Master of Industrial Design

JUST FIVE YEARS
LUND UNIVERSITY INDUSTRIAL DESIGN LTH
2001-2006


DESIGN
CENTRUM

Lund University
Faculty of Engineering/Lunds Tekniska Högskola (LTH)
Rector LTH
Gunilla Jönson

Lund was founded in the late 10th century and was a leading, religious, academic and cultural centre in all of Scandinavia already in the 12th century. It became Swedish in 1658 and eight years later Lund University was established. Today, the university is the largest Scandinavian research university with about 40 000 students that make up roughly half of Lund's population. It is a full comprehensive university that is recognised by its democratic attitude, critical thinking and defence of academic integrity. Its creative academic environment is proactive against discrimination; its humanist orientation propagates ethnic and social diversity values.

Today, the university is also recognised for its cross-faculty research, where especially its medical, natural science and engineering faculties together have won prestigious research resources in international competition. The international cooperation is extensive and every year exchange programmes are carried out with universities in 50 countries. Lund University is also part of the Øresund University which is a virtual cooperation between 14 universities and colleges in south Sweden and Denmark. Through this cooperation and strong liaisons with industry, the OECD has identified this part of Europe to be one of the strongest growth areas.

Significant cross-research results are often transferred directly to the nearby medical clinics for treatment of patients or to IDEON, the oldest and largest industrial park where patents and ideas are applied to commercial products and services.

The engineering faculty, LTH, is the youngest faculty and has grown in importance for international companies like TetraPak, Sony Ericsson and Alfa Laval both through its engineering graduates and its PhDs. LTH, contrary to most other technical universities in Scandinavia, has chosen to work within the comprehensive university to enable students to address the complex issues that they are to meet in life. They are able to add for example languages, literature, ethics or human rights to their curriculum to gain perspective beyond engineering skills. One very clear strategic step has also been to add the industrial design education to the curriculum. A close connection between design, engineering and economics has become a necessity in the modern world. Industrial design gives LTH a synthesis of technology, applied aesthetics and industry demands. This programme and its curriculum have been so successful that it today influences some of the more traditional engineering programmes at LTH.

Lund University Industrial Design, LTH
Professor of Industrial Design
Claus-Christian Eckhardt

Just five years…

This book charts and documents the wide spectrum of our activities and development – our enthusiasm – over the last five years (2001-2006); a period that marks the departure from many well-established certainties. The global power balance has steadily tilted, new strategic alliances have emerged and the economic focus has begun to shift eastward. The environmental impact of human intervention has been assessed and confirmed. In more than one way the world has changed beyond recognition and keeps on transforming rapidly – and so is our educational profile which is constantly being altered and adapted with respect to sustainable value creation, diffuse consumer behaviour or technological progress and more. In that sense, our Swedish microcosm duly reflects this macroscopic development. Above all, "Just five years…" is an indication of the challenge we face in restructuring our five-year education in respect to the Bologna Process.

It may seem new to a certain extent that industrial design can be an educational proposition within a traditional university framework. However, it is that particular aspect which characterises our approach: a well-considered merger of the artistic and creative perspective with a sound theoretical and scientific background. Not surprisingly, such balanced orientation is gaining in popularity with respect to imminent changes in design education worldwide.

Design is the one particular field of work that has the potential to instantaneously reflect cultural and technological shifts, incessantly triggered by changing habits and emerging lifestyles. Unfortunately, too much of what is being put forward is mere effluence, a profusion of mimetic products and erroneous services. To prevail over managerial short-term thinking, we position design as a vocation calling for mindfulness, modesty and moral intelligence. A meaningful dialogue between professions is necessary as well as the capacity to relate the incoming research to reality, keeping a critical eye on the relevance of it all.

We hope that our educational profile is a substantial contribution to that end.

Lund University
Industrial Design, LTH

Industrial design education in a university environment

The inception of manufactured objects is meaningless without the focus on people; the consequential intricacies and responsibilities for those involved in the field of design have been extensively debated. A once somewhat obscure vocation has matured to become an amalgamation of culture, sociology, technology, research and economy. It has evolved into what could be described as the first truly global profession. Faced with rapid change, designers must dynamically adapt to different roles, acting as initiators, communicators and upfront problem-solvers. To that end, much expert knowledge, critical awareness and a passion for transformation is a prerequisite. These competences cannot be acquired on a theoretical level alone. Our aim is to enable students to orient themselves in the limitless field of design, to stand the test of their motivations, actions and results.

The industrial design programme is located in the purpose-built Ingvar Kamprad Design Centre (IKDC). It is part of the Faculty of Engineering (LTH) at Lund University which – founded in 1666 – is a centre for education and research in Scandinavia. Embedded in such large and diverse campus, our approach is to encourage and develop interfaces to other key disciplines as well as networking through regional and international institutions. Our interactive take on design education shall enable students to adopt a generalist or specialist profile, depending on the development of their creative personality. The education can be enhanced further by doctoral studies in industrial design (PhD).

Our programme takes five years to complete, concluding with a diploma project entitling students to the Master of Industrial Design degree. Each year, a limited number of students is admitted, based on their artistic and creative potential. The education commences by concentrating on the essentials such as aesthetic skills and creative tools, complemented by a sound technical and theoretical background. In respect to various projects, we introduce design methodology at the core of the design process, supplemented by human factors such as ergonomics, psychology and universal design – issues that continue validating the explicit potential of our university context. Design management know-how further complements increasingly advanced and long-term design projects that include auxiliary tuition in material application and 3D modelling. Comprehension and practice of the fundamentals in design is reinforced, culminating in a complex project that focuses on sustainability and ethics as well as technology and manufacturing. We encourage students to apply their knowledge in internships abroad, verifying and adapting their individual approach to develop insights and understanding for different cultures. The programme concludes with preparatory studies – in some cases in conjunction with international institutions or companies – for the degree project, a final in-depth study merging and confirming all creative and analytical competences.

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Robin Edman
CEO SVID,
The Swedish Industrial Design Foundation

Design pays!

With increasing global competition and the selection of available goods and services becoming boringly standardised, the importance of design has never been greater. User power, driven by known and latent needs, will quickly determine a brand's ability to survive. The need for any organisation to stand out and truly deliver on their promises has become extremely necessary in the world of disloyal customers. One of the few ways to effectively strengthen communication and to transform an organisation from mundane to exciting is to introduce it to the notion of design.

Research tells us that companies that work actively with design enjoy a more positive development in their turnover, profitability and number of employees, than companies that do not invest in design. It is not just a matter of simply using design but rather the way it is utilised and nurtured that counts. To look upon design as an expensive styling exercise is probably worse than not doing anything at all.

To back this up, studies show that the real increases in profitability and revenue are realised once the organisation starts seeing design as an investment and hence starts using it as an innovation driver. Doing this will increase overall creativity and influence the organisation's response to customer needs. Once this is set in motion it will change the entire organisational structure to focus on value creation and – as a consequence – the customer's total perception. The picture will improve over time and include everything from how the phones are answered to supplying merchandise and services.

However, the biggest challenge is not how this is done, but that most small and medium-sized companies have yet to realise the considerable advantages of investing in design at all. To change this situation, the first steps have to be taken under the assumption that this really is the path to the future. At the other end of the spectrum, large companies today see industrial design as a natural competitive tool to ensure maximum brand development. The ability to create distinct individual profiles and unique market offerings is key to survival, since commercial success is mostly a result of how well a service or product's appearance and function manages to reflect the core values of the brand.

On the other hand, value for the user is created once the known and latent needs regarding function, content and appearance are satisfied. At the same time as increased value is created for the user, profitability and growth of the client's organisation should also increase. This can only happen if the value of the delivered design service is at the highest level, with a true understanding of the situation from both the buyer and the seller. The goal of engaging a design consultant must be to make something better than it was, to create value, take a leap forward and to surprise. Therefore it is extremely important that all involved parties understand and support the process, no matter what the initial situation may have been – good, broken or just plain bad.

It is no easy task to achieve this but only with improved education and understanding does this have a chance. Business schools need to have design on their agenda and the design schools need to breed a new type of designer with a far more advanced business understanding than presently found. The future buyers of design are willing, interested and ready to spend time and resources on new and innovative ways of finding success – design is such an avenue! Not only does design bring good looking figures to the bottom line – with proper support and organisational structure, it connects and helps create a common overall view within. The process builds strong teams where the designer typically collaborates with other areas of expertise to create enterprise-wide ownership of the organisation's offerings.

To further complicate the issue, the sphere of design is also growing in the sense that it includes other areas in addition to traditional goods manufacturing businesses. Because of globalisation and increased local competition, many service organisations now need new methods of adding greater customer benefit and quality to their offers. By using a design-influenced mode of thought and assimilating established design methods, these companies can increase the attractiveness and relevance of their services on the market.

Design can also save millions and the only thing stopping businesses from reaping the benefits is to not dare to find out. One could almost regard it as gross misconduct not to invest in design – yet many organisations still struggle to see the advantages due to a lack of convincing reasons launched from among our practicing designers. Some designers are good, very good, but there are still improvements to be made to the vast majority of proposals. We need to strengthen the consultancies with education and competence building to make them more powerful with broader pallets. To be able to match this, the buyers need to be educated and trained in how to best utilise the potential in front of them. We know that our entrepreneurs listen to each other so they need to share their successful examples and show proof of financial and corporate well-being among their peers.

This cannot happen without more research – research that shows the value of design and how it affects our present or future societies – how businesses can prosper while driving innovation. Cross-pollination will breed a new order of understanding to the future ways of doing business, where the secrets of success are embedded in the increased and wide-spread knowledge of design.

Lennart Ekmark
Senior Advisor to Ingvar Kamprad and IKEA
Stichting Foundation
Former Creative Director IKEA of Sweden

FORM FOLLOWS FUNCTION
Forget it! An outmoded view from the outmoded modernism movement.

FORM FOLLOWS ANYTHING
Can always work in the postmodern period. Anything goes.

FORM FOLLOWS MONEY
Now we're talking! Short life cycles, fashions and trends, product styling. It's a piece of cake.

FORM FOLLOWS FORM
Wannabes. Everyone keeps their eye on what others are doing. Selection is reduced and becomes uniform.

FORM FOLLOWS NOTHING
Absolutely! Only surface; otherwise completely empty!

FORM FOLLOWS YOU
As designer and user you have to take responsibility for your actions. No one else does that in our society obsessed with individuality. Public debate and legislation are conspicuous by their absence.

Design, to what use!?
We have to revitalise the critical analysis and debate on design and the added value it should contribute (cf. the 60s and 70s). A state of naiveté reigns today, while aspirations in Design-Sweden are obvious (cf. "concept design" at the National Museum during Design Year 2005). "Design" is one of our most misused words. Nearly everything is design, while analysis and criticism are almost nonexistent. Everyone wants to be a megastar designer; there appear to be no other driving forces, with a few exceptions. At the same time, universities and colleges chug along with their design programmes to an ever-increasing extent, where quality is just now starting to be discussed.

Here are some thoughts and ideas for getting out of the dilemma, with the best of intentions:

You can view the concept "industrial design" as "a specific design competence, the mission of which is to create added value through industrial change processes." This creation of added value can be divided into three levels or structures:

- Micro level. The needs of users/people for safety and security, for health and well-being, as well as our psycho-social desire for a positive, pleasurable and meaningful social life.

- Macro level. To ensure sustainable development of our civilisation and environment, cf. Karl-Henrik Robert's, Det Naturliga Steget (The Natural Step), and Stefan Edman's report, Bilen, Biffen, Bostaden (Cars, Beef, and Housing). Globalisation and today's material consumption contribute to us moving in an entirely erroneous and dangerous direction. Many designers also contribute to this negative development in their roles as professionals.

- Industrial level. To understand the technical and financial possibilities and prerequisites of production. To also understand the mechanisms of the market economy, its advantages as well as weaknesses and limitations and how you achieve long-term and sustainably positive economic development and profitability; how you create good competitive capacity for a manufacturing industry. Technology, economy, environment and human aspects – all have to be considered.

That is why industrial design training programmes at the international bachelor and master levels must be characterised by "The Understanding Business" which means that you, in addition to more conventional and specialised design training, also have to deliver education and knowledge in the different subject areas of relevance so that when students start their professional careers as designers, they are able to contribute to the creation of genuine added value.

Students have to develop and be offered opportunities to actively search for relevant information themselves, and to then be able to implement critical analyses of this material in order to create the conditions for a conscious, relevant and creative design process based on well defined and described contexts.

They have to be good communicators and build good relationships in the multidisciplinary industrial teams in which they work and thus master a professional as well as a personal authority.
If they succeed with this in their educational programmes, design colleges will contribute to breaking today's in many respects negative development, and to a more long-term and sustainable view of the role of design in our society, a view that will result in positive synergies.

Words of wisdom:
"If you as a designer can create attractive objects with several layers of understanding than are first apparent, you have achieved something."
Ineke Hans, Dutch designer

"Above all, to implant in our young designers that they have to know and understand what they are doing and for whom they are designing."
Tom Dixon, British designer

"Creating a better everyday life for many people."
Ingvar Kamprad, IKEA's founder

Joe Ballay
Professor Emeritus
Carnegie Mellon University

A Design Opportunity

We're at a point of opportunity in design education, and the research universities of the world are in an ideal position to do something about it.

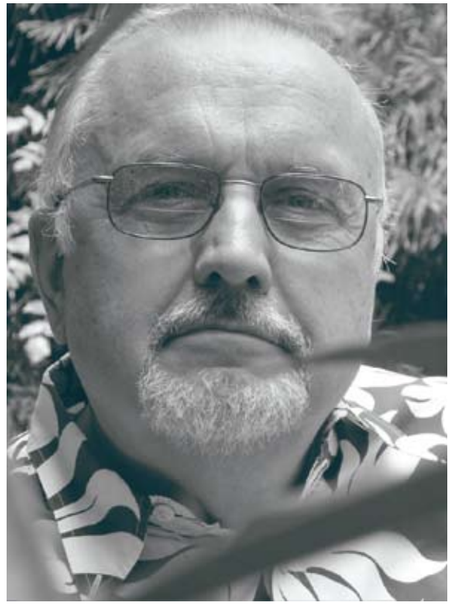
In the interdisciplinary enterprise that design has become, visual designers (industrial designers, information designers, etc.) bring two valuable skills to a crowded table: 1. the skill of integration – pulling the contributions of the other disciplines together into a product that is a coherent whole, and 2. the skill of manipulating form. Integration skills are learned by designers (and others, too) through working on interdisciplinary projects – and that seems to work pretty well. Form skills are not faring so well.

Design education programs are feeling the legitimate pressure to provide instruction, or at least exposure, to other disciplines so their graduates can successfully participate in the business of design – not only the traditional broad exposures to science, the humanities and the arts, but now more specific instruction in green technology, information science and legal principles, to name a few. Time for learning and maturation is scarce in a traditional undergraduate design program. And, unfortunately, time for these other disciplines is increasingly made at the expense of acquiring form skills. To stress the situation even further, the best students – the ones with the intelligence and temperament to become design leaders; the ones we want – are coming from a high school preparation that is more academic and less artistic. It's a troubling intersection of developments. Education in visual fundamentals and form skills is diminishing just at the time it is needed more than ever.

A partial remedy can be found in the growth of graduate design programs; providing more time for the preparation of professionready young designers. And many of the candidates for these grad programs are coming from a background in other disciplines. The good news is that the student mix itself has become more interdisciplinary. The bad news is that these students further swell the ranks of those who most need a solid grounding in form development.

The missing part of the remedy is a relevant way of teaching visual form fundamentals. And it's here that I think the research universities have the advantage. We need a way to intensively study form – not the subjective art school method, but a method that is both systematic, to appeal to the rational mind, yet subtle enough to challenge and grow the intuitive mind. It will take innovative teaching methods; research universities reward innovation. It will take a pluralistic faculty and an intellectually heterogeneous student body; research universities have that. It takes interdisciplinary projects for incubation; research universities can do those. And it takes a dedicated cadre of visual designers to work their form magic; and some of the best research universities – Carnegie Mellon, Lund Faculty of Engineering and Georgia Tech, to name a few I have worked with – have that cadre too.

The bottom line is this: of all the skills the new designer can bring to the table, all but one are some other discipline's core, and they can do it better. Only that one – our form-giving skill – is our core. Understand it, nurture it, proclaim it.



Gunnar Bolmsjö
Chairman of the Board of Education
Industrial Design and Technical Design 2002-2005

In developing and shaping the master's programme in industrial design, its location within a large university was a key factor in creating a first-rate education in such a short time. It was only in 1999 that the programme started. Its roots were in the former "Design Programme" which focused on the building environment and home-based products. Positioned at the Faculty of Engineering, it is natural to bring forward two important aspects of industrial design: its multi-disciplinary and multi-faculty nature. These aspects were also central, and still are, in making use of existing resources while at the same time contributing to the university with a programme that provides an excellent education on the highest level.

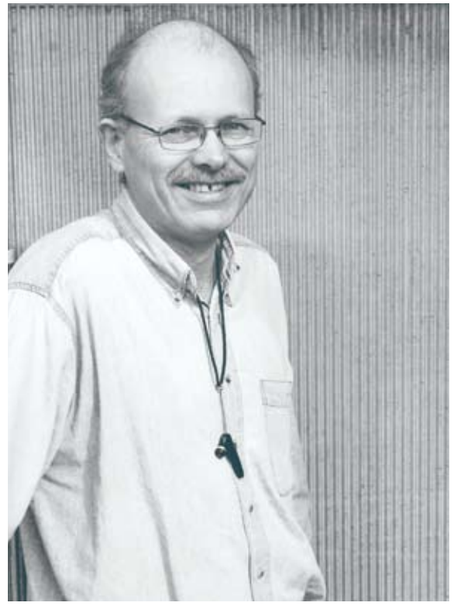
Industrial Design with its teachers and students is also an integral part of the research in the main subject of the programme and interrelated subjects in technology and economics. This is important as excellence in higher education can only truly be achieved by the acquisition of new knowledge through research and creative activities. It also made it possible in a short time to recruit the kind of students and teachers who would cultivate and develop the intellectual spirit and climate of learning and scholarship which are the hallmarks of an institution of higher education. Thus, our position within a large university is an integral and important element in our success that will further strengthen us in the future.

Industrial design is generally viewed as a creative activity, the aim of which is to establish the multifaceted qualities of objects, processes, services and their systems in entire life cycles. In Lund we embrace this generic view, because it offers students and teachers freedom of choice.

Design means making good things and good decisions for the well-being of people. With our roots in a large university we are able to put forth highly creative solutions based on research and development in different areas that address the complexities of the modern world. This includes globalisation and sustainability issues as well as ethics, which is of increasing importance.

Design is also about communication and meeting. Over time the programme has developed into a truly international forum with active international collaboration and exchange of both students and teachers. This, along with the top-ranking positions our recently graduated industrial designers have reached is, if nothing else, an inspiring benchmarking indicator.

With the approach described above, we focus on the growing need for professionals who can deal with the ever increasing complexities of modern life. Design is about creating comfort, pleasure and personal choices for individuals while supporting a way of life which considers sustainability and ethical values. This will be the case even more so as we adapt the programme to align it with the Bologna Process with a three-year bachelor's- and two-year master's degree. I am confident that these new programmes too will succeed in becoming fine examples of higher education.



Johan Huldt
Professor of Industrial Design, University College of Borås

Design is definitely a job with a future, but at the same time or rather as a result of this fact, a profession undergoing major changes. Many of the looming threats to our civilisation are associated with lifestyle issues. Design is involved in everything that the concept of lifestyle encompasses; housing, transportation, clothing, work and recreation are focus areas of design today. To this we must add upcoming necessary tasks of design within areas that we now can barely imagine.

At present, humanity faces massive challenges. Every day we are able to experience, or read about, new threats to the envronment and thereby our chances of survival.

One might pose the question if this is the concern of the designer or an issue of design. Is it possible that good design can present solutions to the obvious problems we are facing? Or is it the other way around, that design itself is the core, or at least a part, of these problems?

Designers are a progressive and curious group of professionals who greatly influence our lives. It is therefore important that they suggest a resource-efficient lifestyle, including new products and processes. A significant component of the work for sustainability is a financially stable and socially sustainable society. Environmental degradation is caused not only by war and natural disasters, but also by exaggerated bureaucracy. As a result it will be difficult to obtain a sustainable society without simultaneously paying attention to social sustainability. Everyone should have the opportunity for regular work, and trade between countries needs to be developed. These issues also entail an enormous amount of work for designers, not least in regards to intelligent transport solutions and new packaging.

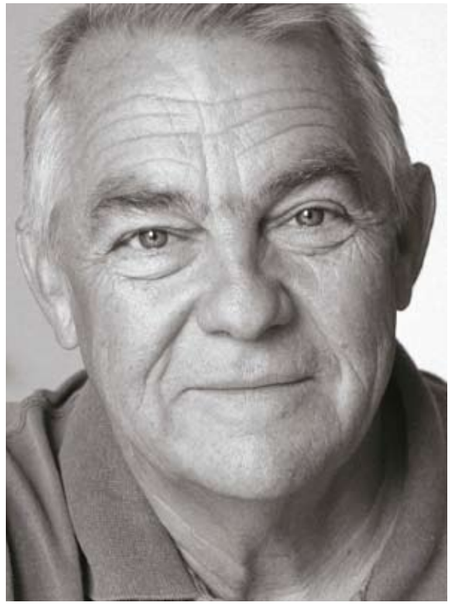
I would also like to remind you of the significance of beauty for humanity. The need for beauty has followed human beings throughout history manifesting itself in various ways through embellishment, symbolic forms and art. Apart from food and shelter, rest and relationships, beauty is a basic human need.

In the past the main objective of design was to develop human extensions, i.e. things that reinforced the human body thereby improving its capabilities. We nail more efficiently with a hammer than without one, drink more easily from a cup than from the hand and travel faster on wheels than on foot. The hammer, the cup and the wheel prolong the arm, the hand and the leg. Computers, telephones and CD-players expand our senses in time and space. Together with technological innovation design increases the natural capabilities of human kind.

Our industrial society, and as a result the conditions for working with design, has so far been evolved on the basis of the following unspoken assumptions:
- the supply of raw material is unlimited
- nature's ability to endure environmental impact is unlimited
- the supply of stored energy is unlimited
- peoples' ability to tolerate changes in their living environment is unlimited.

We are now facing a sort of trend reversal that will involve entirely new conditions for design operations. From now on The Three R's - Reduce, Reuse and Recycle - apply. Up to now we have been used to working in accordance with the so-called design process - beginning with a BRIEF and ending with a PRODUCT or a PROCESS. We will continue to do so but with new information and demands included in the "brief".

More than ever before, the creative and coordinating competence of the designer is required in society.



Michel Sabouné
Vice President Sony Ericsson
Creative Design Centre

For a long time now industrial design and industrial designers have been looked at as the people that give form to the products at the final phase of the product development and unfortunately, most ID university programmes emphasise mostly this area. In my opinion industrial designers have a much more important role in the product development phase and, even more so, play an even greater role in product innovation and business strategy! More and more companies are just discovering the full potential of the ID organisation they have. Companies are discovering that ID can be a great tool for communication both internally and externally; it is a great asset in product marketing and a huge asset in new product development!

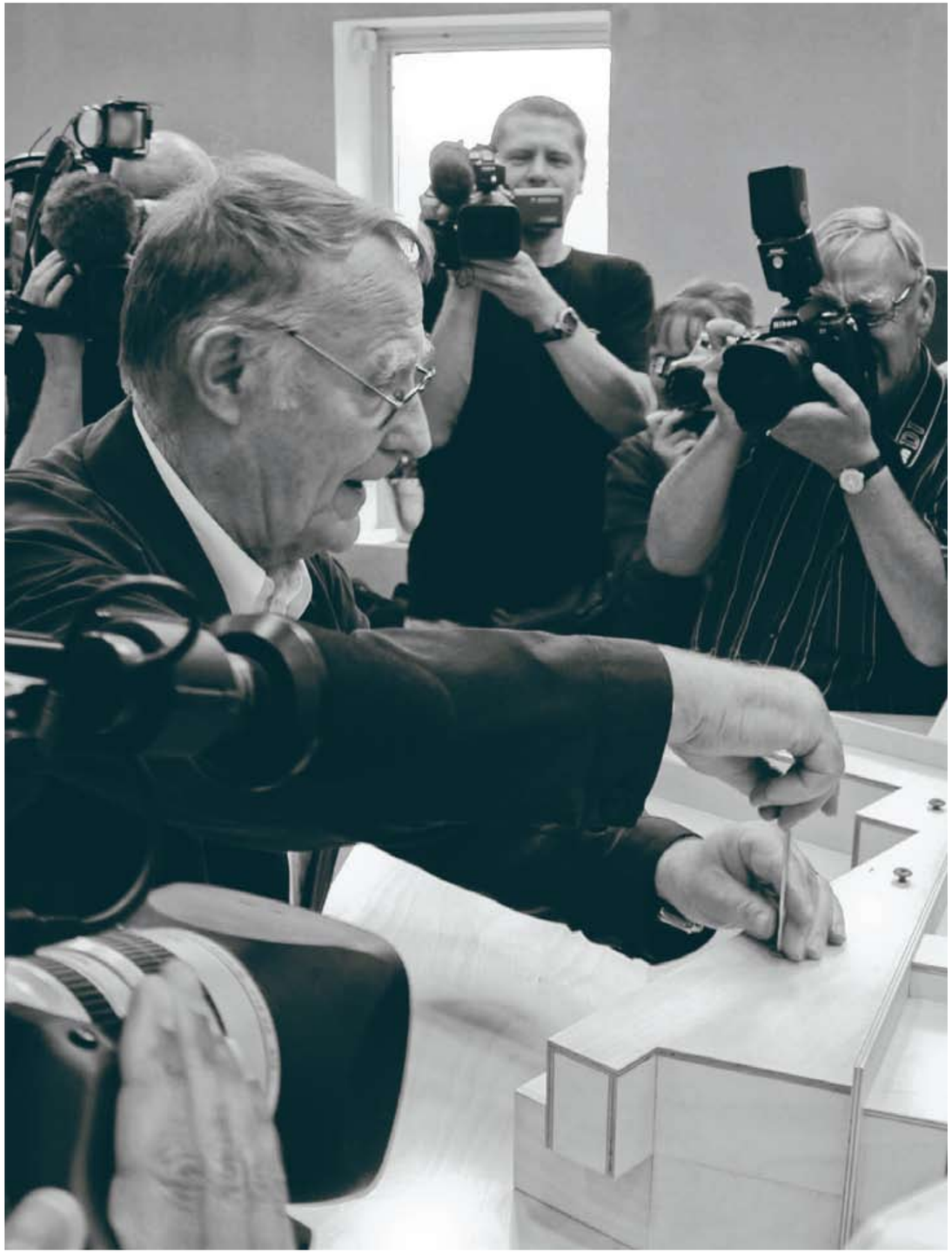
This change of scope means that the pressure and expectations put on the industrial designer are increasing. Eventually those requests should be reflected by the education that we give designers at university so that they can be better equipped to face these expectations and challenges. Examples of this can be: communication skills, cross-functional group work, basic business knowledge, project management, etc…

I feel, as I have preached for many years now, that the place for industrial designers is not only in the design department – there is a place for a designer depending on his or her interest in almost every discipline in an organisation; from idea to concept to development to launch and marketing!

Ingvar Kamprad Design Centre
Building year: 2001-2002
Architect: Gunilla Svensson

Inaugurated by Ingvar Kamprad on the 4th of September, 2002.

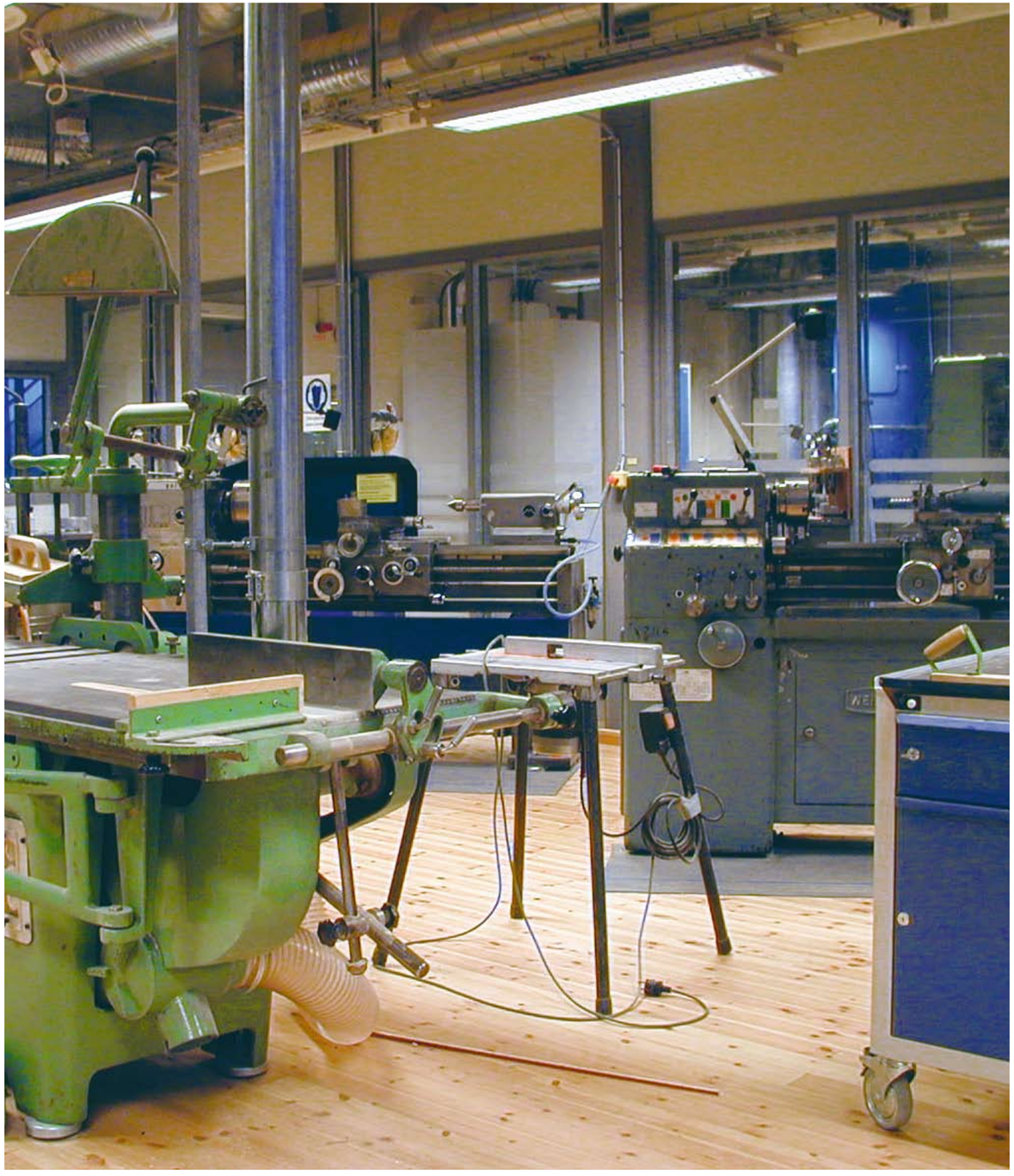
Donation
In 1998 the IKEA Stichting Foundation donated funds to LTH in order to facilitate the development of education and research in the field of industrial design.



Assembly room
IKDC

Student studios
IKDC

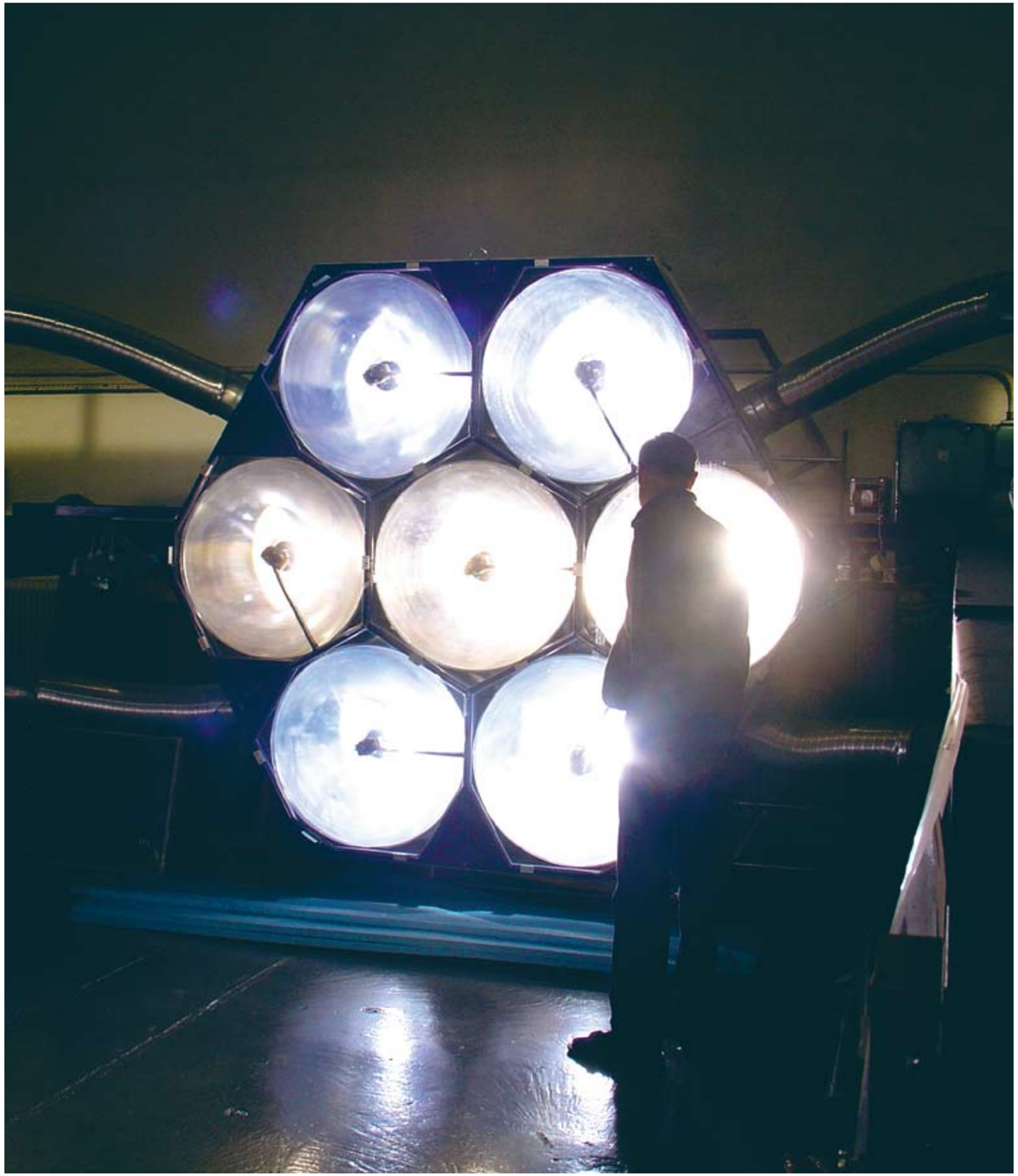
Café Bryggan
IKDC



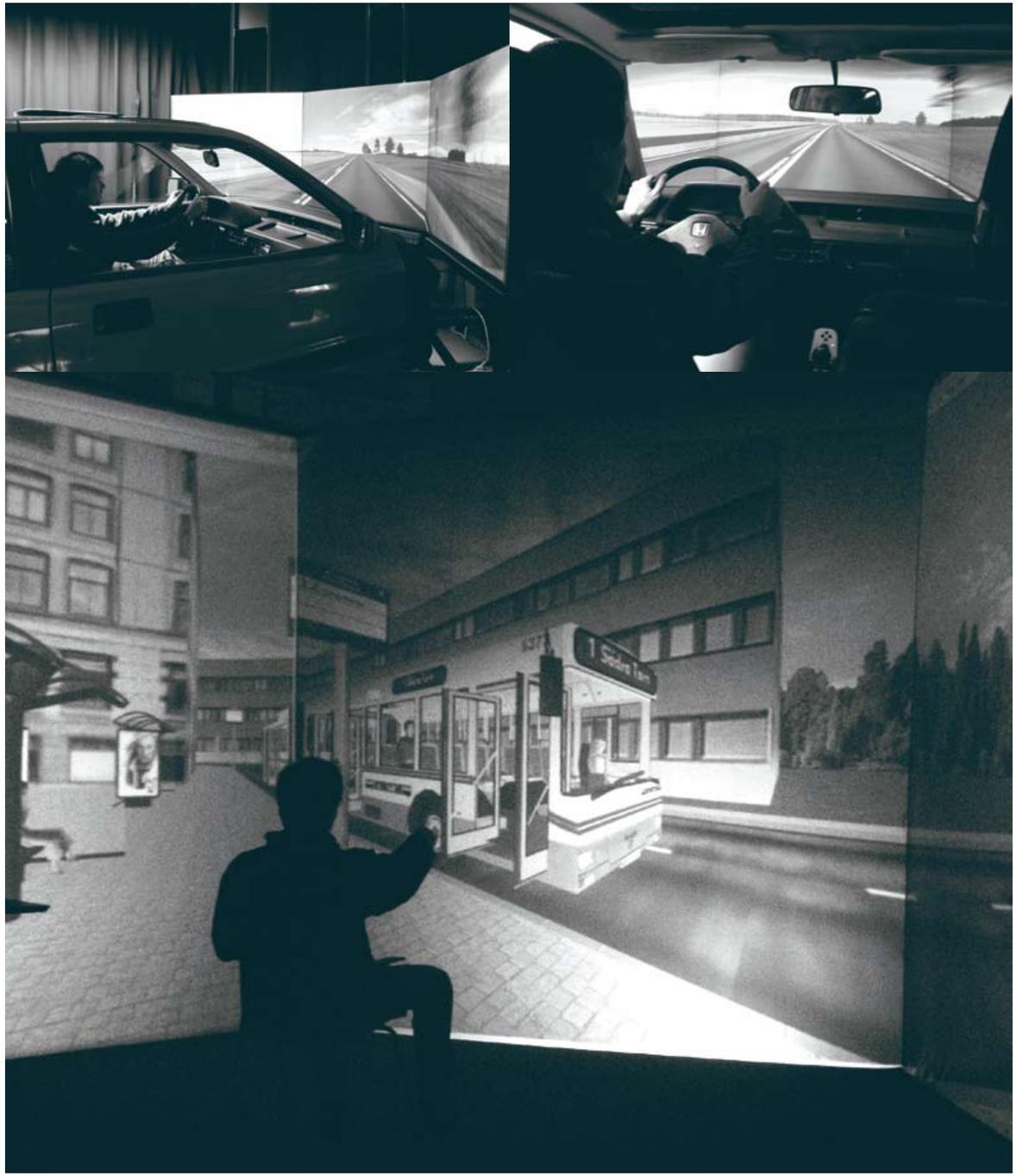
Educational workshop
IKDC

Metal workshop
A-building

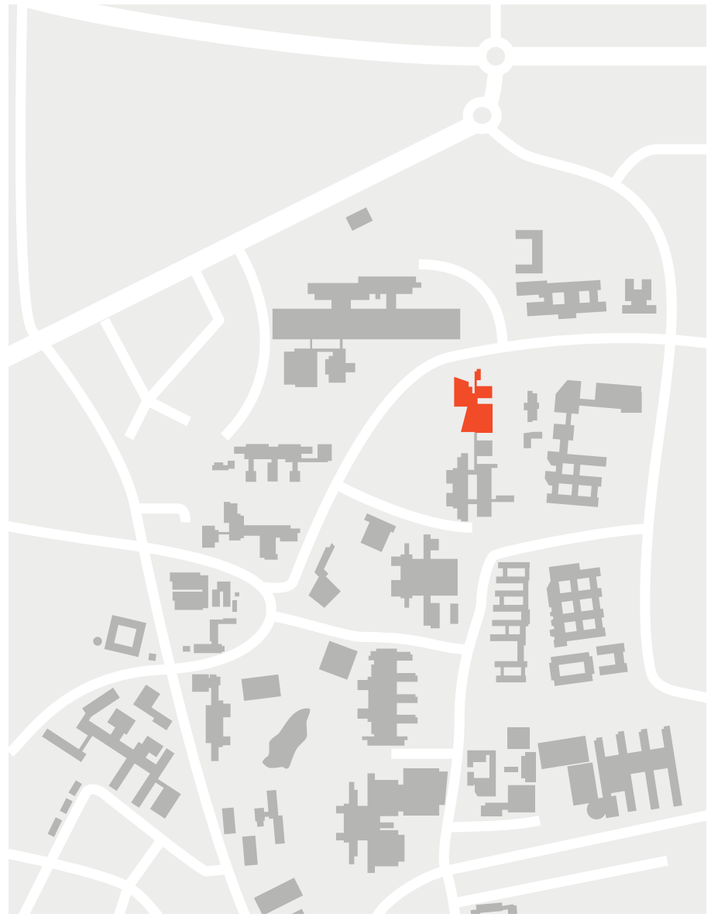
Wood workshop
A-building



Sunlight laboratory
A-building



Virtual Reality laboratory
IKDC



The Ingvar Kamprad Design Centre is located in the city of Lund which is part of the Øresund Region with the Øresund bridge connecting Malmö to Copenhagen and Sweden to the rest of Europe.

In Lund, the Ingvar Kamprad Design Centre is located in the northern part of the campus, on Sölvegatan 26.

Lund University

Lund University was founded in 1666 and is Scandinavia's largest institution for education and research with approximately 42 000 students.

The University consists of eight faculties:

- Faculty of Engineering
- Faculty of Science
- Faculty of Law
- Faculty of Social Sciences
- School of Economics and Management
- Faculty of Medicine
- Faculties of Humanities and Theology
- Malmö Academies of Performing Arts

In total 85 educational programmes of which one is the Industrial Design Programme with about 150 students.

The Industrial Design Programme was founded in 1999. It benefits from the large campus, fostering the crossover and interaction with other faculties, departments and divisions of LTH, Lund University and the rest of the world.

Divisions and departments contributing to the Industrial Design Programme

The Department of Design Sciences

- Ergonomics and Aerosol Technology
- Industrial Design
- Machine Design
- Rehabilitation Engineering Research

The Deparment of Architecture

- Architecture and Development Studies
- Theoretical and Applied Aesthetics
- Environmental Psychology

The Department of Art History and Musicology

- The Division of Art History

The Department of Building and Environmental Technology

- The Division of Structural Mechanics

School of Economics and Management

The Department of Electroscience

The Department of Mechanical Engineering

- Materials Engineering
- Production and Materials Engineering

Curriculum

Year one

Autumn

Computer Tools and Techniques
Rehabilitation Engineering Research

History of Design
Art History

Elements for an Industrial Designer, part 1
Industrial Design

Workshop Practice
Industrial Design

Inspiring Introduction to Industrial Design, part 1
Industrial Design

Applied Aesthetics, Visual Communication Ability, part 1
Theoretical and Applied Aesthetics

Spring

Elements for an Industrial Designer, part 2
Industrial Design

Mechanics
Structural Mechanics

Inspiring Introduction to Industrial Design, part 2
Industrial Design

Materials
Materials Engineering

Kitchen in Progress
Architecture and Development Studies

Applied Aesthetics, Visual Communication Ability, part 2
Theoretical and Applied Aesthetics

Year two

Autumn

Cognitive Ergonomics
Rehabilitation Engineering Research

Computer Aided Product Modelling and Simulation
Machine Design

Ergonomics
Ergonomics and Aerosol Technology

Design Methodology
Industrial Design

Applied Aesthetics, Visual Structures, part 1
Theoretical and Applied Aesthetics

Spring

Disabilities – Universal Design
Rehabilitation Engineering Research

Applied Aesthetics, Visual Structures, part 2
Theoretical and Applied Aesthetics

Product Semiotics
Theoretical and Applied Aesthetics

Photo and Videotechnics: The Photographic Image as a Tool
Theoretical and Applied Aesthetics

Light and Colour
Environmental Psychology

Year three

Autumn

Industrial Design Project 1
Industrial Design

Material, Shape and Force
Structural Mechanics

Space and Interiors
Theoretical and Applied Aesthetics

Applied Aesthetics, Visual Metamorphoses, part 1
Theoretical and Applied Aesthetics

Spring

Design Management
Business Administration

Industrial Design Project 2
Industrial Design

Electronics: Possibilities and Limitations
Electroscience

Applied Aesthetics, Visual Metamorphoses, part 2
Theoretical and Applied Aesthetics

Year four

Autumn

Industrial Design Project 3
Industrial Design

Theoretical and Applied Aesthetics
Theoretical and Applied Aesthetics

Materials and Production Technology
Production and Materials Engineering

Entrepreneurship and Business Development
Business Administration

Spring

Practical External Training / Internship
Industrial Design

Year five

Autumn

Design Project, three alternatives:

NASA, STAR Design
Architecture and Development Studies

Design in Unfamiliar Cultures
Architecture and Development Studies

Industrial Design Project 4
Industrial Design

Research Methods in Industrial Design
Industrial Design

Design Management and Future Forecasting
Business Administration

Spring

Master Project
Industrial Design

Extracurricular courses offered by Industrial Design

3D-modeling, part 1

3D-modeling, part 2

Automotive Design

Curriculum examples

Year five

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Research Methodology

Lena Sperling

The aim of the course is to introduce basic principles of theory of science and the research process, as well as to present methods and models for realisation and documentation of projects of a theoretical as well as practical nature. The course conveys a vision of a subsequent research career in industrial design. At the same timt supports the coming diploma project and future work as a practising industrial designer.

After the course, the students will be able to account for, plan, carry out, report and discuss a small research study in relation to current knowledge.

Industrial design is presented as a growing field of research within the design sciences and is positioned in its epistemologic and scientific contexts. The various phases of the research process are presented. Introductions are given to information searching in scientific data bases, scientific authorship and writing of popular reports. Research methods in the three main areas of industrial design (Management, Meta-qualities and Methodology) are presented by researchers in industrial design. Investigation methods in user-centred design will be given special attention in the course. The students will carry out small research projects using various investigative methods and report them according to scientific praxis.

Educational form:
Theoretical lectures and practical demonstrations, self-organised reading, group discussions and research under supervision, group presentations and critique. Feedback on reports by groups.


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1/ 2/ 3/ 4/ 5/ 6/ 7/ Documentation from a user evaluation excercise, an example of how students can take the opportunity to integrate courses: in this case evaluating a mockup for Industrial Design Project 4

Sony Ericsson, 2002

Claus-Christian Eckhardt

Michael Henriksson

Johan Karlberg

Joshua Murray

3G concept phones in cooperation with Sony Ericsson.
The original assignment was to create a “near future navigation paradigm and device” for mobile phones. This paradigm and device should respond to the upcoming needs created by new forms of applications and content that mobile devices will be using.

As the project developed, the focus of the assignment broadened to even include the design of the entire mobile device, with the navigation paradigm as a basis.

To support the design students, industrial designers and interaction designers from Sony Ericsson's Creative Design Center visited the design school periodically during the project for progress reviews and feedback.

The completed projects were presented at Sony Ericsson Creative Design Center and received positive feedback from their design team.


NASA


PENN
RACING

NASA, STAR Design

Per Liljeqvist

Based on a three-week field study at Lyndon B. Johnson Space Center (JSC), Houston

The Project

STAR Design started in 1998 and is a project run in cooperation with the Space Programme at JSC in Houston. This is a project in continuous development, where the fields of interest change due to the work our collaborators execute. In the last five years, themes of interest have been different habitat, work and emergency functions/solutions for the International Space Station, on the way to the Moon and Mars and back, on the surface of Mars and on the surface of the Moon.

Basic human needs of everyday life become visible where life support systems are required. The study and work is about solving elementary problems in extreme circumstances. The human dependence and interaction with the environment, surroundings and artefacts, are the foundations of the project.

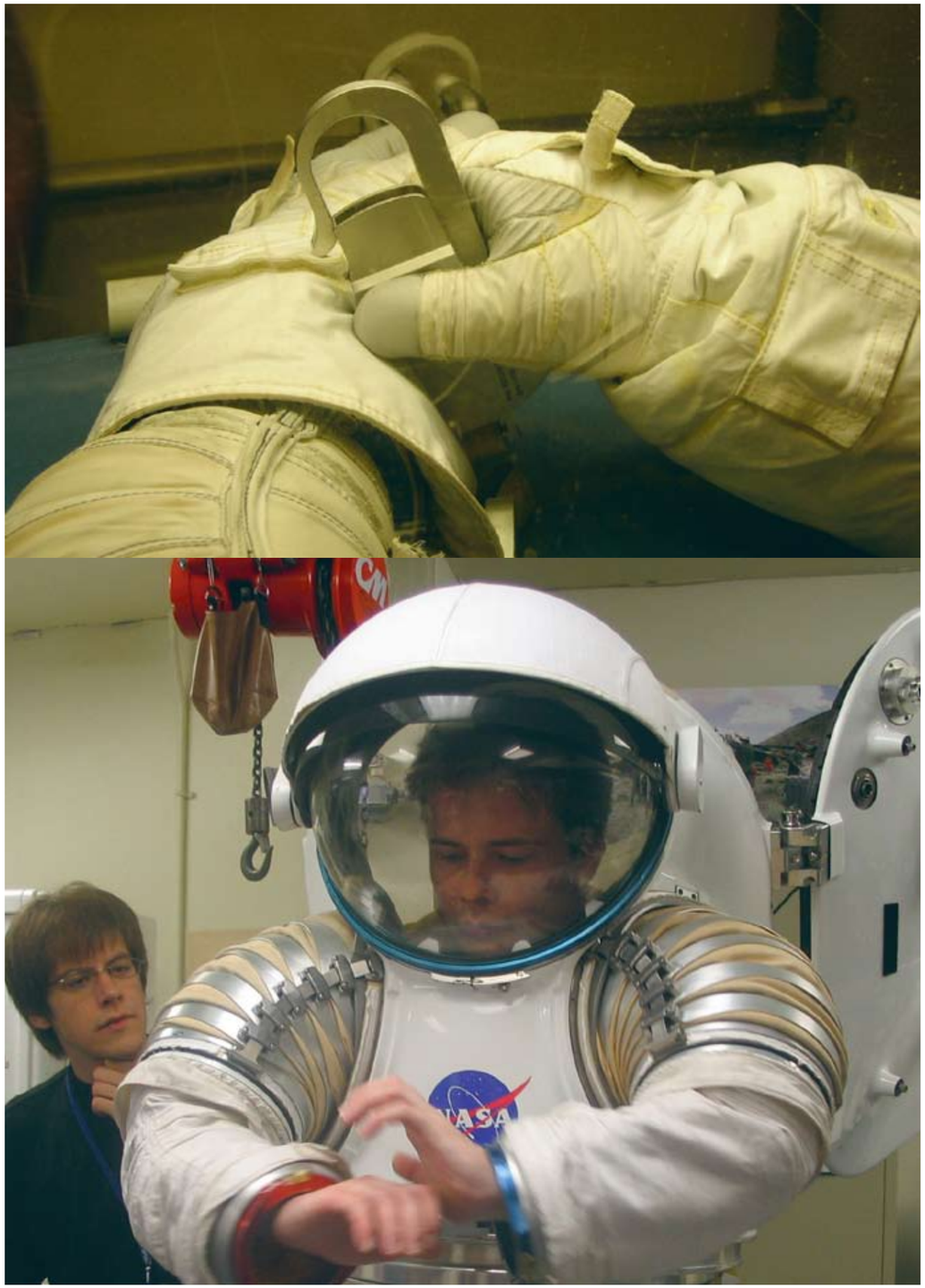
Students are trained in planning and developing complex projects and processes. Because the students explore things unknown to them, they learn to put questions instead of starting with an answer. Students are trained in gathering information and converting data into knowledge that they can apply in their design processes. In order to do so, it is necessary to try reading and defining the interacting sub-systems, like architectural, physical, sociological, biological and technical systems. This method embraces systems-mapping which focuses on defining different systems and their integration with each other and with the citizen.

The project consists of three phases:

Phase 1 Man in Space
Phase 2 Field-study at NASA
Phase 3 Design Applications

Preparatory studies in Lund include general information, lectures, workshops and assignments to make the students start thinking in the right direction. Central for this project is the focus on lunar or Mars habitation in different situations. Students will have to consider such challenges as normal routines and emergency situations under these conditions.

The fieldwork takes place at NASA's facilities in Houston, Texas. The students work within an ongoing project and focus on designing with human aspects, the human interaction with the physical environment, the well-being and how to live in a dense life support system. The students are introduced to specialised knowledge of the life, environment and conditions in space.



Exploring Texas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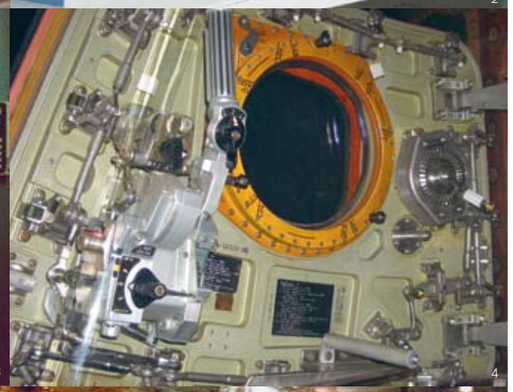
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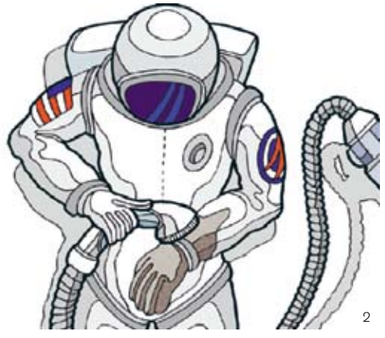
1/ The ISS Mission Control Room 2/ Sonny Carter Training Facilities 3/ Inside International Space Station mockup 4/ Inside panel of capsule door 5/ Students visit the building where the mockup of the ISS and Shuttle are housed 6/ Students working on their projects 7/ A memorable moment meeting with the Swedish astronaut Christer Fuglesang 8/ Visiting the control room used for the Gemini missions through Apollo missions 9/ Testing astronaut gloves in vaccuum 10/ The Johnson Space Center's Sonny Carter Training Facility houses the Neutral Buoyancy Laboratory, a 6.2-million-gallon pool used to train astronauts for space walks

1

The students formulate their projects while at JSC, NASA and present a “midterm” presentation on-site. They present their ideas and the formulation of the project that they, at that time, have taken to a level that it can be criticised by experts. This presentation is to give them feedback and guidance.

Back at Lund University the project continues. From the input the students got from the presentation on-site at JSC, they start to develop their projects. They evaluate the information and seek more if needed.



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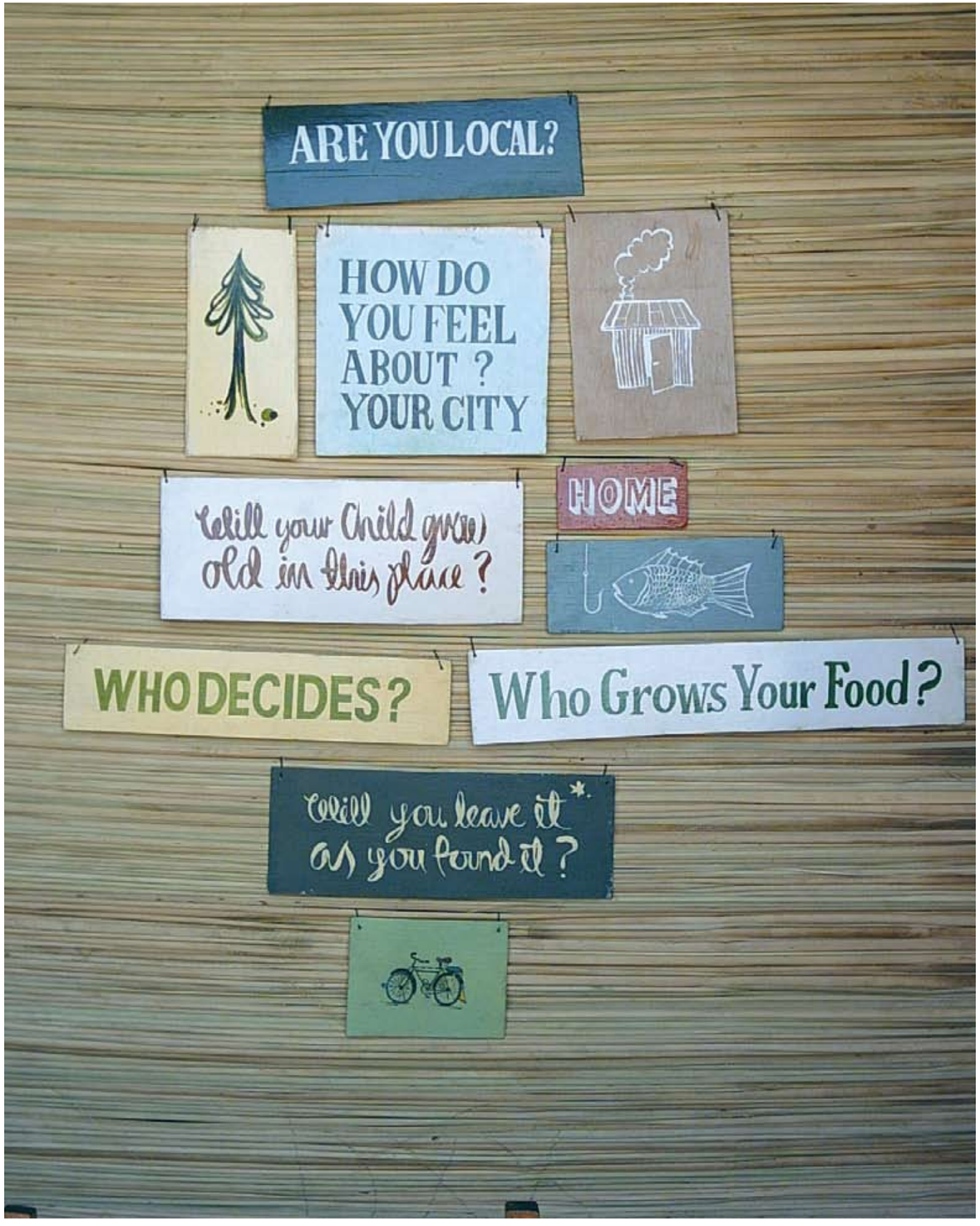
1/ 2/ Regolith remover 360°, vacuum cleaning device for removing regolith (moon dust) before re-entering the habitat 3/ Easy-grip camera for use on EVA (Extra Vehicular Activity)


ARE YOU LOCAL?
HOW DO YOU FEEL ABOUT ? YOUR CITY
HOME
Will your Child grow old in this place ?
WHO DECIDES?
Who Grows Your Food?
Will you leave it as you found it ?*


ELDORET

Kenya, Design in unfamiliar cultures
Catarina Östlund

Based on a six-week field-study in Kenya.

The visionary and long-term goal of the study is to improve the health and quality of everyday life on Earth. The goal of the study is to find new planning strategies for urban areas, villages and neighbourhoods. Sustainable development is a global issue which needs to be managed with care for each local situation. Each site which is studied is in need of analysis and specific solutions for its future development. But they also face problems in common with each other and many other cities of the world such as cultural identity and increased tourism, population growth, expansion and pressure on resources, declining markets and growing slums. The world planners and developers face an enormous task – creating the cities of the future. As designers we form processes, products and systems in society. We interfere with developments in progress that affect physical as well as social factors in developing countries. The study philosophy is centred on what architecture and design do, over time, rather than what they are.

It is our intent to work with the whole design process towards design, architectural solutions and implementation. The students explore things unknown, to them, and create visions in the process of designing. In order to do so, it will be necessary to understand the relation between different levels, between the micro- and macro-perspectives. The students get tools to help them understand and react to complex situations. They learn to put questions instead of starting with an answer, and to describe reality from a problem-oriented point of view.

The course consists of three parts: introduction in Lund, field study in Kenya and finalisation of the projects back in Sweden. During the introductory phase, theories on sustainable urban development are studied and previous projects analysed. In heir field study, the students are introduced to a range of different environments, organisations, institutions and people in Kenya. Based on this, various interest areas are developed and the students formulate these into project definitions. The different projects are documented in separate reports and distributed back to UN-HABITAT and the involved parties on site. The projects are also presented in exhibition form both on-site in Kenya and in Sweden.

As of 2005, the course is a collaboration between the Architecture and Industrial Design Schools at Lund University, Chalmers University of Technology, University of Nairobi and UN-HABITAT. The collaborating organisations are represented in the teacher-and-resource-persons group as well as in the student group.

The Department of Architecture and Development Studies has been carrying out studies from 1995 and onwards mainly in Vietnam and Tanzania and since 2004 in Kenya. In 2002 and 2003, the site studied was Bagamoyo, a small Swahili town on the coast of Tanzania and collaborating partners were the University College of Lands and Architectural Studies (UCLAS) and the Department of Antiquities. In 2004, the objects of study were Lamu Island and Masai Mara in collaboration with the University of Nairobi and the National Museums of Kenya. In 2005, the field study was located in two towns at the northeastern shore of Lake Victoria, Kisumu and Homa Bay, and carried out in collaboration with UN-HABITAT, Chalmers University of Technology and the University of Nairobi.

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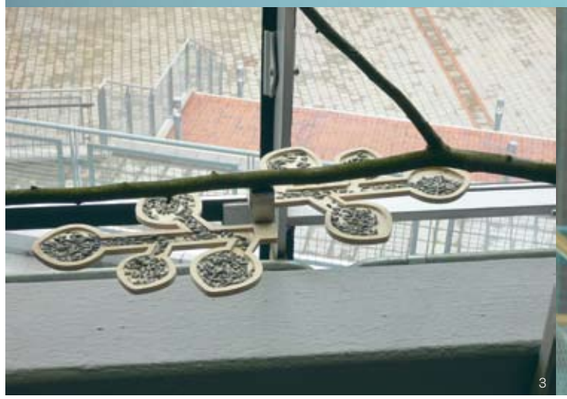

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Birdhouse, 2005

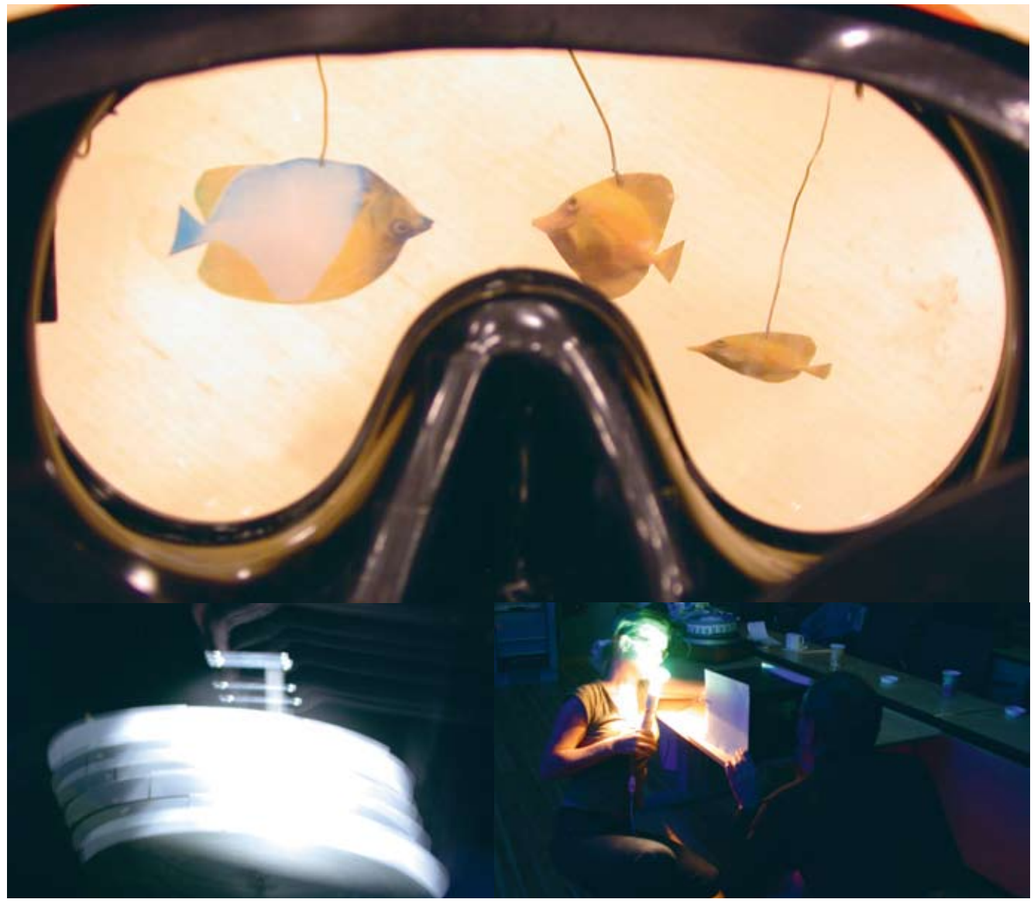
Marko Macura

In the first week of November 2005, with the Swedish winter just around the corner, a five day workshop took place. The challenge was to create (in teams of two) a birdhouse, birdfeeder or new archetype, focusing on one strong innovation element or characteristic. The designs should respect functional and practical issues, (cleaning, mounting, etc.) but not focus on them, as the ultimate goal was to explore the narrative, poetic and emotional qualities of such an object. Needless to say, next to highly creative solutions, the students needed to address and answer the following four key aspects in their designs:

- The context of use – understanding of the environment and its application
- Functionality – how it will be used by birds and/or people
- Materials & finishing – a clever and fresh choice of materials
- Presentation – clear explanation of the concept as if to a potential manufacturer

The students rose to the challenge and created concepts both for public as well as domestic applications. In a short time, (less then five days of hard work), they created a series of hard models and brought their ideas to an impressive and finalised level.

1/ Slingable birdhouse for homeless city starlings 2/ Bird unplugged: bringing live birdsong inside 3/ Bird feeder 4/ Birdspeaker, creating opportunity for mutual observation

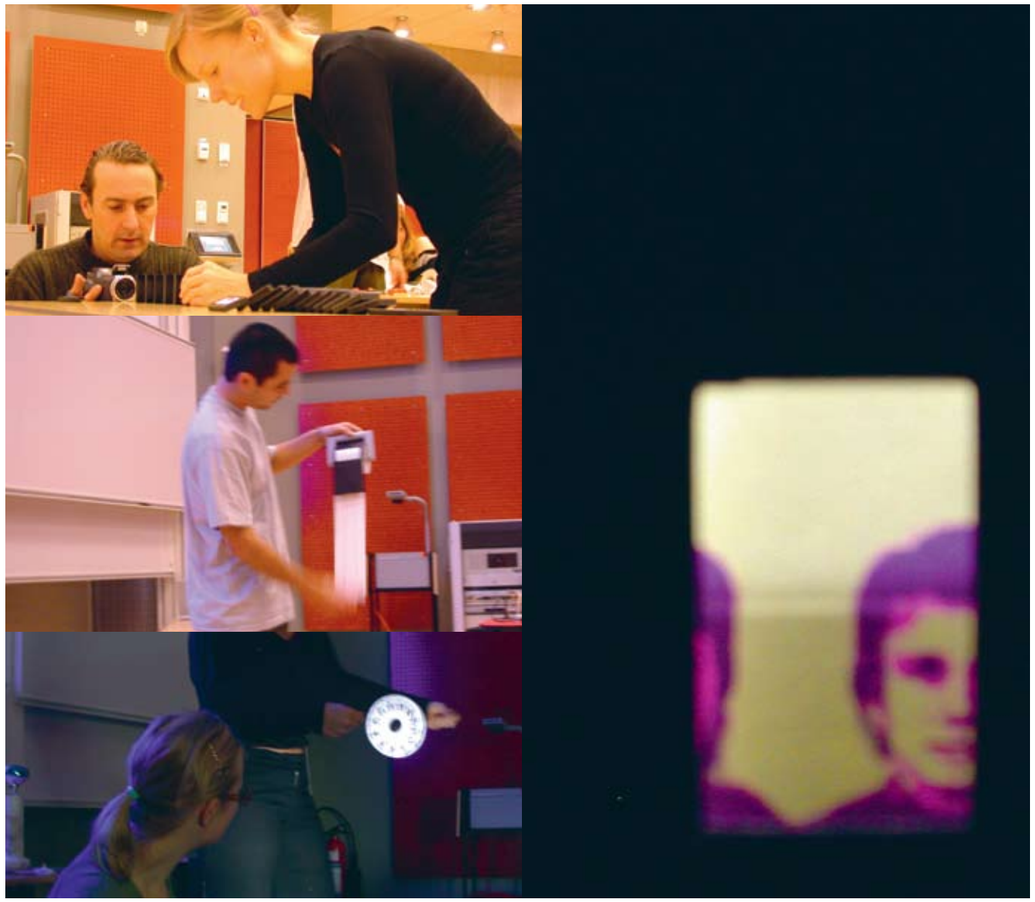


Seemachines, Vogt+Weizenegger, 2003
Oliver Vogt

Background: In the beginning of the 19th century, (1820-30), many inventors developed toys that played with the post-picture effect of the eye due to human physiology. Humans can only see single pictures in a frame rate of 16 pictures per second. If there are more pictures per second, the human brain interprets them as a fluid movement which we nowadays call film. These toys were invented to play with the psychology of vision. The brain of the observer was a necessary part of the game to complete the pictures into something running, moving, morphing and acting.

Today it is normal to have access to film and video; TV is an everyday feature, video cameras are as good as film cameras and even phones can record small films that can attract friends in remote places in order to let them participate in a reality, where more and more moving pictures are exchanged as bits of a global and digital community. The reason to rethink the SEEMACHINES is that new technologies can open new ways of thinking.

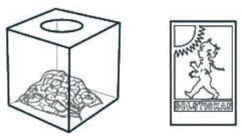
Brief: You are asked to create the next generation of SEEMACHINE toys: innovative, easy to produce, ready for the mass market, un-copyable, outstandingly different, good for marketing uses like advertising, attraction of visitors in a museum, toys for the children and so on. Just imagine that you can change the way we see.



Questions at hand:
What could happen to the cinema when we invent new SEEMACHINES that are as amazing as film was in the past?
What can attract the human brain as much as possible to become part of an illusion?
How can we create an imaginative attraction for a modern audience that touches all senses without using too much technology?
What could be the SEEMACHINES that would possibly create a different kind of cinema in the future?

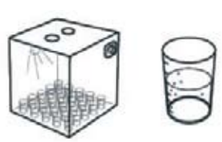
Material: Digital photography, mirrors, headsets, phones, lenses, glasses, GPS, laser copies on transparent film, beamers, old slide projectors, home lighting, fireplaces, lanterns, architecture and, of course, the “short term attention perception” (STAP) of today’s audience.

Outcome: After discussing all kinds of visual experiences and attractions that were known and experienced by the students, it was a surprise to see in which directions the course went. After visiting the scrap market and the electronic supply shop in Lund - the students started to experiment in a playful way with the materials they found. An old record-player served as a projection wheel, a salad dryer was used to mix the pictures, a stroboscope became a projection lamp and a domino became a one-second filmstrip.



"Nordic light"

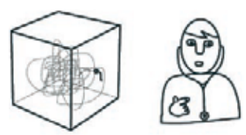
(Is a box with a package of 100 candles; GLIMMA from IKEA)
The nordic light is famous, it is classic, and in Sweden there is a lot of light.
In Sweden people believe in democracy and they want to share their light with others. This is a democratic action to spread the Nordic light all over the world.



"Swedish dental hygiene"

This is a box full of glasses containing fluoride. It was very common in Sweden to administer fluoride rinse in school about ten years ago, and now people can celebrate this way of taking care of your teeth. Swedish people are known for their exceptionally white teeth, and the fluoride rinse could be a reason why.

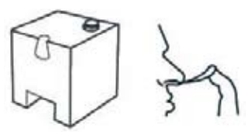
When I was a child I thought it was the most terrible moment of the week, when the old fluoride lady came to school and forced us to have this fluid in our mouths for two minutes!



"Socialstyrelsen"

Sweden´s National Board of Health and Welfare has for decades helped Swedes live quality lives; safe and healthy.. Their recommendations have often been very hands-on, and they are not disrespected by the population.

Recommendations include:
- You should eat 6-8 slices of whole-grain bread a day.
- Everybody should try and get 8 hugs a day.
- Every woman should bear 1,8 children.
- Copper amalgam must not be used, irrelevant of the patient´s age.
- A straitjacket must not be used for more than 4 hours in a row.
- Fitted carpets should be used with caution.



"Swedish privacy"

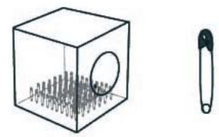
One prejudice says that the Swedes prefer doing things in privacy. You should also mind your own business. This box allows you to experience Swedish privacy by picking your nose without showing it to your surrounding. As a souvenir you can collect your nosepicks in a paper cup.

Speaking through objects, designRAW, 2002
Tad Toulis,
Roman Gebhard

A design collective originally conceived by eight industrial designers living in San Francisco, designRAW, seeks to demonstrate an important but seldom explored facet of design: its ability to reinforce and manipulate us by playing upon shared values. designRAW's investigations have been presented to design audiences and the general public throughout North America and Europe. Prior to their arrival in Lund, designRAW assigned the students two simple tasks each created with an aim towards liberating their thinking from form and placing it squarely in the realm of ideas.

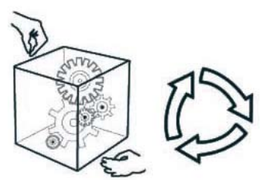
1) Go to the market and buy plastic forks, knives and spoons. Change them in some way. Cut, join, deform. Come to the first day of the workshop prepared to present, explain and discuss.

2) Find an object which represents to you each of the following: "Childhood, Fear, Happiness, Lund". The first day of the workshop, come with your object or a photo of it, ready to explain and discuss why these items represent these themes.



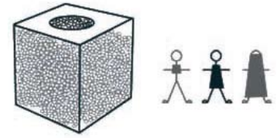
"The delusive feeling of safety"

- Volvo is the safest car to drive.
- Sweden is the safest place to be.
- There is always someone (the government) to take care of you.



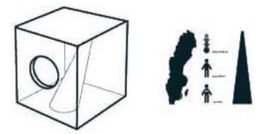
"Swedish generosity"

In Sweden you don´t get without giving. Try how it is to be a Swede for a brief moment. To offer something of yourself and expect something back.



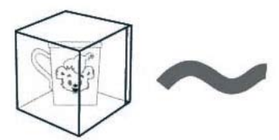
"Lagom" – Just right

The concept "Lagom" in Swedish means "just right". It´s something that´s embedded in the Swedish psyche and apparent in everyday life.
"Lagom" is subjective and this is reflected in the way the peas shape themselves to accomodate your hand. For you the fit is "Lagom".



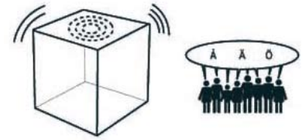
"Feel the difference"

Put your hand in the box and feel the differences between the north and south of Sweden.



"Invisible transition"

Bamse = Swedish socialist welfare state.
Teaching children to be good citizens.
Coffee is something that Swedes drink every day. Put Bamse's face on a coffee mug and make a profit.

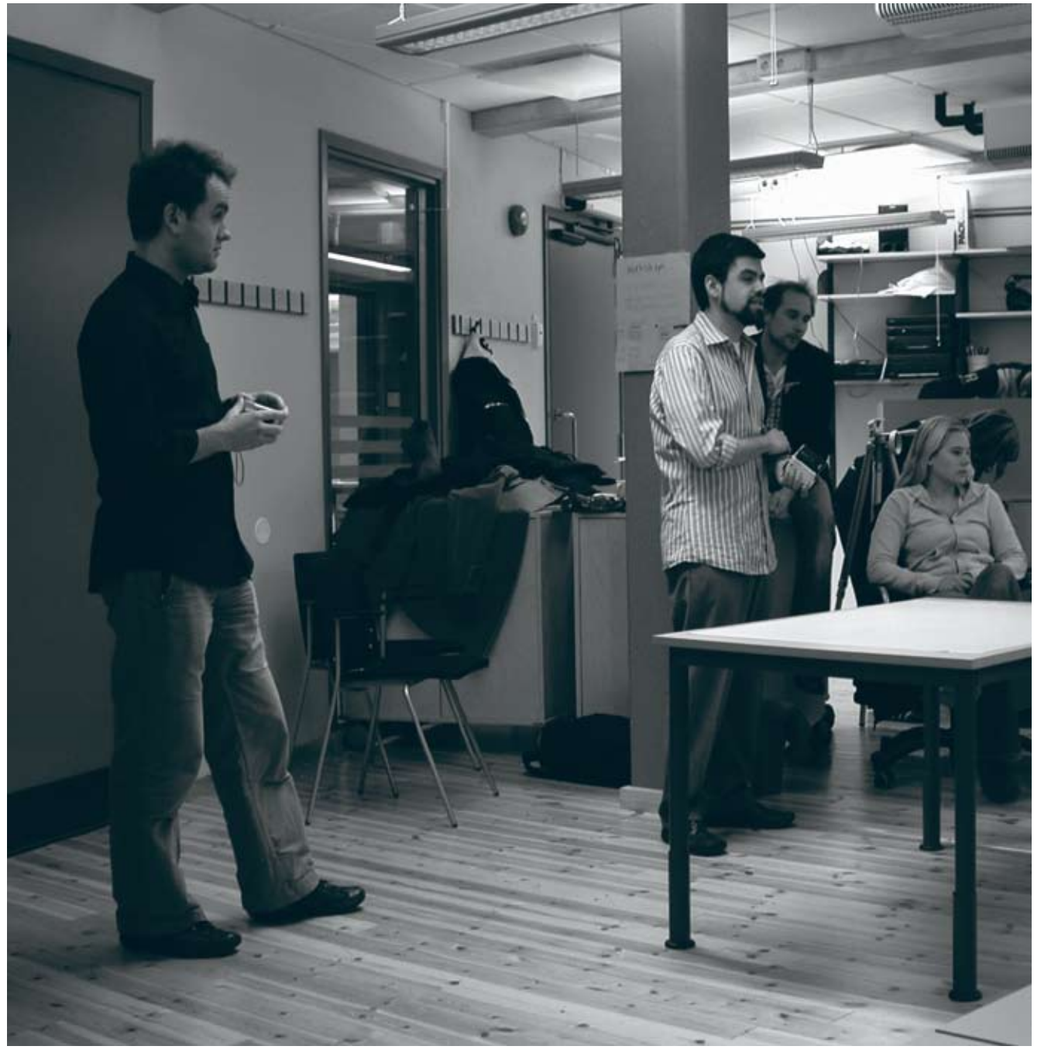


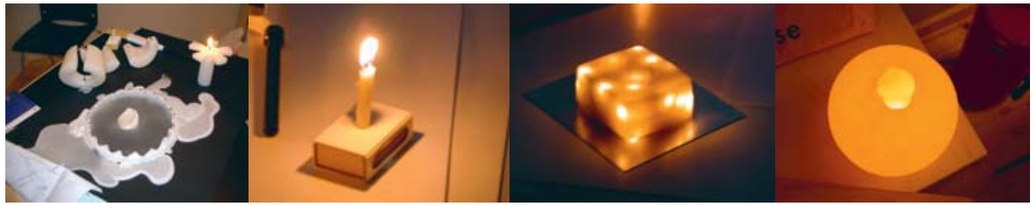
"The sounds of Swedes"

These are the most common "uncommon" sounds in Sweden.

The first day of the workshop started with Tad Toulis and Roman Gebhard giving a brief introduction of designRAW, its approach, its background as well as some of the design collective's key projects and installations.

This presentation was followed by a work session where all the participants presented the results of their pre-assignments. The results and the process of presenting these objects illustrated the impact that each student's background and personal experiences can have on the way they see objects. In addition, the notion of culture as a silent hand influencing the design and importance we place on individual objects was also discussed. Building on this idea "souvenir", the project pursued over the course of the workshop explored the possibility of everyday objects and notions to express complex ideas, in the case of the workshop: What is Sweden?

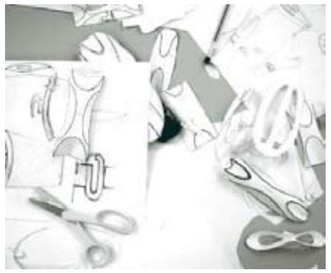


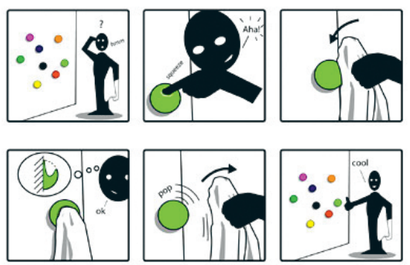


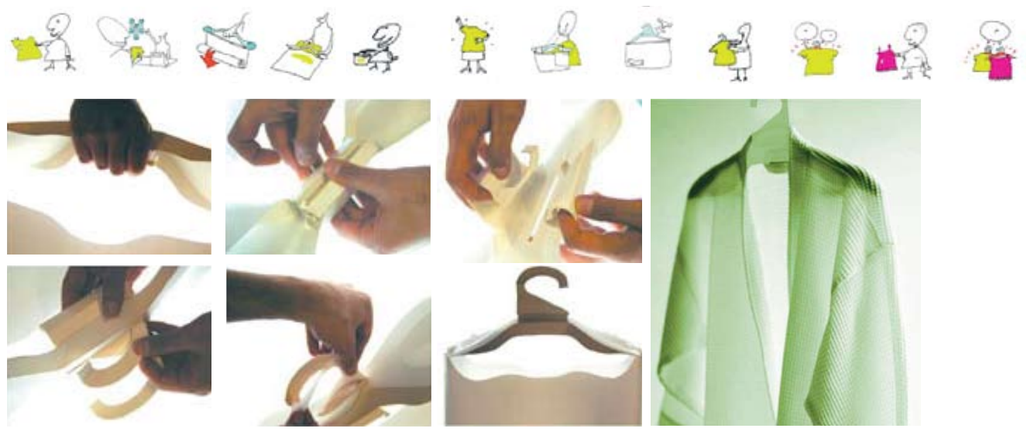
Time, designRAW, 2003
Tad Toulis, Roman Gebhard

At the invitation of the Industrial Design Programme of Lund University, designRAW returned for a second year to conduct a three day workshop exploring abstract themes in design. As they had done with their first Lund workshop, “souvenir”, which explored cultural beliefs and biases in contemporary Sweden, the 2003 workshop “time” encouraged students to investigate time as a material agent in the design process. To facilitate the exploration, wax paraffin was chosen as a material and candles were selected as the medium. The choice of material allowed the designs to transform their static state and become dynamic objects which in the very act of burning expressed their author’s design intent. Drawing on Scandinavia’s rich and profound affinity for candles, the students blended traditional concepts with contemporary themes to generate design solutions which were steeped in notions of time, nostalgia, and a thoroughly Scandinavian perspective.









Coat hanger, IDEO, 2003
Leif Huff

The focus of this three-day workshop was to work under the typical time constraints and "product briefings" designers are confronted with in their daily business. The topic was to design a coat hanger for a fictitious plastics manufacturer. Teamwork was encouraged.

After an initial research phase, where the students created an overview over the past and current "coat hanger market", each group focused on generating ideas for coat hangers for a specific market segment or user. This user group was to be defined through storyboards, mood-boards or other methods of storytelling. The teams quickly needed to select their favourite product idea during focused critiques with the whole team. Each team had only one day to develop their idea to a presentable result. The presentation focused on the definition and visualisation of each product in their specific context. The workshop was a success! Each team selected a different style of presentation and visualisation of their ideas. Each team was able to bring across their idea in a humorous, surprising, and gripping way at the final presentation. The teams worked well together, and the critiques in the "classroom setting" were efficient and fun.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Human behaviour and gestures, IDEO, 2005
Leif Huff

Design inspired by human behaviour and gestures.
"Develop a product concept for the home that is inspired by human behaviour. Think about all the stages of the day; from when we get up in the morning until we go to sleep at night. Think about the "touch points" during this journey where we interact with products. Think about how we behave while using these products and create one product concept accordingly."

1/ Nightstand glass with watering can feature 2/ Device-protecting earphones 3/ Cable managing table


2


1

Human behaviour and gestures, IDEO, 2006
Leif Huff

Products for cooking and eating: Develop a product concept, that is inspired by human behaviour, for the preparation or consumption/enjoyment of food. Think about all the stages of the day that are linked to food. Think about the “touch points” during this journey where we interact with products to prepare, consume and enjoy food. Think about how we behave while using these products and create one product concept accordingly. In order to make the workshop efficient and to get the most out of it, please prepare for it by doing some research. It is simple: all you need to do is watch yourself, your partner, your roommates or think about an interesting environment, like a professional kitchen, an outdoor food vendor, a restaurant or your cafeteria and watch how people behave there, what kind of routines and rituals they follow. Take pictures, collect quotes. Try to gain key insights about their behaviour that will inspire us during the workshop. Make sure you think about the WHY! We want to look at the unanticipated issues inherent in the routines and circumstances people experience every day. We want to reveal the latent needs that people might have and design a product that addresses these experiences and needs. Please bring that material to the workshop so we can start right away!

1/ Packaging concept for dry goods with integrated foldable measuring cup 2/ Dustpan & Cloth 3/ Coffee pot, grow a plant in your coffee grounds 4/ Crumble, container and dispenser for your frozen herbs

Curriculum examples

Year four

Contents

Material and Production Technology

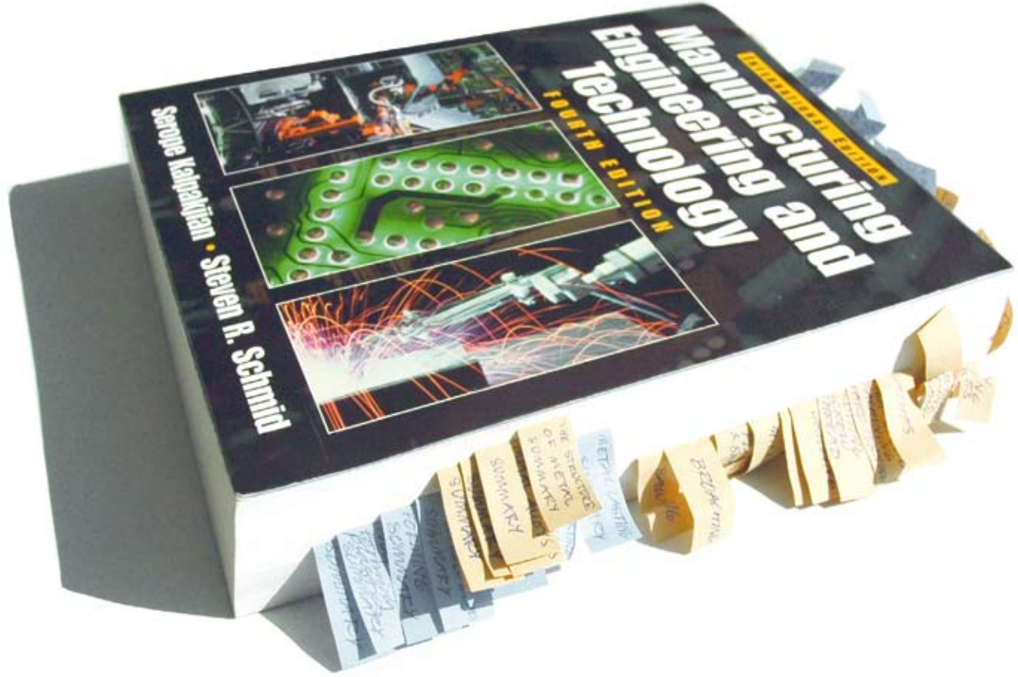
Jinming Zhou

Course description

Study of engineering materials and manufacturing processes, including interrelationships between the properties of the material and the process. The course covers the broader and fundamental aspects of engineering materials, manufacturing technologies as well as details of commonly used materials and processes including casting, bulk metal deformation, sheet metal forming, metal removal, polymers and composite processes, joining, surface treatment technologies, advanced machining technologies, and rapid prototyping.

Course objectives:

- Gain understanding and appreciation of the breadth and depth of the field of manufacturing processes.
- Recognise the strong interrelationships between material properties and manufacturing processes.
- Become familiar with the basics of casting, bulk metal deformation, sheet metal forming, polymer processes, joining processes and surface treatment technology in terms of: process principle, parameters and capabilities.
- Learn to apply basic terminology associated with these fields.




FM7

Industrial Design Project 3

Olof Kolte

“Much of the human condition results from the ways in which men divide their talents between short term, parochial problems and less urgent, but more seminal threats to the continuation of global society. Perhaps the most pernicious consequence of the rapidity of change that marks the modern era is its mobilisation of human thinking to deal almost solely with day-to-day accomodations to change, it ensures that tactics dominate strategy, that quick reaction triumphs over unhurried conception”

/Professor Paul Doty, Harvard University

The fast and huge expansion of the human enterprise with the great acceleration in the use of natural resources and energy is putting unprecedented strength on the ecosystem, the one and only life supporting system. There are very few parts of the world that have not been influenced by human activity: 50% of the earth’s surface has been altered by man. Global warming, one of the consequences, is a potential threat to all living things. Mass extinction of species at an unprecedented rate in human history is taking place. It is likely that half of all living organisms will be extinct within our lifetime.

We in “the West” have been used to, and take for granted, a “way of life”, that if it were to comprise all citizens of the planet, would by simple mathematics and physics be impossible. We would need the ecosystem, energy and natural recourses of five planets to cater for all needs.

In this project, we have been dealing with this situation, under different themes, considering the three aspects of sustainable development: economic, ecologic and social. I believe that we as designers can play an important role in transforming society into a sustainable society, without reducing the quality of life. The following are some of the projects that have been conceived in this project.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2002, Packaging Project
AFAIR

The task was to develop a packaging concept with a strong focus on the three aspects of sustainability. All aspects of the concept, from sourcing of material, through production, distribution, use and disposal affecting all stakeholders should be considered. A LCA, life cycle analysis, of the concept shall be made. Anybody without any prior information or knowledge about the concept/project/product should be able to understand it.

1/ Sustainable Rosary 2/ Exploit, board game, you "win" by ruthlessly exploiting natural resources, including human labour 3/ Soup pills, packaged in biodegradable plastic 4/ Space saving pasta 5/ Spotted Hyena, bag "without" box, resource efficient wine distribution


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2003, Shop Until You Drop
A Journey Towards Sustainable Shopping

The task was to explore all aspects of the activity of shopping in a grocery store (every day products) and based on the research, create and visualise a vision for the activity of shopping in the future, with a strong focus on sustainable development.

The result of a group assignment shall be a full scale "concept store" built in the design centre. The task for the individual project is to develop a packaging concept that will relate to the groups' findings and can be used in the concept store. The starting point should be an observation of a problem or an area of interest related to packaging. All aspects, from sourcing of material through production, distribution, use and disposal by all parties involved should be considered.

6/ Space saving toilet paper 7/ Dozer's Hat, replace with cap on dishwashing liquid, squeeze the bottle to create a puddle of detergent in which to dip the brush 8/ Shopping trolley 9/ Absolut refill

1

2

2004, Sustainable City Project

Short-sighted political and economic interests have had a great and unfortunate influence over city planning. Since the beginning of the last century, powerful economic interests in the shape of oil, tire, car-manufacturing and construction industries, retailers and their suppliers and sub-contractors have by lobbying, and sometimes unfair business methods (see Fast Food Nation) shaped what are now gloomy segregated environments, only accessible by car, that is the prevailing nature of today's cities around the globe.

The cost of this "way of life" in terms of segregation, social instability, violence, crime, is becoming obvious; nevertheless this kind of planning is the most common. The fear that densly populated countries, like India and China, would start consuming on the level of "the west" is now becoming reality with unforeseeable economic, social and environmental consequences. As an example, the sales of cars rose by eight millions in China last year, following an exponential curve.

The task

The task is to create a vision for a sustainable high-density city with great diversity and mix of activities, commercial and non-commercial, that makes it attractive to live and work in. The only means of transporting yourself and goods will be by foot, on a bicycle or on rail-bound electrified public transport. All day-to-day activities that normally would be done by car/truck/bus should be catered for by other means. Perhaps additional information technology is needed to facilitate "getting around the city". The changes on city planning level will be substantial and many other aspects of "street-life" will have to be considered.

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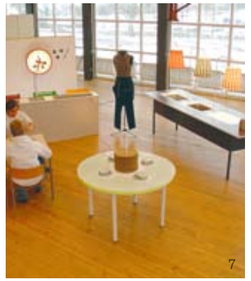

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2004, School Lunch Project

This project was about improving the school lunch experience focusing on how the space could be used during the day to allow for interaction with, and involvement by the rest of society; how the atmosphere could be changed by how the food was served, involving the students in preparing and serving the food; equipping the staff with functional and stylish clothes to improve their working condition and sense of pride; involving the students in cleaning the dishes etc.

1/ A range of products to encourage cycling 2/ Traffic sign for a city based on soft mobility 3/ 4/ "Smörgåsbord": Bread holding, crumb managing and butter cooling table 5/ The school lunch project 6/ Detail of the food serving table 7/ Test in the full scale lab

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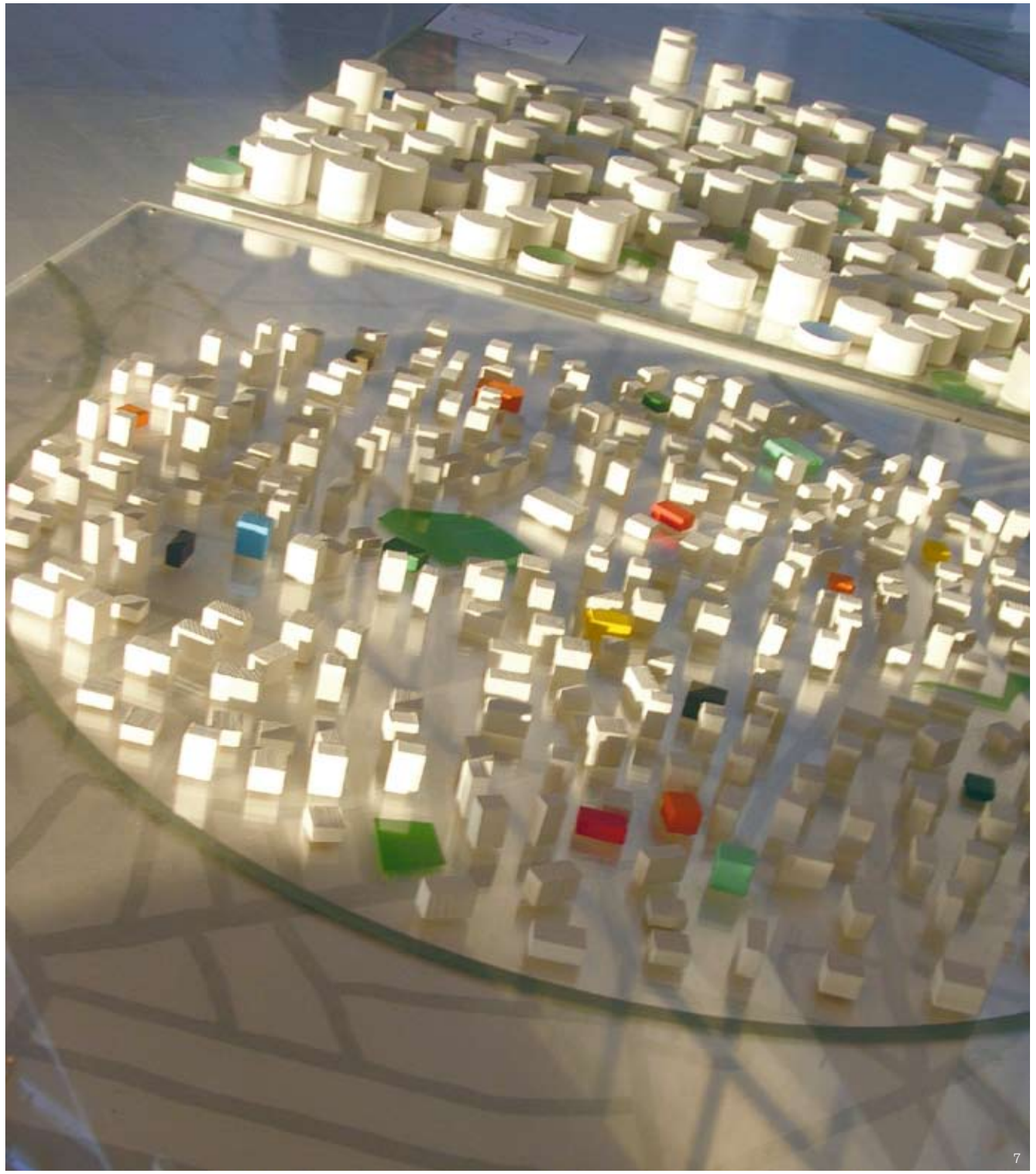

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2005, Energy Project

This project was about energy. Why do we need it? How do we produce it? How is it distributed? What do we use it for? What are the consequences? How can we use it more wisely? How can we change our way of life and use less? We, as designers can play an important part in this change by suggesting solutions that will make this change a positive experience.

Part I: The task was to create a vision for a sustainable low-energy society using 1/10th of the energy we use today. The proposal shall include studies of how energy is produced, how it is distributed and used. Principle human needs should be addressed such as shelter (buildings), food, water, mobility, media, culture, healthcare, etc. The society shall have great diversity and mix of activities, commercial and non-commercial, that makes it attractive to live and work in. All day-to-day activities should be catered for by using very little energy. The case study will be Sweden.

Part II: To develop a product/system/service that will constitute a natural part of the suggested energy system. The starting point should be an observation of a problem or an area of interest. The concept shall clearly reflect sustainable thinking. All aspects, from sourcing of material through production, distribution, use and disposal should be considered.

1/ Garden together: concept for local, small scale food production 2/ Modular electric transportation concept for cargo and travel 3/ 5/ Mc Donald's packaging concept: reusable containers for take away and eating in 4/ Cup by cup: Electric water kettle with clear cup indication encouraging you not to boil more water than needed 6/ Shower basin concept: By lathering up using the basin you only have to shower to rinse, which minimises water use 7/ Principle planning of a city based on electrified public transportation and soft mobility

Anna Persson

Internship at IDEO/San Francisco, spring 2005

In 2003, IDEO came to us to do a workshop with the fifth year students. As far as I'm concerned, it was love at first sight. Their way of working in multi-disciplinary teams and using human behaviour as inspiration for design are features that very much appeal to me. Two years later, I found myself co-running workshops with their clients as an intern at the San Francisco office.

During the five months spent there, I got a chance to work with some very inspiring people on some very diverse projects (ranging from house buying experience to baby bottle feeding systems). The internship at IDEO taught me a lot about the business but maybe even more about myself. It encouraged me to really think about what we choose to do with our lives. In general it was a healthy and valuable experience; educationally one which I found myself to be very well prepared for.

Looking back at it now, two main facts seem to stand out; I got the position and once there I felt I had a lot to offer. At the end of the day, these two facts bear testimony to the quality of education received at Lund University Industrial Design Programme – a school to which I owe many thanks.

Kajsa Westman
Internship at Volkswagen AG, Germany, spring 2006

Between March and May 2006, I did an internship at the product design department at Volkswagen AG in Wolfsburg, Germany. Wolfsburg is a small town, one hour by train from Berlin, and consists of not much more than Volkswagen; most of the city is occupied by the Volkswagen plant which is about five km across. As one of the more than 1000 trainees that pass through all the departments at the Wolfsburg plant each year, my first day was spent listening to an introduction meeting in German with 50 other trainees. The office in which I was later placed was at the far end of the big VW plant and situated on top of the modelling area, where the 1:1 clay mock-ups of new versions of VW-cars were made. To walk trough this big hall everyday and watch the clay turn into real cars was very inspiring.

The product design department develops accessories for the cars, such as sunglasses, watches, clothes and gizmos, but they also take on projects from external companies. My work consisted of researching and sketching concepts and doing renderings of possible products connected to the car in question, mostly working alone or together with my supervisor. In addition to car-related products I got the chance to do projects for companies outside VW. I was involved in the initial phase of several interesting projects, but unfortunately my internship was over before I got to see the outcome of any of them.

My three months were enough to get a glimpse of what this company does but also just barely enough to get into the work handed to me. I really appreciated this chance to do an internship at a major company like Volkswagen and the opportunity to see how a large design studio like this conducts its business.

Anton Breman

Internship at Ergonomidesign, Stockholm, 2004-2005

One of the largest and most genuine design firms in Sweden has had its nest in Stockholm since the 60s. Ergonomidesign is located by the water in an old missionary church where the one and only Emperor Haile Selassie once visited. They have now grown to a staff of thirty-six, with a mix of engineers, ergonomists, graphic designers, and, of course, industrial designers.

I was able to experience their magical mixture of theoretical and practical experience concerning human capabilities, limitations and behaviour. It was a very interesting and inspiring year that gave me a greater experience of what industrial design can be and accomplish.

While bieng there, I had the privilege to take part in projects for Ergonomidesign's main clients (Bahco and BabyBjörn) with whom I experienced how much there is to gain through a multidisciplinary design team and thorough ergonomic user studies. I also was involved in brand identity projects for Optimus which helped me to realise that design can be much more than creating shapes – by implementing design philosophy on a deeper level to create strategy for companies.

After spending one year in Stockholm I have to say that I fell in love with the city. It's the closest thing to a metropolis Sweden has to offer.

Carl Hagerling

Internship at Tom Dixon, London

During my internship at Tom Dixon my knowledge from the education was applied to real projects. I learned how to take a concept, bring it to production and onto the market.

Curriculum examples

Year one

Contents

Workshop Practice

Karl-Axel Andersson

Since the dawn of mankind, people have been producing artefacts. Despite the digitalisation development, we think that basic workshop training and the corresponding model building is an essential tool in the design process. It is hard to beat the direct response of experimenting in different materials and forms as well as trying out new construction principles. The joy and strengthening of self-confidence in being able to produce something by one's own hands is of great importance. Therefore, the workshop course is one of the first given and the main aim is to make the students familiar with safe operation methods of the common workshop machinery like a lathe and a milling machine.

Workshop, Form, Shape and Expression

Joe Ballay, Joshua Murray

Systematic morphology is a way of thinking about three-dimensional form, particularly attuned to the skills, needs and methods of industrial design students. At LTH, this workshop takes typically two weeks, in the second or third semester so that the students gain some basic model-making skills beforehand.

The First Week – Four Forms in Five Days

We begin by experimenting with four basic families of form; a kind of simple vocabulary. The number of families and their definitions are somewhat flexible, but there are four that make a nice set to work with. I call them: Orthoform, Rotoform, Flowform, and Growform. Each family derives from a particular generative process, or underlying geometry, or other systematic way of thinking about material, force and form. But to achieve subtlety in any family requires intuitive judgment too.

Orthoforms derive from rectilinear or orthogonal relationships among edges, planes and volumes. Rotoforms are forms of revolution, usually with a strong axis. Flowforms express the supple movement of a surface in a medium like water or air. Growforms can be thought of as enclosed membranes, stretched into shape by a combination of internal pressure and external boundaries, like the biomorphic forms of growth.

Each family is reasonably distinct, each suggests different techniques to draw and model it, and each parallels one of the basic form generating techniques embodied in computer modelling.
One of the form families is assigned each day, usually with a particular objective such as to "break the axis of the rotoform". It's an intense, hands-on, experience that stresses rational and intuitive ways of thinking about form and making form decisions. For each, the expectation is "a simple form, done exceedingly well". The fifth day is for finishing unfinished work, and all four forms are due the next Monday.

The Second Week – Pseudoproducts

Now we ask whether we can use this form vocabulary to say something about the function, intention, or attitude of a product form. But we don't work on actual products, which involve technological, economic, and cultural constraints that complicate our brief and basic study of form. Instead, I devised "pseudoproducts" to reduce these distractions yet leave some content and substance for the designer to work with. A pseudoproduct has some of the qualities of a product without actually being a product. It looks like it functions without saying how it works. It implies the movement or interlocking of parts. It projects an attitude of power, elegance, security or novelty.

For the LTH workshops, the students were asked to design and model a pseudoproduct, combining two of the four form families. They could choose one of seven such products, defined only in terms of its basic function:
It twists or applies torque
It pumps or causes flow
It locks or makes secure
It heats or makes warm
It measures or meters
It squeezes or compresses
It inserts or injects
Initially there is some literalism, e.g. wanting to turn #1 into an electric drill, or #2 into a fireplace bellows. Once beyond that, the students deal fluently with abstract form concepts. The results are, as always, surprising and satisfying.

Elements for an Industrial Designer, part 1

Zenit Design Group

1

The purpose of this course is to initiate our students to their future profession. For most of them, it is the first opportunity to dip their toes into the water; acquiring new skills whilst working on their first industrial design project.

From an organisational point of view, they begin with freehand sketches, progress on to 2D computer drawings, create mock-ups along the way – and finish with a proper hard model, accompanied by a visual and oral presentation.

In other words, students are exposed to the design process – although a shortened one – to learn the fundamental aspect of designing: successful communication of ideas and their development.

2

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1/ Kungen, portable DAB radio, 2004 2/ Bluebird, digital camera with docking station, 2001 3/ Digital camera, 2001

Elements for an Industrial Designer, part 2

Olof Kolte

Karl-Axel Andersson

1

Developing something new that did not exist before is not easy. There are no set rules to follow. In this first “creative” project, which is a continuation of the course “Elements for an Industrial Designer, part 1”, we use the knowledge in building sketch models and prototypes to verify and communicate the result of the project.

Creativity cannot be taught, however, by getting used to confronting complex problems. By positioning yourself in a “creative state of mind”, being open to influences and making associations beyond the obvious, you can establish a “creative process” that can help you overcome the insecure, and sometimes frustrating nature of navigating unknown territory. Each and every creative process is as individual and complex as the operation of each and every one’s brain.

To collect necessary information, compile that information, establish the hierarchy of importance of many contradicting requirements and to determine the final product or concept and its appearance, is an activity that cannot be assigned to any machine, not even a computer with infinite capacity.

The focus of this project is different every year. We have done steel wire products for MUJI, Japan and MAZE, Stockholm, fabric products and small furniture for compact living. And to help us get into that creative state of mind each year, we do short workshops with several creative guests.

2004, Wire project, MUJI

Naoko Jano (MUJI)

Clay Ketter

Tim Parson

Shideh Shaygan

The task was to develop a full scale prototype with packaging and graphics that could fit into the product portfolio of MUJI and that was ready to be put on the shelf in any MUJI store. Naoko Yano, working for MUJI participated in the project.

1/ 2003, Klein Möbel project


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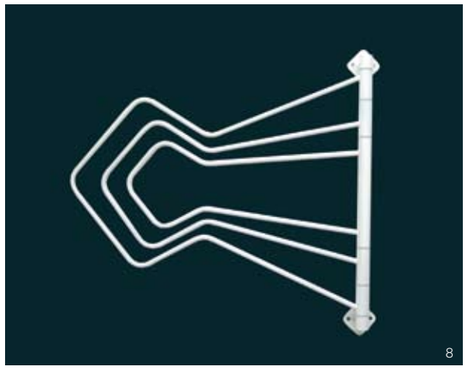
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2005, Fabric

Isa Glink

Anna Hansson

Johannes Norlander

Fabric has been around since the early days of civilisation, used in clothing, packaging, for carrying devices, for storage and many other things. At first natural fibres from animals skins such as from lamb, alpaca, camel, from plants such as cotton, linen, hemp and from insects, silk. Nomad cultures used it for constructing shelter that was easy to wrap up and transport. Sails made it possible to travel fast by sea to new continents.

More recently, synthetic fibers have been introduced and extended the field of application for fabric; sophisticated properties can be added through advanced technology and processes. The task was to develop and build a full-scale prototype of a fabric-based product. The product should have an obvious result to be decided by the student. The fabric itself should have an original expression that is easy to reproduce with existing technology in a rational manner. The product should have an extension in space, i.e. be three-dimensional. It should be packaged in a purpose-made container of fabric. The size of the container should not exceed what is possible to carry on public transport. Instructions of how to assemble and use the product should be provided. Anybody without any prior information or knowledge about the concept/project/product should be able to understand it.

The material to be used was mainly fabric with other necessary materials to provide additional structure and detailing to make the product work. It should be possible to produce the product in large numbers at a reasonable cost. The following should also be considered: efficient use of material, transport volume, assembly/mounting and sustainability

1/ Crime safe handbags with cable locks and gun prints as an indicator 2/ Confidence booster for cats and dogs 3/ Martin Luther: A result from the inspirational embroidery workshop with Anna Hansson 4/ Collapsible fabric barbecue

2006, Compact Living

Peter Johansson

Christian Hasemauer

By 2030, more than 60% of the world's population will live in cities according to a study by United Nations Human Settlements Programme (UN-HABITAT). This trend is equivalent to the addition of a city of one million residents every week. It took 130 years for London to grow from one to eight million inhabitants, for Seoul it has only taken 25 years.

To create small spaces to live in that cater to all our daily needs will be much asked for in the future. Inspiration can be found in caravans, boats, spaceships, airplanes and other places where the efficient use of space is asked for.

The task is to develop and build a full-scale prototype of a product that will be of use when forced to live in a very small space.
The product shall have an obvious result to be decided by the student. It shall be easy to reproduce with existing technology in a rational manner. The product shall have an extension in space, i.e. be three-dimensional. It should be stored in purpose-made packageing. The size of the container should not exceed what is possible to bring on public transport. Instructions of how to assemble and use the product shall be provided. Anybody without any prior information or knowledge about the concept/project/product should be able to understand it.

5/ Stuck, a wall-mounted hanger for your shoes 6/ Efficent storage and drying stand for the kitchen 7/ A shower curtain with pockets for shampoo bottles and soap 8/ Wall-mounted towel rack 9/ Pung, an elastic wall mounted laundry bag that expands with the amount of dirty clothes

Theoretical and Applied Aesthetics

Lars-Henrik Ståhl

Courses in aesthetics or aesthetic related courses were always important components in both traditional and avant-garde oriented design educations. In some schools, it was more or less a central theme. The concept of aesthetics is nevertheless not an unchanged entity. For many years one has no longer been able to confidently claim aesthetical values without also considering contextual aspects. This change might best be described as a shift from the question “what is beauty?” to “how can we discuss sensational qualities, and what is the background for such discussions?”. It’s significant for the set of courses given in the field of Theoretical and Applied Aesthetics to consider this shift in a two-folded way: by providing practice-based courses where qualities such as shape, colour or appearance are elaborated, but also highlight contextual aspects on, above all, contemporary design. Courses in Theoretical and Applied Aesthetics are offered in years one through four starting with Visual Communication Ability in the first year.

Theoretical and Applied Aesthetics, Visual Communication Ability

Mats Hultman

The course Theoretical and Applied Aesthetics – Visual Communication Ability mainly aims to train the ability for visual communication by training the students’ ability to draw and observe. While drawing real objects, like in sketch exercises with live models, the ability to look closely at things, really seeing them, is sharpened. In addition to the drawing exercises, the course also includes a project where an artistic design of some sort is added to an existing public place. The project is presented in sketches and models, and thus it trains creativity and artistic skills together with the ability for visual communication.

Kitchen in Progress

Jürgen Usinger

The global village

Today, in a globalised world, we face the challenge of intercutural didactics and design language. Global enterprises emphasise their corporate environmental and social responsibility as a sign of their competitiveness and to demonstrate that they are working in the context of sustainable life supporting systems.

Products are evaluated according to their environmental and social impacts; this incorporate forms, materials, smells, noises, and/or surfaces that reflect a newly evolving accentuated trend across all cultural levels. Regional (e.g. European) and global trade harmonisation efforts provide additional political impetus. Global environmental agreements such as the UN Framework Convention on Climate Change (UNFCCC) are starting to be seriously considered by market opinion leaders. “Resource conservation” is the slogan of the hour.

Designers’ corporate demands

More than ever, integrated understanding and thinking becomes an indispensable skill of industrial designers and forms an essential part of the long-term marketing strategy of their businesses. Positive impacts of such strategies are equally motivating for customers and employees and consolidate economic robustness of enterprises.

Product designers working in such environments need first of all to be receptive and open for other perspectives. It is impossible to purely adapt one’s own cultural experiences. On the other hand, global culture is such a varied issue that it is impossible to reflect all ethnic manifoldness.

Foreign localisation

The project-based lecture “Kitchen Making Sense”, incorporates elements of various training techniques such as focusing, structural dynamics and moderated group learning. It provides orientation in developing an intuitive understanding of foreign environments through the reflected use of the human senses. First year students are asked to design objects for an environment that is as remote as possible from their own cultural experience.

After discovering their own limitations, they acquire techniques to work “below the surface”. Using methods of structural analysis students identify situation-specific requirements of systems, processes and environments and include them in their design concept. All exercises are strictly organised as team work to avoid early individual identification with a designed object and to distract from premature conclusions and perceptions. It helps to keep up receptiveness during role plays and practical exercises.

Concept of sense and meaning

Thematically the course is centred around scenarios of daily life situations in extreme environments found among foreign cultures in Asia, Africa or Latin America, such as the life in an Ethiopian village in the dry zone of Tigray or the situation of refugees in the highlands of Waziristan near the border to Afghanistan. In the last six training seminars, students have produced almost 40 different large and small scale household appliances for heating, cooking, lighting, smoking, drying, baking and frying.

Rather than applying a concept of values, students are encouraged to discover associations and meanings and vary in their analysis between prognostic and diagnostic approaches. The envisaged environment is explored in all its aspects, including natural science, sociology, energy use, economy, psychology, aesthetics, ethics (religion) and other aspects.

Implicit knowledge and creative process

The use of existing technologies and processes facilitates an intuitive understanding of peripheral aspects of the design exercise. Archaic elements such as water, mud/clay, iron, stone, wood and natural foods are common historical denominators to all cultures and are ideally suited to be used for such training. In our effort to understand foreign cultures it is often helpful to feel the roots of our own culture. Fire, smoke, steam and the haptics of rudimentary materials and objects stimulate implicit personal associations and sense of a variety of “meanings” that help to understand traditional societies situated in extreme environments.

Combined application of implicit and conscious knowledge provides effective orientation and confidence in the identification of essential needs for solving complex situations.

1/ Clay stove for central hearth with tin can chimney 2/ Cooking furnace made out of clay 3/ Ethnic dishes cooked on the finished ovens and stoves

History of Design

Helene Fuchs
Torsten Weimarck

To give a course in the History of Design from humanistic and art-historical points of view for the students of the Industrial Design Programme has always been on the wish-list of both the design students and the Department of Art History at Lund University. During a couple of terms some years ago my colleagues and I were invited to give occasional lectures on design theory and history from an art-historical perspective, until finally, in 2002, a whole design history course (three college credits) was introduced, compulsory for the students of the ID Programme. It was given for the first time in 2002 and is since compulsory for first year students.

The aim of the course is to obtain surveyable knowledge of the history of design through a series of lectures with the support of some reference books as a useful theorethical base. Industrial design and related themes, with their connections to the visual culture as a whole, is mainly focused on. There is an emphasis on industrial design as a visual and plastic expression of social history and style, technical and industrial development, as well as fashion. Here, design appears as a “bold creator of attitudes” to life and feelings/experiences of reality, too. Different gender aspects of design are of particular interest here to develop creative insights among the students. The students learn about different contemporary design cultures and strategies together with the thinking, description and interpretation of the processes used in design and of the designed objects themselves. The history of the role of the designer is a given theme. Special attention is drawn to the user experience.

Also, to a lecturer of art theory it is very stimulating to meet the IKDC group of students and make some contribution to the reconciliation of humanistic and artistic-technological subjects.

Inspiring Introduction to Industrial Design

Despina Christoforidou

Inspiring Introduction to Industrial Design
A series of guest lectures, occasional field-trips and workshops. The aim is to introduce the students to their future profession through meetings with designers and inspiring persons from neighbouring disciplines like art, architecture, communication, design, research, etc.

The focus lies on the different aspects of the design process. Leading designers, artists, scientists and cultural personae participate as guest lecturers and workshop leaders. The lectures are followed by discussions on current issues of industrial design.

During the course, the students become aware of the differing roles the design profession has to offer and the relations to other professions. They engage in discussions regarding design; question and reflect on their profession and differentiate between the various roles available in design. In addition, the inspiring lectures provide an informal platform to obtain interesting contacts within the design field.

External Lecturers

Göran Ahlström, Professor, Department of Economic History, Lund University School of Economics and Management, Lund, Sweden.
Lena Anderson, Interior Designer, Stockholm, Sweden.
Olle Andersson, White Design, Gothenburg, Sweden.
Joe Ballay, Industrial Designer, Professor Emeritus Carnegie Mellon, U.S.A.
Maria Benktzon, Professor, Industrial Designer, ErgonomiDesign, Stockholm, Sweden.
Jonas Blanking, Industrial Designer, Blanking Design, Malmö, Sweden.
Olle Bobjer, Ph.D. Industrial Design, MSc Ergonomics, ErgonomiDesign, Stockholm, Sweden.
Anna Bodestig, Car Designer, Scania, Södertälje, Sweden.
Lasse Brunnström, Co-opted Professor, School of Design and Crafts (HDK), Gothenburg, Sweden.
Anna Carell, Industrial Designer, Ergonomidesign, Stockholm, Sweden.
David Carlson, Design Manager, David Design, Skanör, Sweden.
Edwin Datschefski, Biologist, Environmental Management, BioThinking International, London, U.K.
Robin Edman, CEO Svensk Industridesign – SVID, Stockholm, Sweden.
Annika Eliasson and Jenny Nordberg, Industrial Designers, BergBerg, Malmö, Sweden.
HC Ericsson, Graphic Designer, Professor, School of Design and Crafts (HDK), Gothenburg, Sweden.
Per Eriksson, Architect, Innovative Design, Chalmers, Gothenburg, Sweden.
Madlein & Stefan Fallgren, Textile Design, Saldo Form & Communication, Huaröd, Sweden.
Roman Gebhard and Tad Toulis, Industrial Designers, Design Raw, San Francisco, U.S.A.
Isa Glink, Design Manager, Kinna Sand, Hamburg, Germany.
Ann Granberg, Industrial Designer, Nya Perspektiv Design AB, Gothenburg, Sweden.
John Grieves, Industrial Designer, ErgonomiDesign, Stockholm, Sweden.
Jenny Gärtner, Industrial Designer, Artist, Helsingborg, Sweden.
Torsten Halén, Bachelor of Law, Swedish Union for Copyright SFU, Stockholm, Sweden.
Jan Hampf, Designer, Hampf Industridesign, Särö, Sweden.
Anna Hansson, Architect & Textile Designer, Malmö, Sweden.
Mia Hesselgren, Design Manager, Ytterborn & Fuentes, Stockholm, Sweden.
Leif Huff, Head of Design, IDEO, Munchen, Germany.
Ehlén Johansson, Industrial Designer, Pelikan Design, Copenhagen, Denmark.
Peter Johansson, Artist, Malmö, Sweden.
Sven-Erik Juhlin, Industrial Designer, ErgonomiDesign, Stockholm, Sweden.
Clay Ketter, Artist, Lilla Uppåkra, Sweden.
Johannes Kiessler, Industrial Designer, Milano, Italy.
Per-Olov Landgren, Industrial Designer, Director of Studies HDK, Gothenburg, Sweden.
Johan Lindau, Furniture Designer, Blå Station, Kristianstad, Sweden.
Jonas Lindvall, MFA Furniture and Interior Architect, Lindvall A&D, Malmö, Sweden.
Linda Lissola, Industrial Designer, Zenit Design Group, Malmö, Sweden.
Björn Kussofsky, Graphic Designer, Stockholm Design Lab, Stockholm, Sweden.
Fredrik Magnusson, Designer, Propeller Design, Stockholm, Sweden.
Rune Monö, Industrial and Graphic Designer, Professor of Semiotics, University College of Arts Crafts and Design, Stockholm, Sweden.
Eva and Peter Moritz, Industrial Design and Arts & Crafts, Moritz Design, Lund, Sweden.
Skotte Mårtensson, Senior Lecturer, Electro Science, Manager of Centre for Technolution, Faculty of Engineering (LTH), Lund University, Sweden.
Stina Nilimaa-Wikström, Industrial Designer, Electrolux AB, Stockholm, Sweden.
Birgitta Nilsson, Ergonomist, STFI Packforsk, Stockholm, Sweden.
Johannes Norlander, Architect, Designer, Stockholm, Sweden.
Malin Orebäck, Industrial Designer MFA, MBA Design Management, ErgonomiDesign, Stockholm, Sweden.
Mikael Pawlus, Industrial Designer, Caran Design, Malmö, Sweden.
Johan Persson, Design Manager, NOPICNIC, Stockholm, Sweden
Ludwig Qvarnström, Doctoral Candidate, Department of Art History, Uppsala University, Sweden.
Nirvan Richter, Architect, Furniture Designer, Norrgavel, Malmö, Sweden.
Mårten Rittfeldt, Industrial Designer, Zenit Design Group, Malmö, Sweden.
Maria Schmidt-Larsson, Industrial Designer, IndustriDesign MSL, Gothenburg, Sweden.
Shideh Shaygan, Interior Designer, Shaygan arkitektkontor, Stockholm/London, Sweden/U.K.
Lisbeth Svengren-Holm, University Lecturer, Design Management, School of Business, Stockholm University, Sweden.
Stephan Söderholm, Designer MSD, Semcon Design, Gothenburg, Sweden.
Johan Ullman, Physician, Inventor, Ullman Human Design Group AB, Gothenburg, Sweden.
Ulrika Vejbrink, Industrial Designer MFA, ErgonomiDesign, Stockholm, Sweden.
Oliver Vogt, Vogt+Weizenegger, Berlin, Germany.
Nils Westerlund, Technical Communicator, Semcon, Lund, Sweden.
Birgit Åkesson, Dancer, Choreographer, Stockholm, Sweden.
Kenneth Österlin, Industrial Designer, Designer SID, Designkonsulterna, Gothenburg, Sweden.

Internal Lecturers

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Sybs Bauer, Industrial Designer, Senior Lecturer, Division of Industrial Design, Faculty of Engineering (LTH), Lund University, Sweden.
Claus-Christian Eckhardt, Industrial Designer, Professor, Division of Industrial Design, Faculty of Engineering (LTH), Lund University, Sweden.
Bodil Jönsson, FD, Professor, Rehabilitation Engineering, Certec LTH, Lund University Sweden.
Thord Kjellström, Designer, Lecturer, Division of Industrial Design, Faculty of Engineering (LTH), Lund University, Sweden.
Olof Kolte, Industrial Designer, Lecturer, Division of Industrial Design, Faculty of Engineering (LTH), Lund University, Sweden.
Per Liljeqvist, Industrial Designer, Lecturer, Division of Industrial Design, Faculty of Engineering (LTH), Lund University, Sweden.
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Curriculum examples

Year three

Contents

Industrial Design Project 1

Per Liljeqvist

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The course commences with an introduction to what defines a room, space or a situation. How do we as humans relate to these situations and when does a need occur? The students analyse a choosen situation that relates to a person in order to identify a need. By applying a creative process, an innovative solution shall be presented for a new product that responds to the need of a suggested user. Students will take into consideration aesthetical and communicative aspects that relate to the product.

1/2/ Ignorance is Bliss – Extreme Makeover, a comment on female genital cutting, the project takes its origin in the void surrounding this subject, 2004 3/ Dishcloth calendar, 2005
4/ Project P, toothbrush holder reminding you to take your pill, 2004

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1/ Space-saving induction stove, folds away when not in use or swivels 90 degrees to allow fexible workingspace, 2006 2/ Future Transportation Concept, 2006 3/ Scanbook and Printbook, wireless printer and scanner with bookshelf docking station, helps keep your desk clean and clutter-free, 2006

IKEA PS, 2003

Lars Engman

Sigga Heimis

Margaretha Rosén

Gunilla Wåxnäs

1

In the spring term 2003, IKEA proposed a project for our students to participate in the design for the upcoming IKEA PS Collection; the theme set for us was to venture beyond superficial styling and decoration. Inspiration was to be drawn from: “diversity” (local/global), “values” (human sentiments), “sustainability” (environment/ethics), “re-think” (experiment/ innovation), “rebellious” (challenge what’s known) and “fun”.

This project was then carried out in the fall term. 20 students from the third year and higher participated, enabling them to learn from each other and share the experience gained in higher years. The outcome was a good blend of design proposals ranging from humorous approaches to profound reflections on the brief. IKEA expressed interest in several concepts, two of which were sold. The “Enköping” table became part of the 2006 PS Collection “what if”.

Extracts from the brief
…the concepts shall put IKEA on the edge…
…solving real problems in the everyday life of people…
…breaking design codes using new materials and technologies…
…creating meaningful step-stones to the future…

Recommended materials were: particle board, recycled plastic (PET, CDs), recycled milk cartons, sheet metal, corrugated paper/starch and bamboo plywood.

2

1/ Enköping, wall mounted drop leaf table, featured in the IKEA PS-collection 2006 2/ PET Chandelier, dispenser for wine, sweets, etc

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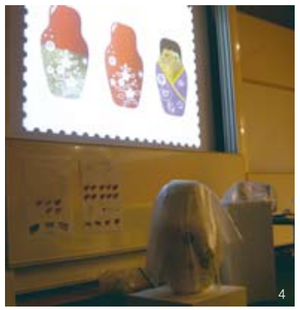

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Collaborations Between IKEA and Design Schools in the World

Lars Engman

Cooperation between design students and manufacturing companies can have positive consequences for both parties. The students learn about the different aspects of production processes in practice and the companies can learn a great deal from interacting with the students. For IKEA, the experiences from working with design students have been very positive. We have collaborated with design schools from all over the world, for example, Moscow, London, Tokyo and Lund. At all times it has been an instructive and interesting experience. In some cases, the students have continued to work for IKEA on a freelance basis. Some have even become in-house designers at Ikea of Sweden.

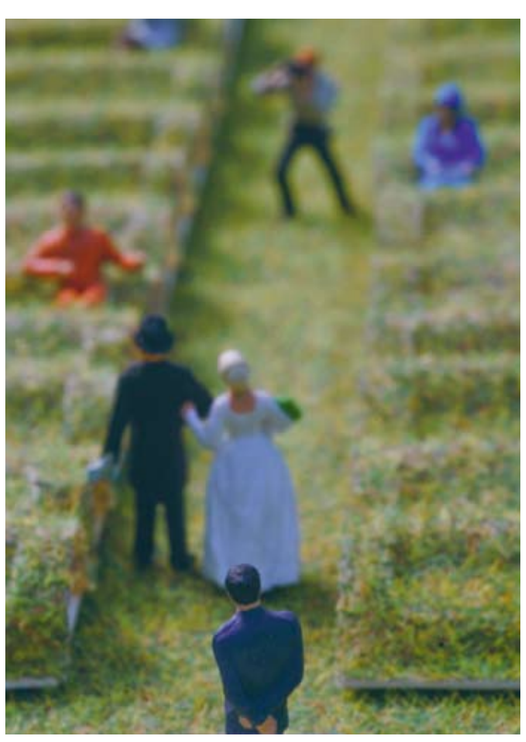
IKEA aims to cooperate with talented young people who have interesting visions for the future and the students appreciate the opportunities to have their designs noticed and sometimes even produced all over the world. Hence the collaboration is positive for both parties involved and much appreciated.

1/ 2/ 3/ 4/ Final presentation for IKEA in our auditorium at IKDC 5/ 6/ 7/ 8/ Flat-pack tree house tables

Theoretical and Applied Aestethics, Space and Interiors

Lars-Henrik Ståhl

The course Space and Interiors for the third year students at the Industrial Design Programme highlights different aspects on furniture and interior related design. Besides lectures about spatial concepts and furniture design, the course consists of a series of practice-based assignments. The first assignment deals with interpretations and transformations of images into models, by that investigating how various qualities of space and interiors may be expressed, visualised and communicated. The second assignment considers a redesign of a piece of furniture for a new context. From an ordinary piece of furniture, bought at a flea market or at IKEA's price-off corner, the students are to create a new piece of furniture. The starting point, i.e. the existing furniture, is here, in its simplicity, a helpful material. At the same time, it offers various options and provokes different standpoints, aesthetical as well as technical. Finally, the third assignment deals with the visualisation of space with the furniture from the second assignment as a basis. Working in groups, the students are asked to find common spatial concepts for their pieces of furniture. Generally, furniture and interiors are created for specific spaces. Here, the furniture should also affect the spatial qualities.



Theoretical and Applied Aestethics, Visual Metamorphosis, part 1

Maria Udriot

The aim of this course is to develop vision and perception of two-dimensional compositions, contrast and visual materialistic qualities. Through a number of exercises students practise repetition and composition, to create a fabric print which they get to apply using different printing techniques.

Industrial Design Project 2
Claus-Christian Eckhardt
Per Liljeqvist

1

Design today cannot be looked upon from an isolated viewpoint. Most projects require in-depth collaboration with specialists from other disciplines; drawing on their diverse competences in order to keep a holistic and flexible perspective. Investigation and comprehension, the ability to blend and balance far-reaching technical, economic and cultural visions are a necessity. The designer's task then is to keep an individual stance whilst being able to interact in team situations, prevailing over the egoism of individual disciplines.

To put our strategy into practice on an educational level, we cooperate with other university departments. One case in point is our relationship with the Department of Electroscience, which is running a course in "electro science possibilities and limitations". Faculty and students of that department are actively drawn into our design projects, acting as mentors to our students throughout their education.

In addition, companies that apply these principles of teamwork and knowledge transfer organise design projects with our students so as to add a certain level of realism to their education.

2

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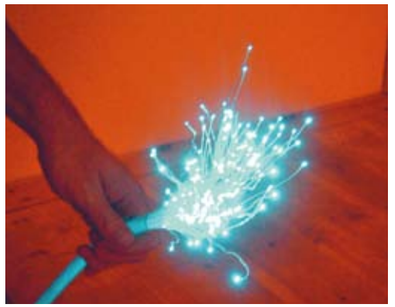
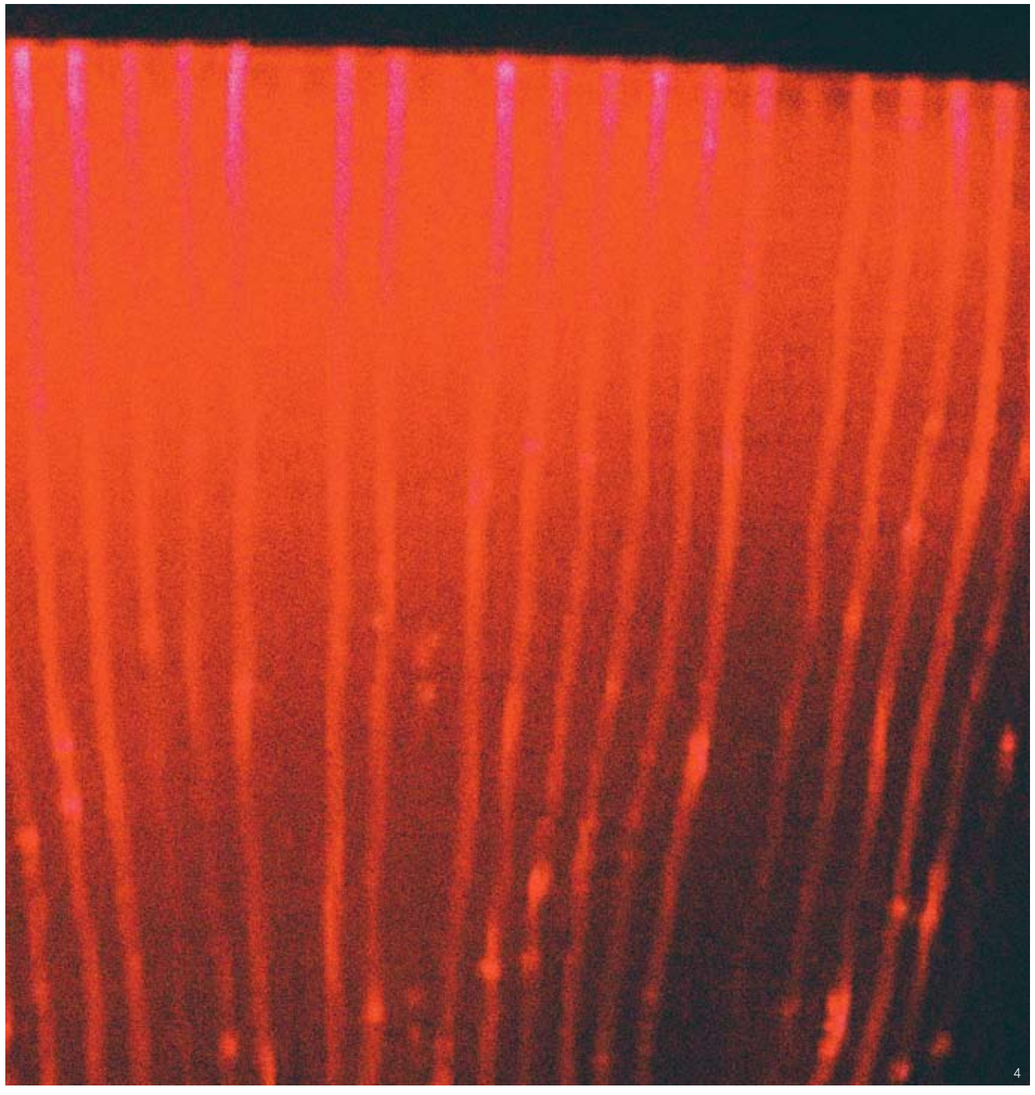
Exemplary for these educational joint ventures are our cooperations with close neighbours: Sony Ericsson, companies in the IDEON Science Park, IKEA and others. Our students are thus exposed to professional marketing, research and design personnel, thereby supplementing their academic prowess.





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1/ Wristband communication and entertainment device, 2003 2/ Low voltage system for domestic use, 2006 /3 First-Aid: flower pot providing water and light, 2002
4/ Electric light curtain, 2002

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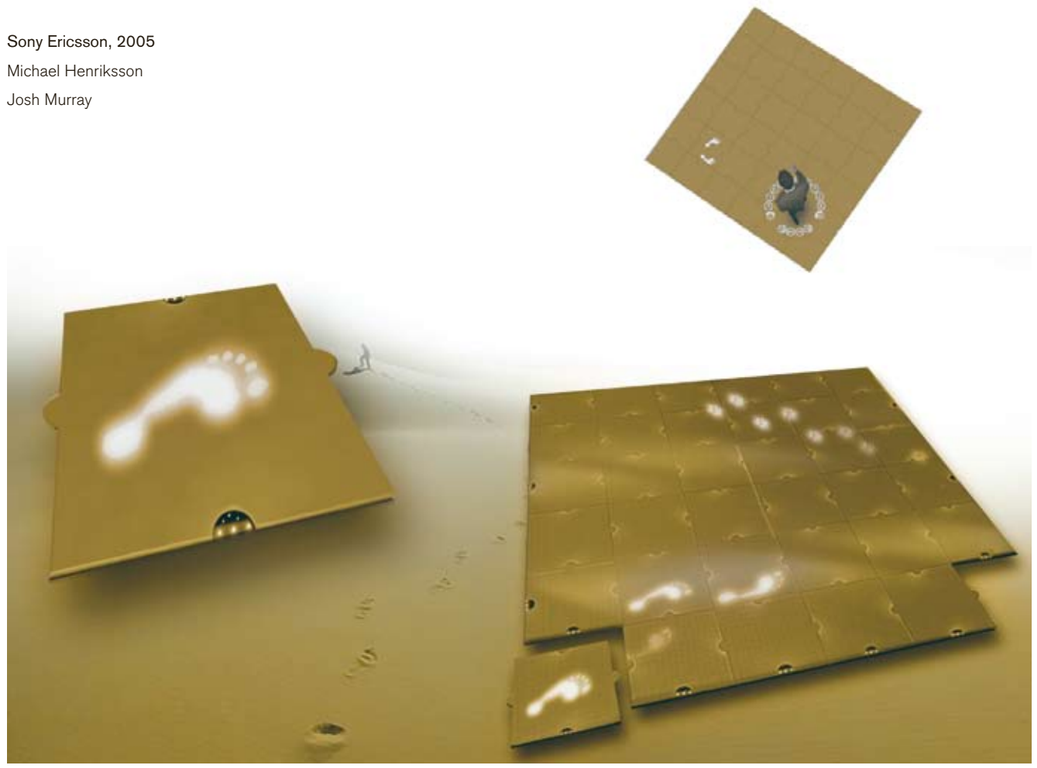
1/ Electric Violin made of aluminium, with ebony wood details, 2004 2/ Beatrice & I, a project of endless questioning, resulting in "Beatrice": a flea market find turned into an electric kettle and "I": the lost, uninspired student who found a way back, 2004 3/ Le Chef: keeps track of your recipes and acts as a constant source of inspiration in the kitchen, 2004

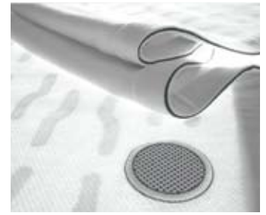
Sony Ericsson, 2005
Michael Henriksson
Josh Murray



Mobile communication has originated from the need of making phone calls wirelessly. Technology evolves over time and we are currently in the era of including image based information in our everyday use of mobile interaction. Accordingly, we can relate wireless communication to the senses of hearing and seeing, but what is the next step? What new products or applications could come out of addressing all senses in contexts of communication?

In this project, students from the Division of Industrial Design working together with students from the Department of Electroscience were encouraged to think about communication in the broadest sense, using all senses and technologies (existing as well as innovative ones). Here are three examples of the result.

Step In – letting existence be known
This idea comes from the feeling of seeing footprints in the sand of an otherwise empty beach. No people in sight, yet footprints alone grant comfort that you are not completely deserted. The idea evolved into a concept of intelligent tiles for public spaces. The tiles are made from durable, pressure sensitive LCD panels, integrated with flat-panel speaker technology which creates a network of 3D sound.



Distant Presence – intimacy despite distance
Springing from the subtle, often unspoken communication found in intimate relations, this blanket conveys a feeling of presence of an absent partner. The textile senses how it is being touched and then glows or heats up in these areas on the corresponding blanket.

Silhouette – bestowing a sense of abstract presence
Replete with digital video-camera, microphone, stereo speakers, signal processor and a full-size LCD panel, this device helps you to create the illusion of standing on opposite sides of a foggy window even though in reality you might be worlds apart.

IKEA NORRÖ, 2006

Henrik Bengtsson

Design Brief

Background

Today, many people are living in small flats with even smaller balconies. Therefore, the need for small smart outdoor furniture is growing.

Another issue for people is the lack of time. Therefore the focus of this project was to offer products and concepts for the confined space on balconies that are care-free and give people a chance to sit outside and relax for a while.

At the same time the market for outdoor furniture is getting tougher and tougher; this emphasizes the importance of offering new, innovative products with a strong company identity at a competitive price that makes a strong impression.

Objective

NORRÖ will consist of one or two seating function(s) for a balcony. It is important that the products are easy to maintain and that they are easy to put away when they are not in use.
NORRÖ will also have a strong identity and a function that signals something new!

NORRÖ will be aiming for people living in small flats with small balconies, whereby the price issue could be an important factor. The size and use for a balcony differs a lot. Balconies are often very small and are often used as a storage area. People see the balcony as an “extra-area” and tend not to want to invest large sums of money in it. With price being a relevant factor, products that can be flat-packed and that do not require advanced production methods will have a big advantage.

Keywords

Innovative and care-free.

Functions

A seating function for the balcony.

Material

In order to reduce maintenance, wood should not be used. Otherwise, the material choice is up to the designer.

Colours

Concrete and grey colours are often used for balconies. Therefore it is a possibility to let NORRÖ be a colourful piece of furniture.

Thai-Swedish Design Cooperation, 2005

A Cross Cultural Design Project

In May 2004, a group of representatives from selected Swedish companies, accompanied by the Swedish Federation of Trade, travelled to Thailand to visit a group of sanitary product manufacturers. The quantity and quality of products was impressive – the problem was that neither the standards nor the designs were suitable for the narrow Swedish market. Following the trip, a student project between a Thai and a Swedish design school was initiated to address these issues. Such cooperation would also help to multiply contacts between designers and companies in both countries.

In January 2005, a group of industrial design students and teachers from Lund University travelled to Bangkok to participate in a workshop together with students from the KMUTT (King Mongkut's University of Technology in Thailand), which was held at Bangkok Code in Bangkok. The purpose was to create a platform for design schools to work from. Eight students and two teachers from each school undertook the project. One goal was to find methods for cooperation that suited their different ways of working.

The workshop was the start of a student project concerning bathroom interiors. The initiative came from the Swedish Federation of Trade with the goal to generate products for bathroom interiors such as faucets and toilets for the Swedish and Nordic market. The design students needed to consider that modern dwellings often are sold on the interior in the kitchen and the bathroom – and that the design is expected to last for up to 20 years before being replaced with new products.

Process

The students were divided into nine groups that participated in a start-up in Bangkok where they visited factories and did some early brainstorming. After this workshop, research commenced on current trends and available products on the Swedish market. With that research, the groups formulated themes and gathered pictures for inspiration – describing feelings, functions, shapes, etc. The pictures were used as inspiration for sketching ideas of how the themes could be turned into products.

When entering the final phase of designing, more detailed functions were considered and the extensive work of producing CAD drawings (3D modelling) began. In April 2005 a second workshop was held at the Ingvar Kamprad Design Centre in Lund, Sweden. That workshop was the starting point for the production preparation phase that connected the students' work to professional designers & engineers as well as to the manufacturers in Thailand. The work was presented and simple paper models were made to study the concepts full size. That way, each group was critiqued and was able to consider changes before producing final presentation material. This was done to ensure that the result of the cooperation would achieve a professional standard.

Result

The companies involved wanted to see realistic product ranges. As all students had different ideas of how this demand was to be adapted to their projects, the final solutions ranged from highly realistic to artistic, futuristic and rather conceptual products. There was a tendency among the Swedish students to be inspired by the nature and culture of Thailand in their design, while the Thai students tried to generate more conceptual ideas of how Scandinavians use their bathrooms.

Can design traditions from minimalist Sweden be combined with those of the melting pot of influences that is Thailand? Project leader Martin Weiderstrand sums up the result:

"A strange bird would be the result, no doubt. After concluding this project I dare to say that it works just fine, it's just a matter of communication. The result is great in its diversity, from products that could be pushed into production today, at an excellent price, to entirely new products that require a lot of work to be produced, but show us a great and promising concept for the future. Others take on specific problems such as renovation of a bathroom, giving us interesting and efficient solutions that, if put into production, would save both time and money."

Experience

One of the Swedish students expresses her impressions as:

"The expectations of this project were immediately high. The opportunity to go to Thailand and cooperate with students from a design school in Bangkok was something very unusual and hence very exciting. We were all overwhelmed by the trip, the arrival in this country, the people, the hotel and the extremely lively city.

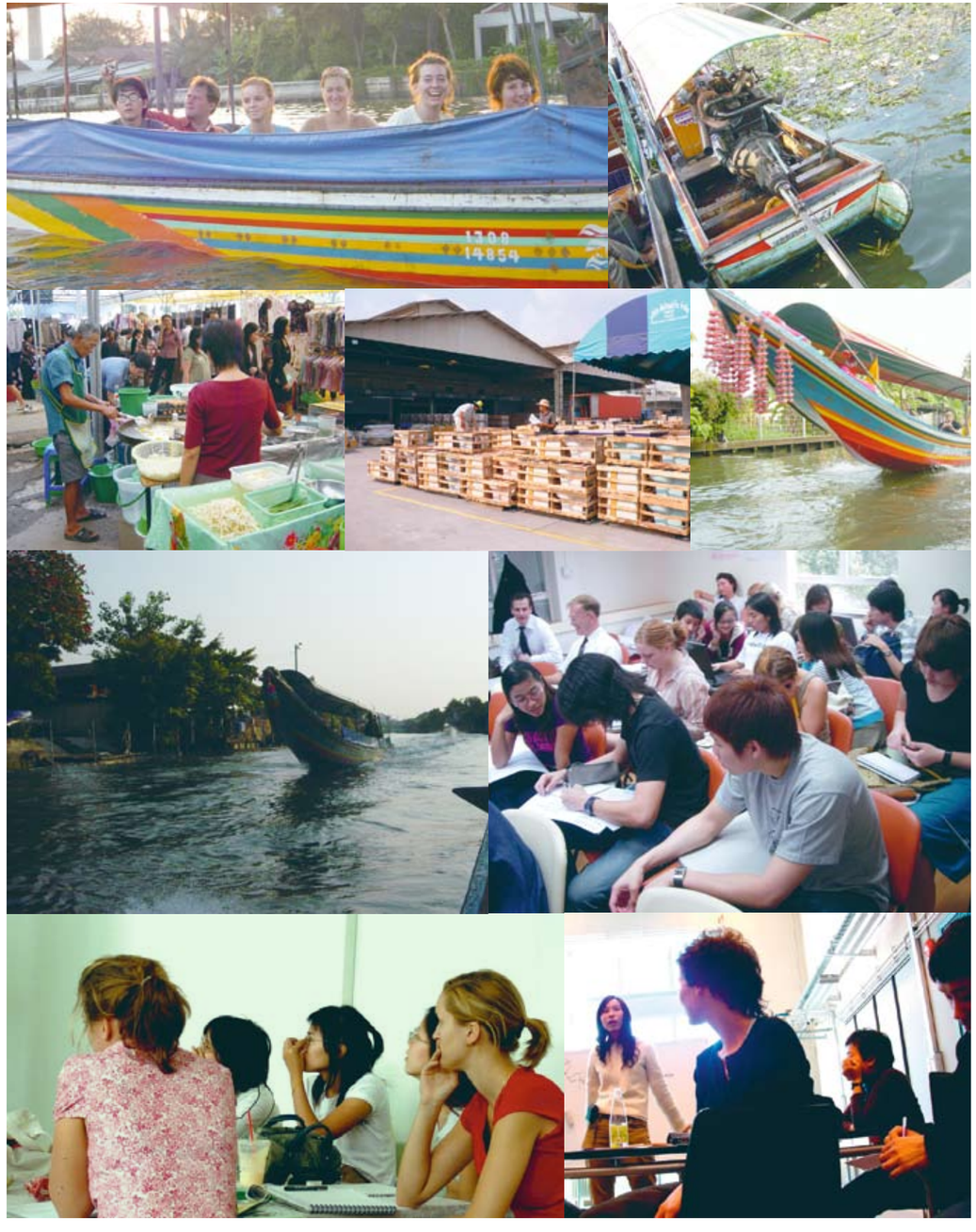
Naturally, our first meeting with the Thai students was somewhat reluctant, we were watching from a distance; it took until dinner later that evening before we started really talking to each other. There were a lot of new names to remember and linguistic boundaries to break – but next day when the actual workshop started it was rather obvious that no matter what culture we were from, a similar interest and task is enough to make friends.

The differences in culture and habits were a good starting point to formulate creative ideas and the workshop week in Bangkok gave everyone a head start on the project. We held many presentations for the other groups and got feedback from our teachers and company representatives who were present during the entire workshop. There were differences in how feedback was given and received and how presentations were performed. These were a few among all the things we had to learn during this short week in Bangkok."

Significance

Prof. Claus-Christian Eckhardt on the importance of cross-cultural projects:

"Cross-cultural understanding and behaviour
In this globalised world, the ability to navigate and understand different cultures becomes the key competence. Students cannot acquire it on a theoretical level; they must submerge themselves in experiences gained in real life. Direct personal contact with people and travel to foreign countries broadens the individuals' horizon substantially."



Thai-Swedish Design Cooperation, 2005

Outcome

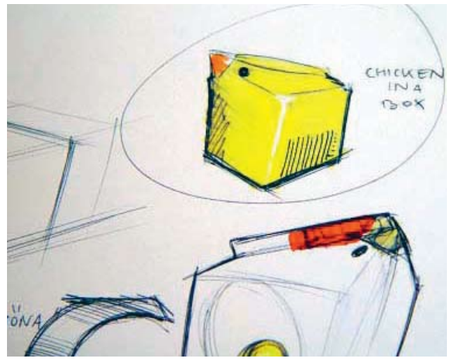
At the second workshop at IKDC in Lund the work was evaluated using simple full-scale models before beginning with the refinement phase. The final result was then presented in the form of 3D models.

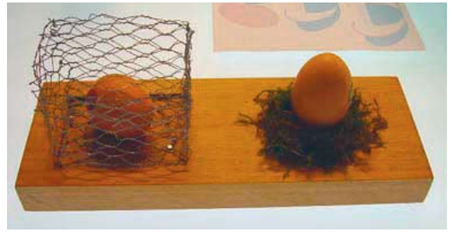
Curriculum examples

Year two

Contents

Workshop, Pack an Egg
Sebastian Peetz





Packaging graphics and graphic design course and workshop. Get information about graphic design and packaging. Take a moment, decide for a function, transform it into a shape, shape is the first of three steps of packaging Think about a material, take it, experiment with it, transform it into the shape, check your idea, develop the details, think about unpacking, don't forget the waste factor, sound, recycling. Focus on your target group, age, status, life-situation. Communicate your function without words. Use colours, grids and pictograms. Make drawings, show your concept of bringing the egg to someone else, explain how it works, opens, closes. How you throw, drink, smell, breathe, squeeze the package, refine the graphics, be the best, draw, colour, paste, cut. Create a packaging and learn about all there is between the product and the customer. Create a new design.

Design methodology

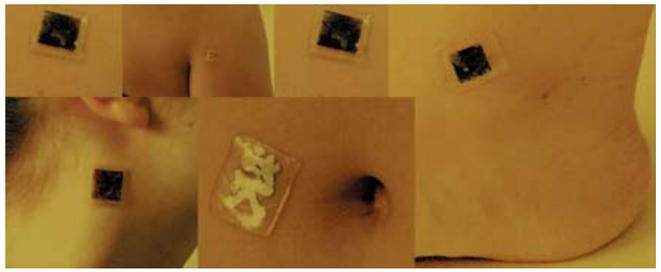
Claus-Christian Eckhardt

Design process and design methodology habitually have a tendency to be confused; although related they are dissimilar. Design process is a succession of particular actions over time, generating desired or unforeseen results. Design methodology is a formulation of the systematic of how and when certain measures must be taken. Once a method is chosen, a process can be applied.

As incited by Tomás Maldonado (HFG Ulm), issues in design cannot be resolved solely based on an idiosyncratic artistic approach alone; it is through application of scientific and technological knowledge that appropriate design solutions can be found.

At the basis of the design methodology course lies the formulation of a strategy that – being individual, variable and design related – enables students to plan and to (re)act accordingly. This rationale is based on the assumption that a majority of design tasks in the educational context is open to interpretation and cannot be anticipated. To solve them, the schedule that delineates all measures must be constantly supervised and adapted if necessary. The aim is to relate the methodological problem analysis and synthesis in industrial design, i.e. the overall planning, to those particular actions that need to be performed to resolve the given problem. It is a holistic model of creative and scientific proceedings.

Students shall be made aware of the complexity a designer is faced with – to establish methods that enable them to subsequently execute their own design process. In addition to their self-managed design tasks – key to their individual progress – a project with a company is executed to practise the realisation of external schedules and milestones.



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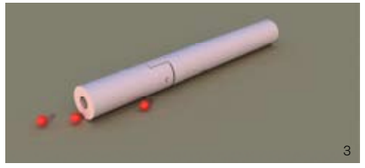

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AstraZeneca, 2001

Per Fridh

In the autumn term 2001 – within the framework of the design methodology course – the students of the 3rd semester Industrial Design took part in a workshop with AstraZeneca to get a more hands-on feel for the industry.

The startup meetings were very positive – just like in "real" life – the actual briefing for the teacher as well as the students arrived at the very start of the course. The project was to be about the findings of latest studies and research done by AstraZeneca into a new indication hitherto named "common laziness" – against which the curing formulation "Cepofan" has already been developed. There were no restrictions given as to how it could be administered except for I.V., and technical solutions for dosing and packaging had previously been researched. "Cepofan" is to be sold as an entry level and exclusive product requiring no prescription.

The reason for involving students was to get additional external input for new approaches to administration, packaging, prescription and how the target group should be addressed. This task polarised the students, being more complex than usual for a 3rd semester class. Also, in design methodology, the students get their first exposure to methods and the analytics of designing. Normally, they analyse a coffeemaker or any industrial product and improve its handling, function and design as well as addressing economic and ecological aspects. The "Cepofan" project in contrast required more visionary and holistic thinking. This fact led to many questions with respect to what precisely was the problem to be solved. For the first time – within a very tight schedule – the students had to actually use methodical and analytical tools of the design process. Because of that, the creativity of this project should be well honoured. We are hoping to continue the relationship with AstraZeneca in the future.

1/ A plaster with a pattern inside, containing the active substance 2/ Turns blue to purple! A gelatine tablet to re-energise you 3/ Pill dispenser

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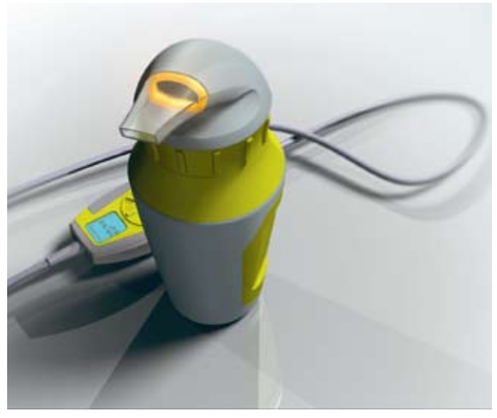
Tetra Pak, 2002-2005
Thomas Waldner

Tetra Pak Research and Development is located in Lund and is developing new material and machine technologies for existing and new packaging platforms. Tetra Pak Research and Development is organised into the three departments Material Technology, Machine Technology and Package Development which drive research and development for Tetra Pak with a customer and consumer focus. The initial briefing allowed Tetra Pak to awaken the students to the complex world of packaging design, consumer drivers and the diversity of consumer needs and preferences. Seven intense weeks followed where Tetra Pak and the students had several opportunities to review the creative solutions being created. Representatives of Tetra Pak attended the final presentation and the students demonstrated a high level of creativity , design skills and presentation dynamics.

1/ Babylon, ice cream packaging concept, 2003 2/ Transformable package for liquids, 2004 3/Packaging concept for a juicy milk product with foldable cardboard spoon, 2002
4/ Morning X-Press, portable breakfast, 2004 5/ Multipack, 2005 6/ Refreshing meal replacement to go, 2002



Teamakers, 2006

We restructured the design methodology course in 2006. Students began with a warm-up phase, designing a low-tier toaster. Instead of the usual long-term Tetra Pak project, this was followed up by a complex one: designing and modelling a teamaker. While on this project, students took part in a three-day “pack air” workshop and a one-week Tetra Pak assignment. The idea was to expose students to working on several tasks simultaneously, training not only the methods relevant to the design process, but also their creativity and coordinative skills.
For the teamaker project, a suitable brand had to be chosen and argued for. Various processes of preparing, serving and drinking tea were analysed and evaluated. Once a meaningful new concept was identified, it was developed and later modelled in 3D as well as a physical model.

Computer Aided Product Development and Simulation, Autodesk Alias Studio Tools

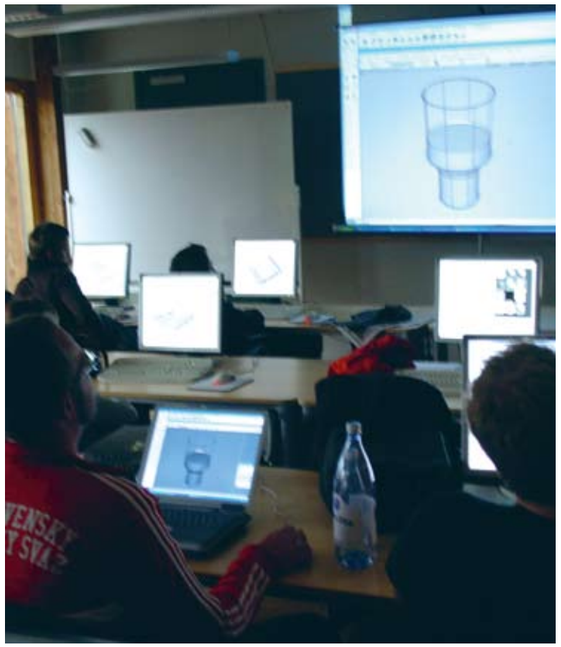
Andreas Hopf

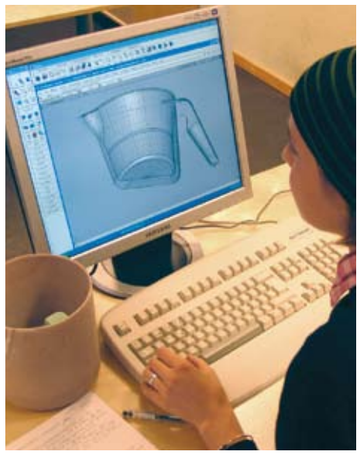
Often, the rationale in teaching and using complex 3D-software is: to produce the ubiquitous flashy images or animations of design concepts and create some data along the way. This conventional approach is a rather short-sighted view on a topic, which has far greater importance for the contemporary design process, especially in markets such as consumer electronics, small home appliances, packaging and the like.

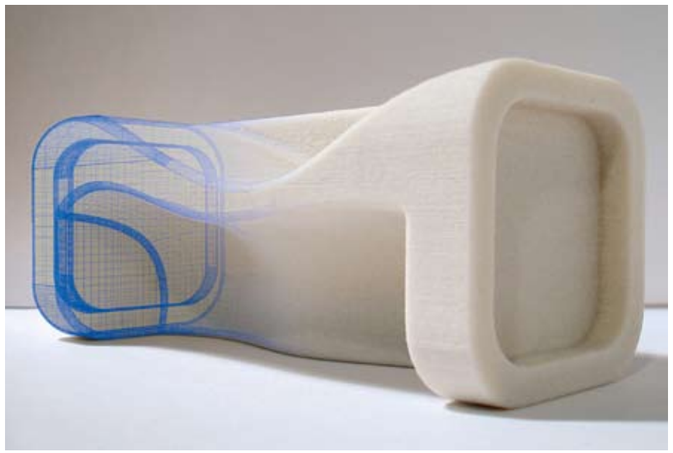
The approach in the industrial design courses at LTH is somewhat different. Our aim is to embed 3D-software education in the curriculum in such a manner as to preserve the maximum of creative expression whilst generating meaningful images and/or data at a later stage. There are three prerequisites that should be fulfilled when using 3D-software in the design process:

- Images are meaningful only if they precisely denote those visual aspects of a design concept (form, material, texture and colour), which are relevant for the evaluation and decision-making process.
- Animations are relevant only if they either contextualise a design concept to confirm a specific attribute or illustrate its versatility and functionality.
- Data is useful only if it is transferable and exploitable for engineering, prototyping or manufacturing.

In other cases, the direct hands-on approach of working with sketches, 1:1 scale drawings, mock-ups and precise models yields better results in terms of design quality, time and budget. The sensual and perceptual aspects of manual design work cannot be underestimated, especially in designing furniture and objects that derive their form language from tactile material properties. Even so, at any given point the intermediate result can be transferred into 3D space for further investigations and/or refinement.







Teaching and personal coaching is done adjacent to or directly at studio level so as not to separate the 3D-process from the students' daily (and sometimes nightly) workplace.

At this time, we are using Autodesk Alias Studio Tools software, because it presents the fewest limitations in free conceptual exploration of form and integrates easily with other 2D/3D software as well as rapid prototyping and CNC systems. As technology progresses, this might change in the future if benefits can be identified, qualified and quantified.

The first step is an introduction to the software interface, menus, icons and window system, the latter being the key to swiftly navigate and design directly in 3D-space. In understanding the latter, emphasis is placed on the fact that many operations and transformations have a close relationship with manual model making; therefore students are taught the concept of modelling strategy ("where to begin"), which is crucial when it comes to a design process directly wrapped up in 3D with no traditional 2D groundwork. We try to discourage downloading demo and sample models in order to keep the students from the common mistake of "preset design", the emphasis is placed on understanding what 3D surfaces are and how they can be used and "subverted". The same approach is used in the production of images. By observing material properties, light and composition in real life, the understanding of "what makes things look the way they look" is developed so the creation of plausible and meaningful imagery comes much more natural than simply using default settings found on- or offline.

As of 2006 students can also output their data with a 3D printer and other means of rapid prototyping if traditional CNC milling is too slow or costly.

Theoretical and Applied Aesthetics, Product Semiotics

Gunnar Sandin

Our everyday things speak to us. There is always a message, or a number of messages, linked to the things we see and the things we use. They speak to us through the ways they look, feel, smell, sound and taste – they tell us how to use them, they point to their relation to other similar things, they show their belonging to cultures, life-styles, attitudes. The semiotic aspect of a product deals precisely with these kinds of messages. A mobile phone, a toothbrush, a road sign, a bus shelter – and so on – may on a first glance seem to have a fairly self-evident appearance. But when we begin to think about what these objects can provide and what feelings they evoke, we find that they may convey quite a complex cluster of "messages". The person who should know most about the message of a product would be the designer, as the one who has "tested" different possible messages, and by shaping them so as to get our attention, attract us, and make us understand.

In the Product Semiotics course for the second year students, much effort is put into a critical analysis of everyday objects and their cultural context. Within the course there are several short exercises. One of them can be summarised as follows:

Take as point of departure a failed product, a badly communicating product, and work with the semiotic shortcomings that you find in it or in its presentation.

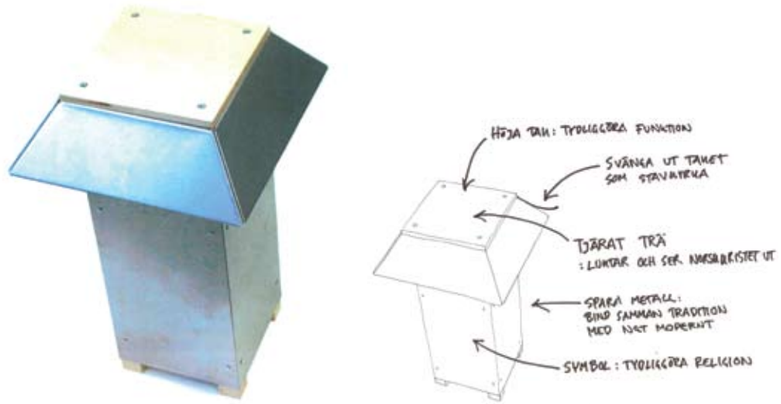
Change your chosen product's semiotic qualities – so that it conveys another message than the original one. You may proceed to improve the original message in order to make the product better. Or, you may also, starting from the set of found weaknesses, work out a radical change that leads the product in a completely new direction, perhaps to a completely new area.

If for instance the dubious or bad feature is related to the ergonomic shaping, the choice of control buttons, the colour, etc, you may depart from this "wrong" feature and use this "negative" situation as a positive point of departure.

Make an analysis of how your suggestions will alter the field of usage and how a target group may be either broadened or adressed specifically.

The notion of target group is here treated not as a group of people specified beforehand in order to be suited, but as one that can be discovered when the product is altered. The target group may thus here emerge as a consequence of the suggested alterations, rather than as an estimated pre-condition. This way of thinking leads away from the common solving of a specific technological problem. Instead, it provokes thoughts where a "problem" may lead positively to another set of issues. This way of thinking is, in my view, at the very core of a designer's identity, because it allows the designer a role of seeing alternatives, and in the end other, and different, ways of living.

As an example of a response to this exercise in Product Semiotics one could mention a suggestion to an alteration of a lamp, made in 2002 by a second year student (see fig. on opposite page). A somewhat pure and enclosed lamp, solid, metal-based and "Scandinavian" in its minimalism, was turned into a sacral and literally more open one, giving off a tar fragrance and featuring a Norwegian stave church roof. This suggestion to a radical semiotic change led to a fruitful discussion at the final review not only of form, colour and technology, but of possible receivers' cultures and of design clichés.



Light and Colour

Jan Janssens, Thorbjörn Laike

Located in the School of Architecture, the Department of Environmental Psychology focuses on how individuals are affected by design and the built environment. The goal is to develop new ways to improve the environment and create designs that will more effectively meet the needs of end users. The department's staff consists of both behavioural and planning scholars and has many fields of interest. The primary function within the design education is concentrated on design elements relating to light and colour. We provide students with a comprehensive overview of the effects that light and colour have on individuals and their surroundings. The students are presented with several lectures given by professionals from the field and visit leading lighting manufacturers. The students also experience hands-on manufacturing and development of lighting designs and they are offered several scenarios to choose from. The students are required to design and build a lighting prototype and, as part of their design process, they must develop a booklet with illustrations describing their project and design concept including floor plans, material selection and all technical information. This booklet is intended to help students with the presentation and marketing of their products. As part of their design concepts, they must consider the function of the lamp as well as practical issues such as fire safety, colour rendering and light distribution. The course is intended to give students a well rounded overview of light and colour as well as the opportunity to create a solution of their own. It is our goal that students gain more in-depth knowledge of how these elements of design will function within the environment as well as how the design affects the individuals that encounter it.

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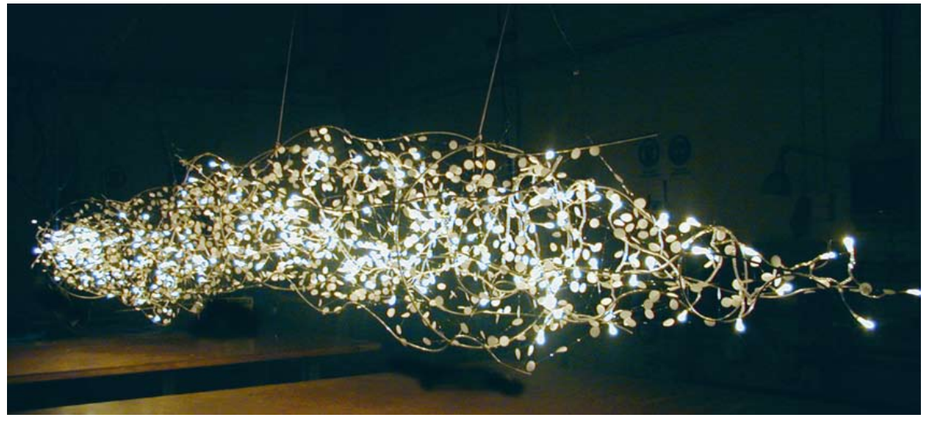
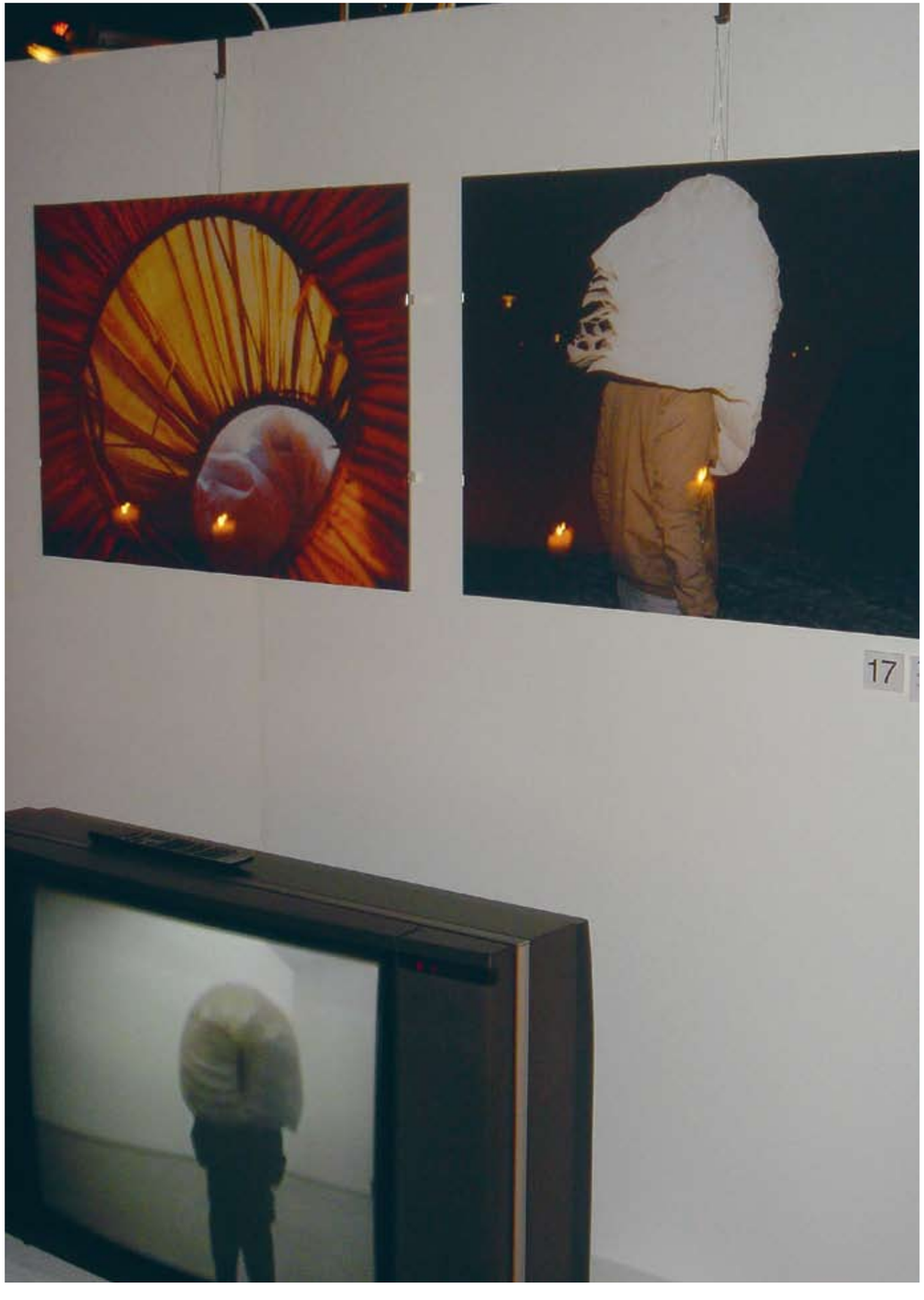
Theoretical and Applied Aesthetics, Visual Structures, part 1

Maria Udriot



This course deals with the ability of working with the effects of light in various spatial situations. The course has an experimental nature and is divided into three workshops based on the relation between light, shape and space. The last step of the process is putting together an exhibition to display the results. In previous years this has been done at Krapperups Art Gallery (outside Helsingborg), but as of 2006, the venue is Krognoshuset in central Lund.



Theoretical and Applied Aesthetics, Visual Structures, part 2

Mats Hultman

Nilklas Nihlén

Visual Structures, part 2 continues the training of aesthetic abilities begun in previous courses in Applied Aesthetics. This course, however, also introduces theoretical reflection on aesthetic subjects. Through a series of lectures and exercises, aesthetic concepts and problems like taste, aesthetic evaluation/judgement, perception, cognition, interpretation, etc. are introduced, discussed and reflected upon. Each student collects a personal repertoire of the beautiful and the ugly, and makes reflections on preferences that govern their choice. The final stage of this work is the design of a personal aesthetic manifesto, in which both the verbal style and the graphic form should reflect the aesthetic preferences stated therein. The course is concluded by a workshop where the manifestos are illustrated or commented by a three-dimensional object cast in concrete. In groups of two, and using the manifestos as a starting point, the students design, build forms and cast an art object or a piece of furniture in concrete.

Universal Design
Håkan Neveryd

The aim of the course is for students to:

- gain a positive attitude towards taking an individual's needs and abilities into consideration in product development.

- be able to start analysing everyday situations in order to see the problems they can create for people with different disabilities.

- gain increased knowledge and understanding of different disabilities and technical aids.

- gain increased knowledge and understanding of the concept "universal design".

- gain increased knowledge and understanding of the theory and methodology in the field.

- gain a positive attitude to and skills in cooperating with engineers in development projects.

Lectures are, to a large extent, internet based and have been made accessible for students with disabilities.

The lectures deal with the following disabilities: physical, visual and hearing impairments, cognitive disorders, brain injury, autism and dyslexia.

The required project work involves the design and development of a product prototype. The project is carried out in groups including engineering students who are participating in the Rehabilitation Engineering and Design course. The project will result in a prototype of either a technical aid for persons with a specific disability or a "design-for-all" product.

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1/ 2/ 3/ Sticky Sack, 2002. Many users are excluded from joining many games due to the simple fact that catching a ball requires a lot of timing and coordination, "Sticky Sack" effectively addresses these issues. By using a combination of velcro on sack (slower than a ball) and glove, contrasting colours and flexible rules it enables everyone to play.

Between Gadgets and Driving Forces

Bodil Jönsson
Professor of Rehabilitation Engineering

Certec is the Division of Rehabilitation Engineering Research at the Department of Design Sciences. Our research and education involving technology, design, and pedagogy, concerns the lived ability and the lived disability. It is the doing rather than the diagnosis that is emphasised. The process starts with the person, her needs, wishes and dreams. In our experience, you seldom come very close to relevant requirements specification through questionnaires and interviews. Instead, there is a need for situated insights into the driving forces and the actions. Certec's fundamental basis, theoretically as well as methodologically, is introduced in the book "Design Side by Side" (Studentlitteratur, Lund, Sweden, 2006)

Methodologically, technology can function as a language both when used as a questioning probe ("Is this what you want to be able to do? In this way?"), and when it functions as an answering probe ("Oh, is it six o'clock already? Then it's time for me to …"). As Bruno Latour states it, "technology is society made durable". If adding Steve Woolgar's "technology is frozen relationships", it becomes obvious that artefacts in reality are nothing more and nothing less than thoughts realised.

The ability of artefacts to make thoughts (or the lack of them) visible and robust is a characteristic of special value for people with disabilities. Artefacts can act as liberating pedagogy if they liberate you from the difficulties that otherwise dominate your life (e.g. problems planning or remembering). Sometimes artefacts "only" facilitate, sometimes they provide true first-time opportunities, such as computers and internet have done and continue to do for large groups of people with different kinds of disabilities. The opposite can also occur: lack of thought resulting in artefacts that exclude. This occurs in physical planning that prevents access to people in wheelchairs, text that because of size or contrast is invisible for a person with low vision, or cognitive oversights that reduce intelligibility, particularly for those who cannot read.

It is fruitful to consider humans and their technology as actants and to focus on the interplay between the two and how it builds up everyday life. Just consider how the introduction of the internet has accentuated the searching, inquiring nature of people and made it impossible to call it into question any longer, even for those with a more authoritarian point of view.

Not just gadgets

For sure, rehabilitation engineering and design are about gadgets – but not only and mostly not as the dominant part of Certec's work. There is a subtle balance to be regained, over and over again, between quick-fix efforts for particular aids that can be ready now, and greater research efforts that can pave the way for an entire arsenal of aids, sometimes built into the culture and thus so ubiquitous that they are almost invisible. The methods and to some extent the language is that of technology and design – the technical solutions and their design demonstrate how problems have been interpreted and how technical and educational possibilities can be implemented.

Much of the Certec research and education is initiated and implemented in the human sector, the sector where people work with and for other people. Since people are people with a human logic and an everlasting search for meaning (i.e. not mechanistic machines) designing for human sector processes and products has its own distinctive features, including human capital to be valued, nurtured, utilised and treated on its own terms. Bold design efforts in the human sector have been in such short supply that there is an almost unlimited potential for growth and renewal. We at Certec are both inspired and challenged by our colleagues at the Division of Industrial Design and the students at the Industrial Design Programme. Let me illustrate our connections and cooperation by introducing two diploma projects that I have supervised with Per Liljeqvist at the Department of Industrial Design.

Kärlek and Industrial Design, Anna Persson, 2006

Anna writes in the introduction: "By questioning the foundational driving force of ID (that being traditional market thinking – supply versus demand) and replacing it with Kärlek, one accesses a whole new world of possibilities, exceedingly full of potential…

K&ID is about all the intangible stuff in life that gets rationalised away because it can't be directly translated into numbers, but when left without makes our lives seem empty and leave us feeling unhappy. If that's how you feel, no product, no matter how well designed it may be, can make you feel any better…"

The complete work is visualised through a lot of sketches and the key elements: the Emotional String Harp, the Alternative Shape Sorter and the Balance Stool.

It was a real pleasure supervising there out of the core "not just gadgets". The connection to the project at Industrial Design "It´s all in your head", is obvious: a project that focuses on all those "odd behaviours and feelings that are part of all our daily lives".

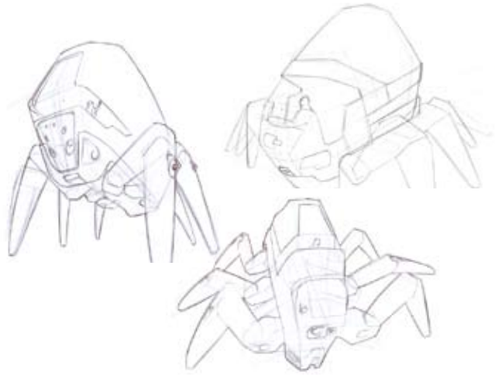
"To bring" – a diploma project on elderly and design, Ulrika Carlberg and Kristina Gullberg, 2004 – Ulrika and Kristina write: "Our diploma work has had the elderly as user group. We wanted to focus on a positive activity/action and try to facilitate that motion. Getting old often involves a number of simultaneous disabilities such as reduced hearing, eyesight, fine motor skills and cognitive disabilities. One of the difficulties in everyday life of the elderly is carrying things around inside and outside the home as they often need to support themselves against something whilst walking....

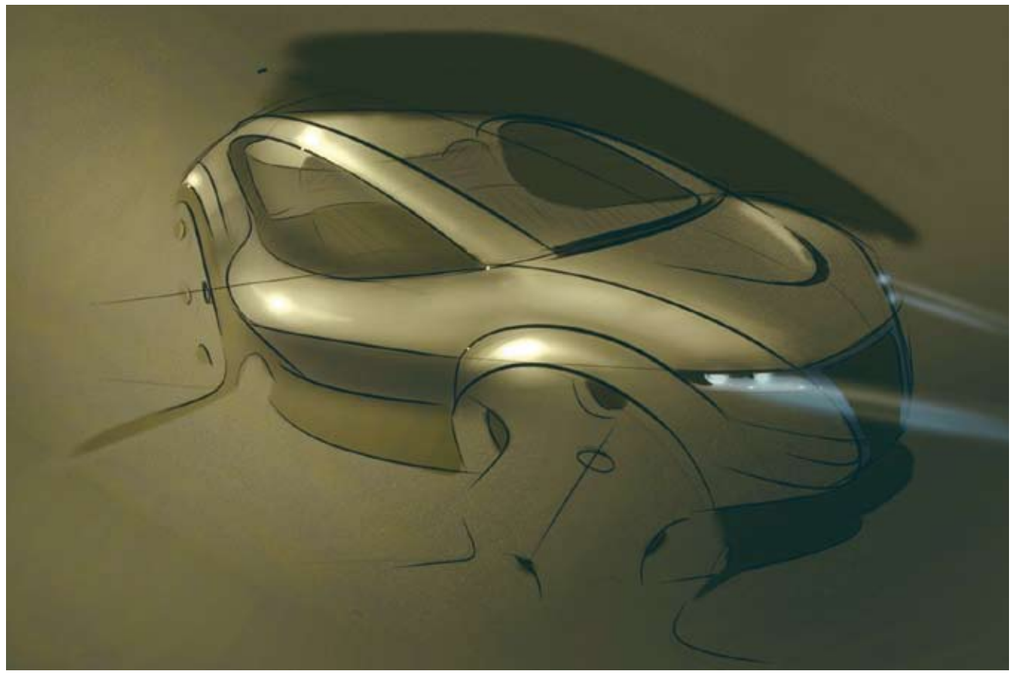
"Our work culminated in the question: 'How do you bring coffee from the kitchen to the table?'. By 'coffee' we meant a coffee-set, cake and coffee. An important aspect was that we wanted the person to be able to set the table themselves before their guests arrived."

Concluding remarks

Both diploma projects are human-oriented. While the first does not seem to concern gadgets at all, it surely does so in its prolongation: a designer aiming for "kärlek" as her driving force in industrial design will never design the same gadgets as those more market oriented. And although the work "To bring" does not seem to concern design and mankind but rather minor problems of bringing the coffee to the table, it surely influences their future thinking and carriers to include universal design or special design for enabling functions and empowering human will.

Outside curriculum
Contents





Automotive Design
Jonathan Disley
Charlotte Sjödell

The course was implemented in 2003 as an elective for students of all levels. The intention is to give our students the opportunity to get acquainted with the basics of automotive design in terms of techniques and practice. At present, the automotive industry as well as its suppliers are looking for a wider perspective, especially where aspects of interior design are concerned. The effort to persistently reinforce and update the brand, maintain and improve quality and search for innovative designs is becoming harder. Therefore, the input of product designers could lead to new insights and fresh approaches to automotive design. This course shall raise students' awareness of these issues. Besides designing and illustrating a new vehicle, they develop an understanding of how brand identity can be translated to design and of the impact a focused and structured presentation can have.

Over a period of nine weeks, students begin with an introduction to the essentials of automotive design, commencing with choosing a not necessarily car industry related brand to design for. Step by step, they get acquainted with the basic techniques of freehand perspective sketching, manual rendering and 2D computer illustration. However, the focus is always on exploring volumes and shapes rather than solving complex technical problems – the students also learn how to find inspiration, document and present their material. Being a rather compact course, the emphasis is always on hands-on practice as well as group critiques to push themselves and others to higher levels of creativity and expression.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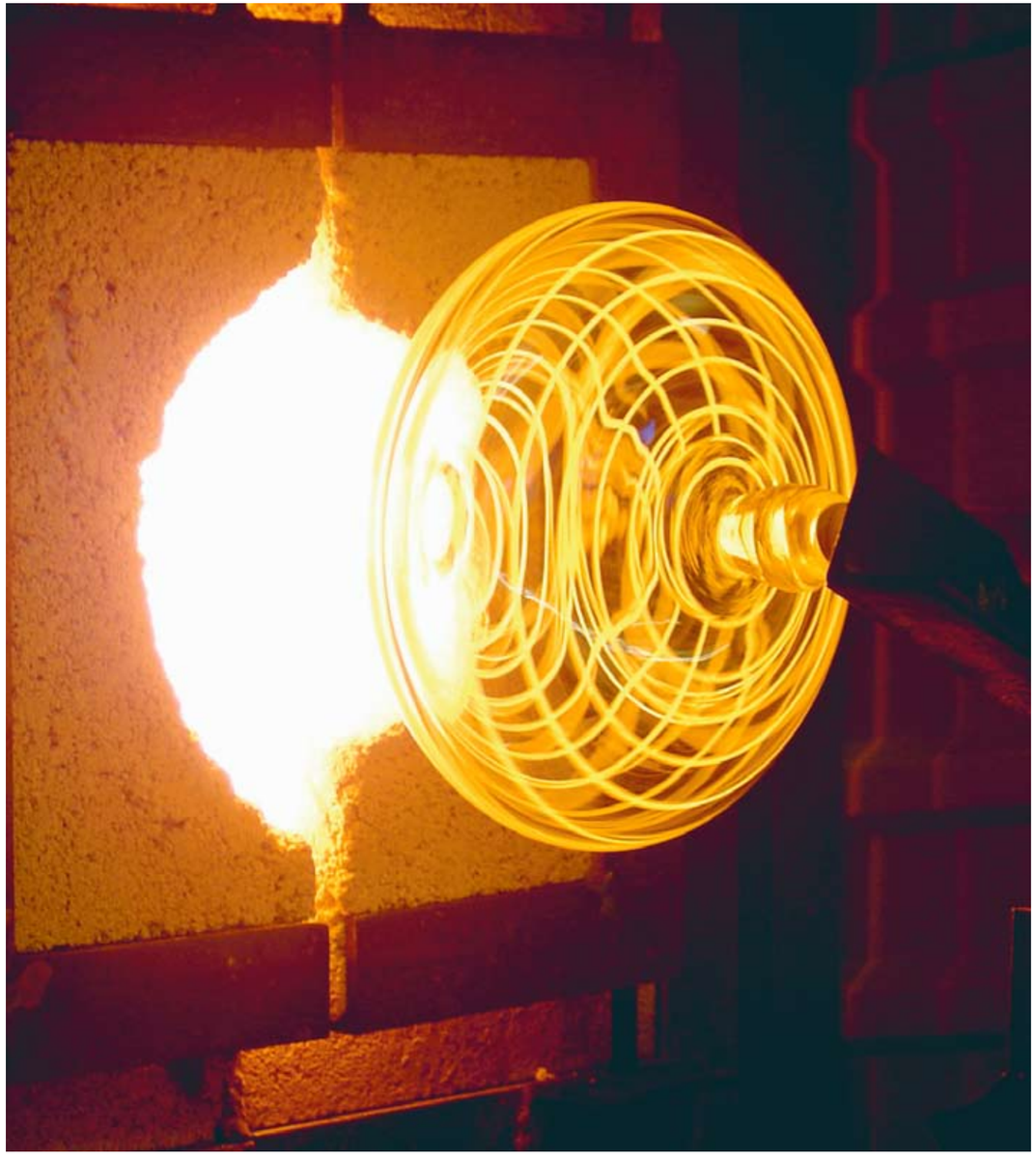


Glass in Theory and Practice

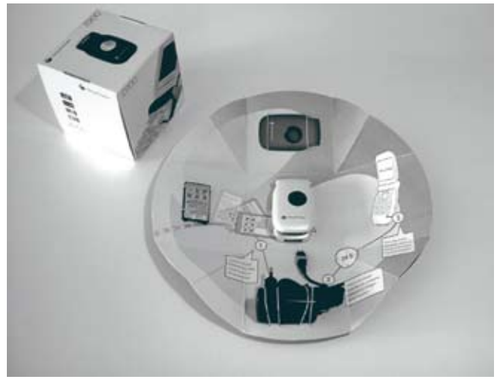
John Bennett

The aim of this course is to convey basic skills and understanding for the art of glass-blowing. The students learn to artistically express themselves with glass as a material and they get to build up a sense of craftsmanship. Through this course, the students not only gain knowledge about production technologies of studio- as well as mass-produced glass, but also a good theoretical understanding of glass as a material.

1/ Shapes inspired from human papilla cells, vase and vaporiser bottle with attaching screw top 2/ Blood cell bowl 3/ Papilla cells and taste buds from human tongue, fruite plate

Signs of Change, Lund, 18-20th October 2005
Dr. Gabriel Klasmer, Daniel Charny

Designers are often asked to conceptualise change; this workshop will ask you to do this. We ask you to make a projection of the services that will be on offer in the future of the city. You will be asked to put up a sign pointing towards the location of a future service that will be available then. This sign is to be in an arrow shape and installed in a real location in the city. Think about the social, economical, scientific, technological shifts, changes, revolutions, evolutions and how they might be reflected in institutional, governmental and cultural bodies. Conceptualise the new amenities, buildings, stations, types of travel, places of interest and highlights of the future of your city. This workshop is about observation and projection. The activity is geared to develop the use of design as a conceptualising medium. It is also about the connection of designers to the locality and place in which they are working, in this case the city of Lund.



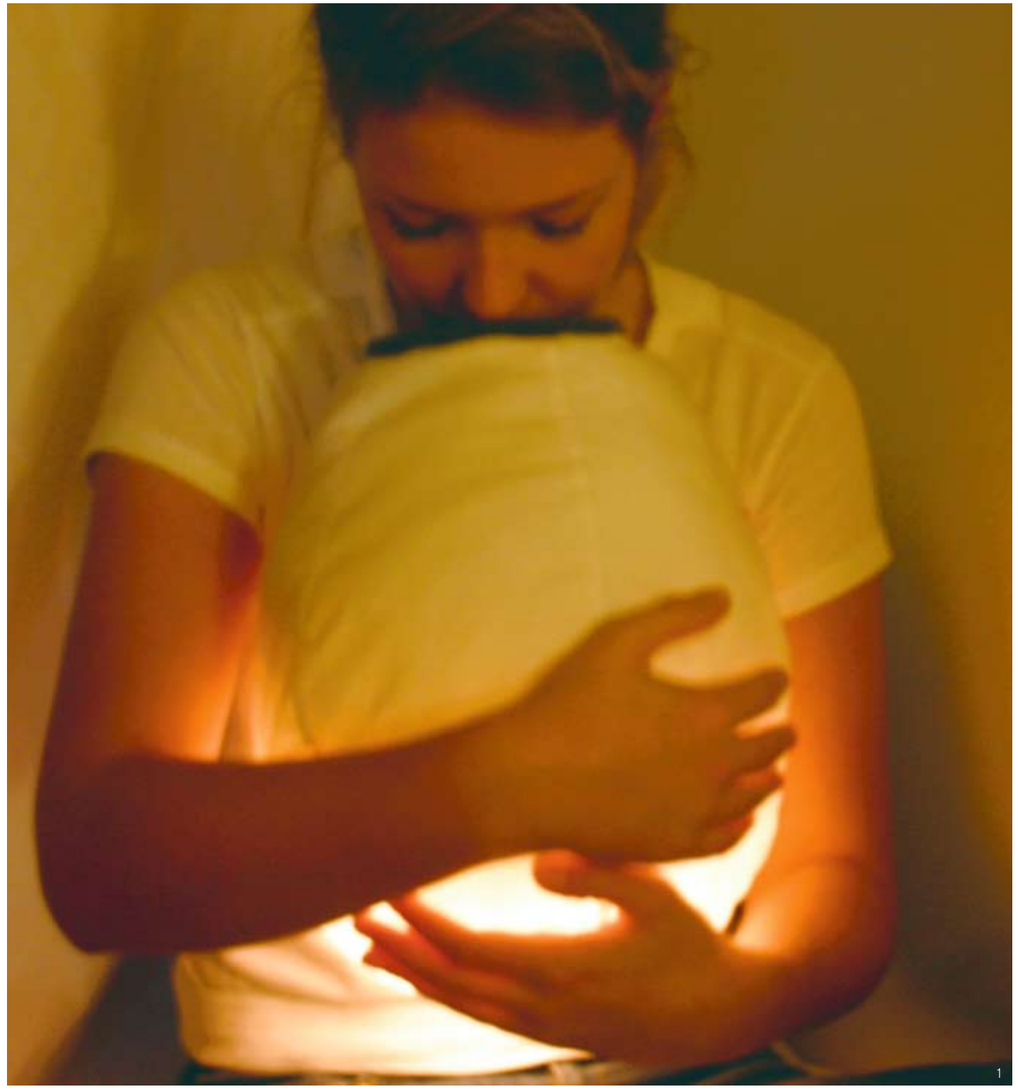
Packaging workshop in cooperation with Sony Ericsson

Claes Wallin Klevås

Joshua Murray

For Sony Ericsson, the importance of the "total package" is becoming more and more important – where the product is not only represented by itself, but also through its packaging and supplementary content. Together with the industrial design course at LTH, a workshop was held to generate creative packaging solutions for mobile phones in the low-tier segment.

The purpose of this workshop was to develop designs that should not only meet customer expectations, but also be easy to use and conform to supply chain demands. The solutions presented at the end of the workshop provided numerous fresh ideas, some of which have been incorporated in the current packaging range.



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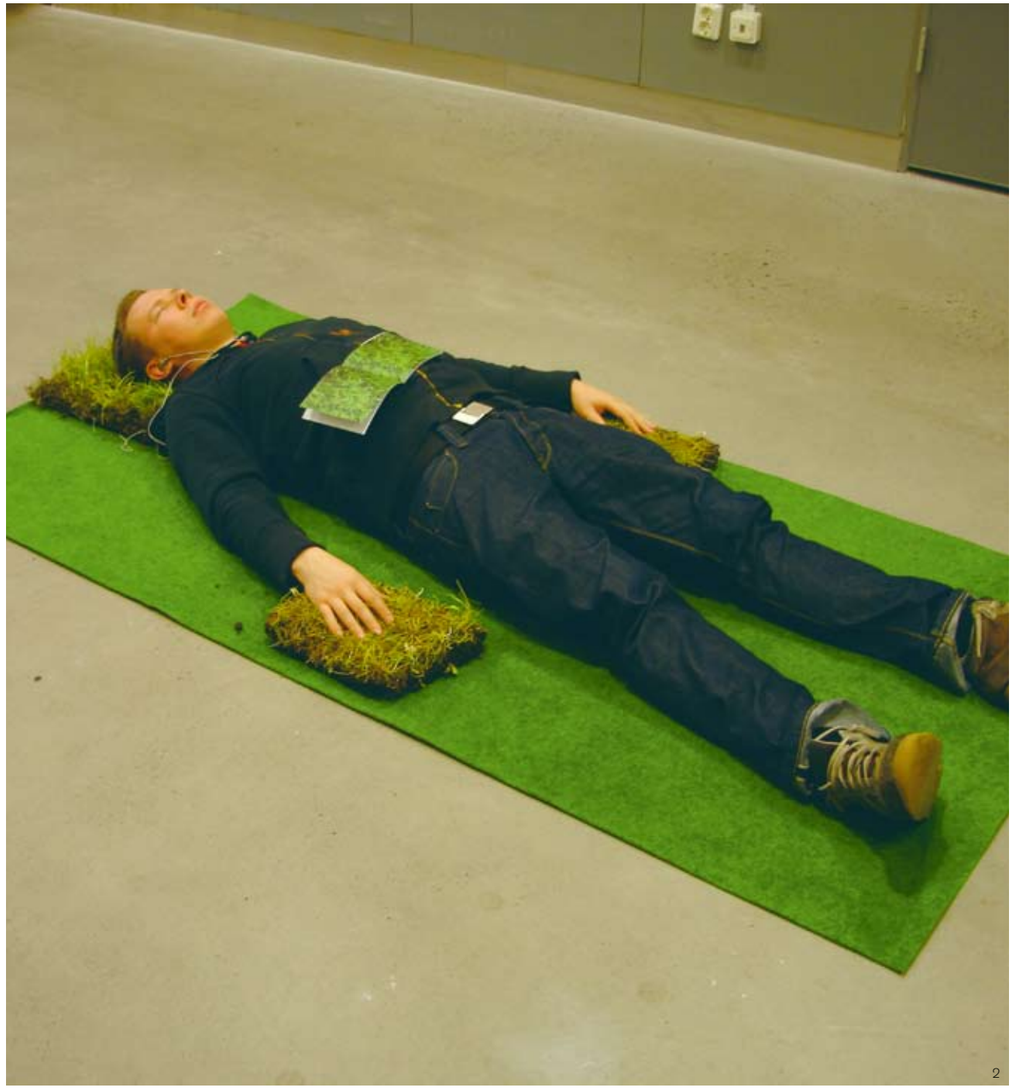

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Awake/Asleep, “Experience Design” Workshop, 2004
Bendik Torvin

The overall theme for this workshop was “Experience Design” allowing for both concrete and conceptual outcomes. After only five days of intense work with a group of talented students, the results were some well-executed, poetic and inspiring proposals. In order to narrow the subject of “Experience Design” down, we focused on the transition between two major states of mind namely being ASLEEP and being AWAKE, i.e. issues of falling asleep and/or waking up. For example: How do you (or someone else) wake up or fall asleep? Where, how, why does it occur (Morning, day, night, bus, at grandma’s house, drunk/hung over, bright/dark, noisy/silent, tired/rested, in a hurry/calm)? The students discussed the subject together in small teams and chose a particular theme of interest, then explored it with the intention to create a somewhat believable “product” that would provide the effect they were looking for.

The second day, there was a review in which each team presented a quick functional analysis, scenarios and personas that communicated the context and effects of the experience. They continued developing and refining their product concepts until unique, new experiences emerged. The students were free in terms of how their ideas would be realised in such a short time, using words, images, mood boards, scenarios, performance, drawings, mock-ups, quick prototypes, installations, etc. There was particular attention given to how the user would interact with the product and that the interaction supported the overall product experience.

1/ Midas Cushion, whisper to it, scream in it, cry with it, hug it, punch it. It will listen. It will start glowing as it absorbs and records your emotions and your voice. Your recording can then be transmitted to an unknown place in the world 2/ State of Mind, what if you could sleep under a tree tonight, or at a sandy beach by the sea, or in a busy town in ancient Persia? State of Mind is a service that provides the necessary stimuli to make you feel like you are falling asleep somewhere else, in any environment and culture you may desire

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Exercises in Architecture, Ceramic Tiles of Italy
Cumulus Design Competition, 2005

A material that comes from the past with an intense disposition towards the future. Convinced of this, the Italian tile industry has challanged itself – under the trademark Ceramic Tiles of Italy – experimenting and reaching new technical and aesthetic frontiers. Therefore it enhanced the identity of an ancient product by adding new and unusual features to a material rich in history and allure: the ceramic tile.

This is the background of "Exercises in Architecture – Cumulus Design Competition", a university training project that in 2005 saw the participation of four schools belonging to the Cumulus network (European Association of Universities and Institutes of Art, Design, and Media): Central Saint Martins College of Art and Design (London, UK), ESAG Penninghen (Paris, France), Lund University (Lund, Sweden) and the Estonian Academy (Tallinn, Estonia). Young design, architecture and interior design students engaged in functional and aesthetic research and experimentation on the ceramic product and its most innovative architectural applications.
Projects selected by: Marino Capelli, Michele Capuani, Dante Donegani and Massimo Iosa Ghini
Coordination: Michele Capuani, Dante Donegani, Luca Buttafava
Exhibit design by: Iosa Ghini Associati
Promoted by: BolognaFiere, Assopiastrelle, EdiGer SpA
On the occassion of: Cersaie Bologna, Italy

1/ Water mirror tiles, collects rainwater creating a water mirror 2/ 3/ Exhibition at the Fair in Bologna 4/ Slipgrip, a tile with integrated rubber material in communicating patterns
5/ 6/ 7/ Thermotile, reacts to heat such as warm water or sunlight to reveal a pattern or motif

Landskrona Young City Innovators, 2005
Olof Kolte

In cooperation with Delft University through Professor Hahn Brezet, DeLabs through Peter Kisch and the City of Landskrona, we have been running summer workshops with five students from Delft University and five students from Industrial Design LTH. The workshops have been centred around how to develop the city of Landskrona with a strong focus on sustainable development and with a distributed economy perspective. Landskrona is a city that has suffered from early effects of globalisation when the shipyard, the greatest employer, had to close down due to severe competition from Japan in the early 1980s. Since then, there have been few new jobs created in the city. Many refugees from the conflicts in the Balkans have had problems in finding jobs and becoming “members” of society. Landskrona has become a socially and economically divided city. The Young City Innovators have been working on finding solutions that can contribute to a path towards a more sustainable society from economic, social and ecological aspects.

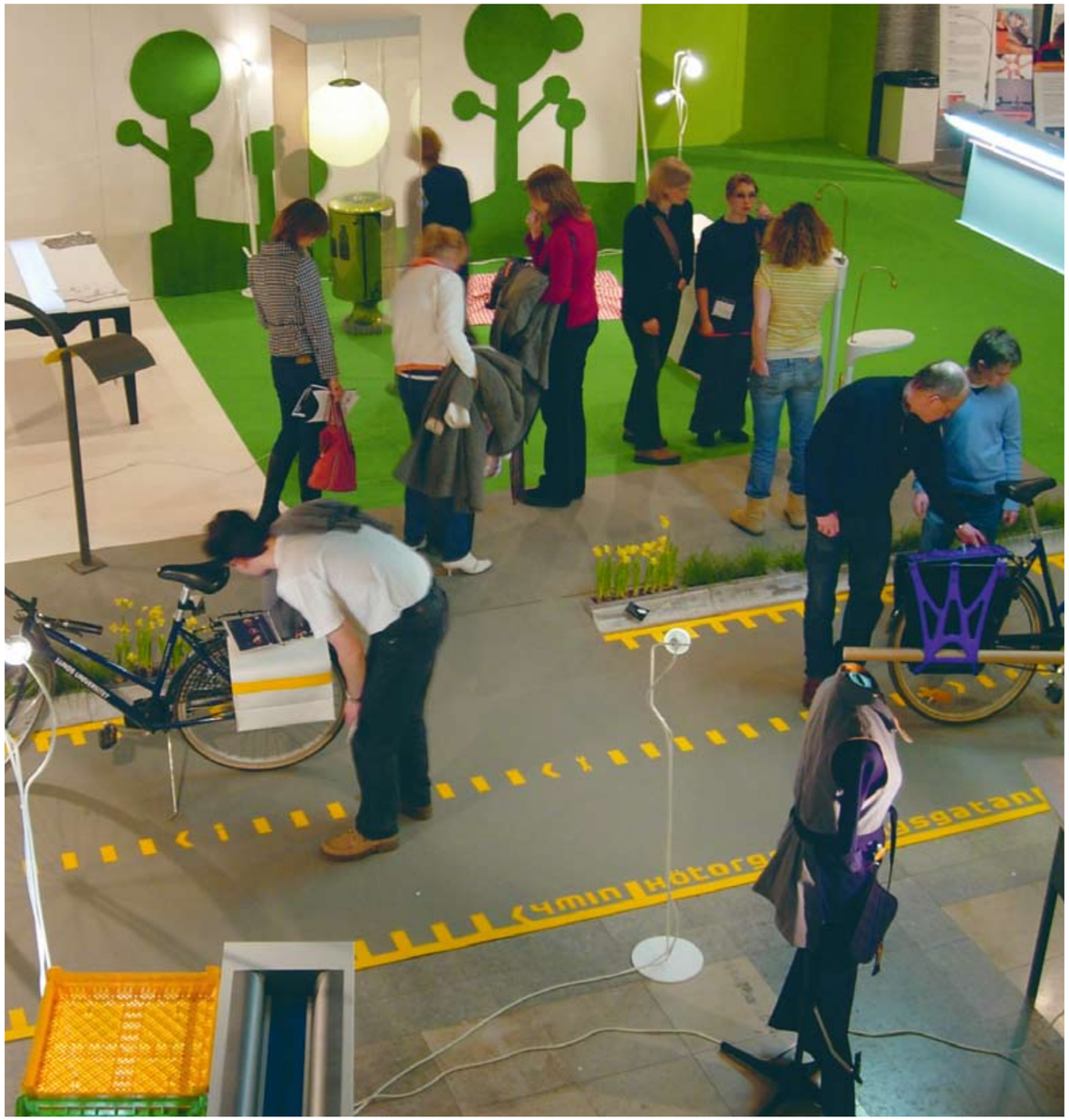
Exhibitions

Contents

Stockholm Furniture Fair
February 5-9, 2003

In 2003, we exhibited in the “Greenhouse”, a forum for design schools and independent designers, at Stockholm Furniture Fair for the first time. Among a few other projects of the academic year, we showed the entire result of the sustainable packaging project (Industrial Design project 3) from 2002. Since then, we have made it an annual tradition to exhibit the results of the industrial design project 3 at this fair, a project which is dedicated to ethical and sustainable development.

Stockholm Furniture Fair, Shop Until You Drop
February 4-8, 2004



Stockholm Furniture Fair, Sustainable City Project and School Lunch Project
February 9-13, 2005

Stockholm Furniture Fair, Energy Project and Signs of Change
February 8-12, 2006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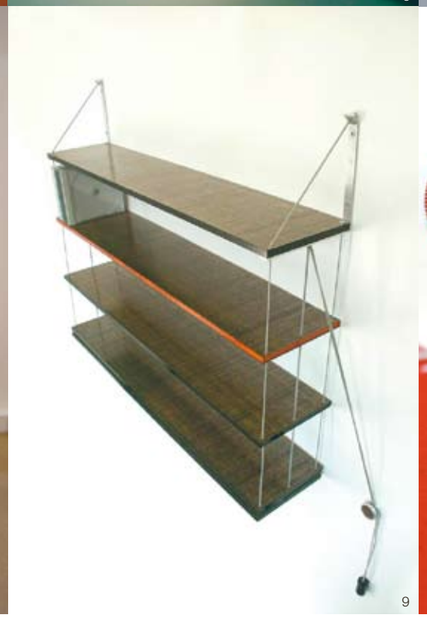
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Le home

Salone Satellite 2003, Salone del Mobile, Milan 9 -14 April, 2003

In 2003, we were the first Swedish design school to exhibit at the Salone Satellite. This exhibition was and will continue to be one of the world's most renowned events allowing young designers and schools to present themselves within the framework of the Salone del Mobile. Our students organised a workshop, based on the theme of advanced home improvement products and developed a variety of design concepts based thereon. The collaboration between students of all levels proved to be very fruitful, smooth and inspiring.

Everything went well, apart from a few stolen wallets and a flat tire.

1/ 2/ 3/ 4/ The Figure, your friend in need is a friend indeed 5/ Massage tile 6/ Tactile light 7/ Time showing light source 8/ Functional artwork 9/ Venetian blind (growing) shelf
10/ Rocking Carpet

Planning the exhibition in Lund.

Setting up the exhibition in Milan.

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The Low-Tech Kitchen

Essence and Creativity, Salone del Mobile, Milan 14 -19 April 2004

The preparation of food in the western hemisphere seems to require the production of more and more complex kitchens. The fruits of technological evolution: management of fresh water and sewage, waste management, appliances for washing, cooling and deep-freezing, different heat sources such as electricity, gas, Ceran or induction hobs, microwave ovens, toasters, food processors, pressure cookers, coffee machines, etc., are components of a highly sophisticated environment. However, the creation, use and disposal of these products consume huge quantities of energy. Many of the appliances listed above are certainly comfortable and the final stage of a long industrial evolution; nevertheless, the question is how to maintain a high level of comfort and at the same time dramatically lower the environmental impact. How can we optimise the cooking process by intelligently reducing rather than adding technology. Designers and architects discovered the kitchen a long time ago; the results are often reminiscent of more or less actual style trends, such as the professional laboratory-kitchen. The fundamental ways of preparing and storing food are merely questioned, though and are therefore only rarely subject to design work. Can we perhaps learn ways of cooking that are simpler but as good as ours, from other cultures?

1/ 2/ 3/ Preparing, eating and washing up. The concept is based on one table; the idea is that the whole process, from preparing to washing up, can be a social event. Gathering around the table like you'd gather around a fireplace

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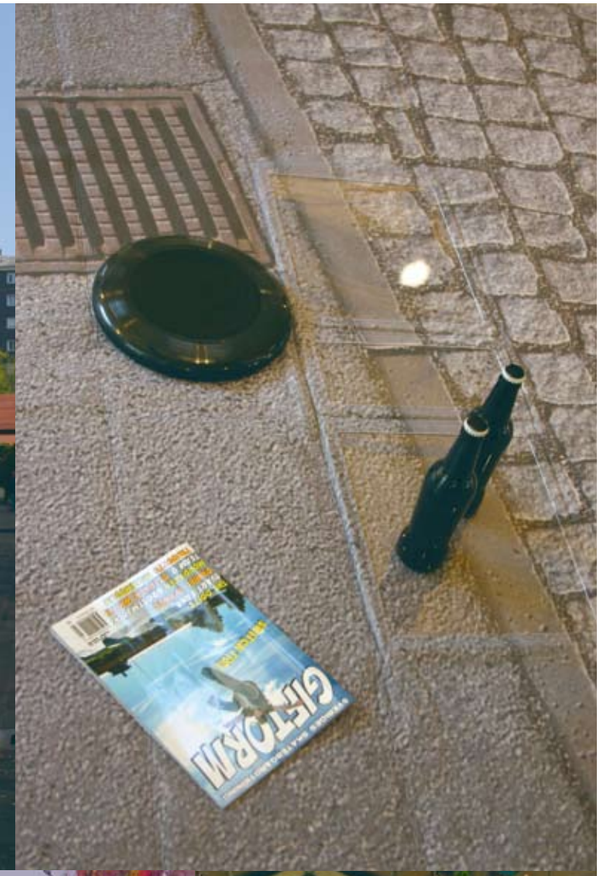
That is where the project for the Low-Tech Kitchen starts: it is about creating a well designed working environment without the excessive use of resources. It is composed of few elements: a fireplace which is optimised to avoid unnecessary loss of heat for grilling or cooking with pots and pans – or the spit, a water reservoir plus basin for washing, a large and resistant working surface and several volumes for storage underneath. The layout of this kitchen is monolithic rather than a composition of separate modules; the unit is placed atop any surface or under the open sky and is always accessible from all sides. Kitchens from other, so called “primitive” cultures as well as kitchens from our own pre-industrialised history serve as a source of inspiration. The challenge was to create a kitchen that allows for a maximum of creative freedom for cooking and staying together with your friends. Since it does not require external attachments, it can be installed anywhere in no time and therefore qualifies for alternative or temporary housing.

1/ 4/ The Soil Fridge, self-cooling through evaporation of the damp soil. The soil is also a home for your kitchen herb garden 2/ 3/ 5/ 6/ The Cooking System, consisting of independent, stackable burners and a set of pots and pans. It is designed to be used for both cooking and serving. Combining the big pot and the frying pan with a silicone rubber seal creates an oven. The Cooking System is powered by standard camping gas containers 7/ The Sink Basin, standard 1.5 liter PET bottles are used as the source of clean water as well as management of used water



HomewearHomewareHomewhere

CP Company showroom, Via Savona 54, Salone del Mobile, Milan 14 - 20 April 2005

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HomewearHomewareHomewhere

CP Company showroom, Via Savona 54, Salone del Mobile, Milan 14 - 20 April 2005

A collaboration between design students at the Facoltà del Design, Politecnico di Milano, Lund University, Industrial Design, School of Architecture and Design, University of Brighton. A project exploring the theme of homeware for the fashion brands CP Company and Stone Island. The thought-provoking assignment to design homeware for a clothing company to be exhibited during a furniture fair requires a reassessment of the notion of home – particularly in relation to clothing designed as a protective shell for transitory peoples. If contemporary nomadic life is about the mobile office and the freedom to cross borders, what are the goods and accessories that we shall require on the move?

The exhibition suggests three possible approaches to this subject:

HOMEWEAR – wearable objects that have an ambiguity between furnishing the body and furnishing the house.
HOMEWARE – nomadic home accessories to be carried with oneself and to create a personal domestic landscape anywhere.
HOMEWHERE? – provocative objects that remind us of the condition of being urban nomads, on the move in relentlessly unfamiliar environments.

1/ 2/ Balloon Buoy: Inflatable helium balloon marker for lost children and adults. 3/ Filter Scarf: An air pollution filter with built in warning system for bad air. 4/ Shower Belt: Connect to any tap and use the buckle as shower head. 5/ Bag-in-Bag: This compact all-in-one solution is for backpackers who want to keep their luggage and themselves safe when sleeping – anyplace, anytime. 6/ Gate Skate: Skateable cabin bag with retracting wheels and handlebar. 7/ Sensation Aid: A band-aid to stimulate your senses; a quick and easy self-treatment.

8/ Sleepy Beanie: With the sleepy beanie you can put the lights out – wherever and whenever you feel like. 9/ Urban Picnic Blanket: A city picnic blanket with street-related prints. Easily folds into a practical bag 10/ 11/ Bonfire Blanket: Using a flat electronically illuminated fabric, a metaphoric bonfire glows in the centre of this fold-up blanket.

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It's all in your head

Designersblock, Via Donatello 2, Salone del Mobile, Milan 5 -10 April 2006

It's All in Your Head is a project about human behaviour and ways of thinking. It's time to pay attention to those odd behaviours and feelings that are part of all our daily lives. Exploring these rather insignificant nuisances that we usually like to push aside, we discern many similarities and associations in people's behaviour and thinking. All projects address common situations by solving inherent problems and/or commenting on them – some are just plainly inspired by typical incidents. The outcome is intended to be thought-provoking. The objective is that you should be able to reflect yourself in the designs and relate to the targeted situations. "It's all in your head" is an exhibition based on a workshop outside the compulsory curriculum, executed by students from the Industrial Design Programme at Lund University.

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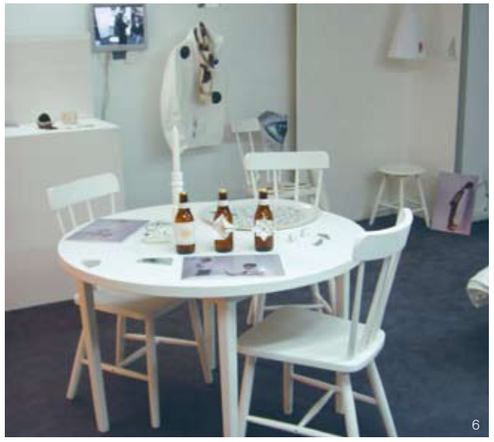

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The exhibition suggests four possible approaches:

Superstition – walking under a ladder means bad luck...
Embarrassment – the awkward silence in the middle of a conversation...
Silliness – checking that you locked the door ten times after leaving...
Phobia – the fear of being watched without noticing...
How can these states of mind trigger and translate to design?

1/ 2/ Save a Sailor Cigarette and Lighter kit 3/ In the Eye of the Beholded 4/ Origami Label 5/ 6/ Exhibition in Milan

Designersblock
The London Design Festival, October 2004

Designersblock provides a platform from which to promote design products and services to an international and UK audience, founded and operated by Rory Dodd and Pierce Roberts 1998. The event coincides with The London Designweek and the trade fair, 100% Design. Industrial Design LTH has participated twice. In 2004 represented by three master projects by Jenny Forsberg, Annika Nordberg and Stina Moreaus and with the project Low-Tech Kitchen (also shown in Milan the same year).

Designersblock

London, September 2005

In 2005 Industrial Design LTH participated with three master projects by Rani Leoson, Lina Maltesson and Olga Shchukina.


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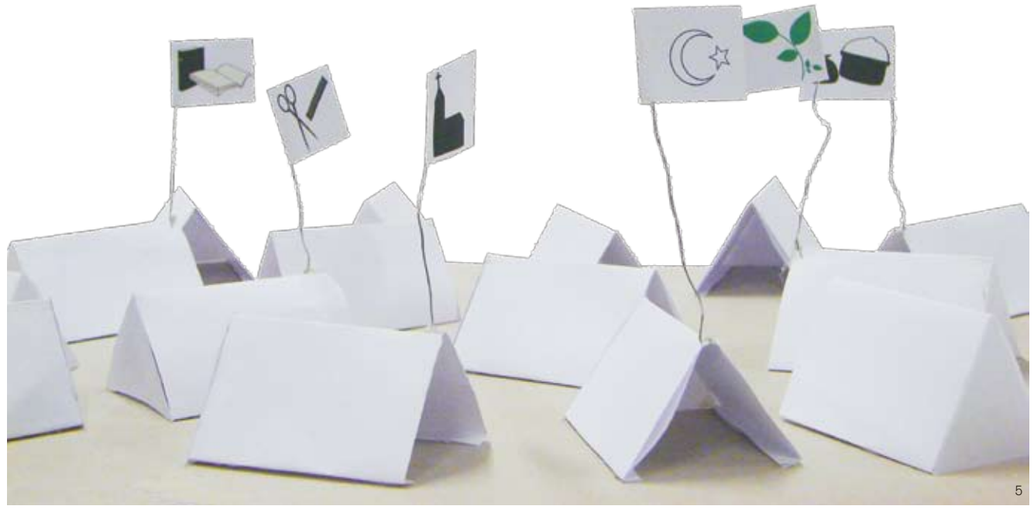
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Designmai
Berlin, May 2006

Community Tags
A refugee camp can consist of thousands of people, and with a collapsed society lots of skills within the camp get lost because of insufficient organisation. It is a poor solution that outsiders construct a community for these people; from a financial, but also from a humanitarian point of view. What happens to the individual self-esteem when your life is in the hands of someone else? Community Tags is a system based on the idea that the refugees by themselves should be able to build their own community. The flags would be put up in various places at the camp to create meeting places where people can find each other, work and share knowledge. A student could find a teacher; a person in need could find a preacher, etc. The aim is to offer a chance to express identity, to give the opportunity of starting a new life and to encourage creativity among the refugees, in a respectful way.

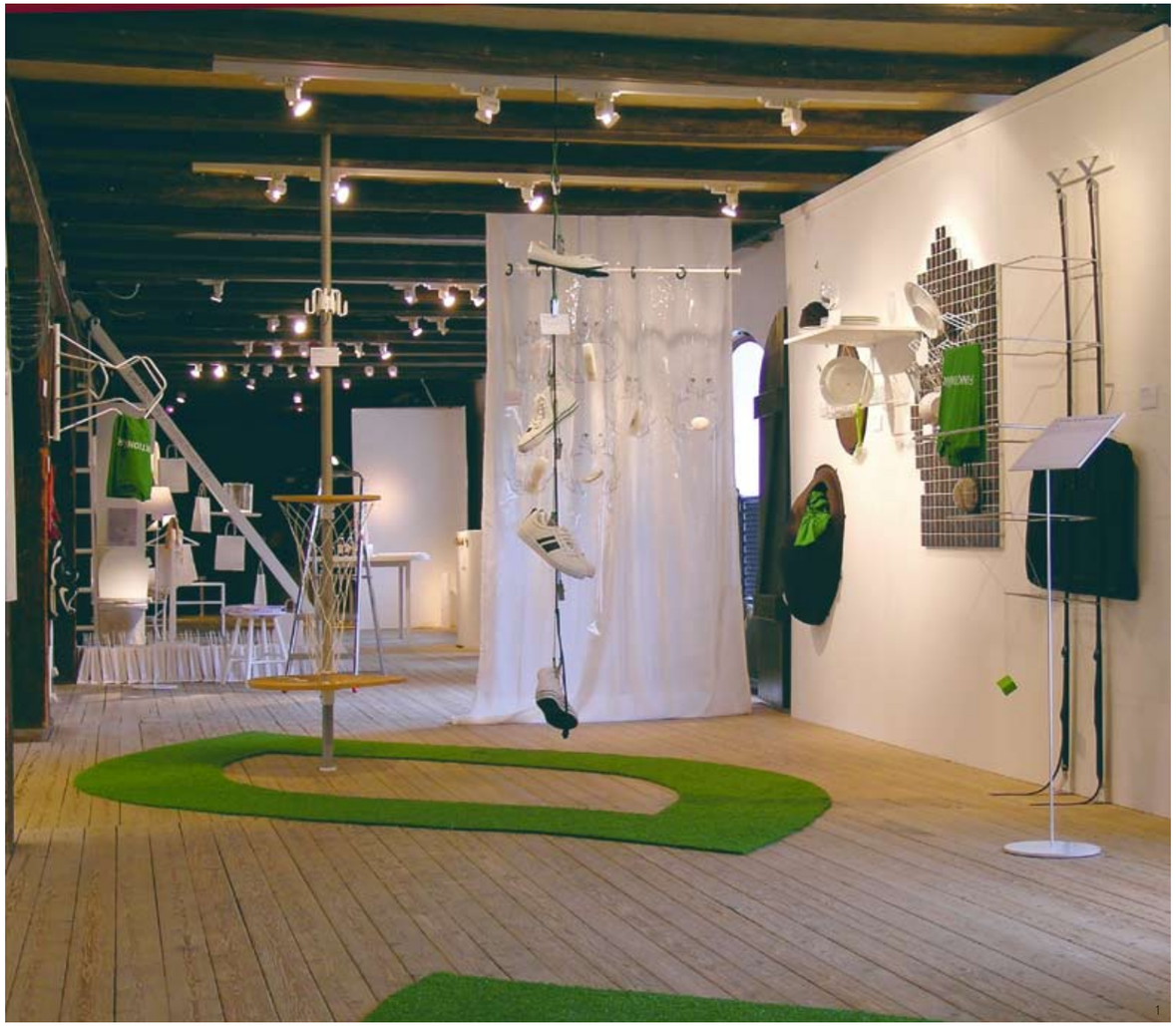
Foam Home
In, for example, the deserts of Pakistan, refugee camps are struggling with the complex process of providing durable solutions for living in an extreme climate. Earthquakes, cold winters and intense heat during the summer demand lightweight constructions with great cold and heat resistance. These are the characteristics of polyurethane with its superior insulation capacity, low weight and low price. For less than 200 US$ per shelter, the Foam Home provides instant housing for sleeping in high-low temperature zones where a tent wouldn't be life sustaining. We have been focusing on the refugee camp as a temporary solution, where a clear vision of what comes next has to be well integrated, since this would bring a sense of hope. The core of our concept is that after one year the shelter should be taken down and be used as insulation in the building of a conventional home.

1/ Meeting with Mats Theselius during the workshop 2/ Community Tag 3/ Community Tag for a barber and a performance act during the exhibition 4/ Designmai 5/ Sketch model of a refugee camp with examples of Commuity Tags 6/ Full scale model of a Foam Home at the exhibition 7/ Assembly instructions

Spargel dinner
Berlin, May 2006

Down Town 2004, Klara, Färdiga, Gå 2005, Uthållig Design/er 2006
Form/Design Center, Malmö

We have participated in an event and exhibition at the Form/Design Center in Malmö in cooperation with the local design and architecture programmes in the Malmö-Lund region since 2004.



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Down Town 2004, Klara, Färdiga, Gå 2005, Uthållig Design/er 2006
Form/Design Center, Malmö

1/ Uthållig Design/er, 2006 2/ Down Town, 2004

Design Orienteering
Ingvar Kamprad Design Centre, September 2004

In 2004, we arranged an exhibition in the format of an orienteering competition. Works by graduating students were exhibited in many parts of the building, inviting visitors to explore all facilities of IKDC.

Inställning

Skissernas Museum, Lund, September 2005

On occasion of Designåret, the national design year 2005, we were invited to exhibit at the Museum of Sketches in Lund.

DesignVal 2006

The University building, Lund, 18 - 29 September 2006

Continuing our tradition of having our master projects exhibition at different places in Lund, this year we had the opportunity to use the hall of the main building of the University.

Industrial Design Research

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ERA 05 World Design Congress
ICSID/Icograda/IFI Educational Workshop
Ingvar Kamprad Design Centre, Lund

Arranging and hosting international design conferences is an important means of positioning Industrial Design in Lund on the international map. In September 2005, the educational workshop Exploring Change – Design Education in the new Era took place in the Ingvar Kamprad Design Centre at LTH, as a regular and parallel session of the ERA 05 World Design Congress in Copenhagen. Our commission handled both the scientific programme with international speakers and the complete organisation of the event. The workshop was very successful and attracted almost 200 national and international participants, researchers as well as teachers.

Meeting international actors within the design area at design conferences is very important for a young research group as ours. We have up to now submitted, presented and published results of our research at international conferences in Sweden, Denmark, Finland, Norway, Italy, the United Kingdom, Turkey and Japan.

1/ Gunilla Jönson, Rector of LTH , Professor, Packaging Logistics, Lund University, Sweden 2/Participants in the auditorium, IKDC 3/ Claus-Christian Eckhardt, Professor, Industrial Design, Lund University, Sweden 4/ Patrick Whitney, Professor, Illinois Institute of Technology, Chicago, USA 5/ Lorraine Justice, Professor, Head of the School of Design, Hong Kong Polytechnic University, China 6/ Christoffer Barnekow, Journalist, Moderator and Yrjö Sotamaa, Professor, Rector of University of Art and Design, Helsinki, Finland 7/ 8/ Lunch 9/ 10/ 11/ Visit to the Industrial Design master projects exhibition at Skissernas Museum, Lund.


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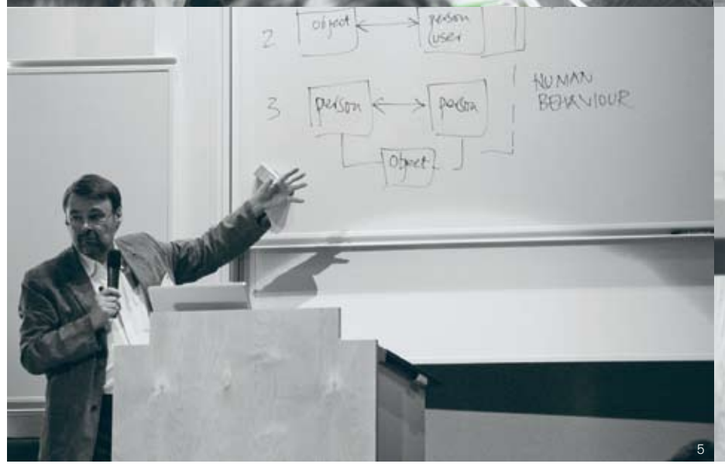

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ERA 05 World Design Congress
ICSID/Icograda/IFI Educational Workshop
Ingvar Kamprad Design Centre, Lund

1/ Lars Engman, Design Manager, IKEA of Sweden, Älmhult, Sweden 2/ Bill Moggridge, conference visitor 3/ Paul Hekkert, Professor, Delft University of Technology, Netherlands 4/ Tom Waldner, Design Manager, Tetra Pak, Lund, Sweden 5/ Mike Stott, Professor, Interaction Design, Umeå Institute of Design, Sweden 6/ Axel Thallemer, Professor, Industrial Design, Kunstuniversität Linz, Austria 7/ Conference visitors in the IKDC Auditorium 8/ Peter Ullmark, Professor, School of Design and Craft, Göteborg University, Sweden 9/ from left to right: Paul Hekkert, Professor, Delft University of Technology, Netherlands; Lars Engman, Design Manager, IKEA of Sweden, Älmhult, Sweden; Axel Thallemer, Professor, Industrial Design, Kunstuniversität Linz, Austria; Lorraine Justice, Professor, Head of the School of Design, Hong Kong Polytechnic University, China; Yrjö Sotamaa, Professor, Dean of University of Art and Design, Helsinki, Finland; Cheryl Akner-Koler, Professor, Industrial Design, University College of Arts, Crafts and Design, Stockholm, Sweden 10/ Kristina Salqvist, Assistant Professor, School of Design and Craft, Göteborg University, Sweden 11/ Lisbeth Svengren-Holm, Assistant Professor, School of Economics, Stockholm University, Sweden 12/ Claus-Christian Eckhardt, Professor, Industrial Design, Lund University, Sweden; Christoffer Barnekow, Journalist, Moderator

ENGAGE 2006

Ingvar Kamprad Design Centre, Lund

The Engage network decided that IKDC in Lund would be a perfect venue for the Engage International Open Event III in the Design Centre September 2006, the final event to be visited by the project reviewers from Brussels.

The Engage event attracted more than 100 visitors from universities and industry and was also regarded as very successful by the participants. In December 2006, the Swedish Engage partners Linköping University of Technology, Lund University and Chalmers University of Technology arranged a national event, The right feeling – About affective design, at the Konstfack University College of Arts, Craft and Design in Stockholm, endorsed by the ESS (Swedish Ergonomics Society), SVID (the Swedish Industrial Design Foundation) and Vinnova (the Swedish Governmental Agency for Innovation Systems).

Why research in industrial design?

Lena Sperling

Why research in industrial design?

From an international perspective, industrial design is a rather new subject of scientific research, and in Sweden it started only some years ago. Scientific research means construction of knowledge and has been, for some decades now, carried out about industrial design in design management, engineering, architecture and design history, but not yet very much in, for and by industrial design. Artistic development of material artefacts has gone on at schools of art and crafts for a long time, but the created objects are usually not formed with constraints from industrial processes or user requirements. Scientific research in industrial design is important for industry, society as well as the academic realm itself: Research-based creative methods and tools will hopefully enable industrial designers to carry out their complex work, resulting in innovative artefacts or improved products. Desirable, useful, functional and sustainable products will contribute to pride and pleasure in daily life. From a scientific point of view, it is of great interest to describe and understand how the industrial designer's professional knowledge and skill is constructed, as there are many similarities between design thinking and research. The industrial design education at Lund University is based on scientific research, and especially in the core subject, it is important to have a scientific foundation.

Cornerstones of research and research education in ID

The establishment of research in ID was made possible by the financial agreement between LTH and the Stichting IKEA Foundation, where it was stated that research and research education should be carried out in industrial design on a high scientific level and in an international cooperation. The framework of ID research in the context of the Department of Design Sciences was discussed, and the embryonic division of industrial design decided to define its research by the "three M´s" (Figure 1): *Methods* (methods, tools and processes), *Meta-qualities* (emotional aspects and symbol values of products) and *Management* (design management and trend management) and the research embryo started to grow. The vision was and is still to integrate creative "form-giving" with scientific research, to take the best from both worlds and do something new that other research groups in ID do not yet do.

Figure 1.

The "three M's" of research in industrial design at Lund University: *Methods* (methods, tools and processes), *Meta-qualities* (emotional aspects and symbol values of products) and *Management* (design management and trend management).

In Spring 2003, Lena Sperling, interior designer, PhD and associate professor in consumer technology, got a position as assistant professor in ID and the responsibility to build up research in ID in collaboration with Professor Claus-Christian Eckhardt, Industrial Design and Professor Robert Bjärnemo, Machine Design, these persons forming the obligatory group of three qualified scientific supervisors. In September 2003, it was decided to accept ID as a regular subject of research and research education and the definition of the subject and the study plan were published in the research directory of LTH[1]:

"Research and research education in industrial design at Lund University regards innovative design of products aimed at industrial production, considering needs related to humans and environment. The design process is studied from vision to product, and the holistic synthesis of functional, aesthetical and emotional dimensions is of central importance. Research in industrial design shall give deepened insight in relations between humans and products as well as in the creative form-giving from a life cycle perspective. Research in ID also aims at developing science-based knowledge, methods and processes of advantage for the complex profession of the industrial designer. The doctoral students shall in their work focus on one of the 'three Ms' ".

After this important milestone, Elin Olander and Eva Wängelin, both industrial designers educated at LTH, became as the first two PhD students in ID. In spring 2006, Lisbeth Svengren-Holm, econ dr. in Design Management and assistant professor at Stockholm University School of Business, joined us as a visiting researcher and a Lise Meitner professor, and in autumn 2006 also Despina Christoforidou, BA in Art Science as well as Media and Communication, assistant teacher and researcher already employed at the division, could be accepted as a PhD student. They will all present their research later in the present chapter.

Research schools and networks

To be part of research schools and networks is most valuable for a new and small group of PhD students in industrial design. Up to now, our ID research seminars have been internal and open only to some other PhD students of the Department, especially when international researchers in and around ID have been invited. The Department of Design Sciences may be seen as a local research network, but the research questions of our PhD students differ from most of the other research students of the Department, who are more oriented towards human factors and engineering. Elin Olander is a member of and partly financed by the *Research School of the Vårdal Institute*[2], which is a national environment for research and development in the field of health care, and up to now, she is their only PhD student with a background in industrial design. The interimistic national research school initiated by the *D&R Swedish Design Research Network*[3] provides our PhD students in industrial design with a larger research community especially in design theory, and they take part in courses and seminars. Design & Research will apply for financial support in order to establish a permanent research school with possibilities to take part in workshops and seminars and to present their research. Another important and very vital community for our PhD students is the *Nordic network for research on communicative product design, NordCode*[4]. The network gathers active researchers and doctoral students who work on communicative aspects of artefacts, aesthetic qualities of physical products and objects, and related design processes. The ID PhD students have participated in most of their workshops and seminars.

Establishing research in user-centred design

The financial agreement between the Stichting IKEA Foundation and LTH means a focus on user-centred design, function research and home products, but projects are also carried out within other areas of interest and with other economic sources. Although projects with external funding are often dedicated to specific themes, generic research methods, tools and processes are elaborated and tried within such projects, contributing to the personal thesis work of the PhD students. The first project financed by the Stichting IKEA Foundation aimed at establishing research in industrial design, and other PhD students from supporting subjects of the Department of Design Sciences were involved. Eva Wängelin and Despina Christoforidou mapped the degree of communication with users in Swedish furniture and lighting industry[5] in ID consultancies respectively[6, 7] and found that end-user communication was very scarce in both categories of companies. Consequently, it was most relevant to start mapping and evaluation of different mediating methods and tools in various fields of research and to try them in empirical research. Promising methods were tried and further developed by the researchers, such as cultural probes[8,9] and new mediating tools were elaborated for application in products for the re-creative home, such as the internationally acknowledged User Compass Chart, the background, development and applications of which will be particularly described in specific projects below.

International research projects and cooperation

Also internationally, a broad research front within ID and industrial design engineering concerns mapping, evaluation and development of tools for communication with consumers/users, such as in the Coordination Action *ENGAGE – Designing for Emotion*[10] that is financed by the 6th European Framework. Although functionality has always been, and will remain, an essential precondition for product satisfaction and market success, in today's culture there is evidence of the increasing importance of product experience as a driving force of product acquisition and use. The ENGAGE consortium consists of 21 project partners from nine countries, and ID at Lund University is one of them. The partners are presented as leading players in the field of affective design in Europe. The aim of ENGAGE is to provide the European industry with the means to design with full consideration for consumers' subjective and emotional lifestyle needs. In the project, gaps in current methods and tools are identified and future research in this area is promoted.

1/ http://www.lth.se/utbildning/forskarutbildning/studieplaner/allmstudieplaner/?fid=25 2/http://www.vardalinstitutet.net 3/ http://www.svid.se 4/ http://nordcode.tkk.fi
5/ Wängelin E, 2004. Industrial conversation x 9 (Industrisamtal x 9). Report in Swedish. Division of Industrial Design, LTH, Lund University. 6/ Christoforidou D, 2004. Interviews with practicing industrial designers about communication with users in their design work (Intervjuer med industridesigner om kommunikation med brukare i designarbetet). Preliminary report in Swedish. Division of Industrial Design, LTH, Lund University. 7/ Sperling L, Christoforidou D, Olander E, 2005. Communication with users in industrial design activities. Educational report, Division of Industrial Design, LTH, Lund University, Lund, Sweden 8/ Kristav P, 2005 9/ Kristav P, 2005 10/ www.designandemotion.org/society/engage

It is of great advantage for industrial design at LTH to get the opportunity to take part in the network and to calibrate its research with that of other universities. The project will end when the 6th Framework Programme closes in December 2006, but some of the partners plan to continue their cooperation in coming projects and programmes.

LTH has since 2003 a cooperation agreement with *Kyushu Institute of Design* in Fukuoka in Japan, and at a visit in Fukuoka in October 2006, we expressed our mutual interest to accelerate our collaboration in research and to facilitate exchange of researchers and master students. A research field of common interest both to researchers of ID in Lund and Fukuoka is methods and tools for communication with users in inclusive design. At least in Japan, inclusive design means more design thinking than universal design that follows the "seven principles of universal design" more strictly in design of accessible environments. Both approaches aim at usability and accessibility to the greatest extent and for as many users as possible. Elin will present more about this in a separate chapter below.

National research cooperation

During 2001-2004, a large scale research-based universal design intervention took place in all master programmes in architecture, industrial design, interior design and landscape planning, the *Universal Design Educational Project Sweden (UDEP-S)*[11] and ID at LTH was represented in the initiative group. UDEP-S was appointed a *Centre of Excellence* in "Design for All", within the European Information Society. The UDEP-S programme contributed both to our education and research[12] and was a very important community of teachers and researchers and we have continued our cooperation with some of them. The intervention was presented at educational and scientific conferences in Sweden and abroad, such as *INCLUDE* 2005 at the Royal College of Art in London and finally documented in a book[13].

LTH has invited its ID researchers to participate in the research programme PIE-p, Product Innovation Engineering Programme, which was launched in December 2006 and aims at strengthening Swedish power of innovative product and business development. The programme engages several Swedish schools and research institutes. It is managed by the Royal Institute of Technology in Stockholm and was initially developed together with LTH, the University College of Jönköping, Umeå Institue of Design at Umeå University, Centre for Technology in Health Care (CTV) and several companies and organisations. Swedish educations will be better at promoting innovations, and at the same time the climate for innovation for Swedish industry and higher education will be stimulated. The programme will result in new products and businesses, and this will be recognised by an increased number of patents, products and companies. PIE-p will continue for ten years, 2007-2016, and will have an annual budget of 50 million SEK, where VINNOVA will contribute as much as 100 million SEK in the course of ten years.

Research connections of the industrial design education

For a science-based education in ID as in Lund, it is most important to implement research in design education, and researchers in ID regularly lead or give lectures in the ID and Technical Design educational programmes. Students also take part as subjects in research studies when relevant.

During their fifth year, before the master students' diploma work, ID students take the course "Research Methods in Industrial Design". The aim of this course is to give an introduction to fundamental principles of theory of science and the research process and to present methods and models for realisation of projects of a practical as well as theoretical nature. The course gives a vision of a subsequent research career in industrial design but also supports the planning and report of the coming diploma work and also the students' future work as practising industrial designers. The course combines theoretical lectures by national and international researchers in ID with empirical studies, where the specific focus is on methods and tools for communication with users. The previous course (autumn 2005) was awarded very good credits in the course evaluation and a strong impact was seen in several diploma projects, both in the way of execution and writing.

Industrial projects

Industrial cooperation is the third commission of the university. For a research subject such as ID, it is necessary that collaboration with industry is an essential part of action. We need to work with questions of relevance to industry, and research-based methods, tools and models are important for SMEs as well as large industrial companies contributing to their design of successful products. With financial grants from regional innovation funds, we carry out several design commissions every year in companies that have not before worked with ID. In this work, we involve senior students and young industrial designers. The Department of Design Sciences has an agreement with Träriket, the Scanian "Kingdom of Wood" and, among other projects, an innovative prototype chair and a table of beech were designed by the former students Lena Beskorovainaia and Hans Lekeberg in order to promote Scanian beech as an attractive material for furniture. The project was initated and partly financed by LRF, The Federation of Swedish Farmers.

The future

During 2007, our first PhD students will be examined as a licentiate researcher and the first doctor will be examined within the next few years. In order to strengthen the artistic "leg" of our research body, we will now actively involve our ID teachers in research, as they are all practicing industrial designers. They may take part in different design experiments and also help us verify that our research-based methods and tools are relevant in practice. Involving the teachers will enrich our research and contribute to "form-giving" the PhD students' doctoral thesis work. With improved financial resources, we hope to be a larger group of senior researchers and PhD students in the next few years.

11/ http://www.universaldesign-sweden.com/ 12/ Olander E, Christoforidou D, Sperling L, 2005. Toolkit for awareness in universal design. In: R. Coleman, A. Macdonald (Editors). Include 2005. 5th International conference on inclusive design; 2005; London: Helen Hamlyn Research Centre; 2005 13/ Paulsson J (Ed), 2006. Universal Design Education. (Report about a national intervention in universal design, 250 pages). EIDD Sweden and the Swedish Association of Persons with Neurologically Disabilities, Stockholm, Sweden

User-centred design – perspectives and projects

Lena Sperling

User-centred design is one of the important perspectives of ID research at LTH. User-centred design is a definition and a cluster of methods that has evolved mainly within interaction design and extended from this area to other fields of research and practice. User-centred design may be defined as design for users, “design for users with users” or design by users[1], depending on the degree of user participation. Design “with and by users” is part of participatory design. *User-oriented* is a term which denotes a perspective based on the interests and experiences of the user and on knowledge about use and users[2], and in consequence with this statement, user-oriented industrial design would be most adequate for describing our research approach in user-centred design. With users we mean the persons who are experienced in use of the intended product category. In product development as well as in design work, analysis and evaluation are the most important and critical activities for communication with users.

User requirements, expressed in qualitative terms, exist independently of solutions and are therefore an important source for innovative design. User pretentions and expectations have extended from very basic functional requirements such as safety and functionality via usability and comfort to emotional requirements such as desire, and pleasures such as physio-pleasure, psycho-pleasure, socio-pleasure and ideo-pleasure[3]. Emotional requirements are related to the individual image of users and their personal preferences, memories and dreams and form the symbol values and meta-qualities of products.

Requirements may be expressed explicitly by users, while implicit or tacit requirements may be captured, elicited or emerged[4] from users by specific methods and mediating tools. The design process can be seen as a negotiation between problem and solution through the three activities: analysis, synthesis and evaluation[5]. In analysing activities, user requirements are mapped with various physical, visual, verbal and numerical methods and tools as a basis for synthesis and evaluation In the evaluating activities, the degree of user satisfaction is measured with sketches, models and prototypes before deciding on commercialisation. Although all industrial designers use various mediating tools in communication with their clients, they seem to use them more seldom in communication with users[6, 7]. In order to increase communication with users in ID, methods should[8]:

- Be fun and stimulating; contribute to the designers’ personal creativity and facilitate innovative design.
- Be adaptable and contribute to the ID’s individual ways of working.
- Be uncomplicated and time efficient to use.
- Be experienced as natural and spontaneous.
- Utilise users’ experiences and knowledge.
- Result in figures and solutions that convince the client.
- Result in solutions which satisfy users as well as the designer.

The User Compass Chart – a new tool in communication with users

Compass charts have their origin in psychology[9] and have long been used for positioning of existing and future products in strategic industrial development and design practice. But as far as we have found, they have not before been used in communication with consumers and end-users in design work. The User Compass Chart, UCC, was created in the interface between the “IKEA” research programme, where stimulating mediating tools were probed for, and the Vinnova-financed Bioauto project that aimed at design of demonstrators of renewable materials for the manufacture of automotive interior components. In Bioauto several automotive companies were represented, among them SAAB, Scania, Volvo Car and Volvo Truck. Together with Per Eriksson, researcher in Innovative Design at Chalmers University of Technology, we searched for a creative and stimulating mediating tool for the Bioauto project, where more challenging user requirements were needed for the design of creative “green” demonstrators. Vehicle interiors are important for pride of professional drivers and for their daily well-being, but it was not known which qualities of surface materials they appreciate in today’s vehicles, which materials will be valued by them in the future and to which degree ecological materials may be visible in their real qualities in trucks and cars. These research questions are also highly relevant in design of home furniture. 37 different material samples were characterised by ten drivers according to the vectors “more professional” – “less professional” and “more natural” – “more synthetic”. They were asked to position material pieces on the UCC and to finally adjust positions if needed. The complete UCC of each driver was documented with a digital camera (Figure 2).

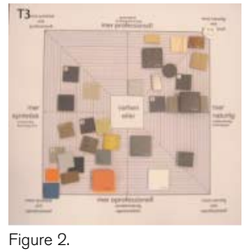


Figure 2.

Application of the User Compass Chart in the Bioauto project. A truck driver’s positioning of samples of a wide range of interior materials considering the chart points “more professional”, “more unprofessional”, “more natural” and “more synthetic”. The black dot represents the interior of driver’s present truck and the white dot with a smiley his dream vehicle.

Some material samples were more often positioned in the project’s desirable north-east sector, such as natural and imitated oak, ash and stone composites. The UCC proved to be a useful mediating tool for identification of user’s experiences[10] and it was decided by us to improve it by further application in studies of design elements of home products.

Integrating functional and emotional requirements in innovative products for home enviromnments

In the design of products for working life, hospital care or for users with disabilities, the functional user requirements are most critical and evident, and the aesthetical qualities are often neglected or even forgotten. In the multidisciplinary research programme Elderly People and Design at the Department of Design Sciences, ID is one of several academic and industrial partners. The Comfort Living project is part of the programme and aims at the design of furniture and interiors promoting health and function. The aim of the project is the design of a sporty easy chair that attracts consumers long before they need the considered function and that may contribute to health and activity in old age. Failure to understand the differences between cognitive and chronological age has created problems for marketers, and new products with great potential to improve the lives of elderly consumers have been rejected, because they become symbols of age and therefore are inconsistent with the self-image of many elderly[11]. A regional furniture company is the main industrial partner of Comfort Living, and subcontractors and distributors are also involved in the project. One of the ID researchers has documented the research intervention as a participant observer. Elderly users were interviewed about problems and possibilities in relation to chairs by an industrial designer educated at LTH, and the User Compass Chart was used in experiments about experiences of a wide range of different arm- and easy chairs with middle-aged able-bodied users as participants[12]. From the experiments, the industrial designer identified important key sentences for the design of a new chair, considering both functional and emotional requirements.

Scanning of body dimensions for the design of chairs and workplaces

In order to meet functional requirements of users with well-designed products, it is important to gather sufficient knowledge about the human body and its dimensions. Data in most national and international anthropometric databases have lost their actuality. Swedish body sizes have changed due to changes in life conditions and life- styles and today’s cultural diversity means that a larger variety of persons are represented in our population. Laser scanning technology means that it is possible to register body dimensions as well as body shape in a very efficient way. Industrial Design and Ergonomics at LTH have recieved a considerable research grant from AFA Försäkring, a Swedish insurance organisation, to build up a new and statistically representative ergonomic database of Swedish adults, in connection with the Swedish Proforma project. Results of our project have the Swedish car and furniture industry as major target groups. Results of the AFA project will be implemented in several Department projects.

1/ Eason K D, 1994. User-centred design: For users or by users? In: S McFadden, L Innes and M Hill (Eds), Proceedings of the 12th Triennial Congress of the International Ergonomics Association, Human Factors Association of Canada, Ontario, 1994, vol.1 pp 78-80 2/ Dahlman S, 1986. User requirements. A resource for development of technical products. Doctoral thesis, Department of Consumer Technology, Chalmers University of Technology, Göteborg, Sweden 3/ Jordan P, 1999. Designing pleasurable products: An introduction to the new Human factors. Taylor & Francis, London 4/ Karlsson MA, 1996. User requirements elicitation: A framework for the study of the relation between user and artefact. Doctoral thesis, Department of Consumer Technology, Chalmers University of Technology, Göteborg, Sweden 5/ Lawson B, 1997. How designers think. The design process demystified. A completely revised third edition. Architectural Press, Oxford. Hasdogan G 1996. The role of user models in product design for assessment of user needs. Design Studies 17:19.33 6/ Christoforidou D, 2004. Interviews with practicing industrial designers about communication with users in their design work (Intervjuer med industridesigner om kommunikation med brukare i designarbetet). Preliminary report in Swedish. Division of industridesign, LTH, Lund University 8/ Sperling L, Christoforidou D; Olander E, 2005. Communication with users in industrial design activities. Educational report, Division of Industrial Design, LTH, Lund University 9/ Russell JA 1980. A circumplex model of affect. Journal of Personality and Social Psychology, 39, 1161-1178 10/ Sperling L, Eriksson P, 2006. Exploring drivers’ experiences of material qualities in present and future interiors of cars and trucks. In: Proceedings of The Ergonomics Society Annual Conference April 2006, Robinson College, Cambridge, UK 11/ Lunsford, D.A. and Burnett, M.S. (1992) “Marketing Product Innovations to the Elderly: Understanding the barriers to adoption”. Journal of Consumer Marketing 9(4): 53-64 12/ Sperling L, Kristav P, Olander E, Lekeberg H and J Eriksson J, 2006. Exploring emotions for design of your future chair. In: Proceedings of the International scientific conference “Design & Emotion” September 2006. Chalmers University of Technology, Göteborg, Sweden

Design Management

Lisbeth Svengren Holm

Industrial designers work – most likely – in a management world. They may be managers themselves, leading a company of their own, having people employed; or they may be employed in a design consultancy or in a company, probably a manufacturing company. In the course of their work, industrial designers will face and cope with the power of managers, the dilemmas of managers, the decisions made by managers. During the professional life of an industrial designer managers play an important part, creating the context and the conditions for the design work and its outcome. Industrial designers are rarely experts on management, but needs to know enough about management and its logic to understand how it affects their own work. Design management is only one aspect of management but the one that is closest to the design process. Design management is about management of the design process, about how to deal with designers, but also how to value and evaluate design. Design management is a subject to learn about the integration of design and management in an industrial context.

Design management is a small research field on the boarder between design and business management. It is a meeting of two worlds – a meeting that can be very complicated, despite the mutual dependency. Design management is the knowledge about this meeting, the conditions for it, problems, opportunities and the value of it. As an academic field it is very new but as a practice it is as old as the industrial development. The purpose of research in design management has been to understand and develop some models for the role of design and designers in a corporate context with a focus on the business enterprise. In this article we will give an overview of design management as a subject, its development over time, and its relation to the development of management.

Design management in a historical perspective – the classics

Design management – to manage, to lead design processes – has the same roots as industrialisation as such in the mid 18th century. When production was split into separate activities and phases in these early days of industrial firms, the design of the product became an activity of its own, an activity of planning and sketching before manufacturing. This created a need for a new profession: the designer – or modeller as it was called[1]. Forty tells the story of how the pottery maker Josiah Wedgwood started to commission artists for new designs; he regarded them as very troublesome people to work with and that they needed special guidance[2]. This could be viewed upon as the first practice of "design management". As a conscious activity and a field for study we have to go to the 1970s to find any written material[3].

Industrial designers emerged as a profession in the early 20th century and some European companies started to have a regular collaboration with designers in what we now would refer to as a strategic alliance; the most notable examples are AEG in Germany and Olivetti in Italy. Inspired by Olivetti, Thomas Watson Jr, head of IBM, started a collaboration with the architect and designer Eliot Noyes in the mid1950s. This contributed to the success of IBM in the 1960s. Watson's statement that "Good design is good business"[4] has often been referred to as a raison d'être for design management. Common for all these examples is that the designers were not employed. They continued to run their own design firms and had other customers, but were still responsible for the design of these companies. This, of course required that the top management legitimised the position of these designers. The designers were then able to stay out of internal politics and besides that they also wanted to have other customers for inspiration and their own development. A more recent example of this kind of design management is Bang Olufsen, where David Lewis is their design manager without being employed but with a veto for the design decisions.

Research and theories of this kind of relationship is, within management, fairly unnoticed. Design historian Stephen Bayley[5] states – a little bit ironically – that these classical examples of design management are stories about a few "enlightened" top managers. Despite the fact that they were leaders in their industry they did not have any followers in this respect and one can also state that these leaders had a personal interest in design. The logic for business success has been dominated by technology, economy and marketing. Compared to these fields, design has had very few representatives in business management. The classical examples are also from a time when large corporations had a centralised management and strategies were planned and implemented top-down. In the decentralised organisations that emerged in the late 1970s, management and implementation of strategic decisions are much more complex. Flexibility and listening to the market became important and a dominant logic for the development of strategic management.

Design and strategic management

What contributes to profitability follows, according to Richard Normann[6], a strategic management consultant and researcher, certain logics for each industry. This is further supported by benchmarking, a popular concept for management, where companies compare themselves with the best in class. Development of management models could be seen as a "follow-John" pattern and some management models are popular for a time-like fashion.

Global competition, diffusion of technical know-how, the increased level and equalisation of quality in global production have turned design into a strategic element for sticking out in a crowded market. This is further supported by the change of consumption from a materialistic to a symbolic one, where brands are the symbols for the desired life styles and design is the medium for its communication.

Despite the argument for design as a logical tool for competitiveness, very few companies have been capable of dealing with design. To prove the value of design has therefore been a common activity for design management research. Studies of the result of investment in design have shown positive effects[7] but also that there is no straightforward relation. Researchers seem to agree that good design in combination with a capability to integrate and organise the design function in the company's strategic development can support a positive development of the company's competitiveness[8].

With a strategic perspective of design, design management has to deal with the relation between design and a company's business idea, its mission and vision. Development of the company's business idea, what product it offers, to whom and with what resources, i.e. how it makes money follows, according to Normann[9], two different courses of events: product variation and re-orientation. Product variation, improvements or model changes can take place within the existing organisation, resources and competences. They take place on a regular basis. Re-orientation, a more fundamental change of the business idea, requires more fundamental changes in the company. It relates to the strategies of the company and to political processes as dominating ideas and significant actors will be affected[10]. The change from serving an industrial market to serving a consumer market, like for instance Ericsson did when they launched mobile phones, is an example of such a re-orientation. What Normann did not notice – as he does not have a design management perspective – is that also the smaller product variation projects could/should include industrial designers and when this is not business as usual, it will require a new thinking as well. What many designers do realise is that they should not stick to small innovations but work on the more radical ones. A consequence of this is that they have to climb the corporate ladder that has many slippery steps.

Wally Olins[11] defined corporate identity as "visualization of the business strategies". At the same time, the design visualises the priorities of the company, its competence and philosophy. Design and strategic management is hence both about what a company communicates and what it produces. In this sense the industrial designers could have an important role in integrating both perspectives. They do, however, need to understand the strategic thinking of their client companies as well as to become strategic partners.

1/ This development is described among others by Gustaf Rosell (1991) in "Anteckningar..." och Adrian Forty (1986) Objects of Desire. Design and Society 1750-1980. London 2/ Forty (1986) 3/ See for instance: Pilditch, James. 1970; Schutte, 1975 The Art of Design Management; Olins, Wally, 1978. Corporate Personality 4/ Watson, 1975. Good Design is Good Business. In Schutte 5/ Stephen Bailey. 1979 6/ Normann, R. 2001 7/ Potter el al. 1991; Hertenstein et al. 2001; Johansson, 2006 8/ Svengren, 1995; Cooper & Press, 1997; Jevnaker, 1998, Borja de Mozota, 2003 9/ Normann, 2001 10/ Normann, 2001 11/ Olins, Wally, 1989. Corporate Identity. How to...

The response from design firms as strategic partners

Lisbeth Svengren Holm

The research project that we as design management researchers at the Department of Design Sciences, Industrial Design Division, have worked on since spring 2006 has had the purpose to get more knowledge about the development of the industrial design firms from a management perspective. In today's global business climate, design has become recognised as one of the most important tools for the creation of competitiveness and for sticking out on the marketplace. Have the design firms managed to match this development? Do the design schools teach the right design competences?

The number of designers educated at university level has increased in the last decade. There are more design schools and there are more design programmes at technical universities. Also business schools teach design both from a communication and an innovation perspective. This is not only the case in Sweden but in Europe, the US and Asia as well. It is not self evident that all those who have an education as industrial designers will work as designers, but they certainly constitute a large resource. As this article focuses on design management we will leave the design part and conclude that many design schools have introduced design management courses, at least shorter ones. These courses give an orientation about the relationship between design and management but can not turn designers into accomplished managers. Many of them are not even interested.

Industrial designers who are going to work with industry however, have to understand design management both for their own company, in case they want to run a firm of their own, or if they are employed – either by a manufacturing company or a design consultancy firm. Compared to the situation in the late 1980s when David Walker wrote his article "Two Tribes at War" (Walker, 1990) the understanding and interest from designers to deal with management issues is quite different. Also, many manufacturing companies have learnt to collaborate with designers and in many companies, like for instance Sony Ericsson, Electrolux, IKEA, etc, the designers have more of a strategic position.

There have been few studies of design management within a design firm. Design management research has focused on the corporate context. The design consultancy is often very small. In a country like Sweden there is less than a handful of industrial design consultancies with more than 20 people employed. We do not count the engineering consultancies. Most industrial design based consultancies are still fewer than five people. Management within these companies is rather uncomplicated. The recognition of design as a competitive tool within many manufacturing companies has been the basis for the growth of the design consultancies. This recognition has also turned design into a strategic resource with a demand on the design consultancy to be capable of understanding strategic thinking. We therefore believe that the trend is towards larger design consultancies based on industrial design but with a planned growth that will require not only design competencies.

The industrial design industry has grown in the last couple of years, both in turn over and number of employees. In Sweden the three largest industrial design companies have almost doubled the number of employees. However, they do not only grow with industrial designers, but have employed graphic designers, engineers, interaction designers, and people with a business education background. These design firms work internationally and have started to set up offices abroad. Companies like IDEO and Design Continuum have grown into large international companies with subsidiaries in several countries, in the US, in Europe and in Asia. These companies have also employed these kinds of people but, to a greater extent, compared to the Swedish examples, also human factors people, i. e with a background in psychology or sociology.

When, in spring 2006, we started our research project about "the development of the design firm", we had a hypothesis that industrial designers have more collaboration with marketing people and top management than they used to have and we were curious how these encounters are handled and dealt with. Another hypothesis was that despite the similarities that exist between marketing and industrial design, they still have differences – and maybe difficulties – to collaborate. Industrial designers and marketers have similar objectives but different backgrounds and tools to work and communicate with. Based on earlier research[1] and recent experience from student projects where marketing, engineering and industrial design students worked together, a lot of misunderstandings and disputes were reported.

Traditionally, marketing people work with graphic designers who are part of an advertising firm. In manufacturing companies , marketing is responsible for packaging design, but also this field of design is often limited to graphic design. Industrial designers have traditionally worked with engineers, who in turn do not always integrate with marketing within their own company. The gap between marketing and technology in companies is well researched. Despite the long emphasis on cross disciplinary team work in management, many companies are still quite fragmented.

We have so far – November 2006 – interviewed one international and six Swedish industrial design firms. We have had access to interviews with three Finnish industrial design firms. We have done interviews at one client's firm that has worked with these industrial design firms and we are going to interview more client firms. The results so far are therefore very preliminary. Some focus on the integrating role of the designer concerning the product and the brand and the technology and marketing disciplines.

The designer as integrator of product and brand

The analysis of the design interviews shows that there is a great awareness of the importance of design and the need for more of a strategic thinking. The strategic thinking is focused on the integration between the product and the brand.

The designer as integrator of engineers and marketers

The product development department is still the most common initiator of the design project, but the marketing department has started to take initiatives. The industrial designers do work in the projects with the engineers but they also try to engage the marketing department in case it was not involved from the beginning. The briefing process and the workshop as a tool for developing an understanding of the project has been a good platform for inviting people from different departments in the company to participate. The role of the designer could therefore be considered as an integrator of engineers and marketers as well.

1/ Svengren, 1995; Svengren Holm & Johansson, 2005

Design Following Ethos in the Global Waltz - a Hollywood Ending (thesis working title)

Despina Christoforidou

Fact: Our actual patterns of consumption are not compatible with a sustainable way of living. Concerns regarding global warming, pollution, decrease of natural resources etc, have lately raised a lot of attention. The rhetoric employed to heighten public awareness on sustainability have always been fatalism, or playing with feelings of guilt and shame. Thus, eco-matters are perceived as a must, a constraint, and are not coupled to anything positive.

These mindsets are all but compatible with those of the customers while purchasing a product, which are coupled to necessity, functionality, usability and pleasure. Moreover, environmental issues are global and are related to the future of mankind and the Earth. The purchase of a product is local and deals with the present or near future of a particular individual.

Fact: Design has customarily been associated with products, consumption and consumers. Design is one of the key factors at the purchase moment, is the consumer going to be attracted by the product or not? Design entails a rather high glam factor.

Question: Could design be put in the service of sustainable society by making the ecological matters appealing to the public in general and the consumers in particular?

Question: Is it possible to tackle ethical and ecological issues from a positive and glamorous perspective and thus contribute to make the idea of design following ethos natural and inspirational for the design community?

Design could become a decisive factor and designers key players in the process of finding the right pathways. The discipline design certainly has the potential. It is visionary, creative and pragmatic to mention a few of its qualities, and it can help set the frame for a new sustainable and yet pleasurable culture and enable a happy ending in the best Hollywood tradition. Through my research I intend to find out whether and how this will be feasible.

Diversity among users and how to involve users with disabilities in the design process

Elin Olander, Designer MSD, PhD student in Industrial Design

My thesis project is about the user and how to involve the user in the design process. The user and the industrial designer are both experts in their own areas. The user's expertise is about how to handle products in different situations and contexts. The industrial designer's is to transform the user's requirements with other stakeholders' requirements into a physical object or a service. From my point of view, it is important to respect the expertise of both, but where to draw the line? To which extent should the user be involved in the process and in which phases? Which methods can the designer use to make users enthusiastic to express their opinion about products? The degree of involvement of users differs between designers, projects and phases in the design process; from those designers who let the users actually design an object themselves to just letting the users answerer questions in a questionnaire or even neglect to interact with them at all. Designers are trained to consider the users when designing but some users are usually more difficult to reach such as children, persons with disabilities and users in extreme work situations such as a space station or submarines.

My research focus is to develop methods for involving the user in the design process. My thesis project is partly financed by the Vårdal Institute, and I belong to their healthcare research school, and my specific commission regards research concerning young persons with disabilities. My specific interest is how to involve this target group in the design process which gives me my theoretical framework of *universal design*. Universal design is defined as an approach to design that incorporates products as well as building features which, to the greatest extent possible, can be used by everyone[1]. This doesen't mean "one size fits all" or that it is a synonym for assistive design. Theories about universal design emerged from the United States during the middle of the 80s, the founder is Ronald Mace. A universal design product needs no explicit marketing for a specific user group. A "true" universal design product includes, for example, persons who are blind without screaming it out loudly. Parallel to universal design there exist different terms of a collective concept with the philosophy of giving the diversity among users an important role in the design process. Universal design, *inclusive design* and *design for all*, are the three most common definitions today. These terms are sometimes used as synonyms and the distinction between them is not obvious.

Products designed with a universal design approach should be usable by people with the widest possible range of functional capabilities. Universal design is often incorrectly thought of as design for people with specific disabilities, however universal design includes products that are directly usable (without requiring assistive technologies) for a wide range of users and those products that are made compatible by assistive technologies[2]. For designers working with universal design it is important not to distinguish between disabled and "abled" people or others diverging from the norm[3]. The word "universal" may contribute to a misunderstanding of the concept since it can imply to seek "universal solutions" to problems and meet the needs of all people[4]. Some argue that the term *inclusive* design better illustrates the concept. Inclusive design encourages an attitude of: "What if we design like this, then we would include these user groups as well, rather than exclude them"[5].

1/ Preiser W, Ostroff E (2001). Universal Design Handbook. McGraw-Hill, New York 2/ ENGAGE (2005), Report of the state of the art, ENGAGE project, Designing for Emotion, Access: 2005-09-01 www.emotional-design.org 3/ Hansson, L. 2006. Universal design – a marketable or utopian concept? Doctoral thesis, Center of Consumer Science, Göteborg University, Sweden 4/ Steinfeid, E. and Tauke, B., 2002, "Universal Designing", Universal design 17 ways of thinking and teaching, Ed J Christophersen, Oslo: Husbanken 5/ Högberg D (2005). Ergonomics

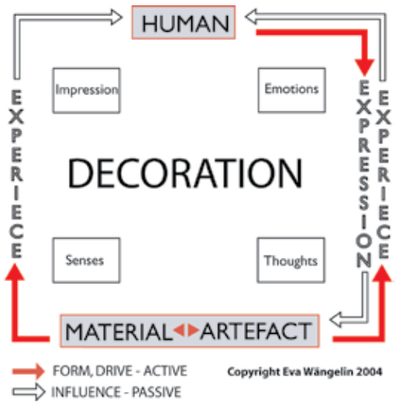
In order to make it easier to create products with a universal design approach, Mace and his colleagues constructed and established seven guidelines which nowadays are globally used[6]. A product can not fulfill all seven but as many as possible should be considered in the design or redesign of a product. These seven principles guide the designer to pay attention to mainly functional product qualities such as equitable to use, flexibility in use, intuitive to use, tolerant for error, low physical effort. The attempt with my thesis project is to integrate the user's emotional experiences in the theoretical framework of universal design: emotional experiences such as identity, personal branding, elicited feelings, attachment, meaningfulness and attractiveness. To realise this integration, I try different approaches to involve young adults with disabilities in the design process. I try out and develop different mediating methods resulting in tools for the designer to be used together with the user. I have planned a case study with different design projects in order to elaborate and apply both methods and theories. Some of these design projects approach problems identified in an interview study I have done with the target group. The design projects can go in two different directions: from an assistive product or an assistive function within an ordinary product which may be transformed to an everyday product for everybody – for example crutches for persons with walking problems are today sometimes replaced by the user with Nordic walking poles used for sport activities. The other direction is the opposite – a transformation from an everyday product not accessible for everybody to an "assistive product" with a universal design approach not marking a specific "extra user": for example, if an ordinary DVD player were equipped with speech synthesis, the use of manuals and extra assistive products would be less necessary for everybody with reading, sight and information problems.

Integrations and User Diversity in Product design. PhD thesis. Loughborough University 6/ Story, M., Mace, R., Mueller, J. 1998. "The Universal Design File, Designing for people of all ages and abilities." The Center for Universal Design, North Carolina State University, Raleigh, NC, USA.

Decoration as a way of transforming impressions and how to express them as representations of reality

Eva Wängelin

The origin and outcome of a design process can be described as a transformation of an impression to an expression. My research area is decoration as a form of expression. Decoration is a term that means "that which has been decorated". In this way it relates both to something situated – the décor – and to an activity[1]. My focus is to understand the act rather than explaining the event (place + act). The difference is that the subject – i.e. the designer – is more present in the act, than in the event The aim is to create a basis for understanding how decoration can be used for communicating design transformations.



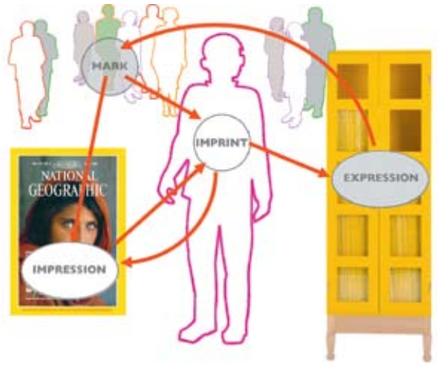
Decoration is placed between man material and artefact. Decoration is embellishment placed onto a surface. The surface possible to decorate, being most close to the human – both physically and emotionally – is the body. Since the human became domiciled, decoration moved away from the body, first on to clothes and then the things we own – the objects around us and our physical environment. The main function of decoration has traditionally been to make something – an object, an individual or an environment – more attractive or valuable. This function of the decoration is very much related to the circumstances of experience and use.

But there are also other ways of looking at decorations. Why do humans decorate their environment? What do we communicate through decoration? Adolf Loos declared that, "Lack of ornament is a sign of spiritual power"[2]. William Morris thought differently. He believed that decorating was something that the humans did in order to add joy to production work, which otherwise would be intolerable[3]. So, decoration can be seen both as an expression and something you experience. Decoration has from time to time needed excuses, reasons for its presence. But one hypothesis does not exclude all others. That would be like saying that we speak just because silence is boring, and not take notice of the content of what we are saying. There is to my knowledge no contradiction between the fact that we speak to avoid silence and that we want to communicate something with our words. The same is true for decoration. We do not assume that body decorations in tribal societies are only made for aesthetic needs.We know that they mean something, that they have a purpose[4].

When one looks at decoration in relation to objects there are two elements to consider: the function of the object and the function or meaning of the decoration. This relation or contradiction between the function of an object and the decorations placed upon it is more present in some objects than others. Decoration that relates to function can have the form of information more than decoration. This interplay between the need and the needless is less present in printed textiles. Of course textiles do have functions, but the functions are less predetermined. The main function of textiles can be to be the carriers of decoration. That is why textiles could be a suitable "surface" to analyse.

Decoration can be seen as the designers' way of expressing representations of a reality. Decorations represent the reality in different "levels" and with different purposes, for example: to copy, imitate, illustrate, interpret, abstract and so on. In order to

1/ -tion is a suffix that is used to create a noun from a verbal stem. Example; construction from construct; situation from situate, agitation from agitate and so on. 2/ Loos A. Ornament och brott, fyra texter om arkitektur; 1985, p. 21 (the quotation is translated by me) 3/ Weimarck T. Design och Konst – texter om gränser och överskridanden I; 2003, p. 90 4/ Brain R. The Decorated body 1979; p.185 5/ Asplund J. Hur låter åskan; 2004, pp. 37-38 6/ Claude Lévi- Strauss used the term bricolage in his book The Savage Mind, as a term for pre-scientific science 7/ design



achieve the levels of representations one uses tools or means. I try to establish, whether some conceptual tools are necessary for a specific purpose while others are optional. To describe and verbalise the process between the designer, his internal memories and aims, external values and demands, and the relation between the impression and the final expression is part of understanding the act.

Will design be better with proper decoration? In a global society, it becomes more and more important that designers can transform their own cultural heritage in a way that can attract and evoke emotions outside of their own product sphere. What happens in a world where the cultural limits of decorative elements vanish, but the understanding of the communicative aspects is less easy to comprehend or transfer? By understanding and integrating knowledge of communicative qualities in product design, and making considerations about that in the design process, we can become better designers.

Industrial design can have a strong technical touch, but in order to perform optimised design work, it is also necessary to make use of thoughts and emotions that are related to inner experiences and private associations of the individual. This is perhaps also true for design research. How do you combine research and practice in a way that serves both the research community and your own identity as an industrial designer? For me it is vital to try to make room for some practical design work in the research process, hoping that this work may be a part of the creation of a research tradition within the field.

Johan Asplund writes that a scientific process can be described as starting with insight, which you gain through observing something through your senses, and then making a metaphor and finally an experiment; some sort of laboratory work in order to create comprehension[5]. Transferred into a plan of how to study decoration, I have formulated three research questions that each provides a step towards realising my doctoral thesis.

1. Insight – How can I see, interpret and describe decoration?
2. Metaphor – How can I experience, understand and evaluate decoration?
3. Experiment – How can I create, express and use decoration?

The plan provides me with the possibility to perform as a designer in experiments, and I am certain that this will enrich my research. Panagiotis Louridas has described how design can be compared to bricolage[6].

Self-conscious design[7] is, then, a kind of metaphorical bricolage. This is in accordance with the view of design as a reflective conversation with the situation at hand. In this view, design is a discussion conducted with the materials in the medium with which the designer works. It is a hermeneutic process, a process of iterative understanding[8]. The designer proceeds by interpreting the effects his actions have on the situation. He tries to understand the effect of his materials and of his tools, to define their place in a structure. He wants to create a structure out of his means and the results of his actions[9].

Louridas points out that the interdependence of contingent events is highly important. He claims that without contingency there can be no design, but only manufacture. The description can also suit design research. To add design practice to the research is to expose oneself to contingencies and makes room for the possibility to make a structure out of events.

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Alumni master projects

Contents

Tilt

Annika Carlsson

Tilt is a piece of dual-use furniture, mainly for outdoors.

In the upright position, it's a chair with proper back and armrests; tilted sideways, it becomes a two-seater bench. The aim of my project was to create a smart and attractive piece of furniture that can compete with comparable products on the market. My inspiration came partly from the ubiquitous garish monoblock-chair, seen in gardens and outdoor restaurants all over the world.

Obviously, there's a need for practical, stackable and low maintenance furniture for outdoor use. In order to compete with the extremely low-priced conventional monoblock-chair, an added-value strategy was needed – in this case through shape and function.

Tilt is a one-piece stackable object, manufactured from injection-moulded polypropylene.

Volvo Sport

Torbjörn Ericsson

My diploma work was carried out at the Volvo Cars Product Design Department in Gothenburg in spring 2003. Volvo Sport is an exterior concept of a practical rear-wheel drive two-seater with a sizeable luggage space, a symbiosis of sports car and station wagon. Most sports cars currently available have hardly any room for luggage and storage, some feature tiny rear seats that only children or rather small passengers can use comfortably. This rather conventional configuration is called 2+2; the rear seats in these cars are hardly ever used. Therefore, my concept was to be a pure two-seater to make room for a large practical luggage space.

The target group is adventurous, unisex, 35-50 years of age with superior financial status. These people put an emphasis on features like safety, good looks and active driving. They often do sports like golf, hill climbing, scuba diving, etc., therefore wanting a sports car that can offer both active driving and room for luggage. My design has a strong Volvo identity with a powerful stance and good proportions. Many design features are clearly linked to past models like the Volvo P1800ES and the Volvo 144.

In many automotive diploma works, we have seen things like freely suspended wheels and other gimmicks. According to the designers I talked to at Volvo, they prefer to see students capable of designing a fairly realistic car. Therefore I chose to create something original yet realistic.

A longer rear overhang underlines the fact that my Volvo Sport is a rear-wheel drive car. The main reason for choosing rear-wheel drive is that it is more fun to handle, also eliminating irritating vibrations in the steering column when accelerating hard. Another reason to have a longer rear overhang is to get away from present-day cab-forward design. My feeling is that this trend will probably change into more of a cab-backward design as seen in the great GT cars of the 60s and 70s. The bonnet is fairly long, accentuating the powerful, longitudinal engine; a nice spin-off effect is that the deformation zone is larger, adding more safety to the occupants in case of a frontal collision. The wheel arches are well defined to give the car a powerful stance. The recognisable “Volvo-catwalk” along the body sides and the characteristic rear window arrangement are key features, a reminiscence of the Volvo P1800ES.

The Volvo Sport is a crossover concept, fusing two different worlds. It is a sports car – and a car for sports. It is a fun car – and it’s practical. It is fast – and it’s safe. The safety aspect is expressed by a sturdy C-pillar, providing a sense of security. It also stiffens the car’s structure. The rear body side graphics accentuate the security theme even more. A wide frame to give an impression of strength and stability – also making the glass areas look less fragile – encloses the side windows. The soft front, reminiscent of the Volvo 144 and 244, has a separate aluminium coloured section acting as bumper. The roof is made of light but strong laminated glass to achieve a spacious feeling and brighter interior.

To keep with the sleek design, the keyless doors do not have handles. Instead, a fingerprint sensor on the B-pillar must be touched to open the door. The fibre-optical headlamps are integrated in the grille and they are, just like the taillight clusters, invisible when not illuminated. The indicators are also obscured when not in use.

Riekkis Fly-Fishing Equipment

Emanuel Lidberg

Rod and reel is one object instead of the conventional two, giving the equipment a very distinct identity and a design that stands out from the competition. The closeness between handle and reel allows the fingers of the casting hand to control the rotation of the spool during casting and fight.

Marpe Tanaka, 2004
Manual Demining Tool System

Manual Demining Tool System

Marpe Tanaka

There are many different demining methods, but the most common and most accurate one is to do it manually – a dangerous, slow and tedious procedure. The circumstances deminers face vary a lot and many different tools are needed in the process. Deminers have to do everything on their own, from digging and excavating soil to sawing and cutting branches and roots. My design facilitates their work by providing all tools necessary, tools that are flexible, ergonomic, easy to store and transport – and that aid the safety aspect. Furthermore, they are simple to manufacture so they could be made locally and adjusted to environmental and situational differences.

The X-Project

Måns H. Sjöstedt, Puia Shamsossadati

More and more people suffer from insomnia, depression, head-, back- and neckache. One of the factors that contributes to these illnesses is stress. The goal of our project was to develop designs that help people avoid or reduce the damaging side effects of stress.

The X-Project resulted in four concepts for health improvement products, which are based on well-known methods and theories for stress relief and well-being. The main idea was to make them easy to use, accessible, fun and inspiring, so they can become a natural part of one's daily life and routines.

X01 – Communication Jewellery

A new communication concept for giving couples support in showing emotions. Because humans are flock animals and social creatures by nature, we want to belong to a group, particularly in stressful times. Being touched by someone you love increases the level of oxytocin in your body, which in return makes you calm and happy. A psychological aspect of belonging to a group is that you are aware that your friends or loved ones are always there for you. Knowing that there is someone who cares for you and supports you in difficult situations has a soothing effect and reduces your worries. The jewellery create a link between loved ones, giving couples new means of communication when they are apart. They provide a feeling of emotional security, letting you know that there is always somebody there.

X02 – Relaxation Improver

A small portable device that helps and teaches people how to relax. Brain and body have a rest system that with its hormones and nerve signals makes us recover. For this rest system to start, the body and mind must be calm. If you're not mentally calm, the recovery process is not going to be effective. To get mentally relaxed is difficult, especially if you feel stressed – and today most people are not able to get in to a truly relaxed state. Relaxation techniques can teach us to be mentally unperturbed, there are different types of meditation and many can be learned with some practice. They help us to deeply focus upon the core of our being; there is a quieting of the mind, emotions, and body. This product will help people to get moments of relaxation using biofeedback technologies by which you will learn to relax your body and mind through audiovisual feedback of your brain activities. This employs binaural beats and sounds to stimulate the user to get into a state of complete relaxation.

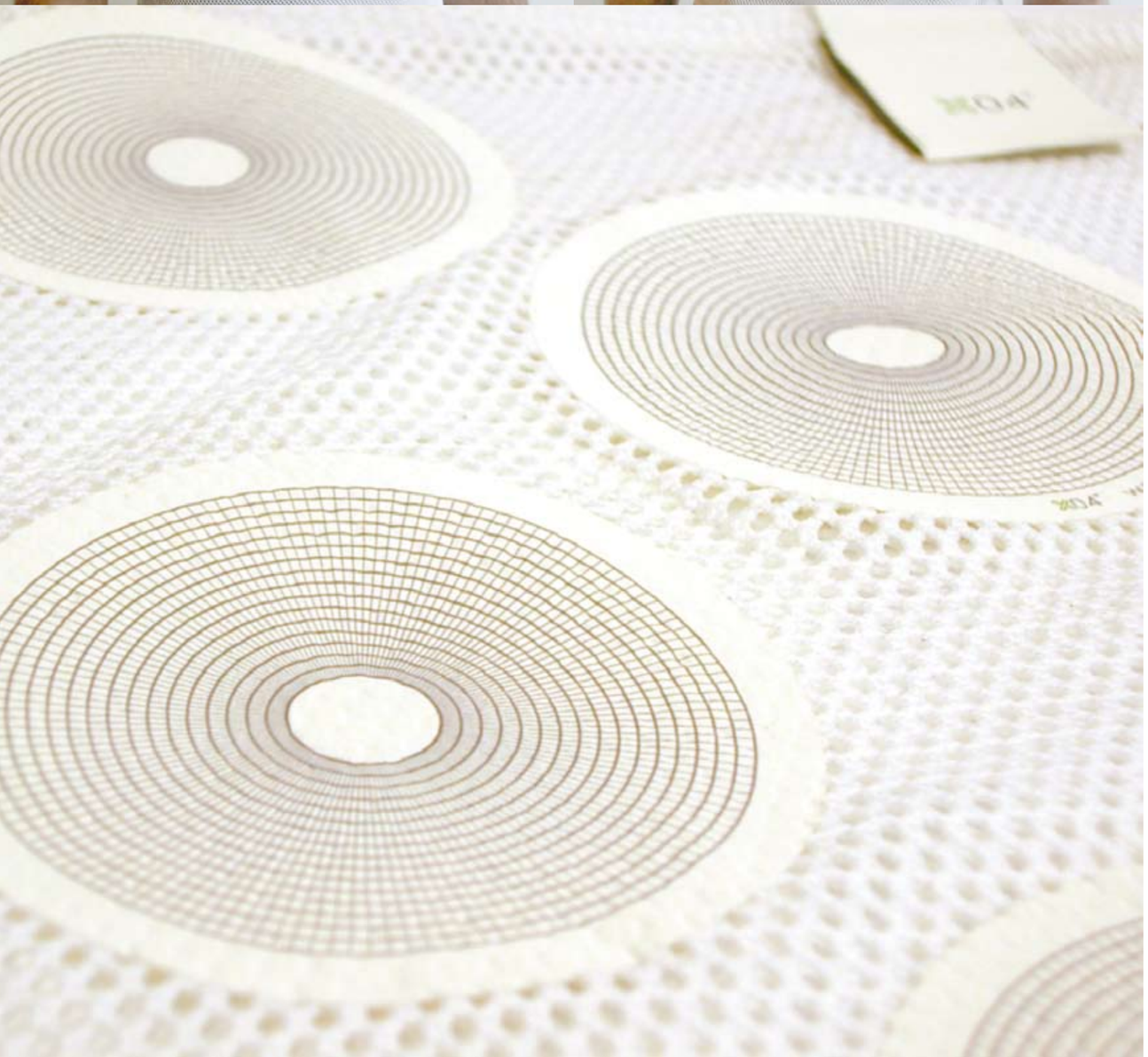
X03 – Sleep Stimulator

An aid for better sleep and comfortable awakening. More and more people have trouble sleeping, often caused by worries and stress. A study in Sweden showed that 25% of the population have sleeping problems. Waking up and not feeling rested is a bad way to start the day; a tired body and mind are more vulnerable to stress.

Falling asleep: the pillow uses sound and pulsating light as stimulation to slow down brain activity. What happens is that the brainwave activity tends to mirror the flickering light and sound. This helps the user to get into a relaxed mood before falling asleep, making mental and physical recovery more effective. Waking up: in the morning, 30-45 minutes before the alarm is set to ring, the pillow emits a slowly increasing light. Even though you're still sleeping, it prepares your body for the waking-up process and gradually guides you out of sleep, making you feeling refreshed and renewed.

X04 – Wearable Tension Reliever

Common symptoms of stress are body tension and muscle ache. These physical symptoms can lead to more emotional stress, which can again worsen the physical symptoms. By stimulating the tensed muscles with heat and massage, you increase the blood circulation in the tensed area and release endorphins and oxytocin that are proven to reduce tension, pain, blood pressure and pulse as well as anxiety.



Designing Frames for Meals

Tiina Karjalainen

Dishes, as well as the food on them, have been decorated for centuries with the aim to add beauty to our everyday lives. But the differing aesthetics, those of dishes and food, seldom relate to each other. After all, both have an influence on the appreciation of a meal. With my designs, I want to emphasise the interplay between the aesthetics of dishes and food. My aim has been to design a frame, where all aspects of the meal – the food, the dishes and the service set can interact in a form. Simply put, this project is about how decorations and food can interact on a plate, or how a plate and a decoration can interact with food.

The Connected Youth, Furniture in Cooperation with IKEA

Hanna Åkesson

Everyday work and leisure furniture aimed at teenagers; for play, relaxation, homework, socialising and many other situations.

Work and relax in bed – KNÄGO
Teenagers like to spend a lot of time in bed. This tray can be used as a work surface in bed and elsewhere.

Work and relax in front of the TV – LÄXA
Teenagers like to watch TV or play video games in groups. This piece of furniture is a seating alternative and an extra table or storage for dirty clothes.

Work and relax on the floor – MUTTER
Teenagers are always stressed. With this low seat cushion I wanted to express a feeling of relaxation. It's like a friend to hang out with. When not in use, it decorates the floor, the wall, the bed.

Anna Hjertman, 2004
Liturgical Field Kit

Liturgical Field Kit

Anna Hjertman

New times demand new approaches!

Never before in modern times have so many Christian rituals been carried out in the open air. Many people today do not feel that a visit to a church is the only way to come in contact with God. They choose to celebrate religious feasts in a more untraditional manner with weddings in nature's own splendid chambers, baptisms under the tree in the garden and worship services on magnificent mountainsides. The wishes of the people have changed and the Church needs to follow along, out in the real world where their role is in demand.

The Church is needed, even in times of war and famine, and carries out fantastic work in many different places on earth; places where the established church is an exception and where worship services are celebrated out-of-doors in what are often rough conditions.

By creating a functional and attractive field kit with the Church's liturgical tools, I hope that I, in my way, will practically facilitate things for ministers and pastors in their daily encounters with people, by giving them a tool that makes their work a bit easier but also offers opportunities to an event that is both solemn and memorable.

Annika Forsberg, 2004
Stressless Island

Stressless Island

Annika Forsberg

My inspiration came from investigating drab pause zones, waiting rooms, cafeterias and the “coffee break culture” in office environments. I wanted people to be able to disconnect from work when taking a break. Many people work too much and too hard; therefore it is important to consider the quality of one’s time off work.

My design is an artificial arbour, a place for coffee breaks and daydreaming. It is like being outdoors but staying indoors. It can't compete with real nature, but it will let you imagine and conjure it up.

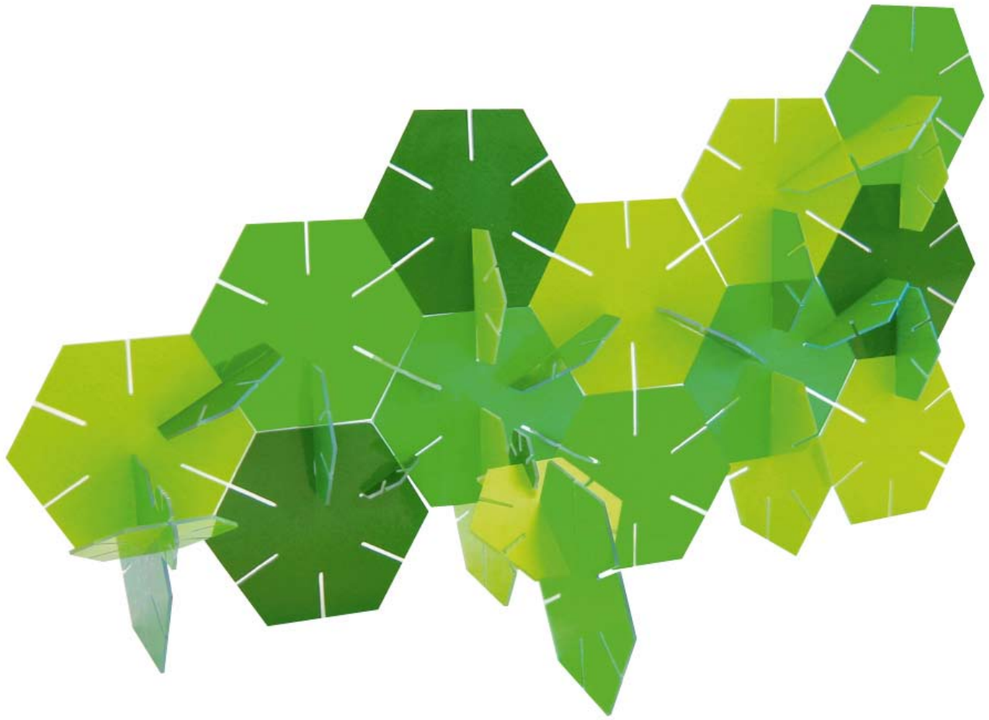
Stressless Island is made for one or two people. If you want to sit on the bench together, you simply move the table to the centre. There is no space for being offish: you have to sit close. For a single person, there’ll be ample space with the table moved off to one side.

The bird perched in the arbour has a loudspeaker in its body – listen carefully to hear it sing!

Allergy Park

Jenny Nordberg

Over 40% of the Swedish population suffers from an allergy to some extent. In the past thirty years, this figure has increased by over 10% every decade. Being outdoors in spring and summer can be agonising for many allergy sufferers. The Allergy Park is an alternative park with no known allergens. It is also a somewhat ironic comment on the rapidly increasing number of people suffering from allergies and similar welfare diseases.



Snow Terrain Vehicle

Ambjörn Viking, Daniel Mauritzsson

This project is a redesign of a snowmobile formerly known as BigFoot. The design was developed in collaboration with Folan AB, the manufacturer of the vehicle. Our ambition has been to improve looks and safety of the snowmobile and make it a more practical “tool” for those working in the field of forestry and alpine rescue. We have also improved its multifunctionality to put forward a higher degree of flexibility, such as adjustable steering and variable seating arrangements. A high and a low version were developed to be used for different purposes and depending on terrain. The snowmobile is of the twin-belt type and can substitute 3-4 smaller snowmobiles in size and capacity.

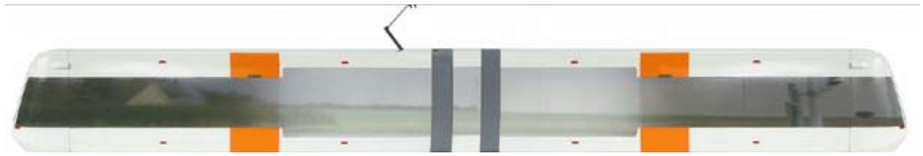
Stina Moraeus, 2004
Kurbits – Garden Swing Furniture

Kurbits – Garden Swing Furniture

Stina Moraeus

The aim of my project was to create a private space within larger spaces, a small retreat for a coffee break, reading or simply daydreaming and swinging for a while. It can seat two – for some intimate moments to be shared. I wanted to update the traditional hammock and create a garden swing style piece of furniture with a tree-like canopy covered with a foliage pattern.

My Kurbits hammock is a synthesis of the essence of a traditional hammock and my own personal interpretation of the old patterns in Kurbits' decoration and artwork – which is part of my cultural heritage from Dalarna. The canopy pattern casts shadows on the person and the seat leaves a temporary trace on the body of the time spent swinging.



Lundalänken, A Commuting and Transit Concept

Josefina Brismar

This project aims to provide a conceptual interior and exterior proposal for a light rail vehicle in Lund. It was done in cooperation with Lund City Council and Bombardier Transportation.

Key issues in designing for the light-rail sector is accessibility for passengers and ease of maintenance. Specific requirements such as the needs of commuters versus those of local travellers place demands on the design of the interior. Since this vehicle will serve the largest hospital in the region, it also has to cater to hospital patients and their special needs.

Aesthetically, my aim was to create some kind of a blend between the central European design language used in public transport and the Swedish culture of engineering and functionality. Lundalänken will become a new landmark and symbol for the region; hence it should express progress and optimism.

Better Boston Brace and Soft Support

Sixten Heidmets

My task was to design a healthcare product. The main achievement of my project is to offer solutions for improving the intra-brace climate of the Boston Brace, thereby breaking the barrier between the medical sphere and everyday life, to which the brace should adapt. As a by-line, the present work features a solution for an elastic orthosis that is used for the prevention of scoliotic processes, to correct a minor scoliosis and to alleviate other back problems. It has not been my aim to invent a new therapeutic method, rather to make a working method user-friendlier in the design process. The Boston Brace, a rigid polypropylene medical support, is the worldwide standard for the cure of idiopathic scoliosis. This condition is a childhood health problem causing an s-shaped sideways warping of the spine. Therefore, the main focus of my design is on children and teenagers. In the case of the elastic orthosis or Soft Support, other age groups come into focus, too.

All designs are based on interviews with physicians, orthopaedic engineers, orthosis users, scientists, tailors and manufacturers and on study of relevant literature. Several functional mock-ups were made according to the results of analysis; reduction of moisture inside the brace were especially addressed. My goal in redesigning the Soft Support was to transform it into a sporty and rather casual looking garment.

Based on sketches, I made a prototype of an improved Boston Brace. In tests, the functional interchangeable inner lining combined with openings facilitating ventilation performed 30% better than the existing Boston Brace with regards to humidity evacuation and thermal regulation. While working on the Better Boston Brace, I considered the demands and colour preferences of my chosen target group. The Soft Support prototype is an orthosis resembling a sports shirt with integrated support elements necessary for reshaping the spine.

The Better Boston Brace is a thinner and lighter medical brace with more airy looks, featuring improved thermal properties and changeable inner lining. The Soft Support can be worn as a kind of fashionable garment; the innovative appearance blends the medical qualities with a sporty lifestyle.

Rani Leoson Samuelsson, 2005
Toadstools and Candle-Light

Toadstools And Candle-Light

Rani Leoson Samuelsson

Toadstools

It is the Japanese architect Shigeru Ban whose paper architectures inspired me to look into the endless possibilities of this simple material. He used paper in the form of tubes, honeycomb panels and membranes to construct his structures. If it is possible to create entire buildings from paper – then making furniture can't be impossible. Therefore, I decided to design a typical structural and common piece of furniture – a stool. Having initially decided to design a stool and supplementary side table from pulp (mashed paper), it was after Shigeru Ban's paper tubes I modelled my furniture. I believe the structure of the tubular form would add to the strength of the paper and allow me to express my desire for an organic shape, showing the potential of using pulp. When wet, is can be worked like clay; it can be pressed into moulds or modelled over an armature. Once dry, it shows many of the properties of wood.

Candle-Light

Most people enjoy the warm glow of a lit candle. It is comforting, intimate and cosy. I wanted to play with the word candlelight; the idea of using the wax as a material for housing a light instead of being its fuel was born. I also studied the aesthetic possibilities of the wax material. Would the same feelings of comfort arise if an electric light bulb replaces the burning wick? How would the wax react? I had considered the possibility that the wax lampshade might soften and decided to regard that prospect as a bonus. It would give the owner an opportunity to reshape the lampshade and take a part in its design process. So far, my experience has been that by using low energy light bulbs, the risk of the wax melting is minimal. Having experimented with form-moulding lamps from wax before, I later wanted to try my hand at dipping one. I hand dipped the lampshade by using lace and the chandelier with cotton wick.

Finnair Intercontinental Business Class Concept

Juho Viitasalo

In 2005 Finnair was planning to renew their intercontinental fleet and preparing for the opening of new routes to Asia. My diploma project was considered to act as a planning tool for the division of service development at Finnair. My task was to develop a design concept for the business class service on the airline's next generation wide-body aircraft.

I studied the habits and trends of the Asian customer segment and explored future aviation and air travel concepts. I also interviewed company employees in Finland, Japan and China and travelled between these countries in my research phase. The major part of my research dealt with the ways on-board service is organised. This meant I had to study various aircraft candidates and find out what their individual strengths were. From all research conducted I derived design concepts covering such areas as seat design, cabin design and service branding.

The seat design uses a lie-flat mechanism that provides passengers with excellent comfort during long-haul flights. Entertainment systems and abundant storage compartments for personal items are integrated. Various issues in connection with the well-being of the passengers are also addressed.

The cabin design comprises the general cabin area and a spacious multifunction entrance area, which can be used for various in-flight services such as serving meals and drinks. All design elements were required to fit the corporate brand of Finnair and to convey a fresh Nordic feeling.

My work was reviewed during and after the process by people from various departments of the airline – such as development, marketing, sales, operations and fleet maintenance.

Some time after the completion of this project, Finnair announced the purchase of the new intercontinental fleet from Airbus Industries.

Olga Shchukina, 2005
Origami Chair

Origami Chair

Olga Shchukina

A new dimension to the idea of “folding furniture”: adapting the ancient technique of the origami paper-folding craft. A suitable product for compact living, fit for a nomadic existence, because the objects can be unfolded and flat-packed. My innovative table and chair set was supported by IKEA. All objects are made from a single sheet of material each and feature a layered construction of leather, board, and printed textile – making for a rather variable appearance. The serene facetted shapes express the grace and lightness of Japanese art. Like true origami, the objects are assembled without a single cut or using adhesives.

Klippo Kinetic
Hans Lekeberg

As our gardens shrink and our environmental awareness grows, the demand for simple manually operated tools increases.

Klippo Kinetic is a lawnmower that preserves the energy put into it and discharges it when needed most. When you come to a corner or want to do some extra mowing – typically under a bush or low trees – the blades will keep spinning for about half a minute thanks to the flywheel-principle on which the design concept is built. This also makes mowing more comfortable, because the unevenness of the lawn will be taken care of by the energy buffer and not immediately directed up to the handle.

The handle can be tilted 45 degrees sideways for perfect clearance close to walls and plants. The wide wheels enable you to mow along flowerbed edges and give you a much smoother mowing experience, even on rough lawns. The cutting width is 45 centimetres; the cutting height is adjustable in four steps: “Golf green”, “Normal”, “Rather seldom” and “First day in the country house”.

Klippo Kinetic is a hand mower that gives you the needed amount of power, accuracy and durability. Without gas fumes. Without noise.

Sara Söderström, 2005
Sewing Machine for VSM Group

Sewing Machine for VSM Group

Sara Söderström

The sewing machine and its context.

Why don't sewing machine manufacturers distinguish themselves from each other regarding shape and function? Why don't practically all sewing machines express more design quality? Why is the sewing machine always seen as a typical female object?

Before my thesis, I established cooperation with the VSM Group in Husqvarna. A suggestion from the company's side was that I should create a new design profile for their mechanical models, including factors like ergonomics, usability and visual expression. I received a specific model from their range as starting point for my project. My goal was to not only design a sewing machine but also to find new ways of advertising it to attract new target groups.

For a start, I analysed sewing machines from historical, technical, economical and social perspectives. What was the raison d'être for the origin of the sewing machine? What factors have governed the design in the past? In what ways have the machines changed over the years?

Further on into my project, I investigated the market for sewing machines today, focusing on machines for home use. Who is the typical user? What are they used for mostly? To what extent does the customer influence the product development? Who could be the next target group?

Parallel to my research I was working on mock-ups and study-models that finally developed into a full-scale model.

Master projects 2006

Contents

The White House

The official building of Lund University was designed by the architect Helgo Zettervall and was inaugurated in 1882.

The site for our master projects exhibition; DesignVal 2006.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DesignVal 2006

The University Building, Lund, 18-29 September 2006

Viking – Big Game Fishing Reel

Lisa-Stina Eriksson

My master project was developed in cooperation with Abu Garcia, one of the world's leading fishing reel manufacturers. My goal was to design a fishing reel for saltwater fishing in warmer climates, which would complement the Abu Garcia product range.

Since the brand has a strong position on the American market, the aim was to primarily attract American consumers. Abu Garcia is proud of being a Swedish brand; its Swedish tradition is highlighted in all means of worldwide communication. Therefore I accentuated the heritage theme in my design.

The result is the "Viking" fishing reel; its form language and details derived from Swedish history.

Long Lasting Computing

Elin Annebäck

My master thesis is about how we buy, own, use and dispose of our personal computers – how that affects our environment and us. The result of my research and design work is “evo”.

“evo” is a portable computer that will last a very long time. It can be upgraded in three different levels. The first level is an upgrade of software; the second level is an upgrade of some of the hardware as well. The user can easily accomplish this whenever needed. By comparison, the third level is a major upgrade – possibly one or two times during the ten-year life cycle of “evo”. The different levels of upgrading are visualised by exposing the components through a transparent front casing.

The underside is covered in durable brown high quality leather, which also acts as the closure. The keyboard and track pad can be removed to make usage more flexible; this will also reveal the opening to the components.

A gradually appearing branch pattern will show time passing by working like a subtle motivator for keeping the product.

Husqvarna TRIAD365

Gustav Landberg

My master project was done in collaboration with Husqvarna AB.

It's an "all season outdoor product", a combination of three standard products: a lawn mower, a snow thrower and a power brush. Reason: make the three yearly garden chores that little bit easier: Mowing the lawn (spring and summer), sweeping fallen leaves and gravel (spring and autumn), and throwing the snow (winter).

The TRIAD365 is a "walk-behind" mower. Its design is based on three core values: professional, dynamic and experience.

The idea was to bring Husqvarna to a new generation of consumers. The target group is a couple that has just purchased a house with a yard and is a first time user/buyer of outdoor maintenance products – they are amateur users who nonetheless want a professional result. To buy three separate products is too big an investment for them. The TRIAD365 gives them three useful tools at the same time whilst saving storage space.

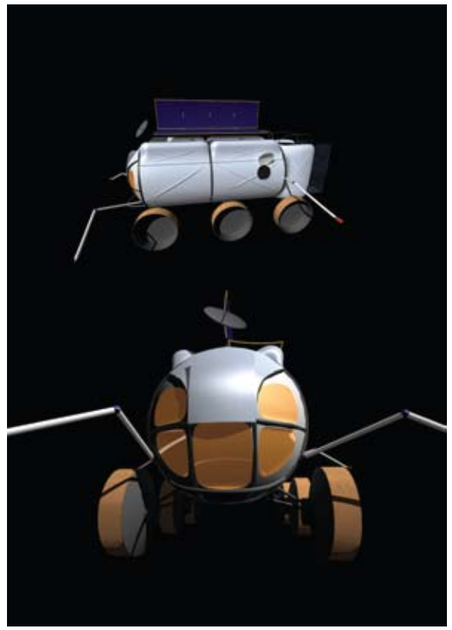
Mobile Lunar Laboratory

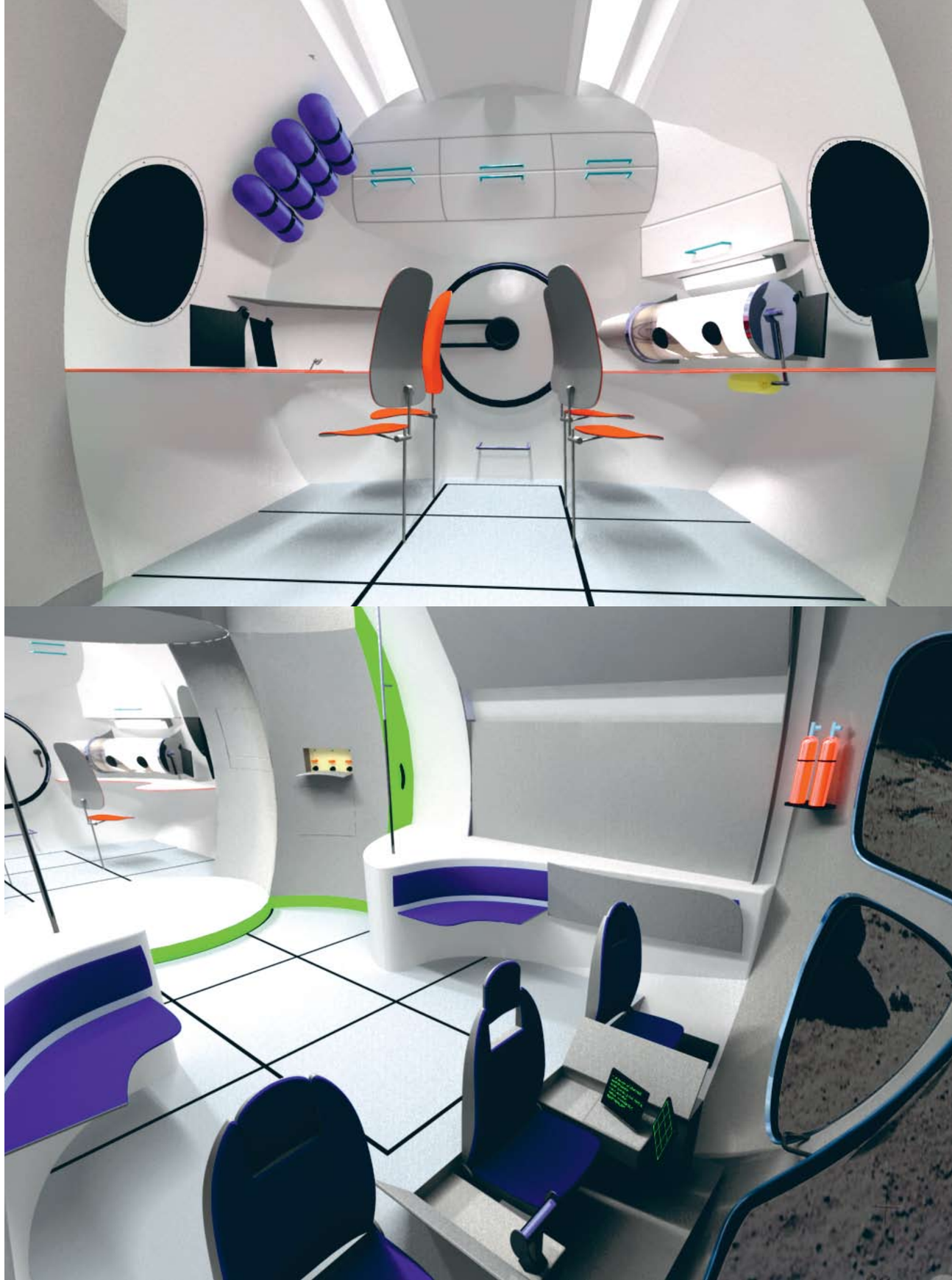
Bo Berggren

The problems of efficiently exploring the lunar surface and enabling a crew to increase the science reward are multi-faceted and considerable. One way to cover a larger area to do more thorough research, land surveying and geological mapping of the lunar surface is to rove the surface with the habitat and laboratory together. This method of exploring vast areas has a higher probability of finding valuable locations for scientific research and higher science reward than the proposed Apollo like missions that are currently in NASA's vision/pipeline for exploring the Moon once again. The area that can be explored is limited by the time the astronauts can do hands-on science and research, current and proposed EVA time is up to eight hours. Limiting factors are the human physique – EVA is very hard work – and the EVA suits and technology proposed for future use. They allow for an activity radius around the habitat/mobile that ensures a safe return of the astronauts. Safety is of maximum importance since fatalities would result in mission failure. A serious injury would compromise the mission; even an on-location treatment or stabilisation of an injured astronaut would greatly reduce the efficiency of the mission.

A lot is unknown about the Moon; to have an evolving mission that results in new insights means the crew must operate with a high degree of autonomy and suitable tolerance to allow for improvisation. Such a habitat/mobile needs sufficient space that permits improvisation and a mission schedule that warrants maximum autonomy.

My master project investigates and proposes a mobile lunar laboratory that will rove the surface of the moon for 30 ±3 days per crew rotation. The design addresses known problems and risks of lunar exploration, some of which are: hostile environment, reliability of technology, mission objectives and the human factor – the astronauts – that rely on life-sustaining factors in a controlled environment. The final concept was presented as an interior of a pressurised lunar rover for a crew of four. The way I presented it was as computer generated 3D data and visualisations. The software used was AutoStudio™ and Maya® Unlimited™ from Alias® and Poser from e-frontier.





Fjällräven Kajka

Henrik Andersson

Kajka is a backpack concept made in cooperation with the Swedish outdoor manufacturer Fjällräven. It is to be used by travellers, trekkers and others with a need for a larger carrying capacity. The pack is built on the heritage of the Fjällräven brand while being modern and expressing innovation as well as continuity, functionality and simplicity.

While the product should be as versatile as possible, focus during the development has been on specific activities such as travel and different sports. This has lead to features designed to solve a specific issue, but will also be functional for other activities and occasions. One example is the “Wet compartment” in the bottom of the pack. First designed to enable drying soaked surfing or diving equipment (wetsuit, towel, etc.) it can just as well be used for sweaty socks or wet tent cloth during a trek. Being as multifunctional as possible the backpack can be bought as a one-pack-only instead of different packs for different activities. Buying one backpack instead of two saves energy and material in production and lets the customer spend money on activities, not only equipment.

Many backpacks on the market today are overloaded with straps and use-specific pockets and are made in multiple materials in multiple colours. I wanted to strip the unnecessary stuff off the backpack. Fewer parts lead to fewer seams which means less leakage and fewer parts to break. It also means easier disassembly when it is time to recycle the pack.

Backflip

Sofie Collin

My task was to design footwear for young girls who are into action sports under guidance from Nike's action sport division.

I started my research by developing an understanding of Nike's SB & 6.0 brand positioning as well as getting an overview of styles and consumers' desires. Based on my analysis, I focused on the essentials to address my chosen target group whilst incorporating athletes' functional requirements, too. My footwear designs were to appeal to dedicated action sport girls as well as to merely fashion-oriented people.

The result is a two-in-one design – the slip-in sneaker becomes a mule with the heel cap folded down. It is aimed at the new generation of sideway thinkers, female youngsters whose constantly shifting interests push action sports constantly forward, be it skating, surfing or biking. This kind of footwear is normally worn all day, raising issues of comfort, durability and cost.

My final design is a merger of two footwear categories – sports and casual – allowing for versatility. The two-in-one concept is also an expression of "mutation"; just like action sports are persistently changing, reflecting on the behaviour of flickering activity and passivity.

I chose durable materials that look good even when worn down, that's why I also developed the initially hidden "mutant logo" that appears on the outsole after some period of intensive use – abrasion and deterioration become somewhat positive characteristics here. I stripped away as many parts as possible, also doing away with shoelaces, which tear apart rapidly on action sport footwear.

Kärlek and Industrial Design – I'm Choosing My Life

Anna Persson

"Three passions, simple but overwhelmingly strong, have governed my life: the longing for love, the search for knowledge, and unbearable pity for the suffering of mankind."
/ Bertrand Russell

By questioning the foundational driving force of Industrial Design (that being traditional market thinking – supply versus demand) and replacing it with Kärlek (Swedish word for love), one accesses a whole new world of possibilities, exceedingly full of potential.

K&ID is all about the intangible stuff in life that gets rationalised away because it can't be directly translated into numbers, but, when left without, makes our lives seem empty and leaves our souls yearning for deeper meaning. In such a state, no product (no matter how well designed) can really make you feel any better…

Now, the easy way out would have been to join a yoga class, but instead I decided to give myself 20 weeks to try to come to terms with what this stuff is to me. I felt that as I am about to head out in the world earning my living by working as an industrial designer (which often means being the creator of questionable products), it is crucial to have my priorities straight. I guess I could say that the point of this project was to give myself a sense of how far I'm willing to prostitute myself and my values for economical gain. Or put in another way – to what extent am I willing to let numbers rule my life? In the end that choice is mine.

Essentially Kärlek and Industrial Design, is a diploma work that deals with my moral and existential issues connected to the decision to become an industrial designer. It started out as a proactive measure, to deal with stuff that would catch up with me sooner or later anyway. But progressively it turned into taking charge of my destiny, hence the subtitle – I'm choosing my life.

The aim was that anybody remotely receptive should know who I am and what I stand for, which consequently implied that I too had to find out those things.

When I set out on January 16th 2006 I had: a title, two supervisors, an examiner and a deadline but maybe, above all I had an unshakable incentive to take this project on. For as far as method and demarcations go, that was it; the rest was to be made up along the way, starting out with ten full weeks of free thinking time – bliss!

In the end K&ID resulted in the concept of philosophical design (describing thoughts and ideas through objects), three rapid-prototyped symbols (concept of philosophical design applied) and a report describing the journey, themes and struggles in paragraph form.

Yet, the true result of K&ID has a more elusive nature. I can confidently claim that my mind was thoroughly exercised by K&ID. But, I dare venture further and state that working with K&ID profoundly enlightened me. Concept of philosophical design and its symbols aside – the main result of K&ID was a forever altered Anna! For me K&ID represents a major breaking point brought on by insightful introspection. At the same time, despite its complete self-centeredness, K&ID brings up issues that more or less apply to every one. In the end we all strive to find love, happiness and meaning in life, I just happened to make it my top priority.

Three symbols of K&ID

K&ID is structured around three pillars: kärlek, industrial design and me. Throughout the process I had to be careful not to focus too heavily on one nor the other, as to prevent the project from ending up lopsided. It was pondering this balancing act that gave me the idea for *The balance stool*.

Life is a constant balancing act, the trick is finding equilibrium: the balance stool – promoting mental as well as physical balance in life. The three legs of the balance stool represent any three factors that need to be balanced against each other (e.g. work, home and you; society, technology and the environment; etc.). The only way of staying on the stool is finding the middle point i.e. the balance between the three factors.

It was watching and getting completely wrapped up in the movie Love Story that gave me the idea. I was deeply touched, and kept thinking – what is it that gives some things this amazing power to override all preconceptions, leaving lasting imprints in one's soul? What delicate internal instrument governs our unpredictable receptiveness? (That Tuesday morning back in March, I was in the ultimate Love Story mood yet, I'm fully aware that another day, in another mood I might just as well have written it off as a sentimental bla, bla movie). Conclusion: maybe it's not so much about what it is that affects us, but rather what it is that is affected in us …

The Emotional String Harp: a hypothetical and symbolic organ, an illustration embracing our intangible inner verve. Its fictional function: to tune in, respectively play on, our inherent, dynamic emotional strings.

There's a multitude of essential entities in life that don't seem to belong in any given space. *The alternative shape sorter – Ö för övrigt* – is an acknowledgement of all those things and speaks to our overconfidence in various forms of shape sorting. From an early age we are taught that everything belongs somewhere. And yes, to some extent that is a valuable lesson. It's good for helping us to organise and structure our lives along with its content but, when taken too far it's a breeding ground for prejudice and intolerance. The block shaped like the Swedish letter Ö doesn't fit into any of the holes in the lid – tough luck! To me that is an equally important lesson.

On a more personal level the alternative shape sorter speaks to my own unwillingness to be typecast. In that way I am the Ö personified.

Trim & Colour for Pininfarina's stand at Geneva Motor Show 2006

Sandra Boberg

For the Geneva Motor Show 2006, I researched colours and trends to create a special trim & colour concept for Pininfarina's three production cars exhibited there.

In my thesis, I explored the possibilities to unite three different cars through the use of related materials and colours. I also investigated the surrounding environment in which the cars were to be presented – in order to create a connection between them and the presentation area.

I followed the project throughout the entire process, from first ideas to the "creation off" and press release preparations, to the project completion and presentation in Geneva.

Trinette – The Compact Kitchen in cooperation with Electrolux

Karin Härenstam

This redesign of the well-known Trinette kitchen unit is a space-saving and flexible solution for the small home. This compact kitchen includes facilities for hot and cold running water, cooking, food preparation, storage, food preservation and an air purification system.

My design features different modules containing all necessary elements a kitchen must have. It is a flexible solution allowing different arrangements to fit the individual home environment. The Trinettes' kitchen elements can be hidden when not in use, transforming it into a subtle piece of furniture.

The tap can be pushed down into the sink – the protection surface is then usable as a lid to cover the sink top. This functionality gives the product a more flexible use and makes it possible to put the unit in any open space, kitchen or living room area. The concept addresses the essential needs of saving space and time for the user in order to allow more time for other activities.

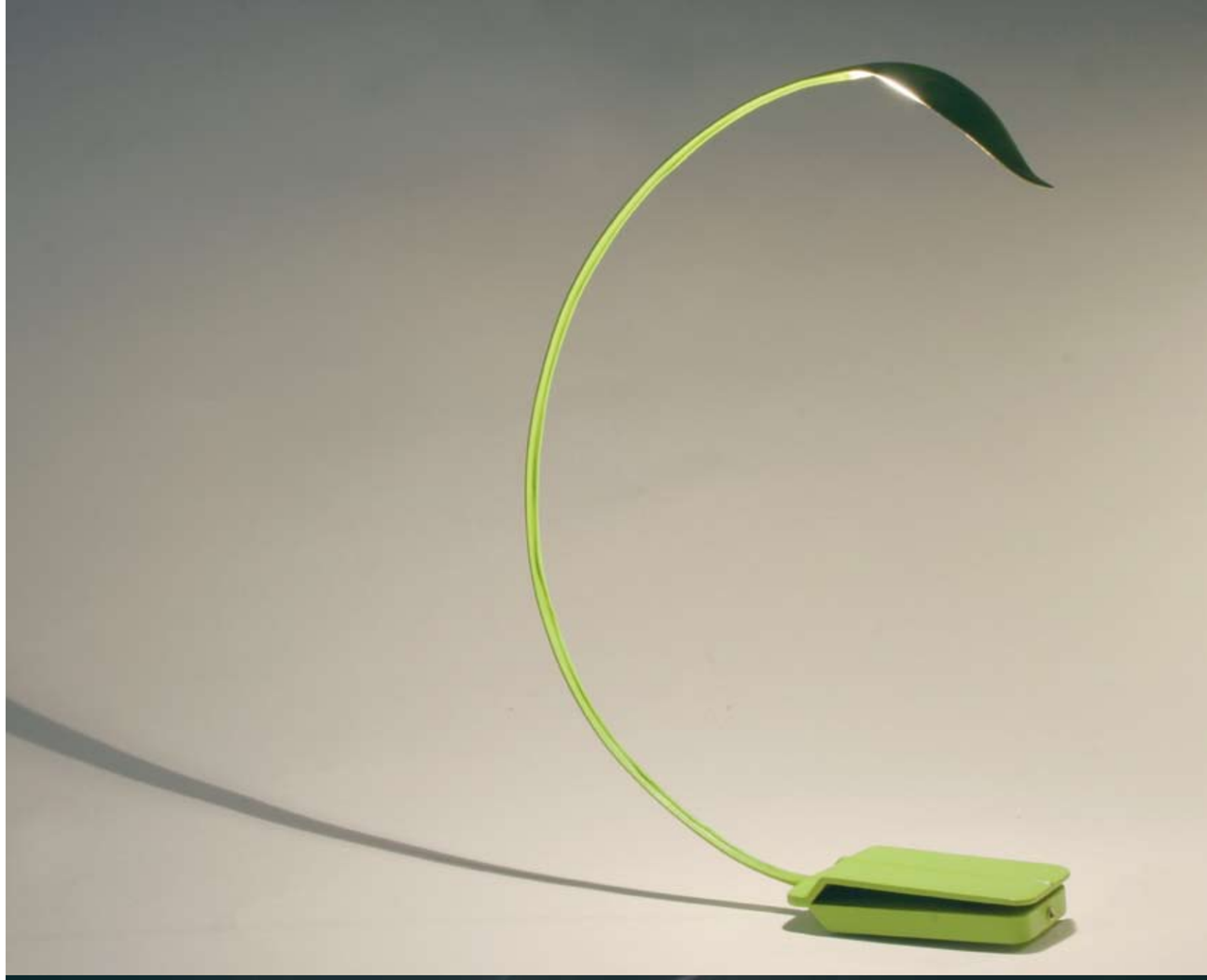
Lilit, LED Lamp for IKEA

Olga Cudakova

Lilit is my result of applied research, technology and aesthetics. It is a portable rechargeable lamp for all occasions. It emits light suitable for reading or completing small tasks featuring a one-watt LED source. It sets a homely environment without the need for cabling and sockets. The lamp is wireless, featuring moulded-in rechargeable batteries. Lilit is a set of three portable units and a charger that can be placed on any horizontal surface or wall mounted.

Each portable lamp unit has a leaf shape on one end that illuminates and a clip on the other to connect it to the charger. It can stand on its own or be clipped to thin surfaces such as a book, a shelf or an armrest.

Take Lilit with you wherever it's too dark and let the soft light and elegant form brighten up your life.



Saferide

Daniel Gunnarsson

My design was developed in cooperation with Norrøna Sport.

Skiing has ever-increased in popularity; these days much of skiing is about the free-ride culture. Free-ride is all about off-piste skiing, hiking and jumping off cliffs in remote areas with pristine untouched snow. This style of riding is potentially hazardous because of hidden rocks, steep cliffs and avalanches – a higher level of safety is needed. In my master project, I addressed these safety issues improving protection for free-riders without interfering or limiting their skiing experience.

I executed and improved this initial concept together with the Norwegian company Norrøna Sport, a well-known brand for the development and manufacturing of quality outdoor and mountaineering clothing.

I conducted interviews, did surveys and a target group analysis. This research revealed that the essentials of all basic safety equipment for off-piste riding are a transceiver (radio transmitter/receiver to locate skiers buried in an avalanche), an avalanche probe and shovel. To prevent losing the transceiver in case of an avalanche, it should be carried under the jacket at all times. I concluded also not to develop any ancillary equipment as it would add weight and limit free movement – my interest was rather to optimise the indispensable safety equipment for free-ride skiers and improve handling.

X-Ray Tools

Kajsa Bobjer

For my thesis, I chose to develop products for the medical field. I designed a series of positioning tools that will support nurses in X-ray examinations, along with a storage system to store and organise these tools. The focus was on the development of such tools that not only perform well but also enhance the feeling of working pride – fusing functionality and aesthetics to meet the needs of the clinical environment. My aim was to design tools that correspond emotionally to patients' and nurses' expectations of products for the X-ray environment.

I was rather surprised to find that auxiliary X-ray equipment has not improved in the past. Much progress was made in the actual X-ray technology and imaging systems, leaving the tools in the shadow. I believe that in order to provide serious and high quality care, nurses have to be proud and satisfied with their tools and working environment. Attractive professional products will encourage them to treat patients even better.

I got the opportunity to share my ideas with professionals within the medical field – complemented in terms of the actual designing by my industrial design supervisor Anna Carell at Ergonomidesign in Stockholm. It was exciting for me to share knowledge and skills with people from different professions. This project has been the most fun and challenging of my education.

Fire Helmet
Ola Lantz

The task I set myself was to design a fire helmet with the focus on demands and needs of the users – fire fighters. Instead of collaborating directly with a manufacturer, I based my work on experiences and demands from the Swedish Rescue Service (Räddningsverket) and fire fighters.

Everything in my research pointed to the need for a new helmet because of certain shortcomings of the products currently available. A shift in the type of rescue operations performed – with an increasing number of traffic related incidents – has lead to new requirements of the helmets used, such as the need for combining helmets with eye and ear protection. Each individual fire station purchases its own equipment; too many cannot afford the more advanced and rather costly helmets available. Therefore, affordability was a key factor in my project.

I also explored a decidedly modern aesthetic compared to existing helmets, where many aesthetic elements date back to the old style metal helmets used by the army. I found out that a helmet must look somewhat "cool" without appearing threatening – visually it must not be confused with army or police helmets. The identity of a firefighter comes to a large extent from his or her helmet and its graphical treatment, such as the fire station badge and reflecting stickers. I therefore made sure these elements could be prominently located.

The result is a helmet with an integrated half-face visor to protect the eyes when using metal- and woodcutting equipment. It is ergonomically designed so as to allow for ear protection to be worn comfortably as well as with auxiliary equipment such as protective hoods and a breathing apparatus. I put a lot of work on the head-helmet balance and adjustability to achieve a good overall fit.

Tova, Trans Orbital Voyager

Johanna Håkansson

Myself, Katarina Eriksson and Sandra Kopljar, the latter architecture students working on this project, the last one before their own diploma projects, developed this group project.

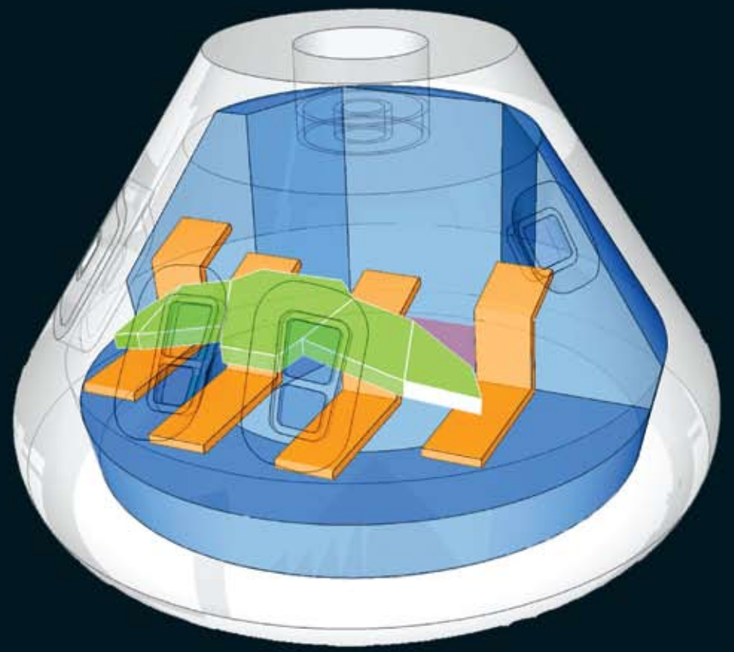
The Trans Orbital Voyager is a design and development project of an overall interior layout for a lunar capsule and was done in cooperation with NASA. Research was performed both onsite at Johnson Space Centre in Houston, Texas where the group met with engineers, human factors researchers, astronauts and architects from Lund University. In the process, a full-scale mock-up was built; it was used both for sketching and brainstorming with spatial relationships as well as for user tests. Our group also conducted human factors tests with persons outside of the group.

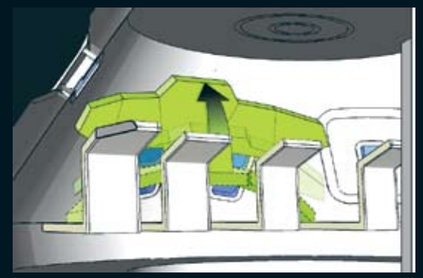
The capsule is a small pressurised volume with which a crew of four is supposed to be able to live and work for up to 18 days going on a lunar mission. It also serves as a transport vehicle for bringing a crew of six to the ISS (International Space Station). By addressing the requirements of the longer and harder lunar mission, the design also covers the – to some degree "simpler" – ISS mission.

The project brief was to establish design criteria and develop ideas for specific parts of the interior that were to be integrated. The starting point for our design was the human factors perspective and how the volume was to be used most efficiently. Our assignment entailed a broad spectrum of very diverse information. Psychological, physical, technical, operational and social parameters are all pieces of the puzzle. Astronauts have to be able to live and work in space – an environment where they would not survive without that extra "skin" the capsule provides. Within the habitable volume, a crew should be able to eat, sleep, work, have their privacy and leisure time when off duty. The crew should feel safe and as comfortable as possible in a situation where there is constant pressure on them to perform efficiently at all times.

Weight control issues were considered in parallel with the fact that all items have to be placed within easy reach, but at the same time "out of the way" – everything in a space capsule has to be integrated so it will be usable in all different situations that can occur on a space mission. Also, weight distribution is important so the vehicle can be flown safely when reentering the Earth's atmosphere.

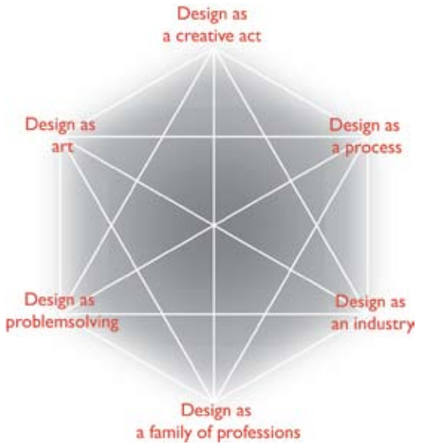
The final design makes the interior of the capsule very flexible compared with other space vehicles. In launch mode, when the seats are out and the control panel flipped down, our capsule can be used for either a crew of four or six by only adding the last two seats. When the capsule reaches orbit, the seats are stowed and the panel flipped up out of the way to let the crew have as much habitable and usable space as possible. The hygiene area, which is mostly a matter of privacy, compared with how much space it needs, will only take up space when it is in use. Since the human waste system is hidden in the stowage wall and pulled out like a drawer, it well fulfils the design criteria our group established at the outset: out of sight, out of mind.

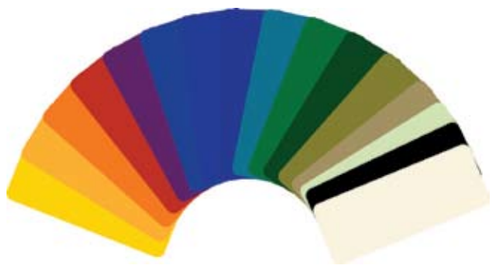




Theory to Practice – The Zeta Case

Sara Gottschalk





My diploma work has been an attempt to confirm how a designer can apply design management theories in reality.

I collaborated with the foodstuffs manufacturer and distributor Di Luca & Di Luca (the “Zeta” brand). The aim was to execute a project that proves how the company could use design as a strategic resource for a potential brand extension. I started off with an in-depth study of design management literature and a company survey to develop a thorough understanding of how I could develop such a new strategy.

The outcome has been a conceptual proposal of a delicatessen where the potential of the “Zeta” brand would be demonstrated to its full extent. Also, Di Luca & Di Luca would form a closer relationship with their customers by means of direct communication.

Zero Gravity Surgical Workstation 0GSW

Johan Hägg

This project is a collaborative effort between NASA at JSC Houston and Lund University Hospital to develop an operating table for surgery in space. Long-term missions like Mars explorations will very much depend upon the ability to solve medical problems right on the spot, where the distance from Earth is too long for a rescue mission. This problem requires an operating table that allows for competent surgery – rather than only a stabilisation of the patient as is the case in today's space missions. Surgery in microgravity is in many ways different from the same procedure on Earth. If successful missions are to be carried out, there are essential factors to consider like fluid management, waste disposal, anaesthesia, working positions and restraints of the surgeon, patient and equipment.

The 0GSW is an operating table designed to meet the restraint demands as well as electrical insulation for defibrillation. The 0GSW is radiolucent so that the patient can be restrained during radiography. Its weight has been reduced to less than 6kg by using lightweight materials such as carbon fibre, aluminium and low-density polyurethane. The boards can be positioned and adjusted for various operating positions and – because it is used in microgravity – the surgeon can face the patient from all angles and have full overview while operating.

The boards easily fold together to reduce space when not in use. The 0GSW also has mountings for the LUCAS™ system that provides mechanical heart compressions in case of cardiac arrest.

Buster, a vacuum cleaner concept for children

Kristina Andersson

Buster is a vacuum cleaner concept to not only attract and address adults (or rather parents), but also their children. They shall be encouraged to help out with cleaning their home in a fun and inspiring way. Kids can “ride” Buster like a bobby car. Literally speaking; vacuuming becomes child’s play. Very young children are simply attracted to Busters’ toy-like qualities; as they grow older they can “ride & clean” in a more directed manner – growing more aware of household tasks and maturing in their responsibility.

As a low children’s seat, the vacuum cleaner is also a piece of cute technological furniture – it doesn’t have to be hidden away. Fantasy animals have inspired its shapes; the product is accompanied by a picture book to enhance its toy-like qualities even further.

People
Contents

Isabelle Olsson
Student

It became clear to me that it was in Lund at the Faculty of Engineering (LTH) that I wanted to study, when a guidance counsellor and a few students spoke about the Industrial Design Programme at an introduction to schools of design that took place in Stockholm. The idea of applying to LTH and living in Lund was exactly what I was after. The Ingvar Kamprad Design Centre, where the Industrial Design Programme is housed, is a modern and creative setting for studying design. You can create almost anything in the workshops. There is plenty of room; we have our own drawing boards, storage space and various computer facilities; students put on exhibitions in the building… There is always something going on!

You have to be prepared to apply for jobs abroad right after graduation. That felt more distant when I lived in Stockholm, but here in Lund we are so close to the continent that it seems quite natural. Many take off there for the weekend. The distances are so much shorter. Lund simply opens the way for new possibilities.

Mia Deng
Exchange student

It has been i couple of years since I left Lund. My year studying in Sweden has been one of the best times of my life. It opened so many doors for me, in terms of a different way of living, meeting inspirational people, and making amazing friends.

In terms of studying design, Sweden was an incredible place to be. Design was all around me, not only limited to the classroom, but as a part of the Swedish life.

I loved the atmosphere at IKDC in Lund. It really was a close community of friends hanging out together, working together, and partying together. It was such a creative environment to be in, and the people: Swedish students, exchange students, instructors, and staff were all so friendly and helpful. My time in Sweden allowed me to be more creative than I had ever been while studying in university. It just really rejuvenated my love for design. I know my time in Sweden will stay with me forever, because it has become an integral part of my being.

After I graduated, I moved to Japan, and am now finishing a year of teaching English in Japan. What an amazing year that's been, too. I think there is something about travelling/living abroad that just makes you feel alive, and makes you more motivated about life. In the fall, I will head to an organic farm/eco house at the base of Mt. Fuji and work there for a month. I am excited to learn about organic farming and sustainable design during my time there while taking in beautiful nature all around me.

After that, my tentative plan is to move back to America and head to New York City. But who knows, I'm open to possibilities that pop up along the way. That's what's so beautiful about life, you never know where it'll take you!

Every day, I feel my mind expanding, reaching places/interests that have laid dormant until now. As I travel and meet people, my vision for a future is slowly taking shape. I definitely want to stay in the realms of design, but would like to incorporate social causes/issues into my design career.

Jag alskar Sverige!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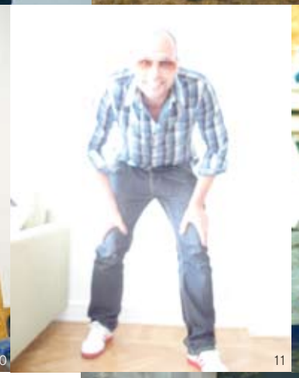
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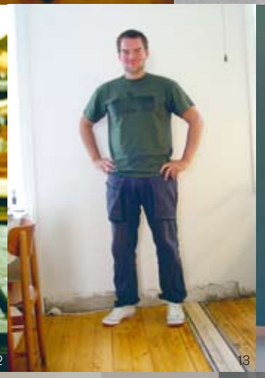
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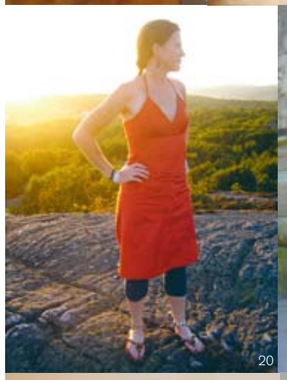
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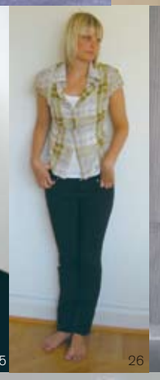
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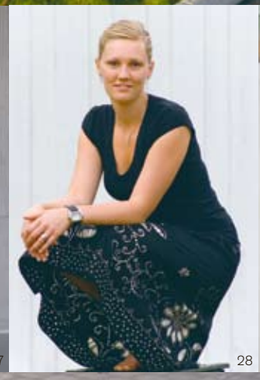
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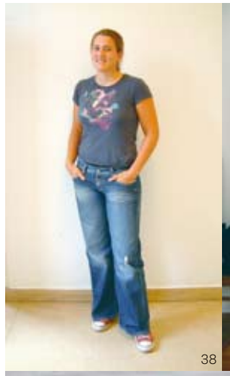
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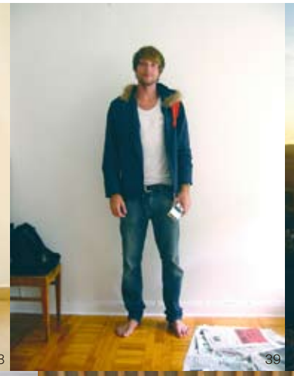
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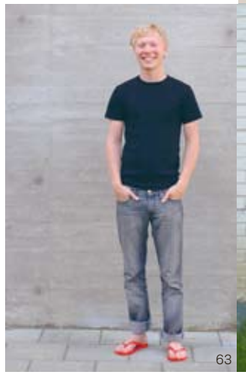
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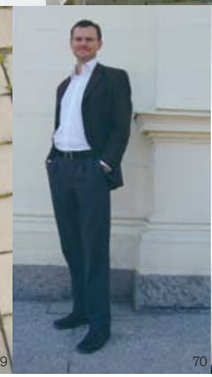
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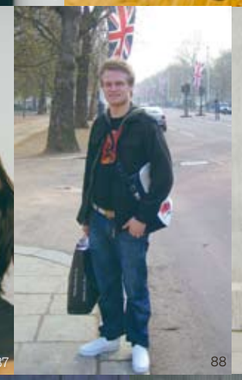
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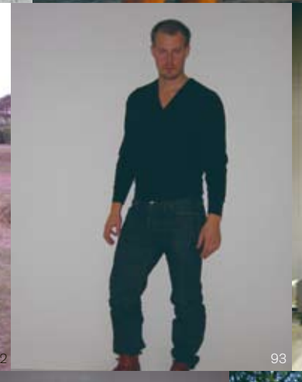
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Students listed according to year of admission (picture number)

1999

Hanna Ahlberg
Bo Berggren (2)
Lennart Börjesson
Josefina Brismar
Fredrik Burman
Ulrika Carlberg
Annika Eliasson
Anna Hjertman
Ulf Jansson (11)
Tiina Karjalainenen (14)
Anna Larsson
Hans Lekeberg (13)
Daniel Mauruitzson (51)
Linda Meiby
Stina Moraeus
Jenny Nordberg (10)
Fredrik Palm
Kjell Sundkvist (16)

2000

Terese Alstin (30)
Henrik Andersson (65)
Elin Annebäck (44)
Sandra Boberg
Daniel Brandt (55)
Oscar Brynolf
Ebba Eriksson
Sara Gottschalk (41)
Birgir Grimsson
Anna Haupt (22)
Karin Härenstam (26)
Katarina Ivarsson (1)
Anna Kjellander (23)
Martin Krajewski
Anna Klara Lagerås
Johanna Lassvik (76)
Rani Leoson Samuelsson
Anna Lewerth (20)
Lina Maltesson
Marie Osbeck
Betina D Prejsler Hansen
Martina Rosell
Juho Viitasalo (8)
Carolin Wiinberg
Anna Åberg
Mattias Övermark

2001

Fredrik Aidehag (113)
Peter Aluuan
Tina Andersson (128, right)
Kajsa Bobjer (5)
Anton Breman (99)
Sofie Collin
Staffan Dahlberg (24)
Pernilla Danielsson (111)
Lisa-Stina Eriksson (38)
David Granath
Daniel Gunnarsson-Ohlson (67)
Johan Hägg (27)
Johanna Håkansson (121)
Åsa Jansson (37)
Anders Krigström
Gustaf Landberg (42)
Anna Lööf (75)
Maria Malcus (86)
Lisa Nilsson
Annika Norén (119)
Anna Persson (128, left)
Cecilia Pettersson
Johnny Sigfridsson
Sara Sveninge (31)
Daria Toma
Kajsa Westman (71)

2002

Martin Andreasson (105)
Henrik Björkman (57)
Patrick Bokerot (114)
Kajsa Eriksson
Deborah Georgsson (28)
Carl Hagerling (94)
Emelie Hallgard (49)
Karin Hartman
Susann Hertz
Martina Ivanisevic
Anna Janson Olstam
Jeanette Karlsson (115)
Johan Karlsson
Camilla Lundström
Johan Lycke
Emma Lööf
Catarina Molinder (56)
Claes Nellestam
Robert Nightingale (19)
Micael Palmgren (78)
Martin Påme (39)
Sara Sandén
Susanna Silfverberg (58)
Raine Sorvoja
Christian Sterngren
Pär Sånglöf (82)
Ylva Söderström
Sara Smed-Sörensen
Mia Åman

2003

Liv Andersson (59)
Katrin Axelsson (72)
Sofia Bremertz (64)
Per Brolund (6)
Oskar Daniel (69)
Erik Egerup
Kristofer Eriksson (89)
Caroline Gustafsson (107)
Emelie Hedén (54)
Fredrik Hyltén-Cavallius (63)
Maria Johansson (52)
Maria Jönsson
Clara Lindsten (61)
Susanna Löfgren (48)
Marie Nilsson (68)
Patrik Nilsson (124 right)
Matilda Nordgård (124, left)
Isabelle Olsson (43)
Antonia Pehrsson (62)
Mats Renström
Lycke von Schantz (50)
Karin Segerström (53)
Harald Svensson (45)
Fredrik Toreblad (85)
Didrik Wachtmeister

2004

Alfonso Allende
Lena Brantmark (18)
Therese Broberg (102)
Michael Duvskog
Tomas Ekström (74)
Marona Grundén (77)
Richard Hederstierna (110)
Anders P Hellberg (81)
Karl-Johan Hjerling (79)
Tomas Johansson (97)
Johan Johnsson (83)
Linn Källgren (90)
Lina Lewerth (40)
Ingrid Magnusson (116)
Jacob von Matern (80)
Emelie Nilsson
Carl Nordenskjöld (73)
Dan Nordlund
Sofia Ohlsson (60)
Adam Roigart
Jenni Stavare
Anders Svensson
Lisa Säfwenberg (91)
Anders Tobiasson
Julia Treutiger (84)
Snorri Valdimarsson (112)
Cecilia Wahlberg (46)
Stina Westman (92)

2005

Erik Abelin (93)
Elin Assarsson
Susanne Bargi (47)
Björn Bengtsson (36)
David Ehrenstråhle
Elin Felixson (95)
Anna Hallgren (96)
Alicia Hylén Odehammar (125)
Olof Johansson (109)
Johan Kron (117)
Thomas Moser
Lovisa Nersing (103)
Sussanne Ruijsenaars (106)
Johan Sjögren
Philip Todorovski (126)
Johanna Vighagen (101)
Sophie von Wachenfeldt (29)
Karin Wallenbäck (127)
Christian Westelindh
Elina Westman (118)
Anna Wolanska (98)
Jonas Wåglund
Niklas Ytterström (88)
Anders Öberg

Ingvar Kamprad Scholarship Students (2003-2006)

Sixten Heidmets, Estonia (17)
Olga Shchukina, Russia
Jan Ctvrtník, Czech Republic
Olga Chudakova, Lithuania
Roman Kepkalo, Ukraine
Kristian Paljasma, Estonia
Rimgaile Samsonaite, Lithuania
Ksenia Yakunicheva, Russia

Students admitted before 1999, who graduated in the years 2001-2006

Ebba Berggren
Lena Beskorovajnaja
Josefin Dyrkell (33)
Susanne Ek (32)
Therese Eklund (104)
Torbjörn Eriksson (3)
Jacob Fyge (15)
Kristina Gullander
Jenny Gärtner (35)
Ann-Sofie Hartzén
Cecilia Hertz
Pernilla Isendahl
Annika Karlsson (66)
Marie Kristoffersson (100)
Emily Laneryd
Ola Lantz
Jenny Lechner (123)
Emanuel Lidberg (12)
Carl Lidgard
Anna Nilsson (7)
Elin Olander
Helena Ondrus (87)
Tobias Palm
Mikael Pawlus (4)
Patrik Petersson (70)
Eva Rask
Daniel Rubin
Peter Saikko
Måns H Sjöstedt (25)
Puia Shamsossadati (108)
Johan Sundqvist (34)
Sara Söderström
Marpe Tanaka Sandström
Ambjörn Viking (9)
Mariano Vozzi (122)
Sebastian Wagner (21)
Eva Wängelin
Hanna Ydremark (120)

Gustav Landberg
Industrial Designer
Husqvarna AB

My five years at the school was a great experience. When I started my education I was already a creative person. The school gave me opportunities to develop myself to become a designer. All the people I worked with, all the fun shows, workshops and projects contributed to what I am. The education provided all the tools that I needed and the environment with all the people was very open. All I had to do was to take full advantage of it.

Now I'm all grown up with a job working as a designer at Husqvarna in Jönköping.

Emanuel Lidberg
Industrial Designer
Tetra Pak

I began my studies at the Industrial Design Programme in Lund without really knowing anything about design. Since I've had the pleasure of working as a designer for a couple of years now, both as a consultant and employee, I guess I learned a thing or two…

Nowadays I'm employed by Tetra Pak, working within the Consumer Design Group. Packaging design really is hardcore industrial design, the products sell in billions and billions every year. Since I'm having the pleasure of working in an international arena together with both inhouse and external designers, I still learn something new every day.

Therese Eklund
Industrial Designer
Sony Ericsson Mobile Communication

The reason why I chose LTH is because I liked the idea of living in Skåne and I wanted to study in Lund. Many of my friends were already here and I thought close proximity to other departments on the campus was an advantage for the Industrial Design Programme.

I work at Sony Ericsson in Lund, in the Creative Design Centre, as the only female industrial designer. My job is to design telephones (the K510 most recently) and accessories, and follow them through to production. This means, in practice, that I work a lot on the computer or the drawing board in order to come up with a good product that will sell. I also attend meetings with engineers, economists and project managers in order to bring together design, technology and finances. Safeguarding form and function during the work process is crucial.

I like my job and would never think of changing careers; merging aesthetics and technology into a selling product is a fantastically fun challenge – every time!

Since I started studying at IKDC in 1998, public awareness of design has increased; one has started to understand its value. I'm not talking about flashy, expensive design gadgets that people brag about, but utility goods and articles for everyday use and the importance of ergonomics and function. I hope that people take this into consideration and purchase items that are practical, not just objects that have a stylish exterior with a brand name on them.

Pernilla Danielsson
Industrial Designer
IDEO, Munich

After nine semesters of studying, I was pretty exhausted so I decided to do another internship before doing my diploma work, hoping to get inspiration and more insight into which ways I wanted to develop and grow as a designer. My plan failed slightly when the company offered me a permanent position directly after my internship, an offer too good to refuse. So the new plan is to do the diploma work part time while I'm growing into my new role as a design consultant. A lot of work, but it is also a great opportunity to pick the cherries off the cake and combine the best from university with the different skills and knowledge of my new collegues. It's very cool to finally be out on the field!

Fredrik Aidehag
Industrial Designer
IDEO, Munich

I'm back and I'm still a student. The first time I walked through the doors to the IDEO Munich office was a cold Monday morning in February 2005. It was the first day of my internship, and I had no idea what to expect from the coming six months. All I knew was that on paper this company sounded like the place for me to be.

I stayed.

Although I came back to Lund for the last set of courses, it was already set that I would return. Working as a design consultant gives me the opportunity to do projects that matter. Each day I learn something new, from colleagues in the team, from users I interview and from clients challenging me to be innovative.
Can't think of a better profession!

Lynn Lindegren
Senior administrative officer
Programme coordinator
Student guidance officer

Lynn's office is starting point number one – our "central station" for all matters. Everything begins and converges here.

Thank you Lynn!

Karl-Axel Andersson

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Swede

Since 03 lecturer, Lund University Industrial Design, LTH
Since 81 freelance industrial designer, Malmö
Represented at MOMA and National Gallery of Sweden
Numerous international design awards like Red Dot, IF and G-design.
Latest: Gold at Baden Württemberg International Design Award 2003.

Oliver Vogt

born 12th of july, 1966 in essen, germany
dipl. designer (udk-berlin)
executive shareholder and co-founder of the design company vogt + weizenegger, V+W
professor of industrial design at the kunsthochschule kassel, germany
head of the PLAY-AWARD jury 2004, 2005, 2006
- jury: designplus, if-design award
- teaching: university of lund, hgkz in zurich, CEDIM in monterrey-mexico, vitra-design museum summer workshops in boisbuchet france, design industry workshops new zealand
- various international design awards
- various international exhibitions
- solo exhibition in the MARTa museum
- works are being bought by numerous design collections (fnac, MARTa herford just to name a few)

Claus-Christian Eckhardt

Born 1965 in Germany.
Studied art history at the University of Marburg and industrial design at the Hochschule für Bildende Künste Braunschweig. He worked as interior designer for Silvestrin Design, was in charge of designing consumer electronics and communication products at Blaupunkt where he was also responsible for the design of the Bosch Telecom product range and Bosch mobile phones. Later, he became chief designer and head of global product design with Bosch and after that head of design at Tenovis (formerly Bosch, now Avaya). Since 2000, he also works as a design consultant for LG, Nokia, Omega, Sagem, Siemens, Suunto, Whirlpool and others. Since 2001, he is professor of industrial design at Lund University.

He has received several national and international awards and recognitions, e.g. Red Dot Award, IF-Hannover, Good Design Award (The Chicago Athenaeum), ID Annual Design Review, The International Design Yearbook.

Olof Kolte

Born in Stockholm, Sweden 1964. Graduated from Royal Institute of Technology in Stockholm in 1990, Civil Engineering. Exchange student at Ecole Spéciale des Travaux Publics, Paris 1986-1987. Worked as civil engineer in Mexico City, Malmö (Sweden) and Riga (Latvia) 1990-1995. Designer for David design AB, Malmö (Sweden) on freelance basis since 1991. Guest student at The Royal Academy of Fine Arts, School of Architecture, in Copenhagen, 1995-1996 (Architecture and Design). Master of Art, School of Architecture, Interiors and Furniture at Royal College of Art, London 1998. Own design practice in London 1998-2000, Malmö 2000-. Lecturer at Lund University, Sweden 2001-.

Lars Engman

Date of birth February 24, 1945

1967 -	Cabinet-making education incl. presentation of qualifying piece of work, awarded a silver medal
1968-1975	Designer at KF Interiör in Stockholm
1975-1988	Product Manager at IKEA
1989-1996	Manager, together with Niels Gammelgaard, of Design Studio Copenhagen, on behalf of IKEA
1997-	Design Manager at IKEA of Sweden

Other:

2002-	Member of the board of the Swedish Institute Foundation for the fourth year in a row
1998-	Member of the board of Beckmans School of Design for the eighth year in a row
2003-	Personal deputy for Prof. Gunilla Bandolin in the student course committee for humanities and social science within the Science Council
2003-2006	Advisory council for design education at the University of Lund
2003-2006	Advisory council for design education at the University of Växjö
2003-	Activities council at the University of Borås
2003-2005	Singapore Furniture Industries Council (SFIC) Design Development Advisory Panel and Furniture Design
2004-	Saint Etienne council
2007-	Rector HDK Göteborg

Lectures/Seminars:
Lecturer at Cooper Hewitt Design Museum in New York, Elle Decoration in Paris, Moscow, Shanghai, Delft, Brussels, Toronto, Helsinki, Oslo, Copenhagen, London, Lisbon, Valencia, Dublin, Chile, Hong Kong, St Petersburg, Brasil, etc.

Despina Christoforidou

Date of birth: 660704
Nationality: Greek
Milestones: 87 move to Sweden to become Marine Biologist
97 studies in Media and Communication, Art History, etc, etc, etc, anything but Biology.
00 meet my soul mate
01 employment at the Division of Industrial Design
05 birth of my son Aristoteles

Joe Ballay

Joe Ballay is Professor Emeritus of Design at Carnegie Mellon University, where he was Head of the School of Design from 1970-1985. Since 1989, he has been a founding partner of MAYA Design, Inc., a consulting 'design laboratory' in Pittsburgh. He is an industrial designer with a strong interest in interdisciplinary design methods, and long experience in working with psychologists, engineers, architects, and writers. Joe got his design education and a lot more, at Ballay Hardware, Carnegie Tech (B.S., 1960, Industrial Management), University of Illinois, and Carnegie Mellon (M.F.A., 1970, Design and Graphic Arts). Recently he has developed workshops on innovation, drawing, and product form development, which have been presented at design schools in Korea, Sweden, and the United States. But mainly he likes to make things.

Zenit Design Group

Expertise and experience
We are one of Sweden's leading design studios employing both industrial designers and mechanical engineers. The Zenit Design Group has been tailoring well-designed products to the needs of its customers since 1994.

Finger on the pulse
Materials, techniques, design, production costs, trends, markets, etc. Because our work is dependent on so many factors we keep an open dialogue with our customers throughout the entire process.

Visionary and down to earth
Our aim is to develop successful products inspired by motive, intuition and vision.

Johan Huldt

Born in Stockholm, Sweden, January 1st 1942

Studies: Matriculation at Lidingö Läroverk (1962)
"Green Beret" at Royal Navy College, Gothenburgh (1963)
Master's Certificate, Kalmar Naval College (1963)
Trade School - Industrial Woodworking, Enskede (1964)
Graduated MFI at University College of Arts, Craft and Design in Stockholm (1968)
Sociology studies at Stockholm University (1969)

Career:
1968 Cofounder of Innovator Design Studios, Stockholm
1969 - President of Innovator Design AB
1974 - 1976 Director of Swedish Furniture Research Institute
1979 - 1989 Managing Director of Basic Design Shop AB
1983 - 1988 Chairman of the National Swedish Association of Interior Architects
1985 - 1991 Chairman of Swedish Furniture Industry's Board against Plagiarism
1992 Consultant to the UN on production of furniture in developing countries
1994 -1996 Director of Svensk Form, The National Swedish Society of Craft and Design.
1996 - 2003 Managing Director of Svensk Form, The National Society of Craft and Design
2002 - Vice chairman of the board of the House of Design foundation in Hellefors
2003 - Professor of industrial design at University College of Borås, Sweden
2004 - Chairman of House of Design in Hellefors AB

Arne Svensk

Born 22 Oct 1945.
The picture shows me and two artefacts that are very important for me both as a lecturer and as a researcher. The glass containes a "blueclock", which is an example of idea design trying to illustrate the difficulties people with cognitive limitations experience with conventional clocks. Its a clock that measures time as shades of blue. Starting in the morning as transparent and ending in the night with the darkest blue. During the day it continously drips a blue coloured liquid into the the container.
On the wall is a clock that measures time as length which for people with reduced cognitive abilities is much easier to interpret than ordinary clocks that demands advanced abstract thinking. When I started to develop this clock in 1990 it was one of the first artefacts in the world that materialised a paradigm shift in the view of cognitive assistance.
The most important project in my design career is Isaac-a personal digital assistant that started 1993. The idea behind the Isaac project was to give people with cognitive limitations a tool that could help them cross cognitive thresholds in the community. With the help of Isaac, a further developmentof the Newton hand-held computer, we established conditions that allowed people with learning difficulties to plan, make phonecalls, ask for help, find out where they were, take pictures and send them from a distance, all on their own , which at that time were groundbreaking ideas.
Lic.thesis " Design for cognitive assistance", 2001.

Lennart Ekmark

Born in Sweden, 1941
He has held a number of positions during his 38 years at IKEA.
- Most recently as creative director at IKEA of Sweden, responsible for design managers as well as product selection and business strategies.
- Marketing director, IKEA Svenska Försäljnings AB (IKEA Swedish Sales, Ltd.)
- Member of IKEA of Sweden's Management Group
- Board member, IKEA Office Sweden, Ltd.

Outside of IKEA:
- Board member, Förening Svensk Form (Swedish Design Association)
- Board member, Svenska Reklambyråförbund (Swedish Advertising Association)
- Board member, Capella Akademin
- Board member, Svenska Hemslöjdsföreningars Riksförbund (National Federation of Swedish Arts and Crafts Associations)
- Board member, Svensk Slöjd AB (Swedish Handicraft, Ltd.)

In 1991 he was awarded the European Advertising Agencies' Gold Medal for Commercial Freedom of Expression.

Today, Lennart Ekmark is the senior advisor to Ingvar Kamprad and IKEA's Stichting Foundation's donation to Lund University's Design Programme. As a pensioner, Lennart Ekmark also works as a mentor for ALMI in Orebro, Sweden (a state-owned company that promotes growth and renewal in small business enterprises).

Robin Edman

Robin was born and raised in Sweden. After he completed his military service in Sweden Robin moved to the United States. In 1980 he graduated from Rhode Island School of Design with a BFA in Industrial Design. Following his studies Robin moved back to Sweden and started his own design consultancy.

In 1981 Robin joined AB Electrolux as an industrial designer located in Stockholm. In 1985 he became Assistant Director, managing the Industrial Design Department until December 1988. This position included responsibilities for all types of products and brands within the global group.

In 1989 Robin moved to Columbus, Ohio as Vice President of Industrial Design at Frigidaire Company. This position included building, staffing and developing a truly industry-leading operation. A design organisation of 30 people developed as well as a Concept Design Team for future forecasting of user needs.

Nine years later, in 1997, Robin moved back to Stockholm as Vice President of Electrolux Global Design. Responsibilities for the global design organisation included strategic- and concept-design development and product design for the Electrolux brand as well as press and media coverage.

Robin is now the Chief Executive of the Swedish Industrial Design Foundation which he has been since December 2001. The Swedish Industrial Design Foundation aims to improve the awareness within the private and public sectors of the importance of design as a competitive tool and to encourage the integration of design methodology into their activities.

Bengt Malm

has long experience with workshops under the auspices of Lund University.
He took part in building up the workshops of the industrial design education and enjoys the daily contact with the students while instructing them in the use of machines, techniques and materials.

Joshua Murray

(b.1968) Senior Industrial Designer, Creative Design Center, Sony Ericsson
Nationality: American/Swedish
Career:

BFA Industrial Design, Carnegie Mellon University, 1991, Pittsburgh PA, USA
Freelance industrial designer (consumer products, electronics, furniture, interiors, packaging, toys, lighting), New York City 1992-1996
Industrial designer, Richard Lindahl Design, Malmö, 1997-1998
Industrial designer, Ericsson Mobile Communications, Malmö/Lund 1998-2001
Senior industrial designer, Sony Ericsson Mobile Communications, 2001 – present
Senior Guest Lecturer, LTH ID, 2002 – present

Charlotte Sjödell

Swedish
720129
2001 Manager of Colour and Materials Department of Ford
2001-2003 Chief Designer of Colour and Materials Department at Ford
2006- Visiting lecturer, Lund University Industrial Design, LTH
2006- Freelance Design consultant

Stefano Santilli

Date of Birth -1st July 1959

Nationality - British

Milestones and positions -
furniture design and shop interiors - product launches at ICFF, New York, Gallerie 1X, Bremen and Design UK; Pick of 2003/2004, London

senior lecturer - product design and interior architecture at University of Brighton and University of Westminster

guest critic at University of Lund and Politecnico di Milano

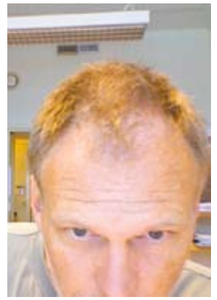
Per Frid

Education: MSc in Mechanical Engineering 1983, Chalmers Univerity of Technology, with focus on Energy Engineering.

Employed at AstraZeneca R&D in Lund (former AB Draco, Astra Draco and now AstraZeneca) in 1994 as Reseach Scientist in the Pharmaceutical Department after a former career in car manufacturing business and mechanical design. Has since -94 worked with various developments of the Turbuhaler Asthma Dry Powder Inhaler but also other inhalers such as pressurized metred dose inhalers (pMDI). Various aspects of device and packaging development for pharmaceuticals, e.g. enhancing the development process by making proper use of available CAE tools, design and design processes, etc., has also been a main task. Promoted to Team Leader in 1995 and worked as such in Lund until recently. Will in the present position work with packaging related science and technology support pharmaceutical projects..

Main achievements;
·Infrastructural Support & Development for packaing development in the pharma environment.
·Increased focus of the importance of patient compliance and the link to packaging design.
·Development of compliance devices for clinical application.
·Support & Maintenance for the Turbuhaler dry powder inhaler and other devices and packaging.

Gunnar Sandin



born 19560226, Sweden
Artist – exhibitions at Moderna Museet Stockholm, Malmö Konsthall, Charlottenborg Copenhagen, Pusan Metropolitan Art Museum, Museo De Bellas Artes Buenos Aires, Växjö Konsthall, a. o.

Exhibition Coordination at Malmö Konsthall, Lunds Konsthall, Overgaden Institute of Contemporary Art, Copenhagen a. o.

PhD and Senior Lecturer in Theoretical & Applied Aesthetics at Lund University LTH
Research topics: Site-specific Art; Practice based research methods; Urban Studies, Visual Culture Studies, Semiotics

Martin Weiderstrand

Date of birth 19 Jan 1971
Nationality: Swedish

Pos
Dep Director, Swedish Trade Federation
Trade officer, Royal Thai Embassy, Stockholm
Trainee, Embassy of Sweden, Singapore

Edu
Master of East and Southeast Asian Studies, Lund University
Politices Magister, Lund University

Thorbjörn Laike

Nationality: Swedish
Birthdate: 1958 7th September
Family: Wife, 3 boys aged 14-22

BSc, Psychology, Lund University	1982
MSc, Psychology, Lund University	1987
PhD, Psychology, Lund University	1995
Associated professor, Environmental Psychology, LU	2000
Head, Department of Architecture, LU	2004
Deputy head, Dept. of Architecture and Built Environment, LU	2005

Bodil Jönsson

PhD (physics), Doctor of Education (Honora Causa), Professor of Rehabilitation Engineering, Lund University, is the scientific leader of the Division of Rehabilitation Engineering (Certec) and contributes to the development of theories, methods and ethics in rehabilitation design and technology. On a more specific level, her main interests are in design for differently abled people with cognitive difficulties and how artefacts and situated technological solutions can influence their learning capabilities. She has had the honour of receiving a number of prizes and awards in and outside of the university setting. It is through TV and books, though, that she has reached a great number of people, particularly "Unwinding the Clock: Ten Thoughts on Our Relationship to Time." www.english.certec.lth.se/bodil

Michael Henriksson

1970 - Director, Creative Design Center
Nationality: Swedish
Career: MFA Industrial Design, 1995, Umeå University
Product Manager, STIGA
Product Manager, Ericsson
Design Manager, Ericsson & Sony Ericsson
Senior Design Manager, Sony Ericsson
Director, Sony Ericsson

Helen Fuchs

PhD (1966, Swedish) is Lecturer in Art History and Design History at Lund University and Halmstad University. In her dissertation "Glasmåleri, modernitet och modernism. Studier i glasmåleriets (konst)historia 1851-1955, (2005)" the status of stained glass is examined, by looking at the historiography of stained glass, definitions of stained glass as Fine Art or as Applied Art, stained glass in the context of the world fairs 1851-1937 and by case studies with modernist artists Rouault, Matisse and Le Corbusier.

Sebastian Peetz

born on a rough, cold december morning in 1968.
He visited German, New England and South-german high schools, studied Arts and Crafts at the American Art Center College in La Tour de Peilz (CH) and began his career working in Paris (F) for and with french designer Philippe Apeloig. After four years of collaboration and creation he moved back to Germany, where he is based since 1996 with "le peetz design". His work combines skilled conceptual craftsmanship and precise typgraphic expression with a singular point of view.

Jinming Zhou

Date of birth: 1958-11-28
Nationality: Swedish-Chinese
Current Position: University Lecture (Docent, PhD)

2002 – Lecture in Department of Mechanical Engineering, Lund University
2002 – Docent in Department of Mechanical Engineering, Lund University
1996 – Ph.D. in Mechanical Engineering, Lund University
1992 – Techn. Lic. in Mechanical Engineering, Lund University
1989 – Research Fellow in Dundee University, U.K.
1988 – Visiting Scholar in Edinburgh University, U.K.
1984 – Ms. in Mechanical Engineering, Sichuan University, China
1982 – BS. in Mechanical Engineering, Sichuan University, China

Dr. Chujit Treerattanaphan

Date of birth:
January 25, 1974

Nationality:
Thai

Career milestones and positions:
Academic: Instructor in Industrial Design Programme
Design: Communication Design, Interface/Interaction Design
Research: User Research, Design Consultant

Thomas Waldner

Manager, Global Consumer Design
Tetra Pak Development and Engineering
Future Concepts, Strategy and Planning

Leif Huff

Leif runs the Consumer Experience Design practice at IDEO's Munich office. Before returning to his native Germany in 1998, Leif was a senior designer in IDEO Palo Alto, working on advanced concepts for Steelcase, consumer electronics for Samsung and other clients, and a research project for Medtronic. Leif originally joined IDEO in Boston in 1994, where he designed consumer electronic products for Digital, Stratus/ISIS, Data Card, and others. Prior to returning to IDEO, Leif worked for three years as a lead designer and project manager on the development of mobile phones, cordless phones, laptops and PC families, and concepts of third-generation mobile devices for Siemens at Designafairs in Munich. Prior to moving to the US, Leif worked as a freelance designer in Germany on capital equipment, office furniture, and corporate identity projects. Leif has a MFA degree from Cranbrook Academy of Art in Michigan. He earned his undergraduate degree at the Fachhochschule für Gestaltung in Schwäbisch Gmünd, Germany in 1992. He regularly lectures at conferences and gives seminars at design schools such as HfG Offenbach, FH fuer Gestaltung in Munich, Vital Design Institute in Tel Aviv, the California College of Arts and Crafts in San Francisco, University of Lund in Sweden, Fachhochschule für Gestaltung in Aarau, Switzerland.

Per Liljeqvist

I was born 1954 in Anderstorp, Småland. In the very early teens I found out that there was a profession called designer. Drawing cars all the way through school and inspired by F1 racing at the nearby race track, a desire grew to become a car designer. While turning twenty I spent a year in the US. Back in Sweden I applied to and got acceptance at HDK, Industrial Design, Gothenburg. During my studies I came to realise that car design was a too specialised field of work for me. My year of service, that which interrupted my studies, made it possible for me to do my diploma work in Guiné Bissau, Africa. This resulted in an MFA in Industrial Design.

Instead of seeking employment, I decided to move back to Anderstorp and start my own business on a freelance basis. Mostly for small and medium sized companies in the area. Parallel with this I got into teaching, which then has led to a position at the Industrial Design Division at LTH Lund University. Still like cars, but now more driving than drawing.

Andreas Hopf

Born in Hamburg, Germany 1968.

Studied industrial design at the Art Center College of Design and started as a freelancer for Puma and Swatch in London. He then joined Jones Garrard Ltd. in Leicester as junior designer. Later, he moved to Berlin to become director of aka Design Germany. Afterwards, he became a freelance designer again, now working for clients such as LG, Nokia, Omega, Sagem, Suunto, Whirlpool and others. Since 2003, he is also a visiting lecturer at Lund University/LTH in Sweden.

Jan Ar Andersson

1. Education:
- MSc in Mechanical Engineering (Lund Institute of Technology) with focus on product development and fluid flows.

2. Positions:
- Employed at AstraZeneca (Draco) in Lund 1979 as Research Scientist involved in development of Turbuhaler, a novel dry powder inhaler for treatment of airway diseases, and development of devices for improving and controlling patient inhalation technique when using pressurized metered dose inhalers.
- In 1987 promoted to Assistant Director with mechanical responsibility for the devlopment of Turbuhaler, other devices and packaging.
- In 1991 promoted to Associate Director and leader of a device development team with responsibility for all inhalation devices and packagings.
- In 1999 head of the device development section in both Lund and in Charnwood (UK).
- Now device expert role supporting development projects.

3. Main achievements:
- As mechanically responsible, being part of the success of the Turbuhaler system, marketed in 1987 and still considered the golden standard of powder inhalation devices worldwide.
- Built a device design and development organisation and implemented processes for documentation, quality assurance and advanced design tools to achieve development targets faster, cheaper and safer.
- Harmonised device development processes into a multinational, traditional pharmaceutical business.
- Improved the business understanding of drug/device integration to improve performance of the pharmaceutical end product.
- 1982, BS in Mechanical Engineering, Sichuan University, China

Marko Macura

Born 14 December 1971
Dual nationality: Serbian and Dutch

Milestones:

'94-graduated from Art Center College of Design (Europe) with a bachelor of science in product design, awarded with honors

'94-'95 Independent freelance designer

'95-'02 Senior product designer, Philips Design Netherlands

'02- present Marko Macura Design Studio, Netherlands.
Clients including: BRF Italia, Felicerossi, Chi Ha Paura, EM Design, Sputnik IDEE Japan.

'02-present part-time senior strategic design consultant, Philips Design Netherlands

'05 Visiting lecturer, workshop Lund University

'06 Guest lecturer, Design Academy Eindhoven

Bendik Torvin

16/10-1971 Norge
1997-99: Master of Fine Arts, 3D-Design, Cranbrook Academy of Art, Michigan, USA
1994-97: Industrial Design, Oslo School of Architecture, Oslo, Norway
1993-94: Liberal Arts, Kabelvåg School of Art, Norway
1990: Preparing studies in Philosophy, University of Oslo, Norway
1987-90: General studies, The Rudolf Steiner (Waldorf), School Oslo, Norway

Professional Experience
2002-2006: Freelance designer, Oslo, Norway / Sweden / Italy / Netherlands.
Product design, strategic design research, interiors, exhibitions,
furniture, art and teaching.
1999-2002: Senior Product Designer, Advanced Design (within Strategic
Design), Philips Design, Eindh., NL
Summer 1998: Designed high-speed ferry concepts for Kvaerner Fjellstrand,
Bergen, Norway
1991-93: Social Service, Norwegian Maritime Museum, Exhibition design, model
making, and conservation.
1995-96: Assistant for Baard Breivik and Kristian Blystad, Norwegian sculptors

Peggy Thoeny

Born 1972 in Austria Nationality: Liexhtenstein
2004 Freelance design in the field of interaction and graphic design for international clients such as Philips design
2002 Research with CET, a London based group of freelancers
Investigations into a public zone for SKT (South Korea Telecom)
2001-2002 Teaching position for graphic software at Wirtschaftsfoerderunginstitut Oberoesterreich
1999-2000 Internship at Philips Design in Eindhoven/ Holland
Development of interactive Lightning Concept for Changing Rooms (LCCR)
Academic:
Master in interaction design, Interaction Design Institute Ivrea/ Italy
Master in industrial design, University of Art and Design in Linz/ Austria
One year studies in Architecture, Technical University in Vienna/ Austria

Sabina Rivetti

born on 8th June 1955, Italian
She attended the American Film Institute in Los Angeles. As a producer, she worked on film productions and for the Italian public television company RAI, always as a producer; worked on communication and pr for fashion firm Valentino; has been head of communication for Sportswear Company for the last ten years.

Carlo Rivetti

born on 9th September 1956, Italian
He graduated in economics at Bocconi University in Milan.
The family founded one of the leading European clothing manufacturers: the Turin-based GFT Group.
In the 50s, GFT introduced in Italy the first ready to wear Italian men's and women's brands, Facis and Cori: By studying the strategies and production systems used by major American companies in this sector, Silvio Rivetti, Carlo's father, laid the foundations for what became the leading European clothing manufacturer in the 80s. In those years GFT was the first manufacturer to close license deals with fashion designers such as Giorgio Armani, Emanuel Ungaro, Valentino. This resulted in the birth of the so-called Made in Italy phenomena. In the mid 80s, GFT also decided to expand in the informal fashion business and became first partner and then the sole owner of Massimo Osti's C.P. Company.

In 1993 Carlo Rivetti and his sister Cristina decided to leave the family company before taking over the informal clothing branch of the group centered on C.P. Company in Ravarino, which was promptly renamed Sportswear Company, owner of the brands C.P. Company and Stone Island. Mr. Rivetti became President.

He teaches Industrial Design Marketing at Politecnico in Milan and sits in the scientific committee of I.E.D. (Istituto Europeo di Design). He teaches Marketing and Fashion at L.U.N.A. (Free University of the Arts) in Bologna. He is among the founders of the "Fondazione ADI" (Italian Industrial Design Foundation) where he sits in the board of directors. He also sits in the board of directors of Pitti Immagine, the company that organises and promotes the most important Italian clothing fairs.

Gabriel Klasmer

DATE OF BIRTH: 1950 Jerusalem
NATIONALITY: Israel / Netherlands
1980-1989: Lived and worked in Israel
1989-1995 Working and living in London
1998- Working and living in London

Education:
-Bezalel Academy of Art and Design, Jerusalem (BFA)
-Royal College of Art, London, MA (RCA)
-Royal College of Art, London, PhD (RCA)

Teaching Positions:
1983 - Senior Lecturer, Bezalel Academy of Art and Design, Jerusalem.
1995 - Tutor, Tel Aviv University, School of Architecture
- Tutor, Beit Berl College of Art.
1998 - Senior Tutor, Royal College of Art, London, Dep. Design Products.

Daniel Charney

- Date of birth: 04 April 1966
- Nationality: Israel
- Career milestones and positions.
2005 ongoing - Senior Tutor Design Products Royal College of Art, London, UK
2005 The future of Hearing aids - research product design and brief writing consultancy V&A and RNID, London
2003 Ongoing - Directing Curator of The Aram Gallery www.thearamgallery.org
2003 Master plan and architectural brief for new type of design museum for the 21st century, Holon, IL
2002 Judge on Spanish National design Prize , Barcelona, SP
2000 danielcharny studio founded
1998 Tutor Royal College of Art
1995 - 1997 MA RCA Industrial Design, London UK.
1988 - 1992 BA Bezalel School of Art and Design, IL

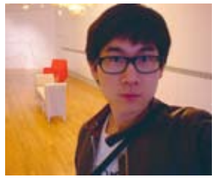
Gunnar Bolmsjö

Gunnar Bolmsjö received an MSc in Mechanical Engineering in 1981 from Lund University's Faculty of Engineering followed by a PhD from the same institution in the area of robotics.

Since 1987 he has held a professorship at Lund University and is currently at the Department of Design Sciences where he is active in both teaching and research. He is the author of numerous journal articles and conference papers and has also contributed to several books. He is currently active in several robotics projects which focus on his main interest: industrial applied robotics and service robotics for use in the home and public environments.

He is past chairman of the board of the Industrial Design Programme and since 2006, director of studies for the Programme.

Nat Chantkam



- Date of Birth: 23 Aug 1972
- Nationality: Thai
- Milestones and positions of my career:
It all began when I went to study abraod in Industrial Design at Pratt Institute, NYC and The RCA, London. Studying design on two different continents is valuable experience. At RCA I studied under such designers as Ron Arad, Jasper Morrison, Tord Boonjte and worked for Tom Dixon in London (works exhibited at Milan Furniture Fair 2004). Currently I am a lecturer in Industrial Design at SoA+D, KMUTT, opening my own design studio for interior and furniture and working as a consultant at Material Connexion Bangkok and TCDC (Thailand Creative & Design Centre).

Michel Sabouné

Vice President
Creative Design Center, Sony Ericsson

MSME Master of Sciences in Mechanical Engineering, 1983
Michel has been involved in Design and Engineering since 1983 with Texas Instruments, Volvo Car Corporation, Valeo and Outdoor Technology Group and now Ericsson/ Sony Ericsson. Michel Joined Ericsson Mobile Communication in 1997 as head of Mechanical Engineering and Industrial Design, head of Design strategy Group within the Creative Design Center since the Sony Ericsson joint venture start in 2001, besides heading the Design strategy group at the Creative Design Center, Michel also heads the Innovation and Concept development, a cross functional group involving: Design, Technology and portfolio planning.

Jonas Lindvall

- Date of birth: 1963-02-26
- Nationality: Swedish
- Milestones and positions of my carrier:

Jonas Lindvall was educated at The University of Gothenburg. In the early 1990s he received a scholarship to study furniture design at London's Royal College of Art. After that he was a guest student at the Royal Academy's School of Architecture in Copenhagen.

After graduation, he returned to Sweden in 1993 to set up his own studio Lindvall A & D, in his home town of Malmö.

His first commission was to create the interior for a Japanese restaurant: it was a prize-winning and trend-setting design, as well as the start of a succession of commissions.

The architectural commissions have been diverse, ranging from railway carriages for the Swedish state-run railway company, to private villas, apartments, hotels and restaurants as well as design concepts for companies in the world of fashion and retail. Lindvall has amongst others worked for Ecco, Färgtema, Issey Miyake, Royal Copenhagen, Vagabond International and Växjö Museum of Modern Art.

In 2005 his interior for the Japanese restaurant Izakaya Koi was given the Golden Chair award by the Association of Swedish Architects in two categories: one for the year's best interior and one for the best classic interior.

As well as working with interiors and houses he has devoted a great deal of his time to furniture design.

Jonas Lindvall's work caught the design industry's attention at an early stage, and fruitful collaboration with the Swedish companies David Design, Kockums and Skandiform were established. As a consequence of this, in the period 1998-2000 Jonas won the 'Excellent Swedish Design' award no less than four times, as well as Furniture of the Year Award in 2001 for one of his most celebrated objects to date, the 'Oak' chair for Skandiform. The sleek nominal lines of the dining chair have made it a desirable, modern classic. In 2004 he was listed as one of three "Wise Buys" – designers of tomorrow's collectible furniture – by Wallpaper* magazine. His furniture has also been shown in several exhibitions and fairs all around the world.

Following in the footsteps of many of today's biggest design names, in 2001 he was courted by the Japanese design company Idée. In addition to designing a range of furniture for the company's collection, he also worked on shop concepts for the Issey Miyake owned Tokyo store, "Plantation" as well as for Royal Copenhagen in Japan.

Clients include Annell, Ballingslöv, David design, deNord Skandiform, Snickar-Per, Håg and Kockums. Today his furniture is found at The Victoria and Albert Museum in London, The National Museum in Stockholm, Mori Art Centre in Tokyo and at the Swedish Embassy in Berlin. To name just a few.

Lindvall has also been invited as a guest lecturer and reviewer in architecture and design schools in several European countries. In 2002 he served as a visiting Professor at the Université de Montreal in Canada. He has also headed workshops in Sweden and Hungary, and been a jury member for a number of design competitions.

The philosophy of the company is that architecture and design can make a positive change for the user and contribute to a difference to people and to their lives. In achieving that they believe in the core values: clarity, continuity and common sense.

Mats Theselius

Designer in the field between art and design

Born in Stockholm 5th of January 1956
Nationality: Swedish

1979 – 1984	Konstfack
1996	Professor at HDK, Gbg

Numerous exhibitons and projects all over the world
Design commissions (example):
Källemo
WA Bolin
Awards (example):

1997	Söderberg award
1997	Bruno Mathsson award

Pernilla Magnusson

Architect

Born in Lund 22 of November 1970
Nationality: Swedish

1990 – 1994	Architecture at LTH, Lund
1994 – 1997	Architecture at ETSAB, Barcelona
1996 – 2004	Collaborates in the office of Enric Miralles, and the office of Beth Galí, Barcelona, with projects mainly in the realm of urban design

Since 2004 own practice with projects in the field of design and architeture, with several collaborations together with Mats Theselius
Author of several articles (Domus, Topos) and a report for the National Council for Architecture Form and Design as well as co-teacher on numerous occasions at workshops and master classes (ESARQ, Elisava)

Lena Sperling

In 1970 I graduated as an interior designer at the Konstindustriskolan (HDK) in Gothenburg. I was then employed as a research assistant at the Division of Handicap Research at University of Gothenburg and after research studies I graduated as a PhD in Handicap Research in 1979.

1980 to 1986 I worked as a consultant in human factors and design. In 1986 I was employed at the Division of Product Planning and Design at Volvo Car Corporation and from 1989 at the Volvo-owned company Ergoma, where I, among other projects, took part in the design study of the new metro car 2000 for SL in Stockholm and in projects about anthropocentric production and professional hand-tools for women and men. At the same time, I was also an adjunct professor in Consumer Technology at Chalmers University of Technology in Gothenburg. When Ergoma was closed in 1994, I was employed at the R&D Department, of the city-owned Lindholmen Development in Gothenburg.

In 2003, after some years as a visiting professor and director of the undergraduate programme in ID in Lund, I got the position of assistant professor in industrial design and the responsibility to lead research in ID.

Jan-Åke Larsson

Since June 1970 I have been employed at Lund Faculty of Engineering with a short break for the military service during 1971-1972.
My first position was at the Division of Structural Techniques where I was employed as a technician at the division's laboratory and workshop. My assignments were to assist research projects, produce equipment for experiments and test materials such as wood, steel and concrete.
At the end of the 70's I was employed at the division of Structural Statics as instrument maker with placement at the common workshop of the branch. My tasks were mainly to construct prototypes and pieces for the experiment equipment. I also assisted researchers and diploma degree students.
From 1993 until 2000 I worked as a research engineer together with a colleague at the common workshop that served the Civil Engineer Programme and diploma degree students and my responsibilities were management, maintenance and service along with administrative tasks such as offers/estimates, purchases and project accounts. I also worked with production, the construction and manufacture of prototypes etc.
Since 2000 I have work as an instructor in the mock-up workshop for the Industrial Design Programme which I also helped build up.

Roman Gebhard

Partner & Creative Director Lunar Europe GmbH

Roman Gebhard is a product designer with a combined professional experience in the USA and Europe, holds a Bachelor degree of Science with Honours in Product Design from Art Center College of Design (Europe) in Switzerland.

Before co-founding Lunar Europe, he held positions at international design consultancies such as Modus Design in Stuttgart, Lunar Design in San Francisco, frog design in New York and designafairs/Siemens in Munich. In these positions he directed and participated in award-winning design programme for clients such as: Sony, Siemens, Microsoft, HP, Motorola, LG Electronics, GE, Procter & Gamble, Coca Cola, Xelibri and T-Mobile.

In 2001 he co-founded the American design collective, designRAW° and in 2005 the German group dialog05 to explore design on a more conceptual and idea-driven level. He has taught several design workshops at the Industrial Design Programme in Lund, Sweden. His work has received several international design awards and appeared in professional publications.

Johannes Kiessler

born in Munich 1969.

In 1993, he graduated as industrial designer from the Art Center College of Design (Europe). In 1992 he studied extensively at the Olivetti Design Studio in Milan, Italy. After completion of his studies, he returned in 1994 to Milan to start working in the office of Michele De Lucchi until 1998, the year he also founded his own practice in Milan. In 1997, he worked as an assistant professor to the master course at the Domus Academy, Milan, and in 2000 he became an assistant professor at the Faculty for Industrial Design at the Milan Politecnic University. Projects have been published among others in Design Report (D), Paris Match (F), Interni (I), Abitare (I), Domus (I), Gap Casa (I), I.D. Annual Design Review 1996 (USA) and The International Design Yearbook 1998 (GB).

Abelardo Gonzalez

Born in Cordoba Argentina.
1967 Architect: School of Architecture and Urbanism – Cordoba National University, Argentina.
1978 Ph D Studies, Stettin Polytechnical School, Stettin, Poland
1983 Docent (Senior lecturer): Department of Architecture 11 a - School of Architecture, University of Lund, Sweden.
2000 - today, Professor, Department of Theoretical and Applied Aesthetics, School of Architecture, LTH, Lund University, Sweden, (on-going).
2003 - today, Chairman at the EDUCATION BOARD, SCHOOL OF ARCHITECTURE, LTH, Lund University, Sweden. (on-going).

John Bennett

John Bennett is a world recognized glass designer and artist, who has been blowing glass over twenty years in many countries. He has been an assistant production manager for factories as well as studios. Before returning to Sweden he was a master for six years for Dale Chihuly. He opened GlasHuset Design Studio Malmö AB in Nov. 2004, a hot glass studio in the center of Malmö. He has been teaching glass blowing and design for fourteen years.

Edwin Datschefski

Edwin Datschefski helps people figure out how to make their products sustainable – good for people, profits and the planet.

With 11 years of experience as a consultant, Edwin's unique background and experience in both ecology and business gives him unparalleled understanding of how products can become truly sustainable – giving your brand a vital boost to enable its survival deep into the 21st century.

Edwin's latest book, *The Total Beauty of Sustainable Products*, is proving to be a contemporary classic, introducing everyone from students to CEOs to the delights and nuances of sustainable product development.

Jonathan Disley

Born December 5th 1970
Experience
2001 - to present date Volvo Car Corporation, Studio Chief Designer
2003 Lund University Visiting lecturer car design course
1999 - 2001 Ford Motor Company, Senior Designer
Ford Köln Germany.
Ford Dunton England
Imagination London
Stola Design Torino Italy
TWR Oxford England
D3 Paris France
1997 - 1998 Volvo Design Centre Europe, Holland, Freelance concept designer
1995 - 1997 Audi Design, Ingolstadt, Permanent and freelance designer
1994 August, Riley and Ray, London, Freelance designer

Education
1993-1995 Royal College of Art MA Transportation design, Thesis grade commendation
1989-1993 Sheffield Hallam University BA Product and industrial design
DEGREE- BA (Hons 2:1) in three dimensional product design
1992-1993 Pecival Whitely College Art Foundation

Johannes Norlander

1974 Born Gothenburg, Sweden
Education
1996-99 Architecture at Stockholm Royal Institute of Technology
1996 Konstfack, University College of Arts, Crafts And Design
1993-95 Architecture at Chalmers University of Technology, Gothenburg
Companies
2004 Formed: Johannes Norlander Arkitektur AB
2006 Formed: Norlander Projekt AB, (Building contractor)
Architecture
2001 Urban Addition House for Wallpaper, Milan, Italy (Collaboration with OLK)
2001 Moncler Store in St Moritz, Switzerland
2002 House A & B, prefabricated houses, Milan, Italy (Collaboration with OLK)
2006 Alta. Private house, Stockholm. Sweden
Furniture Design
2000 Waves pendent lamp for Box Design, Sweden
2000 Flower side table for Box Design, Sweden
2001 L-Serie storage units for Asplund, Sweden
2003 Kyparn, stacking chair for Nola, Sweden
2004 Dartanjang, stacking chair for Nola, Sweden
Cano, shelf system for E&Y, Japan
Tall, planting pot for Nola, Sweden
2005 The Engineer, stacking chair for Nola, Sweden
Post, Ashtray for Nola, Sweden
Ask, chair and table for Collex, Japan
2006 Ori chairs, for Forum, Sweden
Beam table, for Forum, Sweden

Viktor Öwall

Date of birth August 23, 1962
Nationality: Swedish

Milestones and positions:
MSc and PhD from Lund University in 1988 and 1994 respectively. Did a postdoc at University of California Los Angeles (UCLA) 1995-96.
Returned to Lund University and became docent in 2003. Has made several research visits to UCLA and University of California, Berkeley. Main activities are research and teaching in the field of integrated circuit (micro chip) design.

Georg Baldele

born 16.01.1968 in Villach, Austria
Education: MA Furniture Design, Royal College of Art, London 1996-1998
Prof. Ron Arad, Prof. Floris Van Da Broke
MA Product Design, Academy of Applied Arts, Vienna 1991-1996
Guest Prof. Ron Arad, Prof. Carl Auböck
College of Mechanical Engineering, Klagenfurt, Austria 1984-1989

Projects: Fly Candle Fly, Product for Ingo Maurer, Germany since 1996
Buona Sera, Artificial, Germany since 1999
Flooring Design for IKEA, Pergo AB, Sweden 2000
Airpen 01, 02, Airpen Book and Postcard for rrp, Austria/ Thailand
Conic light for Habitat, England, 2001- 2003
Stella Polare and Glitterbox Product Range, Swarovski Chandelier Project 2002/05
One/Off's for private client: Buona Sera and Caveman Light, Niagara Lights and Blinds, Himalaya Rugs, Caveman Longer, Honey Star Chandeliers, Yokohama Lights.

Maria Udriot

born October 18, 1943 in Parana, Argentine. Architect SAR/MSA. Member of Svenska Tecknare.

Architect at the University of Cordoba, Argentine, 1971, pedagogics cousre at the University of Cordoba, Argentine, 1973.
Post-graduate studies at the Department of Architecture II, LTH, Lund University, 1981-1986.

Major exhibitions of own works at Form Design Centre1993, Röhsska Muséet 1994, Lunds Konsthall 2003, Södertälje Konsthall 2003-2004, exhibition design at Form Design Centre 1992, Danish Ministry of Housing 1996.

Teacher at the School of Architecture, Cordoba, Argentine, 1971-76.
Teacher in different courses at LTH, 1986-, lecturer at the school of Architecture, 1998-.
Teacher at the Ingvar Kamprad Design Centre.
Own Studio 1987-.

Hans-Christer Ericson

Born in Stockholm 20 november 1945
Graphic designer, author, photographer, book creator and artist
Professor of graphic design
Studio in Simrishamn
HC Ericson has received a great number of honours for his graphic design. He has also been rewarded with The Berling Prize 2001 and Torsten och Wanja Söderbergs Nordiska Designpris 2002

Graphic design and communication work:
Aftonbladet, Annell Ljus+form, Audi, Bok- och Biblioteksmässan i Göteborg, Bonniers Förlag, Brombergs Förlag, Celsius Industrier, Dagens Nyheter, Design i Dalarna, Designlab/ Per Mollerup, Designonline, Elementhus, Falcon, Ferrosan, Fiorucci, FM Matsson, Tidskriften Form, Fox Design, Föreningen Svensk Form, GB Glass, Gleerups bokförlag, Gärsnäs, Göteborgsposten, Habitat, IBM, IKEA, Jönköpings Läns Museum, Kosta Boda, Lammhults, Tidningen Land, Lantmännen, indshammar Glasbruk, Nike(USA), Papyrus, Pentax, Playsam, Postverket, Röhsska Museet, Sametinget, Semper, SIND, Skandinavisk design, Sony, SJ, Statens Konstråd, Stora Kopparberg, Storstockholms Lokaltrafik, Svenska Spel, Svenskt, papper, TV4, Vin& Sprit, White Arkitekter, Åkerlund& Rausing.

Tadeo Toulis

9.05 - Present
Design Manager - Samsung Telecommunications Los Angeles, California
2.03 - 6.05
Lead Industrial Designern - Motorola, Inc, Advanced Concepts Group, Cambridge, Massachusetts
10.95 - 2.03
Senior Industrial Designer - Lunar Design, San Francisco and Palo Alto, California
11.99 - 6.04
Founder and Collaborator - designRAW, San Francisco, California
Self-directed design collective formed with employees of IDEO, Lunar Design,
Frog Design and Zoe Design.
10.96 - 10.97
Independent Researcher - Fulbright Scholar, Milan and Rome Italy
1.92 -10.95
Freelance work
Lunar Design; Palo Alto, CA; Industrial Designer; May - October 1995
IDEO Product Development; San Francisco, CA; Design Intern and Freelancer; 10.94 - 2.95
Datascope, Corp., Montvale, NJ ; Product Designer; June 1993 - September 1994
Education
Pratt Institute, Brooklyn, NY - Master of Industrial Design; February 1994
Wesleyan University, Middletown, CT -BA Double Major: English & Studio Arts, June 1989
Hackley School, Tarrytown, NY - graduated with honors, June 1985

Tim Parsons

Tim Parsons is a designer, writer and lecturer at Manchester Metropolitan University. Mixing influences from craft and industrial design, his approach examines notions of familiarity, functionality and the quality of materials and processes, producing simple, durable objects. These range from domestic accessories including ceramics and metalware to furniture and lighting.

Lars-Henrik Ståhl

Education and degrees

1985	Master of Architecture, Lund University
1986	Visiting student at History and Theory Studio, School of Architecture, University of Houston.
1987	Studies with Daniel Libeskind at Architecture Intermundium, Milan.
1994	Licentiate of Engineering, LTH.
1996	Doctor of Philosophy in Architecture, Lund University
2000	Assistant Professor, Theoretical and Applied Aesthetics, Lund University
2002	Associate Professor (Docent), Theoretical and Applied Aesthetics, Lund University
2006	Professor, Theoretical and Applied Aesthetics, Lund University

Jonas Bergfeldt

Born: 1969
Lives and works in Stockholm
Education: Konstskolan i Stockholm/ Nyckelviksskolan/Konsfack Industrial Design Department
Profession: Creative Director at No Picnic
Clients: Consumer Electronics, Home appliances, Furnitures, Retail, Sport equipment, Medical equipment

Johan Persson

Current position
- Managing Director of SWE DES Sweden Design Limited.
- Assigned to lead a joint venture between Sweden's largest Industrial design consultancies with the ambition to build up an international multi-disciplinary design consultancy in Hong Kong.
- Part-time teacher for the Master Program at the School of Design, Hong Kong Polytechnical University.

Earlier professional positions
-Design Manager, NoPicnic, Stockholm, Sweden
-Designer, FILA, Italy
-Designer, StrukturDesign, Umea, Sweden

University diplomas

2001	Industrial Design MFA
	University College of Art Craft and Design, Konstfack, Stockholm, Sweden
	Diploma project sponsored by Aprilia s.p.a Italy
	Class nr 1 and scholarship receiver for extra ordinary studies
1999	Industrial Design BA
	Institute of Design, Umea University Sweden
	Diploma project sponsored by Nokia

Mats Hultman

Architect, PhD
Lecturer in Theoretical and Applied Aesthetics at Lund University, School of Architecture. His research focuses on possibilities and limitations to making aesthetical demands through urban design codes.
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Torsten Dahlin

Date of birth	16 December 1936
Nationality	Swedish

Milestones and positions:
I have just entered into my eighth decade after having spent close to five of the previous ones as an industrial designer – focusing on different areas over time. Five years ago I retired from my post as CEO of SVID, the Swedish Industrial Design Foundation, the development of which I led from its inception in 1989. SVID emerged out of experiences from the Design Centre Stockholm, which I was a part of since it started up in 1985. Before that I attempted to establish an ergonomics/design organisation in Sao Paulo, Ergodesign do Brazil, a subsidiary of today's Ergonomidesign. My efforts were premature, though, and my own financial situation was in worse shape than Brazil's at the time. But those three years were quite instructive and productive.

The time spent at Luleå University was also edifying. I had been interested in pedagogical issues ever since I completed my studies at the University College of Arts, Crafts and Design (1953-58) and started working as an industrial designer. I was particularly curious about the connection between industrial design and technology/economy, which led to my participation in an analysis of the ergonomics/design programme at Luleå in the mid 1970s. This involvement resulted in an invitation to apply for and then receive "authorisation to become professor of industrial ergonomics" – based on my industrial qualifications in competition with the academic ones of the other applicants.

I began acquiring these industrial credentials directly after college, first at ASEA's (ABB) Design Office in Västerås followed by AGA Electronics in Lidingö and Bernadotte Design. In 1964, Carl-Göran and I started Crafoord-Dahlin, Industrial Design, where we specialised in the manufacturing industry and producer products. The organisation expanded over the years through consolidations and collaborations to form the current Ergonomidesign.

The Future of the Industrial Design Programme at LTH

Since 1999, the renewal of the Industrial Design Programme at Lund University's Faculty of Engineering (LTH) has taken place during a period of rapid change, not only in organisational terms but also in the view of industrial design and its role in society. The initial profile for further development of the programme presented by the dean of LTH has since been gradually adjusted and refined also with respect to the Bologna Process and globalisation. The programme is internationally oriented without losing contact with its Scandinavian roots. The focus on better living for people remains. But in a time, where work and leisure overlap, the focus needs to shift to peoples' lives in their entirety. The programme's fundamental view is a humanist one.

The Industrial Design Programme at LTH is positioned amidst the rather large Faculty of Engineering and a university strong in broad areas of knowledge. In this context, it is natural to consider the design process as a dialogue between two developmental driving forces: science and humanity. By this is meant that the underlying driving forces for development often arise from either technological innovation in materials, processes or methods (technology driven design), or from motivational changes in people resulting from altered expectations for jobs, leisure time, behaviours, experiences and our fellow man (scenario driven design). In continuous development, the interplay between these driving forces has to be regarded as being equally significant and equally in need of attention in our deliberations as are the economic, social and environmental conditions upon which we usually base our decisions. How this view will be conceptualised in a further elaborated design programme is not easy to envision. It is a vital task for the future, a task that is additionally complicated by the need to convert our education to the three-plus-two year programme specified by the Bologna Process – commencing in autumn 2007 – which awards both bachelor's and master's degrees; the latter also being the basis for doctoral studies in industrial design (PhD studies).

Thomas Johannesson
Former Rector of LTH and Professor of Materials Engineering

Claus-Christian Eckhardt
Professor of Industrial Design

Impressum

Publisher:
Lund University Industrial Design Programme, LTH

Editor:
Claus-Christian Eckhardt

Editorial team:
Despina Christoforidou, Anders P Hellberg, Andreas Hopf,
Clara Lindsten, Patrik Nilsson, Anna Persson

Art direction:
Clara Lindsten, Patrik Nilsson

Graphic design consultancy:
HC Ericson

Layout and production:
Anders P Hellberg, Clara Lindsten, Patrik Nilsson, Anna Persson

Photographic credit:
Page 4-5 and 11: Åke Lindman
Page 216 and 217: Prof. Claus-Christian Eckhardt
Page 263: Scott Peterson/Getty/All Over Press

Translation:
Eileen Deaner, Andreas Hopf, Anna Persson

Proofreading:
Eileen Deaner

Typeface:
Akzidenz Grotesk

Paper:
Munken Lynx 130g

Printer:
Ljungbergs Tryckeri AB, Klippan, Sweden

Binder:
Förlagshuset Nordens Grafiska AB, Malmö, Sweden

ISBN-13: 978-91-972513-7-2

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