

systematically linked to the expressiveness of textile materials and clothing form? A “basic course” in fashion design aesthetics that introduces also this perspective must, in addition to teaching the “laws” of spatial form and visual expressions, introduce the aesthetics of act design in some form, i.e. how we implicitly or explicitly express acts of use in the process of designing a garment. This is still a matter of understanding the intrinsic relationships between abstract form and concrete expression, but from a somewhat different perspective. It is a complementary shift in basic methodology; from design by drawing to design by act-defining.

The main objective of the project reported on here was to introduce interaction design methods in fashion design teaching to make act design explicit throughout the different stages of the design process in a systematic manner; to develop a general workshop curriculum in experimental fashion design focusing on the expressiveness of wearing and use.

The basic working assumption/hypothesis of the project was that learning fashion design aesthetics through workshop exercises in experimental interaction design

- Would give students a broader conceptual perspective on the expressiveness of clothing,
- Would give students concepts and methods to work more systematically with fashion design in a context of wearing and use.

1.2 Review of relevant literature

The world’s fashion schools, and departments, of today are fairly equally divided in the sense of either belonging to/and or grown from technological colleges, e.g. the fashion design departments at Fashion Institute of Technology, New York; Hong Kong Polytechnic, Hong Kong; Manchester Metropolitan University, Manchester; Moscow State University of Design and Technology, Moscow, or fine art schools, e.g. Art Academy, Vilnius; Central St. Martins College of Fashion, London; La Cambre, Paris; Parsons, New York. In additions to this twofold background there are also some few examples of fashion departments that stem from home economics, e.g. Bunka College of Fashion, Tokyo; Buffalo State College, Buffalo. Looking at these different backgrounds it is also here we find the difference in training and integrating aesthetics into the education, the general conclusion being that aesthetics is in the first category of schools taught mainly as a subject of its own, often under the title “fashion concept”, or “fashion sketching”. In the second category of schools, aesthetics is most frequently taught as a fundamental course in a kind of Bauhaus tradition (Wingler, 1969; Naylor, 1985) as well as integrated in the continued supervision of the artistic design projects that dominate the curricula. In the third category of schools aesthetics and artistic training are even less present in teachings as subjects such as fashion sketching is predominantly about representation and the time is devoted to collection composition and design method.

Although there is a lot written about fashion from various perspectives (e.g. Breward, 2003; Carter 2003; Frings, 1999; Johnson, Torntore & Eicher, 2003), the literature on teaching methods in fashion design is not extensive. In basic textbooks such as (Jenkyn Jones, 2002; McKelvey & Munslow, 2003) design aesthetics is also not a basic issue as such, rather its main emphasis is analytic, systematic and concerned with the sequential structure of a thought professional design process. Instead, in a kind of tacit inspired manner (cf. Polanyi, 1967) these still rare contributions to fashion design method make even less of an attempt to articulate and grasp the ambiguous concept of aesthetics, and furthermore, also creativity as an essential element of such

a process. In fact, the overall structure of contemporary fashion design methodology is stating the obvious, as e.g. (Tate, 1999) that most designers try to fit their garment into the general fashion climate, where climate is a combination of the economic condition of the country, current technology developments, and current retail trends; timing – the fit in a general fashion trend and aesthetics; the silhouette, are elevated as essential qualities of a designer, however not critically integrated into any methodology.

In industrial design there has been extensive development of design methodology and theories about the design process (cf. Jones, 1992). There are attempts to transfer this type of methodology to the area of fashion design (cf. Lamb & Kallal, 1992; Regan, Kincade & Sheldon, 1998), but very little is done to build a specific methodological foundation for the fashion design process except for explicitly business oriented models (e.g. Carr, 1992; Burns, 1997; Jarnow & Dickerson, 1997). In fact, the overall structure of contemporary fashion-design methodology has taken its bearing in the direction of the early design management discourse (cf. Carr, 1997; Tate, 1999; Potter, 1980; Easey, 1995) without the integration of a creative design methodology in itself; a methodology of which there are just few accounts (e.g. Sinha, 2002; Lacroix, 1996; Mulvagh, 1998), lacking a necessary theoretical level in order to make them generic models.

The interaction design methodology used in project exercises is, in one way or another, related to the “aesthetic turn” in interaction design, i.e. a rather recent more systematic focus on interaction design aesthetics (cf. Dunne & Gaver 1999; Djajadiningrat, Gaver & Fres, 2000; Löwgren & Stolterman 2004; Hallnäs & Redström 2002, 2006; Graves Petersen, Iversen, Krogh & Ludvigsen, 2004). Discussions and results related to theoretical foundations of fashion design aesthetics have also clear connections with the notion of “embodied interaction” (cf. Dourish 2001).

In design education, as well as in art education, different forms of active learning are standard procedure; learning practical work by practical training in combination with theoretical studies. What perhaps is a bit specific here is that learning objectives – to develop a certain perspective on design aesthetics – are somewhat theoretical in nature (cf. Stolterman 1994). The idea of using design methods as tools in practical workshop training to reach given objectives is, in some sense, similar to what we do when in learning mathematics, or music composition, we use generic “design” methods to develop an understanding of, and feeling for, certain mathematical and compositional perspectives (cf. Stohr, 1933). In classical composition training there is for example a long tradition in using specific methods of counter point (cf. Jeppesen & Haydon, 1939) to develop understanding for a polyphonic perspective on music composition. (Cf. model-based learning, e.g. Clement, 2000). From a constructivist point of view the design methods we use in workshop training could perhaps be seen as *forms of construction* students uses in learning.

1.3 Questions – critical factors

The basic project hypothesis is founded on somewhat general observations concerning a double perspective on fashion design aesthetics; to express garment and to express wearing. A critical issue was to make this concrete, and precise, enough in terms of more specific learning/teaching methods

- To find appropriate theoretical foundations for workshop design,

- To find relevant general, and workshop specific, learning outcome to guide implementation.

In order for workshop training to be successful students and teachers need to have a clear idea of what it is we/they train and what it is we/they train for. The main critical factor here was to make this distinct enough as a foundation for introducing “new” methods and perspectives in fashion design education through workshop exercises: What is it that we train – to understand the workings of the exercise; What is it we train for – to understand learning outcome.

1.4 Importance of the project

Importance of the project is twofold:

(i) Wearing expression is of focal interest in fashion design. The importance of interaction design methodology in this context lies in the introduction of an explicit design-aesthetic perspective on “wearing” and “use” in fashion design teaching and thereby in broadening the design aesthetic foundation for practice; to introduce expressional methods and techniques that relate to the acts of use.

(ii) The basic issue in learning the fundamentals of design aesthetics is to see and understand the link between design techniques and design expression; to learn, and understand, the craft of design in combination with training in critical reflection. Design methods serve a double purpose here:

- As tools for training systematic design work,
- By providing a conceptual framework for critical reflection on design work.

Here the importance of the project lies in its contribution to the development of fashion design methodology, with focus on educational training.

2 Methods

2.1 Students

The aim of the project was to develop design aesthetics at Bachelor and Master level fashion design education. Methods developed in the project are also intended for critical seminar reflections at doctoral level education.

Educational programs Bachelor, Master and Doctoral programs in fashion design at The Swedish School of Textiles, University College of Borås. 10 students are enrolled each year at Bachelor level. At Master level a total of 10 students in fashion and textile design are enrolled each year. Main focus of the project was on education at Bachelor and Master level. Education at Doctoral level is carried out in cooperation with Göteborg University and Chalmers University of Technology, where students receive their degrees. Courses included in project exercises range from introductory courses at Bachelor level to advanced Master level courses and seminar courses at Doctoral level. All educational exercises in the project were done in forms of workshops, including related critical seminar discussions.

Students In 2005-2006 there were 100% women at Bachelor and Master level – normally very few men attend fashion design education at our school. At doctoral level, 5 out of 6 doctoral students in design at our school are women. Age of students was 22 – 33, average age 25. Students have in general about one or two years fashion design training before starting their Bachelor education at our school. Except for exchange students most students at Bachelor level came from Sweden. At the Master level some 30% of the students came from other countries.

2.2 Innovation – project work

Methodologically, the project was based on the idea to work out a proper foundation for a general workshop program on basis of test workshops that would run in two series during two years. Each test workshop was, so to speak, based on an assumption that a certain type of workshop practice would provide relevant learning practice in relation to a given outcome. As such the workshops were meant to explore the assumption and open up for reflection and critical discussion providing material for the development of theoretical foundations and educational methods. The pedagogical program resulting from this is a first suggestion and further evaluation, reformulation, etc. need more time.

2.2.1 Project group and work plan

The project group consisted of five lecturers and four students; three senior lecturers (interaction design, fashion design and textiles design), two lecturers/PhD students (fashion design, textiles/interaction design) and four students (two Master students in fashion design and two Bachelor students in fashion design).

The project group worked as a fully integrated working group and has been intact during the two years of project work. Main project work has been done in four sub-groups:

- Methods and workshops; collecting relevant design methods, defining and organizing the test workshops,
- Evaluation and examination; defining basic design briefs, defining forms of evaluation and examination for test workshops,
- Documentation; sound and video recordings of student interviews and workshops,

- Reflection and development of educational models and methods.

The whole project group met regularly for discussions and overall planning. All project members took, in different constellations, part in the actual test workshops – supervising students, heading critical seminar discussions, documenting workshops, introducing design methods and design briefs.

General work plan:

- Spring 2005; Development of curriculum for experimental workshop;
- Autumn 2005; Test workshops series I with student groups from BA level (year 1 and 2); from BA (year 3), MA (year 1) and PhD level. Study travels. Documentation work (editing interview and video material) and first formulation of pedagogical models,
- Spring 2006; Test workshops series II with student groups from BA level (year 1 and 2); from BA (year 3), MA (year 1) and PhD level. Documentation work (editing interview and video material) and revision and development of initial pedagogical models,
- Autumn 2006; Design of final workshop curriculum, dissemination of results.

Comment on work plan We were able to roughly follow the basic work plan. The test workshops were all integrated as part of the regular curriculum at our school and we had to reschedule the test workshop program a couple of times due to problems with overall planning. Some workshops worked very well, others not so well, but important information came any way out of the workshops that “failed” in various ways. The design of a test workshop implicitly refers to a certain pedagogical context, i.e. a context in which workshop introduction, workshop supervision, workshop examination and evaluation all make sense and provide the intended learning environment. We learned a lot about the meaning of this for specific workshops that failed to work in the context of a given regular course.

We initially prepared for two series of regular test workshops with six in each series. This turned out to be a bit too optimistic. Planning, implementation, documentation, reflection was much more work than we had planned for. In the end we did six regular test workshops plus several reference workshops. The main deviation from the basic work plan concerns the main results, i.e. the design of a final workshop curriculum. Although we have collected a rather large supply of methods easily adaptable for workshops in fashion design and also have gained good working knowledge about the actual workshop design the main result of project is not a completed workshop curriculum, but rather theoretical foundations and general models for teaching/learning fashion design aesthetics with focus on use and wearing.

2.2.2 Development and design of a test workshop program

Workshop design All workshops aim at exploring models and methods for training interaction design as part of the fashion design process; to define wearing intentions (WI) through wearing expressions (WE), to relate wearing intention and wearing expression to each other by designing a garment and defining intended wearing expressions, i.e. to express a relation $WI=WE$.

To focus workshop training on different phases of the design process we used the three logical stages in the design process as described by Jones (ref.): divergence (de-structuring the brief), transformation (making the design patterns), convergence (designing the acts). Each workshop will be an exercise in working through one stage in the design process. For each such exercise there will be specific "input" and "output" formats, typically "output" from a divergence

workshop will work as "input" for a transformation workshop etc. The basic outline for a workshop is set by applying a specific interaction design method to a given "input" providing training to work with a fashion design problem, in some stage of the design process, from the perspective of act design.

First step in designing the workshop program was to interpret the basic working hypothesis (see above 2.2) in terms of general learning outcome:

General learning outcome Students will be able to explicitly see (analyze) and express (design) fashion in terms of wearing and use in a systematical manner.

Comment on learning outcome What is important here is the duality between analysis and design; wearing and use are not seen from a sociological, ethnological etc. perspective but from the perspective of design aesthetics. It is a matter of learning the practice of fashion design aesthetic with a systematic focus on expressiveness in wearing and use.

Specific learning outcome Each workshop is based on a given interaction design method that focus on the relation WI=WE for a specific phase of the design process. In each case this is interpreted in terms of specific learning outcome that all support specific aspects of the given general learning outcome.

- **I (Workshop I and V)** Students will be able to see (analyze) and express (design) the “user” through (in terms of) wearing intentions/wearing expressions in relation to a given brief,
- **II (Workshop II)** Students will be able to see (analyze) and express (design) the “user” through (in terms of) wearing intentions/wearing expressions in relation to a given activity,
- **III (Workshop IIIa)** Students will be able to see (analyze) and express (design) “use” (wearing) in a given brief,
- **IV (Workshop IIIb)** Students will be able to see (analyze) and express (design) wearing expressions in relation to given wearing intentions,
- **V (Workshop IV)** Students will be able to see (analyze) and express (design) wearing expression style in relation to given wearing intentions.

Test workshops are defined in terms of; Period (when), Class/Groups (students, number of groups), Design brief, Stage (design process phase), Method (interaction design method of the workshop), Workshop input/output (initial information and workshop outcome), Evaluation/Examination (forms for critical reflection and workshop dissemination).

2.2.3 Workshops and seminars

Test workshops Six different test workshops were held within the project; workshops I, IIIa, V and II during 2005 and IIIb and IV during 2006. We discuss one example below. See appendix 1 for descriptions of all six workshops.

Workshop I (Learning outcome I)

Period: Two weeks, 26 September – 7 October 2005.

Class/Groups: Fashion Design BA Year I (10 students)/ 3 groups.

Design brief: To design a colorful headgear.

Stage: Divergence.

Method: Cultural probes (Gaver, Dunne & Pacenti, 1999).

A probe is a thing we use in investigations to gather information. A cultural probe is consequently a thing we use to gather information about cultural phenomena. Here it is something we “send out” to collect information about WI/WE relations in everyday life.

AIM: To paint a picture sketching expressions of garment in use in everyday life. To provide initial inspiration that open up the design brief.

OUTLINE:

- We start with a given design brief,
- Design a cultural probe kit that is appropriate for collecting expressional information about activities strongly connected to the given brief,
- Try to find appropriate locations to place the probes,
- Place the probes,
- Supervise discretely until it is time to collect the probes,
- Collect the probes,
- Sum up and present the material collected by the probes.

Workshop input/output: The design brief/A culture board (presenting the information collected by the probes).

Evaluation/Examination: Halfway and at the end of the workshop. Evaluation with focus on intentions and expressions in work methods and presentations is done by two groups of outsiders that have not been briefed about the workshop, nor about the project itself – a sort of blind review.

Implementation: The workshop started with a general introduction where workshop method and design brief were given to students together with a brief description and explanation of project aim and intended learning outcome (See appendix 1). Each group was given a probe-kit consisting of a digital camera, a notebook, post-it notes and a set of fiber-tipped pens. First task for the student groups was to design instructions on how to use the kit. They were then asked to give the kit to someone they thought interesting in relation to the brief together with instructions on how to use it. After return of the kit the task was for each group to analyze and present the information to paint the picture of a “user” of a colorful headgear. The workshop was carried out according to plans with evaluation as a reflective and critical seminar discussion on aims and methods. All groups were given supervision during the workshop by members of the project group.

Outcome: Students demonstrated that given learning outcome was reached, but learning was also clearly only implicit. That students were able to “to see (analyze) and express (design) the ‘user’ through (in terms of) wearing intentions/wearing expressions in relation to a given brief” using cultural probes as a method of design brief exploration was something we as teachers could observe, but the meaning of this was not something the students could grasp and explain explicitly. Understanding methods and perspective needs a theoretical foundation that was

lacking; the level of abstraction was too high on introduction given at the beginning of the workshop.

Reference workshops In order to get a broader background for evaluation we carried out several reference workshops, also involving guest lecturers.

- **Functional clothes** A workshop on functional wear was done with Master students during two days in December 2005. Lecturers and organizers were Sirpa Morsky (International coordinator and clothing design Häme Polytechnic, Finland), Jane McCann (Director smart clothes and wearable technology University of Wales, Newport), Marion Ellwanger (professor in textile design at our school). The aim of the workshop was to train for a clear understanding of all the elements which are to be considered in the design research- and development phase of an aesthetically attractive product which satisfies given use requirements,
- **Interaction design reference workshop** To get a broader perspective on the particular interaction design methods chosen for our test workshops we organized a reference workshop with interaction design students at the IT University in Göteborg in the autumn 2005. The workshop was done in November with 30 Master students divided in 6 groups. Interaction methods were chosen from test workshops II and III. A course in design methods is included in the interaction design curriculum and it was easy for students to understand the workshop exercise and also to explain and motivate the outcome of the exercise. Supervision was done by members of our project group in cooperation with teachers from the IT University,
- **Project course at the Göteborg IT University** As part of our project 6 fashion design students participated in an interaction design project course at the IT University in Göteborg during 2005. They worked together with interaction design students in three groups on projects connecting fashion and interaction design,
- **Workshop at Unga Klara** A workshop at Unga Klara, Stockholm's City Theater in autumn 2006 on exploring wearing expressions through smart textiles design. The workshop demonstrated how a focus on materials can display the double perspective of fashion design aesthetics.

Seminars, development of models and methods Work on the development of theoretical models and educational methods was done during the whole project. We organized a series of seminars to present and discuss ideas and results and also two larger workshops with invited guests.

- **Seminars** Suggestion and results from the project were presented and discussed at the regular design seminars at our school continuously during the project,
- **Workshop on interaction design aesthetics** A workshop to discuss issues in interaction design aesthetics was organized in January 2006 at our school with guests from Århus University; Institute of Design, Umeå University; School of Arts and Communication, Malmö University and Chalmers University of Technology,
- **Workshop on fashion design teaching** To sum up our project we organized a workshop on fashion design teaching at our school in November 2006. For this workshop we invited guests from University of Applied Sciences and Arts, Hannover (Professor Martina

Glomb); Danmarks Designskole, Copenhagen (Senior lectures Ann Merete Ohrt and Peter Dammand); Beckmans College of Design, Stockholm (Senior lecturers Lena Kvarnström and Marie Louise Nordin); Fashion Institute of Technology, New York (Senior lecturer Sass Brown); Faculty of Textile Technology, University of Zagreb (Professor Tonci Vladislac); London College of Fashion (Senior lecturer Alison James) and HDK Steneby (Senior lecturers Ebba Johansson, Eva Alfredsson). Together with members of our faculty we were 25 participants in the workshop discussing general issues in fashion design teaching. Workshops on fashion design teaching are not that common and we feel that the project gave us an opportunity to open up for a new type of discussion and cooperation between design schools with fashion on their program.

2.2.4 Reflection and documentation

Documentation To be able to evaluate outcome of workshops we interviewed all participating students on how they picture and understand the fashion design process and about their level of, practical and theoretical, knowledge about design methods. All interviews were recorded.

All test workshops, including critical evaluation/examination discussions, were documented on video.

Workshop evaluation was then done in closed seminars within the project group. Video material from workshops was used as reference material in these seminars – most project members were participating in workshops, so the video material was not first hand material.

Study tours In november 2005 the project group went to Berlin for a study visit at Universität der Künste, visiting Professor Barbara Tietze, and also to visit Berlin as a center for experimental art and design in Europe. This included a visit to the Photo museum in Berlin with its large Helmut Newton (Newton,) collection. We also made study visits to the design school in Kolding, Denmark and to the design schools in Eindhoven during the Dutch Design Week 2006.

Fashion shows During the project we systematically documented – photo and video documentation – various student fashion shows. Besides the graduation show at our school we documented the annual KappAhl Design Award show in Stockholm, Mittelmoda in Gorizia, Italy, the annual Designers Nest competition at CPH Vision Fashion Fair in Copenhagen and the Concours international des Jeunes Créateurs de Mode in Paris with fashion students from all over the world. In 2005 160 students from 16 countries participated in the competition and we were very happy to see one of our project group members – Maria Nordström – winning the prize for the best Swedish contribution. In Paris we could document also preparations and testing which gave an unique opportunity to see and reflect on fashion student work from all over the world. Documentation of fashion shows and study tours has been used in the project as reference materials both with respect to discussions about level of student work and with respect to discussions about fashion design presentation in a learning/teaching perspective; the role of the cat-walk, the role of fashion photography with respect to wearing expression as a basic parameter in fashion design aesthetics.

Evaluation Workshop evaluation focused on two main issues

- The way in which the workshop explores the given assumption (learning outcome),
- How the workshop displays possible lack of general training in design methodology and understanding of theoretical/conceptual foundations.

The different forms of evaluation/examination integrated in test workshops served a double purpose

- To involve students in a critical evaluation of the workshop,
- To test different forms of workshop evaluation/examination.

Note that regular student valuations in relation to given course were not part of this.

3 Results

The main results of the project consist of theoretical models together with reflections on methods for workshop examination and evaluation. It also includes systematic photo and video documentation as well as initial development of models and methods for using photo and video as tools for critical reflection in fashion design education.

3.1 Conceptual framework and theoretical models

The lack of sufficiently precise and elementary concepts to define and explain the interaction design interpretation of “to see (analyze) and express (design) fashion”, as foundation for exercises and training, was evident from test workshop evaluations. The “what is it we train and what is it we train for” was simply not clear and elementary enough. To raise the level of reflection in workshop exercises we need a basic conceptual framework in which we can define and explain fashion design practice from the perspective of interaction design in a systematic manner. With respect to theoretical foundations, the main results of the project relate to

- A more in-depth exploration of the notions of wearing intentions and wearing expressions as foundation for a definition of what it is we design in the fashion design process from an interaction design perspective. This is then one way of explaining fashion design from the perspective of wearing and use,
- A system for classifying the form of an initial workshop brief modeling “to see (analyze) and express (design)” as a foundation for the development of workshop exercises.

3.1.1 Wearing intentions and wearing expressions

In what follows a *garment* is a construction of some sort intended for wearing. We consider two basic aspects of this

- Wearing intentions (WI); why we wear the garment, why we intent to use it. More generally what *we* do wearing the garment,
- Wearing expression (WE); how we wear the garment, how it expresses us. More generally what the *garment* does as we wear it.

(Cf. the distinction between real, represented and used garment in Barthes, 1990.)

Both WI and WE refers to some given garment X. We may then view fashion design as a process of defining ”that” garment which WI and WE refers to, and thereby relate WI and WE to each other. We, so to speak, express the relation WI=WE in the process of designing. It is not trousers, coats etc. we design. We express relations WALKING=PROTECTING, DANCING=GLOWING etc. *Form*, as a central aesthetical concept, will here refer to the way in which the garment X relates WI and WE to each other.

What we do in the fashion design from an interaction design perspective is to express wearing intentions by (through) wearing expressions, i.e. we interpret the relation WI=WE by designing the garment as expressional material, something we use to express wearing intentions.

This is to view fashion design as an interaction design problem in order to make the aesthetics of wearing explicit as a design aesthetical problem; we do not only design garments, but also its

intended "use" in the fashion design process.

Generic analysis: (A) Given a garment; (B) Explain what it is by defining WI and WE; (C) Describe its interaction form,

Generic design: (A) Given WI and WE; (B) Define an interaction form; (C) Define the garment. The equation $A(BC) = (BC)A$ then describes the relation between analysis and design.

WI defines in some sense *me* whereas WE defines a *garment*. We can given WI and WE ask

- What the *garment does* with me WE(WI),
- What *we do* with the garment WI(WE).

WI and WE introduce two basic design variables and the recursion equations

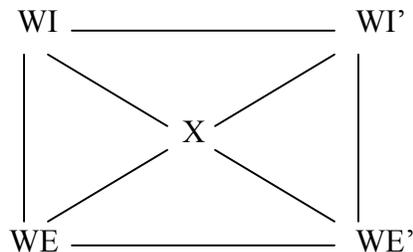
$$\begin{aligned} WE &= WE(WI) \\ WI &= WI(WE) \end{aligned}$$

express the relation $WI=WE$, i.e. *what* it is we do as we design "the" garment which WE and WI refers to. We define the garment by defining what it does with a wearer. Simultaneously we define a wearer by defining what she/he does with the garment. To design street wear fashion for teenagers, for example, means to define what, in a specific case, street wear fashion do with teenagers as well as what teenagers does with street wear fashion.

3.1.2 Interaction analysis in fashion design teaching

The pedagogical program sketched here is based on the idea to relate exercises, workshops etc. to a certain *fashion design diagram*. Each part of the diagram – it has eight elementary components – introduces a particular perspective on saying that fashion design means expressing wearing intentions through wearing expressions. We learn to *see (analyze) and express (design) fashion in terms of wearing and use in a systematical manner* by training us to see and express a fixed set of elementary perspectives of the relation $WI=WE$.

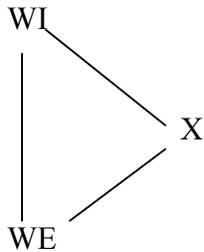
WI (WE) can be an abstraction or something concretely given and it is the garment X that relates the abstract and the concrete instance to each other. Given abstractions WI and WE we define in the process of designing the garment X that WI and WE refers to and given a garment X we can by use derive concrete WI' and WE' by wearing X. Viewing basic possibilities in this we can draw a diagram over different ways in which the garment X relates WI and WE to each other.



In the diagram we find eight different triangles which we can use as a conceptual framework for exercises to train students in working with different basic aspects of the fashion design process from an interaction design perspective with basic focus on design aesthetics.

Examples

$$(1) WE = X(WI) \quad (WI = X(WE))$$



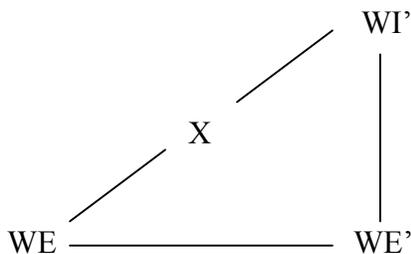
To see (analyze) and express (design) fashion in terms of wearing and use means here

- Analysis: Given a garment X to define WI and WE such that $WE = X(WI)$,
- Design: To solve $WE = X(WI)$ by defining X for given WE and WI.

From the perspective of analysis $WE = X(WI)$ is a form of equality the given garment X introduce. Consider some garment X, for instance a suit X, strict in some sense. What is it, we ask, and answer by producing equalities $WE = WI$, i.e. (WE, WI) such that $WE = X(WI)$. This means we look for wearing expressions WE and wearing intentions WI such that WE is what the suit does to “us” where “us” is what we do wearing some given garment. Say WI = “working at the bank” and WE = “making reliable”. Such a series of pairs (WE, WI) is then one way to characterize X in terms of wearing and use.

From the perspective of design $WE = X(WI)$ is the basic design rationale, i.e. that which motivates essential design choices, it is a design brief form we instantiate by defining WE and WI. If we on the other hand start with for example WI = “working at the bank” and WE = “making reliable” the process of designing X will be a process of solving/proving that X makes “us” (working at the bank) reliable.

$$(2) WE' = WE(X) \quad \& \quad WE' = X(WI')$$



To see (analyze) and express (design) fashion in terms of wearing and use means here

- Analysis: Given a garment X to define WE , WE' and WI' such that $WE' = WE(X) \& WE' = X(WI')$,
- Design: To solve $WE' = WE(X) \& WE' = X(WI')$ by defining X for given WE , WE' and WI' .

3.2 Workshop models

Each triangle in the diagram is a learning objectives/outcome classifier, i.e. defining and classifying the “what” of a workshop exercise. The interaction design methods give us methods to solve the equations associated with given triangles, i.e. the “how” of a workshop exercise. The diagram provides in this sense a systematic foundation for learning objectives and learning outcome. The duality in reading an equation in terms of analysis or in terms of design will also provide a model for explaining what it means to turn analysis into design and vice versa. Some workshops are analytical in nature while others are typically design oriented, connecting two workshop exercises can then be used for explicit training in turning one perspective (analysis/design) in to the other.

Example

Consider Workshop I (V). One way to understand this workshop is in terms of the equation $WE = X(WI)$ seen from an analytical perspective; a colorful headgear is given and we use cultural probes to get inspiration/information for defining WI and WE such that $WE = X(WI)$. (?) We can then bracket X and use resulting WE and WI in a design brief $WI = X(WE)$. To solve this we can, in a workshop exercise for example use the method of counterexamples (See Appendix 1, Workshop IIIa) to explore the boundaries of the design space given by $WI = X(WE)$.

3.3 Examination and evaluation

The main outcome of examination/evaluation experiments is a better understanding of how to integrate critical discussions and reflection into workshop exercises. By varying examination/evaluation methods students will train to focus and reflect on different aspects of the design process. A “blind” review demonstrates explicitly that design presentation, design communication, is an integrated and important part of the process. When examination/evaluation is based on students reviewing each others work they will in a natural manner rediscover the divergence phase of the process, i.e. see possibilities, solutions, more questions and different ways of understanding the brief.

3.4 Documentation work

We have a rather large library of photo- and video documentation from the project:

- Vide documentation of all workshop exercises, except parts of workshop IV,
- Video- and photo documentation of study trips and student fashion shows.

A side effect of our documentation work has been introduction of photo and video documentation as a natural component in the fashion program to facilitate learning through critical discussions. This has become an integrated, and very concrete, part of the development of theoretical models and a pedagogical program and we view this as a very important project result. Photo and video are powerful and flexible tools for representing WI and WE in seminar discussions.

4 Discussion

4.1 Analysis

Successful workshop training requires

- (A) That training methods support learning objectives (Soundness of principles),
- (B) That learning outcome guides workshop training (Correctness of implementation).

The initial working hypothesis of the project conjectures that (A) holds, with respect to using interaction design methods in workshop training to

- Give students a broader conceptual perspective on the expressiveness of clothing,
- Give students concepts and methods to work more systematically with fashion design in a context of wearing and use.

That design methods with an explicit focus on wearing and use in workshop training contributes to a change in focus that makes the double perspective visible is something that evaluation of test workshops supports.

Correctness of implementation requires, among other things, a clear understanding, and definition, of intended learning outcome and suggested training methods. A key issue is to check (“prove”) actual implementation of training methods on basis of given learning outcome. This is the basic rationale for explanations in workshop introductions and in supervising.

Evaluation of test workshops displayed various problems in relation to correctness of implementation, problems that motivates main project results:

- Difficulties in seeing and explaining “use” from an aesthetical perspective – this relates to understanding learning outcome and led to the development of a conceptual framework and theoretical foundations for explaining “what” it is we design in the fashion design process from an interaction design perspective,
- Problems involved in using interaction design methods, and explicit design methods in general, as pedagogical instruments in fashion design teaching – relates to the systematics of design methodology as a pedagogical instrument and led to the development of a framework for modeling and explaining the meaning of “to see (analyze) and express (design)” as a foundation for the development of workshop exercises.

Explaining the learning outcome Even if a perspective on use, wearing expressions etc. in some sense is obvious in fashion design the test workshops made it clear that it is very difficult to make this explicit as an aesthetic perspective in fashion design learning/teaching. To make the learning objectives/outcome of practical workshop training clear enough we need a language, i.e. a conceptual framework for explanations.

The central problem in all design work is how to turn analysis of given problems, requirements, conditions, ideas etc. into constructive suggestions for solutions, i.e. to turn analysis into design. The design solution can never be a mere ”mechanical” derivation from given requirements. This turning point – from analysis to design – is of course fundamental also in design education. In

design education this is all about understanding – both discursively and intuitively – what it means to give form (gestalt) to that which in some way is given in analysis. A specific notion of form is consequently a basic building block in design education – this is really the core issue in learning/teaching design aesthetics. Learning outcome in design aesthetics training must have a firm foundation in a distinct notion of form, i.e. design form. A challenge here is then to give an explicit definition of this with focus on the relation $WI = WE$. The need for a theoretical foundation was also evident in the critical seminar discussion where analysis centered on design rationale, i.e. the explanation of, and motivation for, basic design decisions. This foundation is also essential in building and training practical design knowledge, i.e. a foundation for faith in our ability to make the necessary turn from analysis to design.

Design methodology in fashion design teaching The test workshops gave clear evidence, as we see it, that interaction design methods provide tools for raising the level of learning/teaching in fashion design by giving students and teachers a language to discuss and reflect on design aesthetics with focus on wearing and use in a more systematic and conceptually clear manner. This seems to be true for all the phases of the design process we tested in workshops.

Although we see clear support in favor of our initial hypothesis we feel that we perhaps underestimated the difficulties in introducing design methodology as a conceptual pedagogical tool. To a certain extent it is a matter of "theoretical" tools for "practical" work and we then have to deal with the usual problem of abstraction: the methods are supposed to provide, both conceptually and linguistically, understanding for the design process, but at the same time it is a conceptual, and linguistic, problem to understand details and components of the method descriptions themselves.

It is one of these typical vicious circles. A specific problem here is also that design methodology with a focus on design aesthetics is not very well developed in fashion design. We simply need basic theoretical models as a foundation for developing fashion design methodology.

Examination and evaluation Examination/evaluation have, in the project, been synonymous with evaluation of given learning outcome. The models of examination/evaluation tested in the project have given valuable information about function and form of critical seminar discussions in the context of a practical workshop – that certain examination/evaluation models failed to work was mostly due to general problems with planning and implementation of some of the workshops. Results were here in general rather positive in the sense that level of workshop reflection and understanding was visible in a very clear and distinct manner in examination/evaluation discussions. The different forms of examination/evaluation tested in the project were easy to understand for workshop participants and did not depend on the introduction of specific concepts and methods. All this means that the critical seminars discussions in the test workshops were an important source for reflection on workshop outcome.

4.2 Implications

The project has clear implications for fashion design, as well as textile design, education at our school. In relation to project results development of education will follow four different tracks:

Theoretical foundations for teaching fashion design aesthetics The project has initiated a more general discussion at our school about methods and theoretical foundations of fashion design

teaching. This will, as we see it, raise the level of education and give students a stronger foundation for practical fashion design work.

A basic course in design aesthetics A main outcome of the project is plans for a basic course in design aesthetics that can be given both to fashion design students and textile design students focusing on wearing expressions and expressions in use respectively. This is the course that will provide for the foundations we found necessary for workshop training to work properly.

The educational catwalk In order to introduce the aesthetics of act design more explicit in fashion design learning/teaching at our school we will develop the critical “catwalk seminar” as an integrated part of the curriculum. This is the critical seminar where we discuss fashion as part of the fashion show itself.

Photo and video in fashion design teaching A basic implication of the project is the integration of photo and video as a foundation of critical seminar discussions. This is documentation that focuses on the designer perspective and is a type of fashion documentation very different from *communicating fashion* to intended customers, the intended target group etc. As a critical and reflective component of the educational design process it is a mixture of documentation and critical design. (Cf. Andersen, 2006; Cotton, 2004.)

4.3 Conclusions

The initial project hypothesis implicitly refers to two basic assumptions:

- (A) That good work practice builds on the foundation of explicit concepts, methods and models,
- (B) That it is a good idea to introduce foundational concepts, methods and models through practical workshops.

To be able to develop your work practice through reflection and in communicative action it needs a solid conceptual and methodological foundation.

To grasp the working meaning of foundational concepts, methods and models you must use them in practical design work.

A basic pedagogical problem is then to resolve the circle inherent in this; we need some form of general and initial conceptual foundation to be able to start to build this interaction between theory and practice. The question is in each particular case *how to* design such a key that can open up and resolve the circle in an educational context.

We have, in this project, used series of test and reference workshops to explore this issue in relation to the overall aim of broadening the foundations of fashion design aesthetics. The project results combine the suggestion of such a general conceptual foundation with methods and models for introducing it in the fashion design curriculum. Next step is to implement the project results in the regular curriculum and to evaluate the results of this in relation to the initial project hypotheses.

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Interaction design methods in fashion design teaching – Appendix 1

Test workshops I – V

1 Introduction (given to students participating in workshops)

Interaction design methods in fashion design teaching – A RHU (Council for the Renewal of Higher Education) project at The Swedish School of Textiles

Introduction

The basic component of interaction design within the fashion design process concerns the definition of wearing intentions (WI) through wearing expressions (WE); to relate use of garments to wearing expressions by garment construction and by defining intended wearing expressions.

WI concerns what we do when we wear garment; walk, sit, belong, hide etc.

WE concerns what garments do as we wear it; warming, cooling, protecting, glowing etc.

WI are the basic design variables in some sense, something we initially develop and explore in order to define what it is we design. WE is an end result in the design process and what gives WI a gestalt.

For the purpose of the workshop we follow Jones (Jones, 1992) and distinguish three major logical stages of the design process; divergence, transformation, convergence.

Divergence: testing for stability/instability in the design problem context. To find the components that will permit change and the fixed points of reference. This is the initial stage where the given design brief is questioned, de-structured, the stage where we open up the design space.

Transformation: to recognize basic patterns of what is being designed, "a pattern that is perceived as appropriate but cannot be proven to be right." (Jones, 1992) In this stage we try to explore the boundaries of the problem and identify basic design variables.

Convergence: the acts of designing where the final decisions are taken. This is the stage where the actual designing takes place, where material is being shaped into things, systems, acts, concepts etc.

A design method is a way to work systematically in the design process. This is a way to design the process itself;

- To provide an explicit structure for the process, making basic decisions traceable,
- To provide a conceptual framework for communication within the design process.

A design method is a tool, not a rule.

2 Workshops

Workshop I

Learning outcome: Students will be able to see (analyze) and express (design) the “user” through (in terms of) wearing intentions/wearing expressions in relation to a given brief.

Period: Two weeks, September – October 2005.

Class/Groups: Fashion Design BA Year I (10 students)/ 3 groups.

Design brief: To design a colorful headgear.

Stage: Divergence.

Method: Cultural probes (Gaver, Dunne & Pacenti, 1999).

A probe is a thing we use in investigations to gather information. A cultural probe is consequently a thing we use to gather information about cultural phenomena. Here it is something we “send out” to collect information about WI/WE relations in everyday life.

AIM: To paint a picture, sketching expressions of garment in use in everyday life. To provide initial inspiration that open up the design brief.

OUTLINE:

- We start with a given design brief,
- Design a cultural probe kit that is appropriate for collecting expressional information about activities strongly connected to the given brief,
- Try to find appropriate locations to place the probes,
- Place the probes,
- Supervise discretely until it is time to collect the probes,
- Collect the probes,
- Sum up and present the material collected by the probes.

Workshop input/output: The design brief/A culture board (presenting the information collected by the probes).

Evaluation/Examination: Half-way and at the end of the workshop. Evaluation, with focus on intentions and expressions in work methods and presentations, is done by two groups of outsiders that have not been briefed about the workshop nor about the project itself – a sort of blind review.

Implementation: The workshop started with a general introduction where workshop method and design brief were given to students together with a brief description and explanation of project aim and intended learning outcome. Each group was given a probe-kit consisting of a digital camera, a notebook, post-it notes and a set of fiber-tipped pens. First task for the student groups was to design instructions on how to use the kit. They were then asked to give the kit to someone they thought interesting in relation to the brief, together with instructions on how to use it. After return of the kit, the task was for each group to analyze and present the information to paint the picture of a “user” of a colorful headgear. The workshop was carried out according to plans, with evaluation as a reflective and critical seminar discussion on aims and methods. All groups were given supervision during the workshop by members of the project group.

Outcome: Students demonstrated that given learning outcome was reached, but learning was also clearly only implicit. That students were able to “to see (analyze) and express (design) the ‘user’

through (in terms of) wearing intentions/wearing expressions in relation to a given brief” using cultural probes as a method of design brief exploration was something we as teachers could observe, but the meaning of this was not something the students could grasp and explain explicitly. Understanding methods and perspective needs a theoretical foundation that was lacking; the level of abstraction was too high on introduction given at the beginning of the workshop.

2.2 Workshop III a

Learning outcome: Students will be able to see (analyze) and express (design) “use” (wearing) in a given brief.

Period: One day, September 2005.

Class/Groups: Fashion Design BA Year III (6 students)/ 6 groups.

Design brief: Individual project brief.

Stage: Divergence/Transformation.

Method: Counter examples (Cf. Hallnäs & Redström 2006).

A counter example is an example that gives an exception to a rule. As we come cycling on a one-wheel bicycle we provide a counter example to the rule that all bicycles have two wheels. A counter example here is an example where given WI in some sense are satisfied, but where WE is completely up-side-down with respect to ordinary understanding of WE.

AIM: To explore the boundaries of a common understanding of WE in relation to given use, An exercise in critical analysis of given use.

OUTLINE:

- We start with a given design brief,
- Describe the common view of WE,
- Isolate basic WI that define intended use,
- Keep these WI, but introduce WE, through examples, that are up-side-down, i.e. completely different as to form a counter example to the common view,
- Try to isolate what is essential in these new expressions that makes them into counter examples,
- Make sure the counter examples conform to the brief with respect to WI.

Workshop input/output: The design brief/Counter examples.

Evaluation/Examination: Seminar presentation of, and motivation for, basic choices made in the work process (design rationale).

Implementation: The workshop started with a general introduction where workshop method and design brief were given to students together with a brief description and explanation of project aim and intended learning outcome. The workshop was carried out as part of a course in artistic development. Design brief used in the workshop related to an individually chosen theme of study for the course. First task for the student groups was to understand aim and outline of the given design method and to figure out how to use in relation to the given theme of study. Next step was to step-by-step to follow method “instructions” in developing a series of counter examples. The workshop was carried out according to plans with evaluation as a reflective and critical seminar discussion on aims and methods. Members of the project group gave all students supervision during the workshop.

Outcome: Some students demonstrated that given learning outcome was reached with a high degree of explicit understanding. Going back to interviews we could see that this more or less directly corresponded to previous knowledge of, and training in, how to use design methods as explicit tools in the work process. Some other students had difficulties in understanding methods and tasks of the workshop, which gave clear evidence that workshop introduction was given at too high a level of abstraction, and that understanding methods and perspective needs basic training and theoretical foundations.

2.3 Workshop V

Learning outcome: see Workshop I.

One week; October 2005.

Class/Groups: Fashion Design MA Year I and II (10 students)/ 3 groups.

Design brief: To design a colorful headgear.

Stage: Divergence.

Method: Cultural probes.

Workshop input/output: The design brief/A culture board.

Evaluation/Examination: Same as workshop I.

Implementation: See workshop I.

Outcome: Students demonstrated that given learning outcome was reached, and also that learning was more explicit than in workshop I. The master students seemed to have reached the level of knowledge and training needed for both understanding introductions and methods.

2.4 Workshop II

Learning outcome: Students will be able to see (analyze) and express (design) the “user” through (in terms of) wearing intentions/wearing expressions in relation to a given activity.

Period: One and a half day, December 2005.

Class/Groups: Fashion Design BA Year I (10 students)/ 5 groups.

Design brief: Working clothes for women.

Stage: Transformation.

Method: Gestalt substitution (Cf. Hallnäs & Redström, 2006; Djajadiningrat, Gaver & Fres, 2000).

A gestalt substitution is a reinterpretation of WI in a given example, that provides a new meaning to WE. Consider for example X that in her new evening dress receive a price and imaging that what she really does is shopping in a grocery store.

AIM: To provide an alternative context for exploring WE.

OUTLINE:

- We start with an example of an activity,
- Give an WI-interpretation of the example at hand,
- Substitute an alternative WI-interpretation for the given one which provides a completely different meaning to WE in the example,
- Try to isolate WE-characteristics typical to this alternative interpretation,
- Give an analysis of WE in the example and look for expressions inconsistent with the alternative WI-interpretation,
- Describe these components in the example by re-designs of given WE.

Workshop input/output: Description of an activity through examples – a substitution that reinterprets the example and given WI in an alternative context.

Evaluation/Examination: Day two questioning and re-design what was done during day one.

Implementation: The workshop was set up as a combination of dancing and sketching training. A film showing a waitress working in a restaurant illustrated the brief “Working clothes for women”. A dance instructor was invited to help students substitute an alternative WI-interpretation to provide a different meaning to WE in the example; the waitress “really” is dancing. With a background in actually dancing through the given example, next step was to isolate WE-characteristics typical for the alternative interpretation by sketching. The workshop was carried out according to plans with evaluation as a reflective and critical seminar discussion on aims and methods. Students were given supervision by the invited dancing instructor and also, in part, by members of the project group.

Outcome: The workshop can be divided in two parts: the dancing phase (to substitute an alternative WI-interpretation) and the sketching phase (to isolate WE-characteristics typical for the alternative interpretation). In the first phase learning outcome were clearly reached, but going from analysis by dancing to design by drawing turned out to be very difficult. Much more work, and initial training, is needed to prepare for such a workshop. The necessary understanding of methods and perspective needs a theoretical foundation that was lacking. It is simply very difficult to introduce explicit methods of training in turning from analysis to design – the core of design training that often enough is referred to in terms of the “magic” of “creativity”.

2.5 Workshop III b

Learning outcome: Students will be able to see (analyze) and express (design) wearing expressions in relation to given wearing intentions.

Period: One day, March 2006.

Class/Groups: Fashion Design BA Year III (6 students)/ 6 groups.

Design brief: Individual project brief.

Stage: Transformation-Convergence.

Method: From intention to expression (the art of use/wearing) (Cf. Hallnäs & Redström 2002).

To better understand the aesthetics of use we can look for the art, or the game, of use, i.e. a maximal focus on WE. Walking in a new pair of shoes we can pretend that they are a sort of sports equipment; just tools for putting our feet at exact places and then jump on to other marked out places, all in an intricate given pattern. In terms of gestalt substitution we may say that what we do is not to transport ourselves to work, but playing hopscotch.

AIM: To explore and expose hidden and forgotten aesthetical choices in common WE interpretations of given WI.

OUTLINE:

- We start with WI that describes intended use of a given garment,
- Try to describe an art (game) of wearing,
- Give several examples of garment and WE that defines this artful (athletic) wearing,
- Describe basic WE-characteristics of the art (game) of wearing,
- Use these characteristics as a basis for a characterization of central aesthetical choices in expressing intended use.

Workshop input/output: The design brief/A design for the art of use.

Evaluation/Examination: Half-way in the workshop show, results and then continue to build further on these for the rest of the workshop.

Implementation:

The aim of the workshop was to examine different expressions in wearing while self being in motion, to move from situation and context to the process where wearing comes to expression, e.g. if Batman is a somewhat theatrical example of someone that have made his being in the metropolis into an artful expression through his clothing and equipment, a pair of three inch stilettos and a short tight skirt answers for the same thing, though, in a perhaps more sublime way.

In order for the second year students in fashion design to work with this theme the task that was given them was based upon dwelling in a metropolis area. It included the following tasks but was not restricted to only these:

Theme: Alienation of man/urbanism

- Meditate on the city as it falls a sleep and as it wakes up,
- Take a tram or a bus that you have never taken before and ride with it for one or two laps from beginning to end, or a full circle,
- Sit down somewhere outside your favorite café for 1-2h and observe the people in it without going in,
- Sit down as near as possible to a bigger street/highway entrance to the city (e.g. bridge) for an hour,
- Lay down to rest where you normally would feel embarrassed to do so and stay there until your feeling of shame has left you,
- Move in a grater speed than everyone else (e.g. run through the pedestrian quarters),
- Move extremely slowly relative the tempo than dominates the environment,
- Find a place to sleep as well as having dinner and breakfast on the street.

Rules: You are not aloud to be inside at any time,

- You are only allowed clothing,
- Use public toilets or sneak into café or McDonalds,
- Taken frequent pictures: portraits, situations and still life,
- Use camera or take note only in-between exercises.,
- Finding a place to crash. (Allowance: a flat roof, call a friend),
- No cell phones allowed.

Outcome: The result of the class was mostly varied. It ranged from people who took it very seriously to those that regarded the exercise as meaningless. However, amongst those, who undertook the exercises properly a lot of interesting ideas come out, e.g. a collection of garment for an alternative pattern of moving and resting in the urban environment or an collection for homeless. These results showed to be more or less affected by the actual “living with the environment” as they showed a much more nuanced and almost poetic understanding of the subject. Therefore, in conclusion, as an approach to understand the expression of wearing it seemed like a very conductible approach. However, the bridge from design methods already well

known to the students was arguable a bit to stretched, as it was believed that it was this gap between different approaches to research that was the reason for some students not being able to conduct the research in a proper way.

2.6 Workshop IV

Learning outcome: Students will be able to see (analyze) and express (design) wearing expression style in relation to given wearing intentions.

Period: One week, March 2006.

Class/Groups: Fashion Design BA Year II (10 students)/ 5 groups.

Design brief: Function clothes.

Stage: Convergence.

Method: Interaction style (Cf. Öritsland & Buur, 2000)

Interaction style can be understood as a rule that relates WI characteristics with WE characteristics; basic properties of what we do wearing a garment relates by a rule to certain properties of what garments do when we wear them. An interaction style is thus a certain way of expressing WI. One example could be to expression movement by movement; if I walk, then movement should also characterize WE.

AIM: To explicitly relate a design to a style of wearing.

OUTLINE:

- We start with a series of WI that describe intended use of a given garment,
- Given for each WI a series of different WE interpretations,
- Rule out the interpretations that are inconsistent with intended final design,
- Isolate basic WI characteristics,
- Isolate corresponding WE characteristics in given interpretations,
- Formulate a rule that describes how WI characteristics relate to WE characteristics,
- If no pattern is visible, go back and give a new series of WE interpretations,
- Give a name to the style and look for historical references.

Workshop input/output: WI describing intended use – a wearing style describing intended design.
Evaluation/Examination: Each participant analyses all other participants' results. All analyses are then compiled into a final evaluation.

Implementation: The workshop was planned to be carried out as part of a course in march 2005. This did not work well for various reasons. Together with the Gestalt Substitution method (see Workshop II) the Interaction Style method was the most difficult one to explain and properly implement and we underestimated this, resulting in a workshop that was not properly prepared with the respect to resources in time for introduction and for basic explanations and supervision.

Outcome: The problems with implementing this workshop as planned gave perhaps the most explicit illustration of the need for developing theoretical foundations of, and elementary training in, fashion design aesthetics.

General conclusions:

- Theoretical foundations that provide an explicit language and concepts are necessary to make the aesthetical perspectives visible to students,

- Students have to work through the whole design process – even if different phases are done in different workshops – to grasp aesthetical perspectives in relation to the different phases of the design process,
- The design brief is very important; the workshop must be well prepared in this respect.

It is in some sense a matter of revisiting the Bauhaus “Vorkurse” with its “Abstrakte Formenlehre” (Wingler, 1969) and look for the specific elementary notions needed to introduce fashion design aesthetics in basic fashion design training

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Interaction design methods in fashion design teaching – Appendix 2

Fashion Design Diagrams

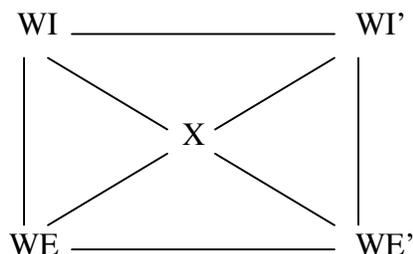
(Lars Hallnäs 2007)

In what follows, a *garment* is a construction of some sort intended for wearing. We consider two basic aspects of this

- Wearing intentions (WI); why we wear the garment, why we intend to use it. More generally what we do wearing the garment,
- Wearing expression (WE); how we wear the garment, how it expresses us. More generally what the garment does as we wear it.

Both WI and WE refer to some given garment X. We may then view fashion design as a process of defining "that" garment which WI and WE refers to and thereby relate WI and WE to each other. We, so to speak, express the relation WI=WE in the process of designing.

WI (WE) can be an abstraction or something concretely given and it is the garment X that relates the abstract and the concrete instance to each other. Given abstractions WI and WE we define in the process of designing the garment X that WI and WE refer to and given a garment X we can by use derive concrete WI' and WE' by wearing X. Viewing basic possibilities in this we can draw a diagram over different ways in which the garment X relates WI and WE to each other.



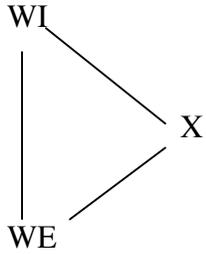
In the diagram we find eight different triangles which we can use as a conceptual framework for exercises to train students in working with different basic aspects of the fashion design process from an interaction design perspective with basic focus on design aesthetics.

We can think of each triangle in the diagram as defining a certain form of interpretation of the general learning outcome:

Students will be able to explicitly see (analyze) and express (design) fashion in terms of wearing and use in a systematical manner.

We read the expression WE(WI) as "what the garment does with us" and similarly WI(WE) as "what we do with the garment" which means we think of wearing expressions as defining the garment in some sense and wearing intentions as defining "us" in some sense.

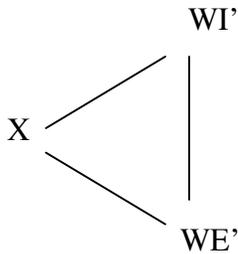
1 WE = X(WI)



To see (analyze) and express (design) fashion in terms of wearing and use means here

- Analysis: Given a garment X to define WI and WE such that $WE = X(WI)$,
- Design: To solve $WE = X(WI)$ by defining X for given WE and WI.

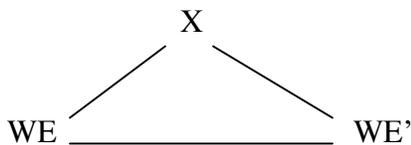
2 WE' = X(WI')



To see (analyze) and express (design) fashion in terms of wearing and use means here

- Analysis: Given a garment X to define WI' and WE' such that $WE' = X(WI')$,
- Design: To solve $WE' = X(WI')$ by defining X for given WE' and WI'.

3 WE' = WE(X) (WE = WE'(X))

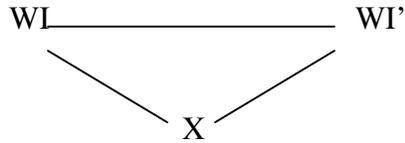


To see (analyze) and express (design) fashion in terms of wearing and use means here

- Analysis: Given a garment X to define WE and WE' such that $WE' = WE(X)$,
- Design: To solve $WE' = WE(X)$ by defining X for given WE' and WE.

(Similarly for $WE = WE'(X)$)

4 $WI' = WI(X)$ ($WI = WI'(X)$)

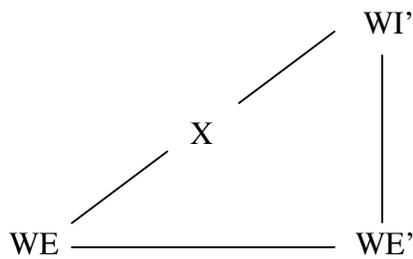


To see (analyze) and express (design) fashion in terms of wearing and use means here

- Analysis: Given a garment X to define WI and WI' such that $WI' = WI(X)$,
- Design: To solve $WI' = WI(X)$ by designing X for given WI' and WI.

(Similarly for $WI = WI'(X)$)

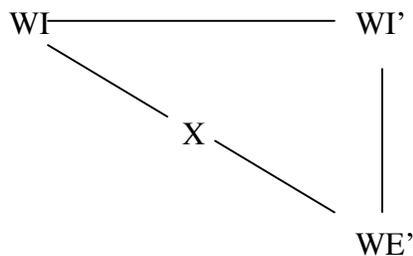
5 $WE' = WE(X) \& WE' = X(WI')$



To see (analyze) and express (design) fashion in terms of wearing and use means here

- Analysis: Given a garment X to define WE, WE' and WI' such that $WE' = WE(X) \& WE' = X(WI')$,
- Design: To solve $WE' = WE(X) \& WE' = X(WI')$ by defining X for given WE, WE' and WI'.

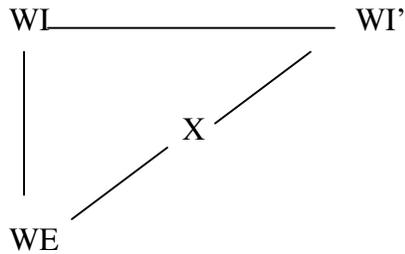
6 $WI' = WI(X) \& WI' = X(WE')$



To see (analyze) and express (design) fashion in terms of wearing and use means here

- Analysis: Given an garment X to define WI, WI' and WE' such that $WI' = WI(X) \& WI' = X(WE')$,
- Design: To solve $WI' = WI(X) \& WI' = X(WE')$ by defining X for given WI, WI' and WE'.

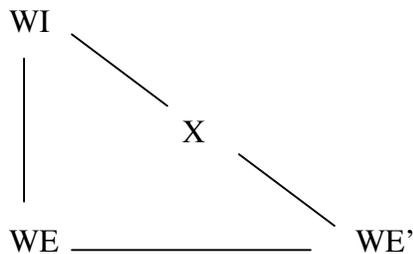
$$7 \quad WI = WI'(X) \& WI = X(WE)$$



To see (analyze) and express (design) fashion in terms of wearing and use means here

- Analysis: Given an garment X to define WI, WI' and WE such that $WI' = WI(X) \& WI' = X(WE')$,
- Design: To solve $WI = WI'(X) \& WI = X(WE)$ by defining X for given WI, WI' and WE.

$$8 \quad WE = WE'(X) \& WE = X(WI)$$



To see (analyze) and express (design) fashion in terms of wearing and use means here

- Analysis: Given an garment X to define WE, WE' and WI such that $WE = WE'(X) \& WE = X(WI)$,
- Design: To solve $WE = WE'(X) \& WE = X(WI)$ by defining X for given WE, WE' and WI.