Bringing Fashionality to Life

Research and Design
within the Online Fashion Ecology

Master's Thesis

written by

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Abstract

As students of Information Architecture we find the constant change and development in Internet usage very interesting and intriguing. Over the past years, the attention has increasingly been around social technologies that support interaction, collaboration, and knowledge sharing - commonly referred to as web 2.0. These social technologies have changed how many activities are carried out, and during the past years we have particularly noticed how the fashion world has embraced these online opportunities. Today, regular fashion bloggers are matching international fashion magazines as trendsetters; they have become the voice of the runway. In light of this, we have found it interesting to investigate, how we can develop a tool that supports the current trends in Internet usage in a context of practising fashion online.

About a year ago, we started casually talking about how this whole thing with clothes online was a disaster. Sporadic observations of online shops, communities, and auction sites gradually turned into an idea for an online community with the focus on the organisation of clothes similar to how Flickr handle pictures and YouTube handle videos.

The present report deals with the invention of this online social tool, which we have called Fashionality. In the report we investigate how it is possible to move from having a rough idea to developing a formal description that enable us to communicate Fashionality to developers.

We examine how the rough idea of Fashionality can be refined through activities within research and design. These activities include an analysis of the genre and ecology; the technological and sociological context of which Fashionality has to fit within. This analysis of the genre and ecology will guide our work throughout the rest of the report.

We examine different design products like sitemapping, wireframes, and prototypes in order to determine what kind of design products that are best suited for mediating design ideas in different contexts. Furthermore, the thesis report includes analyses of interviews and a workshop that we conducted with a selected group of users of fashion-related websites. We identified this group as lead users in relation to Fashionality through our exploration of fashion blogs and style galleries. We will also address the problems associated with the digitising of clothes, because we argue that the key parameter in the survival of Fashionality is a strong database system that can handle the complexity of clothes. We also include a discussion about motivational elements that can help engaging users to participate and contribute with content to the database, as we also consider this essential for the success of Fashionality.

Towards the end of the report, we find ourselves properly dressed for taking a stance in how we interpret the relationship between research and design, the two main activities we have carried out throughout our work.

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16 year-old Nanna is checking out a few stores on her way home from school. In the third store she visits, she instantly notices a pair of Acne pants on one of the mannequins and also hanging on a rack below. She approaches the rack and gently pulls off a pair. A million questions appear in her mind: Does she really like these pants? Would her friends? Is her wardrobe compatible with them, or will they just hang in the wardrobe and be a waste of money? Will her butt look big in them? The shop assistant interrupts her smiling; “Can I help you?”. Nanna replies “I’m just browsing for now... thanks”. Nanna looks at the price tag - the pants are really expensive. She watches herself in the mirror holding the pants in front of her. Finally, she asks the shop assistant if she can try them on. The shop assistant nods smiling and points towards the dressing rooms. Nanna tries on the pants. She turns to one side and then the next. The questions are still there - unanswered. The shop assistant appears between the curtains of the dressing room; “Those look really great on you,” she says. Nanna smiles hesitantly knowing that shop assistants almost always say that. “Thanks”. The shop assistant returns to the shop and Nanna takes off the pants. She finds the tag once again and reminds herself of the style name and hangs the Acne pants back on the rack.

Back home Nanna sits in her sofa with her laptop computer. She is logged into Fashionality. She searches for the Acne pants entering type: pants, brand: Acne, and style: Davi Leather. Each time she enters a piece of information the search results narrow down. When she enters the style name only two matches are left. The pants she saw in the shop, and the same pair in a different color. She clicks on the pants from the store and is able to see nine Fashionality users who already own them. She is also able to see how other users style the pants in combination with other pieces of clothes. Some of the users have not uploaded any pictures wearing the pants, while others have been more contributive. A single user has actually uploaded 15 pictures wearing the pants together with different other pieces of clothes.

Nanna spends about half an hour browsing the pictures. A lot of times her attention is removed from the pants because she stumbles on other pieces of clothes that she likes. She adds these to her Fashionality wishlist for later reference. She browses between users, their clothes, and pictures of them wearing the clothes.

At some point in time she decides that she has to own the Acne pants. The pictures and inspiration from the other users have persuaded her. Her wardrobe seems to match alright, and she has built the confidence to wear the pants. About half of the users with the Acne pants have flagged the pants “red”. Some have them flagged “yellow”, and two have the Acne pants flagged “green”. The green flag means that they are interested in selling them. Nanna checks out the two green ones to see if one of them is her

own size and one of them luckily is. Nanna notices that this user has a lot of clothes for sale. She browses the pieces of clothes, and adds a couple of pieces to her wishlist. Finally, Nanna places a bid on the other user's Acne pants. About half the price from the store. After having placed the bid she closes down her laptop and begins doing other stuff.

A couple of hours later Nanna logs back in to Fashionality to see if the other user has answered her bid. The other user does not totally agree on the price suggested by Nanna, and has asked for a little more. Nanna accepts the price, and begins to look for pieces of clothes to wear with her newly bought Acne pants.

Another place in the world, 20 year-old Pernille is using Fashionality to register herself as owner of a white H&M cardigan. She registers almost all the clothes she owns, because it helps her organise her wardrobe. The pieces she does not want other Fashionality users to see, she adds to a hidden part of her virtual wardrobe on Fashionality.

When she wakes up the next morning, she spends time picking out what clothes to wear. She already has a few pieces of clothes in mind from the night before, but now they just do not seem right. She settles on the H&M cardigan on top of a basic Monki blouse together with a pair of Acne pants that she has actually wanted to get rid of for some time.

In the bus on her way to work she uses her iPhone to create a look on Fashionality. Since most of the clothes and accessories she is wearing right now is already in her virtual wardrobe, this only takes a minute or two. Alone in the bus she writes a small piece of text to accompany the look, but she does not include a picture yet.

The look now travels from Pernille's iPhone to her Fashionality account. Since her blog, where she writes about things she finds interesting - especially fashion, is retrieving information from Fashionality, her blog readers are now able to see her look on her own blog. Or more correctly, they are able to see the different pieces of clothes that the look consists of. With a single click, her blog readers are also able to go directly to the pieces of clothes or the entire look on Fashionality.

When Pernille's lunch break arrives she pulls aside her friend, who is also somewhat interested in fashion. Going to a vacant room they perform what outsiders could interpret as a ritual where Pernille hands her friend the iPhone, who then takes a picture of Pernille posing. On their way to the cafeteria Pernille attaches the picture taken by her friend to the look she posted earlier that day.

Even though most people at work consider Pernille a fashionable girl, not all them know that she has 267 people following her profile on Fashionality. Her look photos have even been voted "look of the week" several times.

2. Introduction

The usage narratives presented above are stories of two girls interacting with our Internet-based social fashion network, Fashionality. However, for the time being Fashionality is not fully developed and released.

We began developing the idea of an Internet-based social network site in the fall of 2009, inspired by the recent years of growth and change in Internet use. Over the last couple of years, designing and developing information systems has had a focus on implementing and supporting a wide variety of social technologies such as wikis, blogs and forums. We consider this to be related to the general increase in the use of online social technologies, and as students of Information Architecture in 2010 it is impossible to ignore this phenomenon.

Our idea is basically to invent a system for clothes similar to what Flickr is to pictures, YouTube is to videos, and Twitter is to short text messages. We imagine Fashionality to be an Internet-based social network used by fashion-interested people to organise their clothes, share information about clothes, and to inspire each other. These are the three keywords in connection to Fashionality; Organise, Share, Inspire.

Three key components make up the core of Fashionality: The users, their "pieces of clothes", and combinations of clothes called "looks". Fashionality works by users adding these pieces of clothes, either separately or as a part of a look, to their personal "virtual wardrobe". In their virtual wardrobes, the users are able to organise their clothes in different ways. The users and their virtual wardrobes are connected to each other and share information about what type of clothes they have acquired, what looks they have created, what their personal style is like, etc.

The present thesis report is grounded in our experiences from working with bringing Fashionality to life. As IA students, the development of Fashionality was an obvious opportunity to work with aspects within our field like conducting user-centred design, and trying out some of our ideas for building the information architecture for a system that eventually has to set sail on the Internet. The conventional aspects of users, context, and content coined by Morville and Rosenfeld as the focus of IA have all been present in our work with Fashionality.

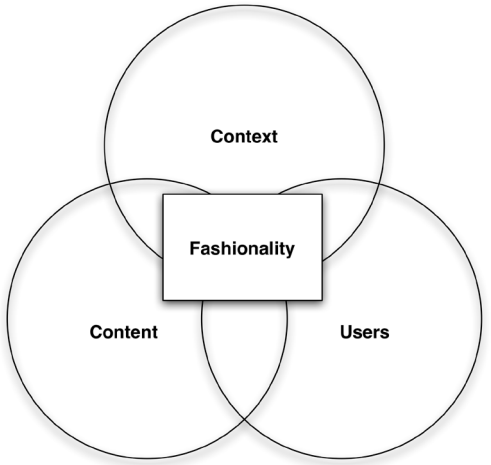


Figure 1. Fashionality in "The infamous three circles of IA" (Morville & Rosenfeld, 2007, p. 25)

2.1 Purpose of the Report

The purpose of the present report is twofold: On one hand, we wish to introduce what Fashionality is all about. What is the central idea, and how do we envision Fashionality? However, it is not within the scope of the report to present Fashionality as a final product. As the report is written and handed in, Fashionality is not yet in a stage of final release and much work lies beyond the scope of this report.

On the other hand, and more importantly, the report focuses on relevant issues in relation to IA, which we have had to deal with during our design work. We wish to describe how we have been able to use our academic background in a developmental process that both involved generating ideas, researching, and designing.

In the following we will present our problem and the subsequent subproblems that we have identified as essential to our work with bringing Fashionality to life, while also discussing the scope of our work as Information Architects.

3. Problem

From the very beginning, we have had a rough idea of what we wanted Fashionality to be like, and the overall challenge has been: How do we bring Fashionality to life?

The idea behind Fashionality is the result of a clash of concepts between the world of fashion and the world of Internet technologies. From the beginning, the refinement of our idea has been the story of asking how we are able to design a tool that supports and combines contemporary trends within these two seemingly separate worlds. The questions is of course approachable from different disciplines and with different techniques. We presuppose that the "tool" is an Internet-based social network in some way or another, however this is really not obvious at all. If a manufacturer of clothes was asking the question, she might assume something completely different from the word 'tool'.

Even within information system design the above question is approachable from different fields. As information architects we have a specific understanding of the scope of our work within the activity of bringing an information system to life. Other key players, for instance programmers or graphical designers, also have an understanding of their work, and would interpret the above question on the basis of that. With this in mind, it is important for us to lay the grounds for how we as students of IA interpret our role and the scope of our work in relation to the above challenge.

3.1 The Process of Information Architecture

Morville and Rosenfeld presents a model entitled "The Process of IA". The model illustrates the stages that are typical to go through during a process of development.

Figure 2. The Process of IA Development (Morville & Rosenfeld, 2007, p. 232)

"The Process of IA" is not particular controversial and similar processes of development can be found in other literature. Morville and Rosenfeld's model, however, is particular suited for illustrating the process on a macroscopic level, and gives meaning to the large number of disciplines associated with IA.

IA encompasses quite a range of different disciplines. Encompasses in the sense that IA is more or less informed by these disciplines. For instance, both the disciplines project management and graphical design are interpreted to be part of IA, even though these two disciplines may seem far apart (Morville & Rosenfeld, 2007, p. 19).

Despite the fact that IA is considered multidisciplinary and the job of an information architect may consist of a wide variety of different activities, we have not chosen the entire scope of IA as the focus of our work. First of

all the setting of our work has had an influence on our choice of scope, and so has our own interpretation of what IA is. We feel that some tasks are more essential than others - more at the core of IA than others.

3.2 The Setting of Fashionality

Besides serving as the case of our thesis, Fashionality is a start-up project initiated by the three of us as a group of curious technology-interested people, who alongside our studies began discussing how we would be able to develop and refine the idea of Fashionality.

Working with Fashionality as a part of our thesis, we have not yet had to worry about financial or commercial factors. This has played an important role, allowing us to administer the process ourselves. Furthermore, we are not (yet) working alongside developers who have to "implement" the design. We have been able to turn our thesis into a project focusing solely on the aspects of bringing Fashionality to life, which we have considered particular interesting and relevant.

At this point in time we have just begun the Fashionality project, and it is difficult to foresee how much we will extend the scope of our work beyond these particular interesting and relevant aspects. The work we have initiated with Fashionality is a rare case, since we are carrying out the project ourselves and as a part of our academic studies. Even though we are using Fashionality as a case for our thesis report, the project progresses beyond the scope of this report.

3.3 Interpreting the Core of IA

To understand and communicate what we consider at the core of an information architect's work, we have become accustomed to using the metaphor of a regular architect. Even though the world of regular architecture is probably far more complex than we might assume, as outsiders we have a view on the work on a regular architect which translates very well into how we experience the core of IA.

In this somewhat simplified view of the regular architect work is centered around creating designs of future buildings, making engineers and construction workers able to do their job. In order to be successful, the architect needs a thorough understanding of the context of use, e.g. where the building is supposed to exist, with what purpose it has to be constructed, what problems it is suppose to solve and what problems it can create. The architect also needs to be able to communicate the design ideas through mediating artifacts understandable by the people the architect is communicating with - for instance engineers, financial stakeholders, authorities or even the architect her-/himself and co-designers.

In our view, the core of IA is similar to the core of regular architecture as described above. IA is also about creating designs refined through a thorough understanding of the context of use. Designs, which have to mediate communication with the people who have a stake in what we are doing.

3.4 Scope of Our Work

In relation to our work with Fashionality, we argue that Morville and Rosenfeld's macroscopic model has little explanatory power, though it has repeatedly forced us to take a stance within the field of IA throughout our Master studies. Taking the setting of our work and the above metaphor into consideration, we interpret the core of IA to be closest to the stages of research and design in Morville and Rosenfeld's model.

In the particular case of Fashionality, we interpret our work to have involved a movement from having a rough image of the system we are designing, to having constructed a formal description, which makes us able to communicate the system to outsiders - most essentially the people who are going to develop Fashionality.

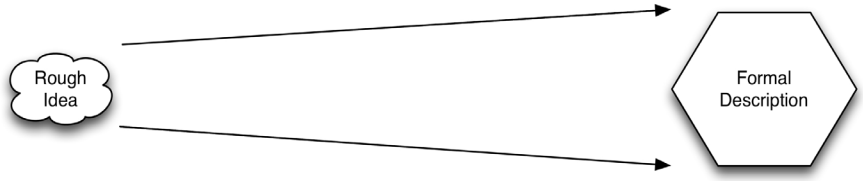


Figure 3. A movement from rough idea to formal description.

This movement, however, is not merely a question of translation; translation from representation as speech and thought, to representation as formal description. Our activities have to facilitate a refinement of the rough idea. The refinement of Fashionality benefits from a thorough understanding of possible users and how Fashionality is able to "fit" in the world of online fashion. To construct this understanding we submerge into online fashion and most importantly try to engage with people who we consider as possible future users. Informed by our understanding of the context of use we make decisions and refine our initial idea on how Fashionality "ought to be".

3.5 Problem Formulation

After clarifying the scope of our work we are able to refine the initially stated general problem of bringing Fashionality to life. Through the eyes of an information architect, working under the conditions we have, the problem is more properly described in the following way;

- How do we move from having a rough idea of Fashionality to having a formal description that makes us able to communicate Fashionality to developers?
- How do we refine the rough idea through activities within research and design?

3.5.1 Subproblems

The formulated problem above consists of a variety of subproblems of importance. We have selected a set of problems which we consider especially important and can help us answer the main problems throughout the thesis report. These problems have not been selected randomly, they have been selected because they have played a large role

in our work, and because they are particular relevant to IA. The problems we have selected transcend our work with Fashionality and are relevant to our work as information architects in general. Some of the problems have been articulated early in the process, and others have emerged later on. Some of the problems are more important than others and will be given attention on the basis of their weight. Following is a short presentation of the problems, which will be fully analysed and discussed later in the report. The presentation below function as an introduction to the selected subproblems. The approach to the specific subproblem will be presented and described within the section of the report dedicated to each subproblem.

A. Interacting with Participants

Inspired by the User-Centered Design tradition, we consider possible future users as a valuable resource either as partners in design or as sources of insight. Interacting with participants is one of the ways in which we are able to gain an insight into practices we are only remotely familiar with ourselves. However, working with participants can be a hard challenge. First of all finding and motivating the appropriate participants is a challenge of its own, and how to benefit from working together with participants is equally challenging. This section will present and analyse our inclusion of participants in our research and design processes. We will analyse both the results of our preliminary interviews and design workshops.

B. Communicating Design

Using and developing different ways of mediating our design ideas have been a major interest right from the beginning of our work with Fashionality. Being able to mediate communication through design products is a challenge that only becomes harder the more complex a system is. Every time we describe Fashionality we reduce complexity and leave out information. This section will answer how we as designers of IA can benefit from various types of mediation under different circumstances of communication. In this relation we will present the different design products we have developed during our thesis work and reflect on how these products have assisted us in our work with bringing Fashionality to life. We will be both discussing, analysing and displaying some of the design products we have constructed to facilitate our work with Fashionality.

C. Digitising Clothes

Understanding a domain and finding a meaningful way to represent it as content is a problem
highly related to IA. Clothes are by all means a fuzzy domain which does not easily formalise, and in order for Fashionality to work, a bridge has to be build between how users experience clothes and how it is organised in the system. The system has to allow for meaningful ways to navigate, search and experience the content on Fashionality. This section will present both our considerations and analysis of how we approach digitising clothes. We also wish to present some of our designs in relation to both uploading a piece of clothes as well as searching for clothes and looks.

D. Motivating Use

Engaging the users to participate and contribute with content to the database is essential for the success of Fashionality. Without clothes added to the Fashionality database, the site has no function, so it is important for us as designers to be aware of how we can design to support the users in

digitising their wardrobe. Motivational factors are a great part of engaging the users as they need to feel that adding content is beneficial to both themselves and other users of the site. This section will discuss the appeal of the community, how we can make users aware of Fashionality and evoke interest leading up them signing up. Then we will discuss the process of signing up to join Fashionality and how we can motivate the users to add personal information and content to their profile and the site in general. Finally, we will discuss how building a useful Application Programming Interface can motivate external use of the data provided by Fashionality.

4. Reading Guide

Up until now we have presented the initial paragraphs of the thesis report. To begin with we told the stories of Nanna and Pernille with the purpose of jumping right into the use of our - not yet fully developed - Internet-based social network site, Fashionality.

After that we introduced our idea further and narrowed down the purpose of the present thesis report in the Introduction. In the section Problem, we continued discussing the setting of our work and how we interpret the core of IA. Based on these two considerations, we became able to describe the scope of our work. We formulated the general problem of our work, and introduced a selection of important Subproblems.

The next section of the report will focus on our Method. We will present the broad methodological framework of User-Centered Design, which we consider ourselves to be working within. Furthermore, we will enrich our framework with the theoretical concept of information ecologies.

Following our method, we will analyse and describe what we have termed The Genre and Ecology of Fashionality. Fashionality is bound to be a social network site inspired by the web 2.0 genre, and the world of online fashion is the ecology in which Fashionality has to fit in.

After the presentation of the genre and ecology of Fashionality, we will initiate the task of investigating and answering the subproblems we have identified.

In Interacting with Participants we will describe and analyse how we have identified and engaged users in the initial stages of our work and furthermore reflect upon the inclusion of users as a part of our design work. In this connection we will present our approaches to and results of both interviews and workshops.

In Communicating Design we will initially discuss the notion of design and how we as designer mediate our communication through a variety of artifacts. Furthermore, we will present and analyse the design products we have developed in the course of our design work.

In Digitising Clothes we will investigate and analyse our approaches in relation to cataloguing and searching content on Fashionality. We have identified and analysed a set of attributes in order to determine essential ones in connection to clothes. Furthermore, we will discuss how our design should implement contemporary search function trends.

In Motivating Use we will be looking into how we can engage and motivate users in a future released version of Fashionality. The analysis will take place on different levels; initially investigating how we can design for momentum and make the Fashionality community seem appealing, moving on to how we can design an interface that invites use and finally how we can design to encourage external use of the data added to the Fashionality database.

When we reach our Conclusion we will use the entire report to look back at the journey of designing Fashionality up and till its current state. This will provide an overview of the journey we have been on in order for us to bring Fashionality to life.

After our Conclusion we will take a reflective stance in the paragraph on Reflection on Research and Design. This will reflect upon the considerations we have had in connection to doing both research and design, and how these two have supplemented each other throughout our work.

Please note that in connection to appendix, we make the distinction between an appendix and a design appendix in order for us to separate designs (sitemap, diagrams, wireframes and prototypes) from the rest of the appendix.

5. Method

As mentioned earlier, the main problem with bringing Fashionality to life is a matter of moving from rough idea to a refined formal description of the system. Furthermore, we narrowed this problems down due to the setting of our work, and what we consider at the core of IA, the stages we deal with are primarily within Morville and Rosenfeld's research and design.

Morville and Rosenfeld's model can be interpreted as a method of doing IA; a description of what activities to perform in order to reach a desired outcome. Even though we hold on to the concepts of research and design, we prefer a more elaborated method than just first doing research and then doing design.

5.1 User-Centered Design

"The world's most powerful functionality will falter and fail if users can't figure out how to make it work". (Garrett, 2002, p. 14)

The methodological realm that we consider ourselves to be working within is User-Centered Design (UCD). The term was initially coined by Donald Norman and became widely used after the publication of his book "User-Centered System Design: New Perspectives on Human-Computer Interaction" (Norman & Draper, 1986).

Today we consider UCD a broad design philosophy. We often experience the term used as an overall way to refer to design processes in which users directly or indirectly influence how the design take shape. User-Centered Design is no longer a term only used in relation to human-computer interaction, but has transcended to address the design of products, technologies, and services in general.

UCD stands in opposition to product or technology-centered approaches, which are accused of not taking into account the end-users. In a sense UCD is a product of bad user experiences and a signifier of a paradigmatic shift within design. It is our belief that involving the user in the design process helps move the focus away from technology to the user's tasks and needs. This again helps prevent the development of products that are too difficult to use and do not serve the needs of the end-users.

UCD is essentially about having end-users as a central part of the development and design efforts. The philosophy behind UCD is that a deeper understanding of psychological, social, and cultural factors in relation to technologies create better designs. This understanding is best available if the user is taken into account during the process of design. The involvement of users is thought to assure that the product will be suitable for its intended purpose in the environment in which it will be used (Abras, Maloney, Krichmar, Preece, 2004).

Within the broad philosophy of UCD, two ways of relating to the user have

been particular dominating. From one perspective users are considered subjects who are able to inform the process of design. Sources of inspiration and evaluation. Customer-centered design is perhaps a suited term to describe this perspective. From the other perspective users are treated as partners in the process of design. The conventional designers act as facilitators, but the users are making the design decisions. This perspective is politically laden and is inspired by Participatory Design which has roots in Scandinavian labour unions and their goal to make systems design more participatory and democratic (Spinuzzi, 2002). Conventionally, the term UCD primarily relates to the first perspective.

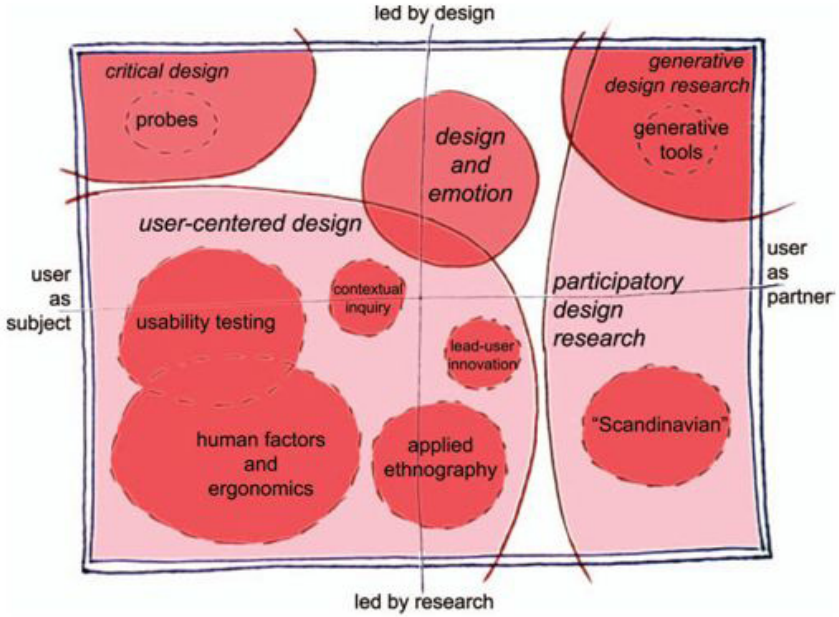


Figure 4. "The current landscape of human-centred design research as practiced in the design and development of products and services" (Sanders & Stappers, 2008, p. 6)

The model above (to the left!) displays some of the different design traditions that all involve the user in the process to a greater or lesser extent. The model makes the distinction between seeing the user as a subject and seeing the user as a partner.

Both of the above perspectives have contributed to the production of an extensive collection of methods for conducting user-centered activities. In developing Fashionality we initially wanted the users as partners in as many of our activities as possible. We found this important, because we do not consider ourselves representative of the core Fashionality user. Our development process would therefore benefit from the participation of potential end-users with all their domain- and context-specific knowledge.

5.2 Information Ecologies

With context-specific knowledge as our point of departure, "Information ecologies" is a theoretical concept which we believe broadens the scope of traditional UCD. We have chosen to attach this concept to our methodological understanding because of the descriptive richness which the concepts entails towards context.

In their book "Information Ecologies" Bonnie Nardi and Vicki O'Day argue that Don Norman's perspective on technologies, is a "technology as tools" perspective (Nardi & O'Day p. 28). They explain that this perspective is the most commonsense to have on technologies and that much valuable work has been done from this perspective. However, Nardi and O'Day argue that there is more to technologies than to view them as "devices-used-

by-an-individual-to-get-something-done". "He (Norman) focuses on what happens when individual human beings interact with singular material objects - with little or no reference to the social situations or even the surrounding physical context in which these encounters take place."
(ibid p.29)

Like Nardi and O'Day we acknowledge that Don Norman is far from responsible for the technologies as "tools" perspective. We furthermore acknowledge that the field of UCD, guided by the reading of books like Nardi and O'Day's, has broadened its scope from only taking this perspective into account to include social and cultural perspectives too.

An information ecology is defined as "a system of people, practices, values, and technologies in a particular local environment" (ibid p. 49). The use of "ecology" is metaphorical and is picked up from biology, where we are used to talk about biological ecologies or ecosystems. A diverse selection of species - both animal and plant - thrive in a healthy biological ecology. Each have they own niche which they have been habitualised into over time. They are interrelated which each other through complex relationships that change dynamically, when the different species and the ecology change as a whole. In an information ecology the plants and animals are replaced by technologies and people, but the relational complexity and dynamism still prevails.

Nardi and O'Day highlight the importance of locality when describing information ecologies. The examples they use to explain different information ecologies are all very local. For instance a library, a hospital intensive care, and a self-service copy shop. In that sense our use of the concept is perhaps a little outside the original intentions of Nardi and O'Day. The information ecology we are dealing with is far from local in a geographical sense, neither does it have a very clear boundary. It is the fashion ecology - or more specific the online fashion ecology with all the different people and technologies this entails. We do however fell that our use of the concept is within reason, and it seems that Nardi and O'Day in 1998 also acknowledges that locality has to be thought through; "With pervasive communication technology, it is no longer appropriate to speak of a physical geography as providing a definition boundary (though it might). Local is now defined by influence in an ecology - which comes from participation and engagement - and commitment to a set of shared motivations and values" (ibid p. 58)

"Information ecologies" is a theoretical concept and does not explicitly concern itself with method, however the concept has deep methodological implications. Nardi and O'Day explain that the purpose of the concept is to "focus attention on relationships involving tools and people and their practices." and "to foster thought and discussion, to stimulate conversations for actions." (ibid p. 50) The notion of information ecologies aids us in *habitualising* Fashionality into an already existing context of use. We are drawn to consider complex relationships between the already existing people and technologies within the online fashion information ecology, which Fashionality is supposed to become part of. Experiences from setting out animal species in biological ecologies show that this is

not done easily. Unexpected consequences are almost the rule, and it is impossible to take into consideration the complexity and dynamism, which determines the success or failure of such a project. Transffered to Fashionality, being the "species" we are trying to set out, we are left with a humbleness towards our own ability to control the process. We are furthermore motivated to pay attention to our surroundings in order to help Fashionality reach a stage of equilibrium. We are not in the job of wiping out already existing ways of dealing with clothes online, we are merely trying to find a niche from where Fashionality can entangle itself into already existing inhabitants in a meaningful way.

Given the creative and exploratory character we aspire to attribute to our project we consider the information ecological perspective valuable. Overall we are not (yet) constrained by neither finances nor time, and by exploratory we mean that we are not at all sure which shape Fashionality will have when first released. Around every corner we have a chance of running into an already existing "Fashionality" which makes us realise that our work is pointless. But around every corner we also have a chance of running into an unexpected source of inspiration, which makes us realise a new possible relation available to Fashionality. If we were merely redesigning an already existing technology, or optimising a specific process we would perhaps not feel the need to include the information ecological perspective as part of our methodology.

5.3 The Two Perspectives: UCD and Information Ecologies

The figures below illustrate how we interpret the essential difference between the perspective of traditional UCD and the information ecological perspective.

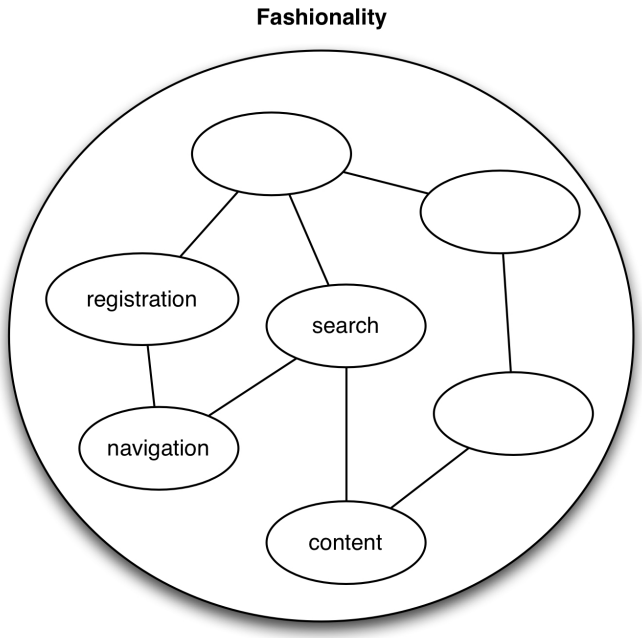


Figure 5. Fashionality as a system with subsystems

The first illustration shows Fashionality as a system with different parts. How well Fashionality functions as a system in this illustration is a matter of how the parts are working together and how well the user is able to get job done through the system. Design work is then a matter of positioning the parts intrinsic to the system in the right way, ensuring that the subsystems of Fashionality functions both on their own and in relation

to each other.

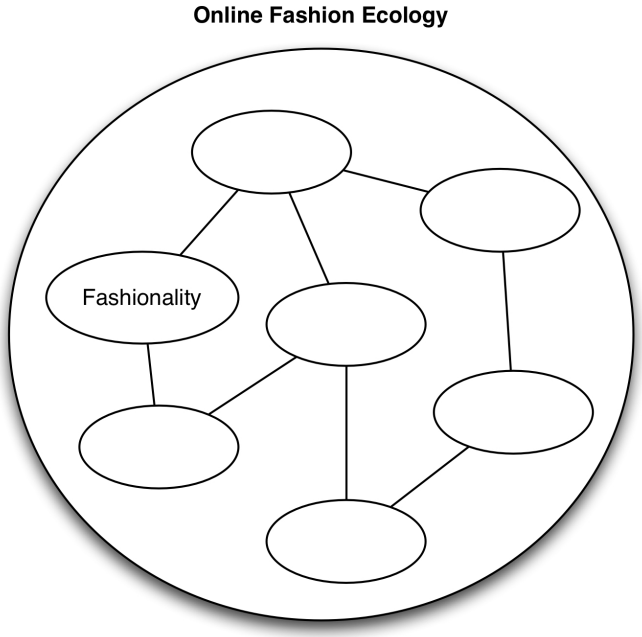


Figure 6. Fashionality as part of the online fashion ecology

The second illustration shows Fashionality within a larger system - the online fashion ecology. How well Fashionality functions in this illustration is a matter of how Fashionality is habitualised within this larger system. In this illustration, Fashionality, however being a subsystem of its own, acts as a humble part in something bigger. Design work is then a matter of finding a suitable niche for the system being set out.

To design well, in our view, is a question of blending the two perspectives with each other. An example of successful design can not automatically be understood as something intrinsic to the design product. It is on the other hand conditioned by the context of use, and it is complicated to argue that a website is designed well if no one is using. It is far from enough to isolate Fashionality and refine it in terms of usability and functionality. We might postulate that certain technologies are adopted because they work better. But why is it thought that a new technology or design works better? What is the perspective used for determining functionality? A conventional answer would be that functionality is determined by the relation between the technical properties and the purpose of the artifact (what is should be used for). This however again presupposes an understanding of purpose from a specific perspective. Nardi and O'Day has the following to say about evaluation of technologies;

"We consider this larger context to be a legitimate focus of attention when we evaluate how technology works in a given setting. Evaluation should not be limited to cognitive issues such as whether menu items are easy to find or recognize, though these fine-grained questions must also be addressed. We would like to move beyond the human-machine dyad, expanding our perspective to include the network of relationships, values and motivations involved in technology use." (ibid p. 30)

Taken this into consideration, designing a "good" information system is not only a matter of positioning the parts of the system in the right way. More importantly good design is a matter of positioning the information system as part of a larger system - the information ecology to which it

belongs.

Our two sources of methodological inspiration each give us an important perspective on Fashionality. Treating Fashionality as a tool we concern ourselves with use, working to ensure that the experience of using Fashionality is both functionally inspiring and unproblematic. Treating Fashionality as a possible inhabitant in the online fashion information ecology, we concern ourselves with the relations and dependencies between people and technologies that already exist, working to ensure that Fashionality will "fit".

5.4 Research and Design Activities

In the literature related to UCD a wide variety of methods exists for conducting different user-centered activities. We have conducted several activities inspired by this literature, and besides that we have developed activities of our own. Below is an overview of the most well-defined activities of research and design we have been performing over the course of the six months in which we have been working on our thesis:

5.4.1 Research

Exploration and evaluation of similar/competitive websites (competitive benchmarking)

Competitive benchmarking has been an ongoing activity, though most apparent during the initial stage of our thesis work. This activity supported the exploration of the technological genre Fashionality is bound to be a part. While being most apparent in the initial stage, competitive benchmarking is part of the research throughout our work.

Exploration of fashion blogs

In order for us to understand contemporary movements within the fashion "blogosphere", we initiated our exploration of fashion blogs parallel to the competitive benchmarking. The two exploratory activities have overlapped in the sense that technologies and trends within both the technological genre and fashion ecology coexist and support each other. Like competitive benchmarking the intensity of exploring fashion blogs has been more apparent in the initial stage of our work.

Interviews with possible future users

After having conducted initial research to identify interviewees, we carried out interviews with several fashion bloggers and people using online fashion services like Lookbook.nu or styleGALLERY. The interviews span over a period of three months with a period after the interviews for follow-up emailing and Facebook messaging via our Fashionality group.

Workshop/focus group interview with possible future users

Next to our interview we planned a workshop/focus group interview as a follow-up activity to the interviews. During our interviews we invited the interviewees to participate in a workshop, which was held in the 4th month of our work.

5.4.2 Design

Development of usage narratives

Usage narratives are prose descriptions about Fashionality told through the eyes of the user. We primarily used these narratives to support our explanation of Fashionality during our interviews, and in general to explain what Fashionality is about to those interested. The usage narratives were refined and rewritten at later stages of our work to better support our concept.

Development of sitemap 2.0

Sitemap 2.0 is a design product which we have developed ourselves. The purpose of Sitemap 2.0 is to give an overview of functionality on Fashionality by illustrating what type of content/information is presented where, and what options/links the users have. Sitemap 2.0 was primarily used for internal communication between ourselves, and assisted us in keeping track of design decisions and mapping out functionality. Sitemap 2.0 was used throughout the process as our main design product.

Development of action diagrams

Inspired by the Unified Modeling Language, we have developed Action Diagrams in order to be able to design how processes happen on the basis of decisions within the interface. The starting point of Action Diagrams has been to build a bridge between how we consciously experience and talk about processes, and what operational interaction with the world we need to perform to make these processes succeed. Action diagramming has been most apparent as a design activity after we clarified the most important processes.

Development of wireframes / prototype

Wireframes and prototypes are in essence two similar mediating design products. To wireframe is to build a bridge between the architecture of a website (in our case represented in sitemap 2.0) and its interface.
We have created both analogue wireframes sketched on paper aswell as digital ones. When we connect our wireframes to eachother and incoorporate ways to interact with them we move towards prototyping. In the case of Fashionality a prototype is a design product which supports interaction and movement between wireframes. We consider a (wireframed) prototype our main design product when wanting to communicate in a more formalized way with for instance developers. Since the prototype is informed by the other design products, the activity of prototyping has primarily taken place in the latest stage of our work.

More detailed considerations in relation to method will be discussed when we dig deeper into the previously mentioned subproblems. For instance, considerations in relation to exploration of blogs and websites will be presented and discussed in the section “The Genre and Ecology of Fashionality”, considerations in relation to user studies will be discussed in the section “Engaging Participants”, and considerations in relation to our design activities will be discussed in the section “Communicating Design”.

6. The Genre and Ecology of Fashionality

In this paragraph we will examine the context that the system of Fashionality is bound to be a part of. We understand "context" as presented by Morville and Rosenfeld to be an insight into an environment, a culture and/or technology infrastructure (Morville & Rosenfeld, 2007, p. 234). On one hand, the context of Fashionality consists of a particular genre of Internet technologies, commonly referred to as web 2.0. On the other hand, the context of Fashionality is the ecology of online fashion with all the people and technologies which this entails. The word context is perhaps more conventionally used to describe the latter, however when we refer to the context of Fashionality, both perspectives are in play.

The contextual perspective is important in order to get a deeper understanding of the domain, which Fashionality will become a part of, and to be able to include domain specific factors in our design decisions. Furthermore, we consider the context to be an important source when finding participant for user-centred activities (this is a subject we will return to in the paragraph on Interacting with Participants).

As mentioned, our perception of the context is twofold in the sense that it entails both elements of web 2.0 and fashion, which is why the examination will both present and analyse the genre and ecology with Fashionality as a point of reference. The research of both elements is primarily based on existing literature and our own experiences from reading blogs and exploring the possibilities of the web in relation to social media technologies. We will describe, analyse and discuss elements related to both contexts in order to draw on our findings and conclusions later on in the report.

We will initiate the present section of the report by discussing the definition and use of web 2.0. We find web 2.0 an important and contemporary approach to understanding some of the key elements in use on the Internet. We furthermore find it crucial to present the conception of web 2.0 in order to further argue for the design choices we make later in regards to the subproblems, but at first we must present some of the disputes and arguments related to the term it self. In this connection we draw upon relevant quotes from key figures and scholars within the field of information technology and user experience design, as well as our own experiences as both users of Internet services and students of IA.

Following web 2.0, we investigate the field of online fashion. By exploring the Internet for websites dealing with fashion, we have identified four major groups: fashion blogs, style galleries, online fashion shopping, and websites of fashion magazines. In this paragraph we will focus mostly on fashion blogs and stylegalleries as they are somewhat similar to Fashionality in regards to concept. When analysing the fashion ecology we rely on contemporary research and discussions related to this domain. Furthermore, we have been following 38 Danish fashion blogs (see Appendix C for a complete list) since the beginning of 2010, and explored

an infinite number of links in order to investigate the online fashion ecology. In order to get a varied representation, the selected blogs were diverse in terms of content, readership, and style. We discovered the blogs by following links from a few fashion blogs and then broadening the selection from this to include more.

The purpose for us to engage in the context - and also to present it in this thesis report - is to shed light on the world of people and technologies that Fashionality is supposed to become part of. After this we will be more equipped to discuss and analyse the previously mentioned subproblems.

6.1 The Web 2.0 Genre

Since the World Wide Web started to broaden its reach from the beginning of the 1990s, its capacities and possibilities has gone beyond the common man's imagination. Since then the web has grown and terms like social interaction, file-sharing, wikis and blogging, have become everybody's favourite web buzzwords. Today, it is almost possible to associate any part of society with the web, and various thinkers, web investors, and scholars worldwide spend many resources trying to foresee the next big trend where the Internet and the rest of society are going to collide.

"A powerful global conversation has begun. Through the Internet, people are discovering and inventing new ways to share relevant knowledge with blinding speed. As a direct result, markets are getting smarter - and getting smarter faster than most companies" (Locke, et. al, 1999).

Even though, the above-mentioned quote is a notion from the past, it has grown into an interesting point of view in relation to web 2.0. In the acclaimed book "Here Comes Everybody - The Power of Organizing without Organizations", Clay Shirky exemplifies via various cases how social collaboration software like forums, blogging, and file-sharing have redefined how people interact, communicate, and indeed organise activities on different scales. A lot of the organisational challenges are being supported or taken over by Internet-based social software. The immediate interaction results in an immediate outcome, and corresponds well with the "powerful conversation", as described by Chris Locke over ten years ago (Locke, et. al, 1999). One of the significant forces of the "autonomous" organisation is the fact that it does not have the same restrictions as traditional organisations, hence providing the production of content with less concern for time and cost. Shirky investigates various cases of social tools that have reshaped the way people contribute, organise, and perceive value, and he concludes that creating a social tool "relies on a successful fusion of a plausible promise, an effective tool, and an acceptable bargain with the users" (Shirky 2008, p. 260). This notion is quite inspiring in our research of existing social media tools and in our journey towards habitualising Fashionality.

6.1.1 Definition

"Web 2.0 is the understanding that the network is the platform and on the network as a platform the rules for business are different. And the cardinal rule is this one: users add value. And figuring out how to build databases that get better the more people use them is actually the secret source of every web 2.0 company" (O'Reilly, 2007)

In 2004, Dale Dougherty, John Battelle and Tim O'Reilly (all as a part of O'Reilly Media) were among the first to coin this new wave of web usage. Essentially, O'Reilly's focus is on how web 2.0 is about the value added by the users. He believes that the key to a successful and contemporary tool for the web is figuring out how this value added by the users can enhance the experience of the tool in general. A definition that establishes a good foundation for working with web 2.0 in relation to information architecture.

Next to O'Reilly's rather precise definition, web 2.0 is also understood as merely an umbrella terminology covering a large variety of Internet services and practices that allows multiple users to interact with each other:

"Web 2.0 isn't a 'thing', but a collection of approaches, which are all converging on the development world at a rapid pace. These approaches, including APIs, RSS, Folksonomies, and Social Networking, suddenly give application developers a new way to approach hard problems with surprisingly effective results." (Spool, 2007)

In the literature it is widely debated whether web 2.0 indeed is a completely "new" phenomenon or just a way to describe the natural evolution of the web. Spool (2007) lean towards O'Reilly's definition as the approaches he mentions are applications or functions that enable users to add value to a facilitating platform.

While Grossman argue that "the new web" is something completely different from the old and calls it a "revolution" rather than a "new version of some old software" (Grossman, 2006), one of the founders of the protocol behind the World Wide Web, Tim Berners-Lee, has referred to web 2.0 as "a piece of jargon" and it being nothing different from what the web initially set out to be:

"So Web 2.0, for some people, it means moving some of the thinking client side so making it more immediate, but the idea of the Web as interaction between people is really what the Web is. That was what it was designed to be as a collaborative space where people can interact." (Laningham, 2006)

The term web 2.0 is also disputed in scholarly circles, where "the new web" and social software, are becoming established fields within the academic domain. The focus, in this connection, is on what influences the way we learn, collaborate, and share with these new web-based techniques and practices taken into consideration. A brief look at what the Information Architecture study programme at Aalborg University encompasses (http://bit.ly/infoark) is a fine example of the academic institutions adjusting to the contemporary movements in the technological sphere.

Whether it is a completely new phenomenon or "a new version of old software", we find the term "web 2.0" useful for gathering various processes and concepts that are present on the web today. We lean towards O'Reilly's definition of web 2.0 as a concept of building websites/platforms that get better the more users' use them (the more functional data you have, the

more functional a website you get). In our opinion Web 2.0 is therefore useful as a term to cover a range of technologies that inspire the design of applications that get better when users contribute.

6.1.2 Reach and Use

In Denmark, nearly 1.7 millions people used social networking as a part of their routinely Internet usage in 2009 (Danmarks Statistik, 2009). This tells us that the Danish population has turned their online presence on and embraced the social possibilities of the online world.

The acknowledgement of everybody's online presence experienced a somewhat mainstream breakthrough already in 2006 when Time Magazine celebrated the announcement of Person of the Year by proclaiming "You" the title (Grossman, 2006). Breaking decades of annual personality celebrations, 2006 was dedicated to everyone in cyberspace creating and sharing content. Statistics telling us that visiting social sites is now the 4th most popular internet activity - ahead of personal email (Nielsen, 2009) and that two-thirds of the global internet population visit social networks (ibid, 2009) underlines the fact that the reach of the social web has indeed settled within the general population worldwide.

The statistics also show that having an online presence has become vital to the younger generations, as almost nine out of ten Danish teenagers in the age of 16-19 used an online social software service to share or create content in 2009 (Danmarks Statistik, 2009). Many argue that this behavioral tendency is being commercialised and exploited to a high extent by both multinational companies and small start-ups that design with the intention to profit from the phenomenon. Søren Mørk Petersen addresses this issue in his paper "Loser generated content" (Petersen, 2008). In this he argues that "user participation" can turn into "user exploitation", as the users voluntarily generate content that the companies can profit from with no cost. Petersen believes that this turns the users of the product into "losers", as their work has no financial reward.

We are quite inspired by the ideology which drives people like Tim O'Reilly, and would hate to see the Internet completely submissive to the traditional structures of society. Rather, we would like to contribute to an open platform, where information is able to travel uncontrolled of both governments and Internet service providers. We do not consider the Internet to be a regular technology that automatically has to align itself with the rules and regulations of the rest of society. Instead the Internet is an opportunity for radical change in our society as a whole. Right now a battle is going on about which direction the Internet will take.

6.1.3 Web 2.0 and Fashionality

The collaborative aspect of web 2.0 websites enables users to contribute to the platform of the Internet. Web 2.0 is an indication of movements away from the web as a source of information, towards a space of social interaction. This undefined and infinite space of possibilities is what has inspired and fascinated us in the work with Fashionality.

We acknowledge the fact that there can be different motifs for wanting to support user-generated content. Regardless of speculations about capitalising on the users' data, we do not want to build Fashionality like this. We intend to build a system with the purpose of improving and supporting ways of dealing with clothes online, and do not consider

exploiting data generated by the user as a possibility.

Web 2.0 has reduced the "entry barrier" that exist in any form of communication by democratising the use of communication tools online. This means that the publication of communication happens in an increasing high speed and to an increasing amount of people. Roughly speaking, there is no control over what is being said and done, commented on and generally published to the masses.

Above we put emphasis on the growing connectivity between people on the Internet, but how and why is it that people connect? The following paragraph will investigate why social objects is an important aspect of web 2.0 and a very relevant one in connection to Fashionality.

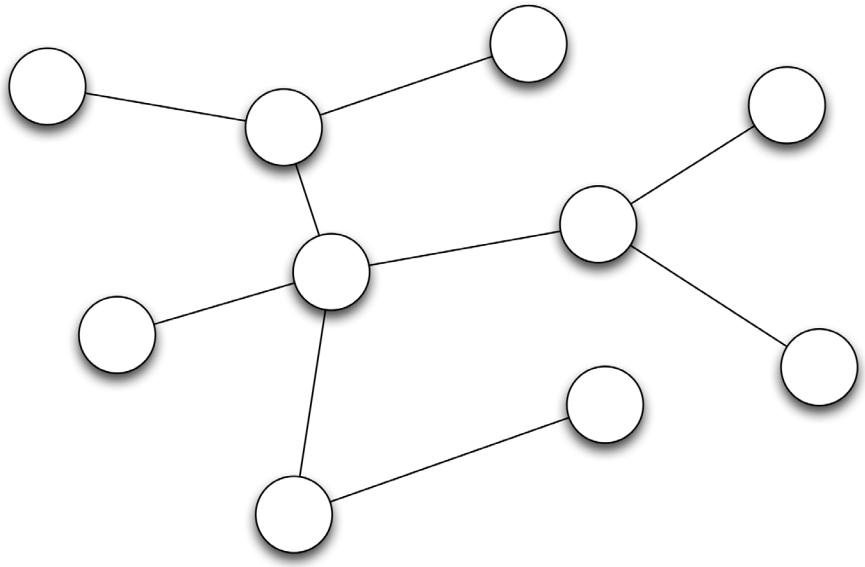


Figure 7. The traditional model of a network of nodes

6.2 Social Objects

As explained above, a common aspect within the sphere of web 2.0 is the increased connectivity that is happening. Connected people interact in different new ways.

"A social network is a social structure made up of individuals (or organizations) called 'nodes,' which are tied (connected) by one or more specific types of interdependency, such as friendship, kinship, common interest, financial exchange, dislike, sexual relationships, or relationships of beliefs, knowledge or prestige." ("Social Network", 2010)

It is common to use a model like the above to illustrate connectivity between nodes in a network - in this case people. However, an important element is missing.

The model illustrated above has received critique from the works of thinkers who encourage us to take notice of the objects that these people connect around. Jyri Engeström, system designer at Google and son of Activity Theorist Yrjö Engeström, explains that the model above is missing what he, with a term borrowed from sociologist Karin Knorr Cetina, calls social objects (Engeström, 2005). People do not socialise "out of the blue", but socialise around something that ties the socialisation together. This tie

is the social object. Social networks form around social objects, whether this is in real life or in an online world.

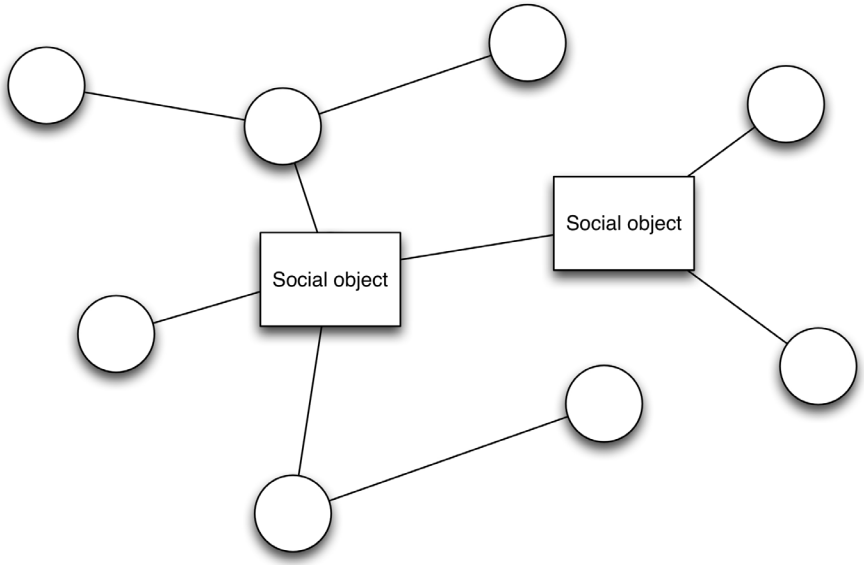


Figure 8. The network model with a social object

Jyri Engeström shows how popular existing online services often are able to connect people around a specific social object, and even warns that without a specific social object social systems run a high risk of failing. Jyri Engeström especially points out that a pattern seems to exist between how clearly a website is able to communicate its social object and how easy people understand what the website is about.

Fred Stutzman explains furthermore the distinction between ego-centric and object-centric in manner that is useful when relating social objects to the work on Fashionality:

"To generalize, let's consider two types of social networks: ego-centric and object-centric. An ego-centric social network places the individual as the core of the network experience [...] while the object-centric network places a non-ego element at the center of the network [...] The characteristics of ego- and object-centric networks are similar, and a human can certainly be considered a social object, but I delineate based on the significant experiential difference" (Stutzman, 2007).

Facebook and LinkedIn are both good examples of ego-centric social networks, where the core is the user's profile and the value is in the surrounding network. The value to a object-centric social network, on the other hand, lies in the object at the core of the website. For instance, Flickr as a social network has the element of pictures as its core object, and the networks surrounding adds value, but is not essential to the core object. Similar services like YouTube, Vimeo, and Picasa all differs from social network sites like Facebook by the fact that the main activity for users is to contribute with video or photo content - activities that are are mainly object-centric. Generally speaking, they all resemble the other social networks – the users have a network of friends, a homepage and a sign-up process, but the focus is on sharing these particular types of content - the object is in focus. The focus on the main activity of these content communities is inspirational to us, and we see it as a tendency that communities gather around particular activities and grow around that main activity. In a similar way, the social object of Fashionality is clothes. Clothes that people care about.

Having a piece of clothes in ones wardrobe makes it an object in the world. When adding that piece of clothes to the Fashionality website, it becomes

social object and can be used to facilitate communication among users of the Fashionality network. This process of socialising a traditional analogue medium such as clothes through the means of an online social network can bring many new ways of talking about interacting with clothes. An enrichment of the object takes place when external sources are allowed to interact with it through the mediation of the social network.

Despite the distinction between object and egos, networks with social affordances share common features. What all these social networks (both object- and ego-centric) share are the social relations and how the interactions merge into data - social relationships become part of the medium and its computational capabilities (Wenger, White & Smith, 2009, p. 179). Letting users interact with each other's photos, comments, related friends, etc. the data behind the network gets better. Social networks can facilitate for instance shared tagging and shared evaluation via the social interactions with data, and via the data generated from this interaction adjust and improve the behaviour of the site (Wenger, White & Smith, 2009, p. 179).

JP Rangaswami, an influential technologist who wrote a special chapter to the ten-year anniversary edition of the Cluetrain Manifesto (Locke, et. al, 1999) that we cite in the very beginning of the web 2.0 paragraph, explains that the value of a social object grows via the conversation that takes place within:

"You can have a conversation without a social object. You cannot have a social object without a conversation. It is the conversation that makes the object 'social'. Conversations grow around social objects, much like pearls grow around microscopic dust. Social objects are about growth, they are 'alive'." (Rangaswami, 2008)

We acknowledge the fact that the notion of an object can take multiple forms. For instance, we have the physical objects (a piece of clothes) and we have the objects that relates to motivation and purpose (e.g. "the object of our thesis report"). The latter expresses an active intention, whereas the physical object needs purposeful engagement (conversation) to become active. Social objects in social networks demand this kind of attention and action (e.g. "to post", "to upload", "to comment", "to rate"). This object-orientedness is inspirational in the development of Fashionality, as we are able to talk about actions in relation to the object of "clothes" (or more specific "a piece of clothes"). We have actually tried to address Jyri Engeström (Tolborg, 2010) in an attempt to get his view upon the distinction between these two different notions of "object", but we are yet to be answered.

6.2.1 Social Objects and Fashionality

Describing and analysing both how we experience the context of web 2.0 and social objects raise some interesting discussions in relation our work with Fashionality. When talking about an object, we refer to both to Jyri Engeström and Karin Knorr Cetina's work on social objects, as well as Fred Stutzman's notion on creating object-centric social networks as opposed to ego-centric social networks (Stutzman, 2007). Their work have inspired

us much to pay attention to the social object(s) of Fashionality. What is it that people are supposed to connect around?

As we mention earlier, Fashionality is bound to be a social network site with clothes as the main object. Interacting around clothes has to function as the center of the overall Fashionality experience. To design with an intention of creation of "object-oriented" social network has from the onset of our work with Fashionality been the goal. Many different aspects of this goal has of course undergone many revisions and changes, but a concrete and clear idea of our object has from the beginning been at hand. The object of Fashionality is clothes, and we can take this to a more specific level by stating that the object is to organise clothes, share information about clothes, and to inspire each other in relation to clothes.

We believe that an object-orientedness is essential to a successful community. Having users interact with the object must generate data that can make the core of the application flourish. The success of Fashionality lies in the ability of the community to add clothes and create value for both new and existing users of the system.

After having defined the genre of Fashionality and narrowed down the social object, we will now investigate the part of the online world which already has clothes as its social object.

6.3 The Online Fashion Ecology

When we talk about fashion, we lean towards the definition on Wikipedia, where fashion is defined as "a general term for style and costume prevalent at a given time, [which] in its most common usage refers to costume or clothing style". ("Fashion", 2010) Traditionally, the prevalent style is dictated by the designers of the important fashion houses, who present their collections at fashion shows two times a year – the spring collection in the fall and the fall collection in the spring (Juncker, 2004). These shows have traditionally been exclusively open to the fashion press, retail buyers, and others who have influence in the fashion world - like celebrities and Hollywood stylists (Patner, 2004). Several months would then pass before the fashion journalists and magazine editors would give their interpretations of the shows and the coming season's trends to the general public.

Among other things, the use of the Internet have changed this practice in recent years. As an example of this the fashion bloggers sat on front row at all the major fashion shows for the very first time in 2009 (Corcoran, 2010). The infamous runway shows were no longer only available to the traditional fashion elite. Furthermore, designers have embraced the possibilities of streaming their fashion shows in real time on YouTube, while editors and fashion journalists have tweeted their immediate thoughts about collections on Twitter along with the fashion bloggers (Flaherty, 2009). This way of including the general public so soon in the process has been unseen until now and it is speeding up the pace of fashion. It is a sign of the designers and retailers relying more on the opinion of the end-customers, than for instance the editors of leading fashion magazines

like Vogue, who has been notoriously know as the gatekeepers for fashion.

To accommodate the increasing popularity of social media, Danish magazines like Costume, Eurowoman, and Bazar have all hired known or upcoming fashion bloggers to blog on their websites. We acknowledge that this is also due to the fact that these traditional media types wish to keep up with the latest trends in publishing,

While designers have always been inspired by street fashion (Juncker, 2004) the social media help expose this genre and makes it possible for everybody to follow independently from time and space. The users are saying "This is what we want to wear and how we want to wear it" and they have a really strong voice (Corcoran, 2010). As an example, more designers and retailers have entered small collaborations with fashion bloggers to create new items or even whole collections (ibid).

Popular fashion bloggers play a major role in this trend, but in general the possibility to share and interact through the social media is to a large degree something that has been embraced by fashion interested users. This is e.g. seen by the emergence of different fashion communities, cell phone applications (e.g. www.loveitorlooseitapp.com), and "What are you wearing today" discussions in forums that are not otherwise specifically fashion-related (e.g. http://bit.ly/mcflyforum).

A concrete example of this change in the otherwise traditional fashion industry, is the Danish label Edie's Eyes, which is opening in September 2010. The creative director of the company is the 21-year-old fashion blogger Trine Kjær, who runs the popular blog trineswardrobe.dk. The new label will not be available in any physical stores, just as it will not be produced in the traditional two collections a year. Instead there will only be produced single items, which will reflect the current trends and hits from the catwalks, and only be available from their website. (Duedahl, 2010)

"I don't draw from scratch, but finds details, colour combinations, and e.g. second-hand clothes, which I notice and compose into new items. It is in fact the same tools that I use on my blog, only now it results in concrete items" Trine Kjær explains about the creative process of designing the items (ibid).

The website of Edie's Eyes is intended to be more than a regular web shop. The vision is to create a universe inspired by the magazines, but with blogging from the staff and lots of user-involvement. The latter will be carried out by letting users vote for what items that should be put into production, design competitions, and interaction through commenting on blog posts. To make up for the fact that the clothes cannot be touched or tried on, it will be possible to see the clothes from more angles, see their exact measurements, and perhaps try on the clothes via a virtual model (ibid).

This is a quite radical new approach compared to how fashion collections traditionally is produced. It is a way to integrate the current tendencies

within both technology and fashion by relying more on the collaboration and interaction with the users and thereby involving them in the process. In the following we want to take a closer look at these uses of the social web in a fashion context, putting our emphasis on fashion blogging and the use of style galleries, which is a form of fashion community.

6.3.1 Fashion Blogging

"A blog is a personal diary. A daily pulpit. A collaborative space. A political soapbox. A breaking-news outlet. A collection of links. Your own private thoughts. Memos to the world." (Blogger.com, 2010)

We see blogging as a clear example of the web 2.0 phenomenon because it is "a collaborative space" that affords interaction. This is both from the content presented on the blog (e.g. embedding video and photo content) and the authors and readers of the blog (e.g. via comments on the blog and ping-backs to replies on other blogs).

While there are many different kinds of blogs, fashion blogging is a genre that has bloomed for the last couple of years and has gained a strong foothold. In 2009, Denmark was estimated to have more than 100 fashion blogs (Ebbesen & Haug, 2009, p. 31) and in the spring of 2010 this number is estimated to have risen to above 550 (Bøgh-Andersen, 2010). The massive increase shows the growing interest for the media and expressing ones style virtually.

The notion of "fashion blogs" covers a rather heterogenic group and it therefore makes sense to divide them into sub-categories. This can be done in many ways. Wikipedia suggests that the blogs can be categorised by "writer's expertise": whether the blogger is an outsider or insider in regards to the fashion industry, "ownership": whether the blog is owned by individuals or companies, or "theme": what the focus or angle of the blog is ("Fashion blog", 2010). We have found it beneficial to take point of departure in these categories and focus our intention at the blogs which is run by individuals without any expert knowledge or affiliation with the fashion industry. In regards to the theme of the blogs, we have developed the following three subcategories, which we find accurate for describing the fashion blogs we have encountered:

1. The diary-like: Some of the fashion blogs are very personal and similar to the journal blog that describes everyday life – only these have a focus on clothes and accessories. Their posts consist mostly of pictures and descriptions of the outfit of the day, but also descriptions of new collections from both high fashion and high street[1], what they buy, what they would like to buy, and also show inspirational pictures from the runway, of celebrities, and of other bloggers. Examples of this kind of fashion blog include http://fierceogfattig.blogspot.com/, http://www.acie.dk/, and http://trineswardrobe.dk/

2. The photo blog: This kind of fashion blog is more impersonal with focus on pictures from editorials, the catwalks, and of celebrities. In this

1 "High fashion" is another term for haute couture and designer made fashion. Examples of High Fashion is Versace, Burberry, Christian Dior, Chanel, Louis Vuitton, and Prada ("World Fashion Industry" 2010). "High street" on the other hand is used for the cheaper alternatives, produced for the mass-market. The term was originally used for the main shopping street in primarily British cities, where "typical" stores are found ("High Street" 2010). Scandinavian examples of High Street include Hennes & Mauritz, Vero Moda, Vila, Gina Tricot, and Monki.

type of fashion blog, the blogger does not include personal experiences from daily life, nor pictures of the blogger herself. The bloggers personal style is shown indirectly through her comments of others', instead of examples of own buys and outfits. Examples of this blog type include http://modeogmyter.blogspot.com and http://fashionillusion.blogspot.com/ and http://www.modebloggen.dk

3. The street-style blog: The third kind of fashion blogs focuses on street-style by posting pictures of ordinary, stylish people discovered in the street scene. Like the professional blog, the personal style of the blogger is only shown indirectly. In this case by which people is portrayed at the blog. Examples of this type include http://copenhagenstreetstyle.dk/ and http://www.gademode.dk/

From our exploration of Danish fashion blogs, we judge the "diary-like" sub-genre to be by far the most dominant one in the Danish blogosphere. It is also the one we draw most inspiration from in the development of Fashionality, as these bloggers focus on outfit pictures of themselves, their latest purchases, and cravings, which we imagine to be central elements of the Fashionality community.

Figure 9. A selection of the fashion blogs we have followed

Strength of Fashion Blogs From the Readers' Perspective

While magazines typically are published once a month, new posts on the popular blogs are published every day. To the readers, a strength of the fashion bloggers is therefore that it is a fast and very direct media. It is possible to read about a certain item even before the model wearing it has left the runway. To do this the magazines traditionally have months of preparation time and need to get their opinions approved by editors. The readers can also obtain information about what a specific store has in stock at this very moment, which the magazines have difficulties predicting and thereby conveying.

The kind of fashion bloggers we have focused on are not experts with thorough knowledge of fashion history and background. On the contrary they are mainly ordinary people, who their readers can identify with. The bloggers show their readers how to be stylish on a low budget and without necessarily having the body and looks of a fashion model. They recommend and review different items with a personal angle, which appeals to their readers. This aspect was mentioned by more in our interviews, as an example Anne Sophie said: "[...] on the blogs, they write in a personal way, so you get to know the person ... it is bit more fun to

read" (Appendix A, p. 2). Because there exist a wide variety of fashion blogs, it is possible for the readers to follow a blogger that suits them the best in regards to style and build, and thereby getting inspiration from for instance less mainstream sources.

The fashion bloggers have a reputation of delivering their fashion advice with an honesty and genuineness that the fashion magazines have a hard time competing with. The readers expect them to be independent and thereby being able to write whatever they want. This honesty is a vital element and it is therefore important that the bloggers maintain this transparency and independency, even if they receive gifts and get sponsors. It is our impression that the Danish bloggers are generally very aware of this and follow a code of ethics that demand them to mention if the product they are praising has been given to them as a gift. Some of them have also incorporated disclaimers on their blogs, which the following quote from the Danish blog anywho.dk is an example of:

"The contents of Anywho are non-commercial, meaning that blog posts aren't paid for advertising. The bloggers behind Anywho have full journalistic freedom and will solely write about subjects they find genuinely interesting. Anywho seeks to protect this impartiality" (http://www.anywho.dk/about/)

However, through their enormous readerships the fashion blogs do hold a great potential, which the fashion retailers are beginning to exploit. This is done by for instance inviting the bloggers to special events or sending them products in hope of a positive mention on the blog. Online shopping is also a major factor in this game. If a blogger recommends an item, it is possible for the reader to buy the item from a web shop a few seconds later. Some retailers can even feel when a popular fashion blogger recommends a certain item, as it can go out of stock shortly after (TV Avisen, 2009). In other countries this is much more exploited, but because of their size and reach at the moment, the Danish bloggers do not have the same power and potential earning as the big international bloggers. One of the largest Danish fashion blogs is the before-mentioned anywho.dk with about 70.000 monthly readers (personal correspondence, May 24, 2010). In comparison the 13-year-old Tavi Gevinson from Chicago has about four million readers (Rawi, 2009) and Elin Kling from Sweden has 70.000 readers a week. (Schmidt, 2010).

Strength of Fashion Blogs From the bloggers' perspective

We do not have knowledge about any Danish bloggers that can make a living from blogging about fashion, though this is seen in for instance Sweden (Ebbesen, 2009). As the financial gain is small for the Danish bloggers, it must be other factors that motivates them for updating the blogs. Student of Interactive Digital Medias on Aalborg University, Lisbeth Bomberg Ravn, has written a paper about fashion blogging as her 5th semester project in the Fall of 2009. For the paper she interviewed Trine Kjær and asked her about her motivation for blogging: "[…] it increases my creativity in regards to fashion – as I get extremely inspired by my readers and their feedback on e.g. my outfits. […] It can also be a great help for me to flick through my outfit pictures and see what works" (Ravn, 2009, p. 35). Another Danish blogger explains that she blogs to keep focus. To her the blog functions as a style diary, in quite the same way as Trine Kjær, which she can use to evaluate what outfits work. In that way it can decrease her number of regretful purchases. She likes to have her thoughts about the

season's trends and buys and her inspiration gathered in one place. She furthermore feels she benefits from the possibility to "go back in time" and say "hey, I also fancied it back then – I'll buy it now!" and in that way ensure that her buys are not just a temporary fling (Signe, 2010).

However, we believe that a big part of the motivation is the confirmation from and interaction with the readers. If the blog was purely a tool to keep track of outfits and trends for own use, a folder system on the hard drive or even an unpublished blog could serve the same purpose. Value is added for the blogger, when the readers provide their feedback of the blogger's looks and recommendations. This kind of interaction with the readers can become nearly addictive for the blogger (Sofie, 2010).

Finally, the blog can function as advertising. It can be a display window for the blogger's skills as a model, designer, photographer, stylist, writer, or communicator. Though it is merely a hobby for most, it can potentially lead to more permanent jobs in the fashion industry and it is our impression that most of these bloggers would not mind that at all.

Fashion Blogging and Fashionality

As mentioned in this paragraph, the massive increase of the number of Danish fashion blogs (nearly 450% over the last year), shows the popularity of the genre. It is our impression, that the readers of the popular blogs are inspired to start their own. They also want to show off their latest buys and their stylish outfits, have lots of followers and affirmative comments. As a result many "trivial" blogs appear which is too rarely updated and too mainstream. It takes a lot of effort to build and maintain a popular blog. Among other things it requires an inspiring and personal style, good writing skills, and new posts preferably once a day to satisfy the readers. Furthermore, it is important to call attention to the blog by e.g. commenting on other (popular) blogs and become part of their linking lists. For those who do not have the time or skills for this, Fashionality would be a meaningful option.

As honesty and personality are two important and appealing elements from the blogs, it will be relevant to try and incorporate this on Fashionality. On Fashionality it should be possible for the users to share their style and get feedback and inspiration from others in the same way as on the blogs. Furthermore, the users have the benefit of being a part of a bigger community and are granted exposure to some degree through this.

A central aspect of Fashionality is also the possibility for users to organise their clothes. Like the blogs, Fashionality could be used as "fashion diaries". Such use could be afforded by making it possible for the users to create categories like "school wear", "family get together", or "party outfits" for the organisation of different outfits. This will both have organisational value for the particular user and inspirational value to other users looking for outfits fitting these categories (even though they might not agree on the categories).

6.3.2 Online Fashion Shopping

It is impossible to talk about fashion online without mentioning online

shopping. In Denmark, 68% of the population between 16 and 74 year have purchased goods on the Internet in 2009. This is an increase of nearly 62% since 2004 and it makes the Danes the third most Internet shopping people in the EU. 46% of these online consumers have bought articles within the category of "Clothing, sport and leisure equipment" (Danmarks Statistik, 2010).

Resellers and second-hand shops are among the most popular of online fashion stores: "What's interesting [...] is how brand-sites are missing from the list. Both smartgirl.dk, smartguy.dk and ellos.dk seems to be established as retailers, while the online stores of eg. fashion brands Inwear, Tiger of Sweden and Only doesn't appear on the list at all. Perhaps there are actually sustainable ways to deal with channel conflicts. It could seem so." (Lund, 2010)

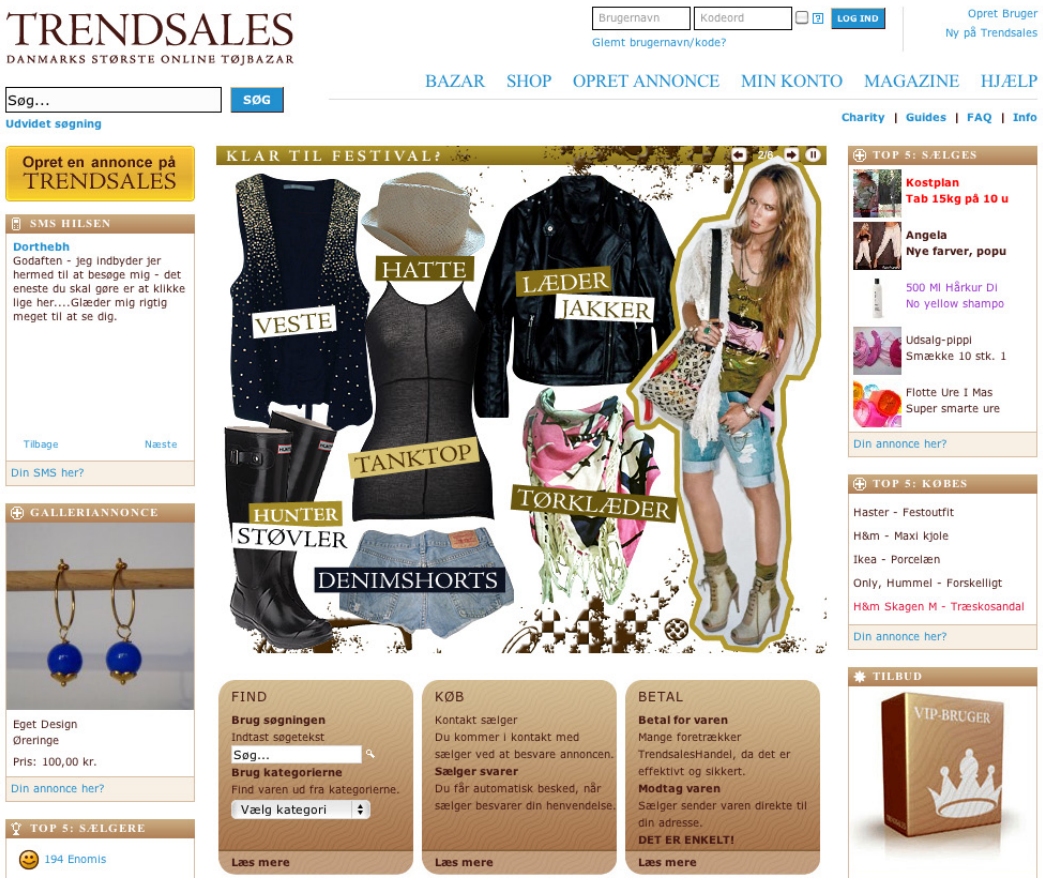


Figure 10. The front page of trendsales.dk

With nearly 300.000 monthly active users, Trendsales.dk is by far the most established online clothing retailer in Denmark:

"Not alone does trendsales.dk draw more than a third the number of users as does number two on the list – in terms of time spend it quadruples number two on the list. How this translates into the number of transactions or the amount of money generated, however, remains unknown." (Lund, 2010)

Trendsales.dk is primarily a second-hand shopping community, where users can sell and buy items from each other similar to international sites like Ebay and Amazon. At Trendsales.dk bids are, however, posted in threaded comments below the item at sale, which is different from sites like Ebay and Amazon, where an auction function is build into the system, allowing the seller to set a minimum prize and so on. The bidding process at Trendsales is more transparent compared to Ebay, as the seller and the potential buyers are able to initiate dialogue about the item at

sale, which is free for everyone to view.

Through our readership of the fashion blogs, it is also apparent that the asos.com, net-a-porter.com and the webshops of H&M, Topshop, Urban Outfitters, American Apparel are popular foreign online stores. Furthermore, it has become popular among the fashion bloggers to create a "sales-blog", where they put some of their pieces up for sale. In this connection the bloggers also encourage their readers to send requests, if the bloggers own anything that the readers would like to buy. (e.g. http://bit.ly/emilysalomon)

Online Fashion Shopping and Fashionality

We are somewhat impressed by the great number of users that Trendsales has, as we do not find their system particularly user-friendly. This is primarily due to the fact that we find their search function rather poor and this is a very essential feature on the site.

The popularity of online shopping and especially the popularity of Trendsales, makes it obvious to think a buy/sell-function into the design of Fashionality. However, we want to incorporate this element in a rather nontraditional way. As a default every piece on Fashionality should be available for purchase for the right price. This makes it possible for the users to receive offers on anything in their wardrobe. This element should, like the other functionalities on Fashionality, be evaluate concurrently, as it might be necessary to apply some restrictions. Some users might find it irritating if they keep getting low bids on their designer goods or simply getting bids on items they are not interested in selling no matter the price. In this case, the users could have the possibility to mark some of their items as "not for sale" or enter a minimum price.

6.3.3 Style Galleries

In the last couple of years different varieties of style galleries have emerged on the Internet. They call themselves fashion networks, fashion communities, online wardrobes, or "international social experiment in style" (lookbook.nu/help). Common for most of them is that it is possible to create a profile, upload outfit pictures and tag these with appropriate colours and/or brands. As a user in the community, it is often possible to follow the users you think have great taste and award them for their stylish outfits by giving them some kind of vote. We have chosen to focus on three style galleries, which in our opinion are the most successful in Denmark. However, a long list can be made of others: Stylemob.com, Fashionriot.com, MinOutfit.se, StreetStyle.com, Chicisimo.com, Polyvore.com, Weardrobe.com, and Modepass.com are a few examples.

Two of the largest style galleries are Chictopia and Lookbook.nu. They were both founded in San Francisco in April 2008, but independently of one another. The people behind were both inspired by the blogger The Sartorialist (http://thesartorialist.blogspot.com/), who run a street-style blog, and threads in forums across the internet discussing "what are you wearing today?" (http://lookbook.nu/help; Georgiou, 2010). The idea behind both sites is to create a space for ordinary people to share and show off their styles and outfits. On both sites it is possible for the user

to create a profile (only on Lookbook you need an invitation), upload outfit pictures and save them on the profile. It is furthermore possible to tag these pictures with keywords describing the different pieces that the outfit consist of in regards to color, type of clothes (e.g. pants), and brand. The users are also able to see outfit pictures from other users and "follow" the users they find most inspiring. On Chictopia this means that the user is able to see these users newest added pictures on their personal profile, while on Lookbook.nu the user gets these notifications by email. On both galleries it is also possible for the users to award the outfits they find most stylish looks with respectively votes and hype. Furthermore, both sites also have a forum and a blog.

There are, however, also small differences of the two galleries. On Chictopia the aim is to answer the question "what looks good on you?" by making it possible to browse by e.g. body shape, skin tone, and brand preferences (http://www.chictopia.com/about). They furthermore have an invite-only shop where users can sell their clothes and have just introduced a swap-function, where VIP users can use "chic tokens" to buy from each other. It is also possible to earn "chic points" by e.g. uploading pictures and leaving comments for other users, which can be used for purchase in their "chic shop".

On Lookbook.nu the focus seem to by more on the "hyping" of specific pictures. This is shown by the way the pictures are arranged by rating (hype plus karma) on the front page. The site's top menu bar also support this perception, as three of the five menu points are "hot", "top", and "leader". Even the pictures under "new" are arranged by rating.

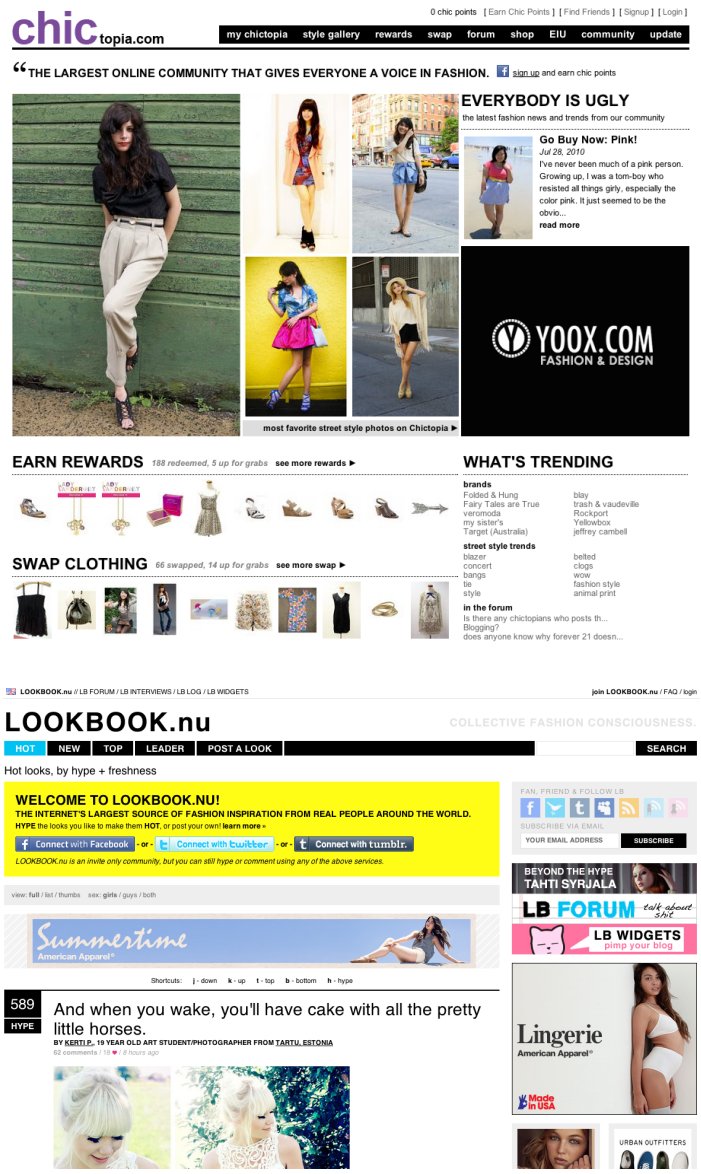


Figure 11 + 12. The front pages of Chictopia & Lookbook.nu

styleGALLERY can be described as a Danish version of the above-mentioned sites. It emerged in 2009 as a collaboration between the extensive Danish MSN network (http://dk.msn.com), owned by Microsoft, and Costume, owned by Benjamin Media (http://benjamin.dk). styleGALLERY is just one of many community services offered by MSN and is a part of the sub community called "MSN Style" that focuses on fashion and beauty tips for young women. As a community, styleGALLERY is very similar to the two American sites. Users are also able to upload their outfit pictures, add a description of the different pieces, and also a note about the style (e.g. classic) and season (e.g. summer). If other users like the outfit, they can show it by clicking "I love it". It is furthermore possible for them to save the picture to their profile for personal reference. Like on Lookbook.nu and Chictopia it is possible to follow other users, which make the user receive updates on her/his profile, when these for instance add new pictures. The user can also choose to get these notifications by mail.

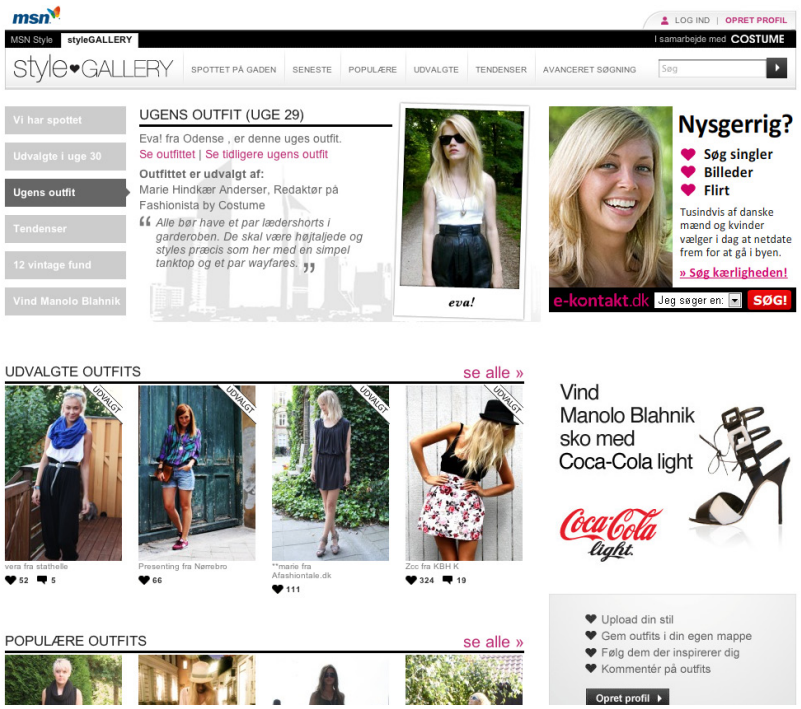


Figure 13. The frontpage of stylegallery.com/da

In comparison, however, styleGALLERY has much more editorial content, as it is managed by a team of editors. Compared to e.g. Lookbook, these editors have a larger degree of control over what type of looks that are in focus. For instance, the editors control a list of weekly looks, a list of tendencies and trends, which is presented at the frontpage. They also activate local "trendspotters" to look for fashionable people in the big cities of Denmark. The users at styleGALLERY do not need to be invited or accepted to become a part of the styleGALLERY community. In May 2010, the Danish podcast Kommunikationscast did an interview with Anders Kragelund, interaction manager at Benjamin Media, on the story of styleGALLERY and the success of this particular type of website and community in the state of the online fashion world. With much approval to our design considerations, Anders Kragelund tells that after only one year as a public community, styleGALLERY has reached about 100,000 unique visitors every month, and has now, partly because of this success, opened up their platform to countries outside of Scandinavia. (Thielke & Westerkam, 2010)

Style Galleries and Fashionality

In many ways the idea of Fashionality resembles the one of style galleries, that we have discovered through our research of online fashion. Having investigated different style galleries we now want to discuss some of their functionalities, which we find inspiration in. We will furthermore discuss in what way Fashionality should be differentiated from galleries like the above described.

Fashionality is similar to the style galleries presented above in many ways - especially in relation to users uploading and sharing looks. However, as these sites focus on looks, the strength of Fashionality is an increased focus on the pieces of clothes which make up a particular look. In this way, the focus is moved to the organisation of clothes and away from merely uploading looks and putting oneself on display.

On no other fashion community (that we are aware of) are pieces of clothes linked to each other. Meaning that no connection exists between a single instance of - let us say a pair of Levis 501 jeans - and another. When outfit pictures are uploaded by a user on for instance lookbook.nu no connection exists between the pieces in this outfit to identical pieces of clothes in other looks.

On Fashionality these links should exist all over and be the "glue" of the system; users should be connected with each other in different ways. The pieces of clothes of a single user should be connected with other instances of the same pieces of clothes owned by other users. Looks should connected with each other through the pieces of clothes they are made up of.

While styleGALLERY seems to have with success with incorporating editorial content and have fashion reporters pick out the most stylish outfits, we do not see a point for Fashionality to adopt this at once. We see more potential in putting as much "content ownership" in the hands of the users of Fashionality as possible, the focus should therefore be on the content they create.

6.4 Connectivity and Feedback

In this section we will describe a range of elements, which we have identified as being present on many web 2.0 websites including the stylegalleries. These elements are used to increase connectivity and feedback between the users of the respective website, and we consider these to be key elements of consideration.

Social peripheral vision is a concept inspired by perceptual peripheral vision and translated to our context. Peripheral vision is that part of the human vision which is outside the center of our direct focus. What exactly the brain detects from the peripheral vision is hard to study, but the main function of peripheral vision is that it recognises well-known structures and movement without having to look straight at these ("Peripheral Vision", 2010). Jyri Engeström refers to social peripheral vision as the capability of staying up-to-date with multiple friends, colleagues and family members at once without interacting directly with them all: "Each of us, with our streams and status updates, are firing off signals like 'pulsars into space.'" (Engeström, 2009)

6.4.1 Friendships and Followers

An essential part of social network sites is the fact that you are able to follow or be friends with other people in the same network. Some differences in connection type are seen when for instance comparing Twitter and Facebook. Lookbook.nu and styleGALLERY work in the same way as Twitter, where it is possible to both "follow" and to be "followed" by other users. This means that when User A decides to follow User B, User B is not obligated to follow User A. This has as a consequence that User A will get all updates from User B, but User B does not get any updates from User A. In other words no mutual exchange exists unless it is organised by both parties. This essential means that one user can have 10 followers, but only follow 1. This model is different from the model used on Chictopia, which work in the same way as Facebook. Here being friends/followers means a mutual exchange of updates: when User A accepts the friendship from User B, the two users are mutually obligated to receive each other's updates. On Lookbook.nu it is possible to see, who the user follow. On styleGALLERY it is possible to see, who follow the user. On Chictopia it is possible to see both, which we find best. For Fashionality, we find the "following model" more appropriate, as the users might not find each other mutually inspiring in regards to style. However, if two users are following each other they become "friends".

6.4.2 Commenting and Rating

The possibility to comment on and for instance rate other users' contributions are two important elements in regards to connectivity and feedback that are incorporated in almost all social networks in one form or another. On Facebook for instance it is possible to comment on friends' updates and actions or comment on them by clicking "I like". Similar is seen on Flickr and YouTube where it is possible to add comments to respectively the photos and videos and add them to ones' favorites. A notable aspects in this relation is that users often need to be connected in on of the above mentioned relationships to be able to comment or rate on each other's activities.

As we mentioned, commenting and rating are also used on the three style galleries: lookbook.nu, Chictopia, and styleGALLERY and was an important motivational element for the bloggers. We therefore find them very important to incorporate on Fashionality as well.

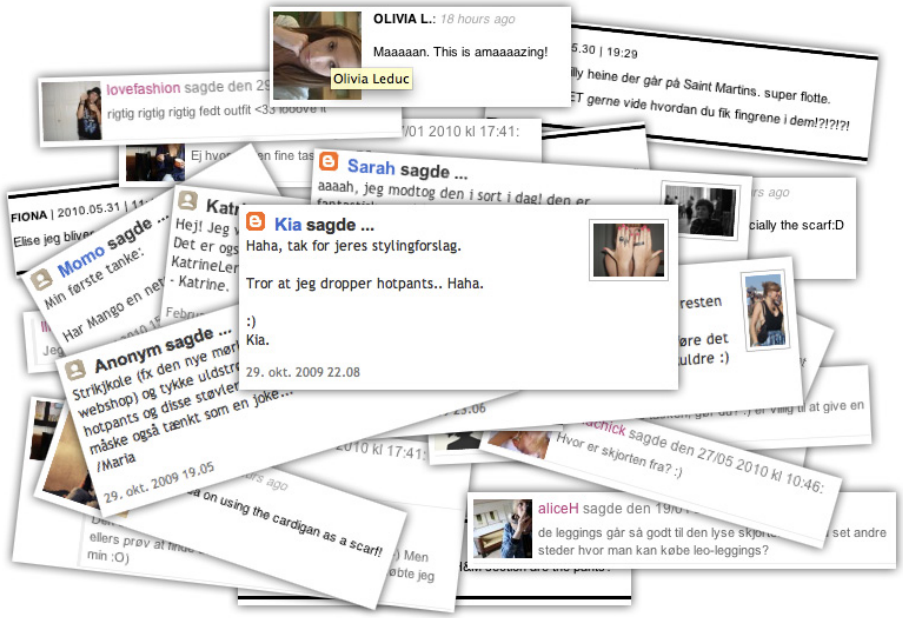


Figure 14. A mash-up of various comments

It is, however, different how the various rating functions are used. As mentioned in relation to the style galleries, the pictures on the front page of lookbook.nu get arranged by this rating, with the most "hyped" looks at the top. The consequence of this flow of hyping looks is that a particular type of looks (the ones matching current trends, the ones with a professional looking picture, etc.) is very dominant on the front page, and looks that do not receive any or less hype are automatically at the bottom of the pile. This way of ordering can furthermore have a reinforcing effect, as the most hyped pictures logically will become the most seen and therefore are most likely to receive even more hype. This is a method we do not wish to copy into Fashionality, as it tends to promote a particular kind of pictures instead of giving all the pictures equal opportunity to get viewed. However, the element of "liking"/"hyping"/"loving" a look is an easy way for users to interact with the pictures and is furthermore an important motivational factor for uploading pictures. We therefore see a similar feature implemented on Fashionality.

6.4.3 Notifications, News Streams and Updates

"The real-time web is a set of technologies and practices which enable users to receive information as soon as it is published by its authors, rather than requiring that they or their software check a source periodically for updates." ("Real-time Web", 2010)

Real-time updating is a key function within the social web and take place in a variety of cases, for instance via aggregating in a feed reader or in a stream of updates via the website's interface. Different varieties of a notification board is often the central element of a lot of social networking sites where it is possible to get an overview of recent activities. This is seen in the form of the news stream on Facebook and the front page of Twitter displaying all contacts' tweets.

A tendency within web technologies is also to focus on real-time updating and keeping track of contact's as they travel to another location, post a quick thought or upload a photo of their latest meal (or in our case, looks). Quick and easy updating about anything is seem very effectively carried out by a service such as Twitter, where the main objective is to type in a text of a maximum of 140 characters and notify the connected network. Facebook has a similar function where users are able to post message (however, these are without a limit in characters).

"Imagine you're [...] sitting on the grass in Central Park when a jumbo jet pursued by two F-16 fighters flies low over downtown Manhattan. How do you learn what's going on? If it's a major event, CNN will pick it up eventually. But what about right now? Increasingly, a real-time search on Twitter is the fastest (albeit not the most authoritative) source of information" (Morville 2010, p. 168)

Real-time awareness, search, notifications and updates are all elements that we notice are growing to become very popular on the web. Having a real-time element as the center of attention has become a big issue and ignited by services like Facebook and Twitter, where the users themselves bring updates to their network. Major search engines like Google and Bing have implemented features in the interface that now allows users to sort results by the most recent posts and links. The web is no longer something we visit from time to time, instead we are always connected and receiving information.

Location-aware micro updates are increasingly become a huge trend. Foursquare and Gowalla are among the most popular types of social software in this connection. By logging into e.g. Foursquare via a mobile device, users share their locations with the network of contacts by "checking in" ("Foursquare", 2010). We acknowledge this micro and real-time updating as a popular trend in social technology use, but we also argue that it is difficulty to predict how this trend will evolve in the future.

The design of Fashionality should reflect this trend of real-time updating and enable users to upload looks (or pieces of clothes that go together and form a look) within few seconds in order to share and add items to their wardrobe on the go. With this real-time argument at hand, it is important to make it easy for users to create a look not just with a picture of the entire look (with this we also accommodate the inconvenience of taking a photo of an entire outfit), but also by selecting items of clothes and compiling that into a complete look.

Furthermore, Facebook's news stream is a design element in which we find inspiration. On Fashionality, the users should be updated with what the users they follow upload, comments on, add, and various other elements. To improve the user experience it should be possible to control the amount and kind of updates the user wants to receive. In essence, this temporal display of updates is essential to keep track what the user and its network have been doing, uploading, commenting on, etc.

The real-time tendency is something very important in regards to Fashionality. Updating on-the-go about something basic as where you are located has inspired us to think this element into Fashionality - could we build a service that enables users to update whenever they change clothes, buy a new item or spot something interesting in their favourite shop?

6.5 Sum-up

In the section above, we have described and analysed the genre and ecology which we consider Fashionality to be a part of. In our context analysis we have captured the essential opinions on web 2.0 and taken this context into consideration as a part of the online fashion world.

By highlighting the general and on-going debate on web 2.0 and how online fashion is considered to be today, we have drawn a map of the landscape Fashionality will navigate within, both in relation to the developmental stages where we design Fashionality and interact with users as a part of our research, and in relation to Fashionality as a released system which must have a strong social object in order to survive as a social network system.

In outline, the analysis of the context enables us to; on one side act well-informed in our research for further relevant websites and communities, and users to include in our design work, and on the other side it enables us to create designs informed by the context of web 2.0 and the technologies that supports the value-adding factor that we have identified as central.

Our analysis has made us able to work differently with our subproblems, than if we had no knowledge of the context. Through the contextual analysis we can move away from working with the subproblems isolated, but instead work with the subproblems enriched by considerations and discussions in regards to a larger whole.

7. Interacting with Participants

As we described in our method, we position ourselves within the tradition of performing user-centered or user-driven design. An important part of our development of Fashionality was therefore to find suitable users to involve in the process and find suitable ways to involve them. In the following section we want to describe, discuss, and evaluate our approach of finding, contacting, and interacting with the users. We especially want to address the problems and obstacles we encountered in terms of finding appropriate user activities and in mobilising the users.

7.1 The selection of participants

7.1.1 Defining Our Users

As our project is the development of a new service, there are no existing Fashionality users that we could have included in the process. We therefore took point of departure in fashion bloggers and users of style galleries since we viewed the activities they perform in those systems to be somewhat similar to the core activities of Fashionality. These activities are e.g. uploading outfit pictures, putting outfits together, commenting on other users' style, receiving comments from others.

We have instinctively used the term "lead users" about the users we would like to involve in our design process. The term was coined by von Hippel in 1986 and is a method used for innovation in product development. Von Hippel describes lead users as displaying two characteristics: "Lead users face needs that will be general in a marketplace - but face them months or years before the bulk of that marketplace encounters them, and Lead users are positioned to benefit significantly by obtaining a solution to those needs." (von Hippel, 1986, p. 796). In other words it is users, whose needs are not fulfilled by the current products or services on the market, why they then invent it on their own or seek alternative ways to fulfil these needs. Lead users are therefore ideal in innovation processes, as they are eager to and motivated for developing this need-fulfilling product or service.

Von Hippel furthermore argues that "regular users" are not able to innovate new products, because they are stuck in the features of the current product and this hinders them in looking beyond for new possibilities. His example is a discussion of amateur cameras in a focus group consisting of consumers who are familiar with this product group. His argument is that if none of these cameras have e.g. instant developing as a feature, it is unlikely that neither the participants nor the researcher will "take this creative step" and think of it (ibid, p. 793). To support this argument he refers to research that show that people have a hard time using familiar objects for unfamiliar purposes and finding the simplest solution to a problem, if they have just been presented one possible solution (ibid, p. 794-795).

Von Hippel's lead users seem ideal for bringing Fashionality to life, as we

want to include users who have contextual awareness and an interest in using Fashionality when released. However, we distance ourselves somewhat from the conviction that "regular users" are without skills in innovation processes. Like von Hippel's lead users, they also have a precious knowledge about the given domain, their activities, needs and goals – even though they might not be fully articulated and consciously aware of them. Furthermore, they represent what Nardi & O'Day define as keystone species whose presence is crucial to the survival of the ecology itself (Nardi & O'Day, 1999, p. 53). Like Sanders and Stappers, we furthermore question, if von Hippel's elite group of users can represent and speak for the majority of the end-users of the product (Sanders & Stappers, 2008, p. 8).

When we talk about "lead users" in this paper, it is therefore not an adoption of von Hippel's definition. It is users that represent the possible future end-user of Fashionality and the ones who "leads" our innovation process. Von Hippel's notion is spiced up with Nardi and O'Day's keystone species to include users because of their relevance to the ecology instead of their technical expertise.

In their paper "Identifying and Selecting Users for User-Centered Design", Kujala and Kauppinen (2004) address the issue of finding this kind of users and discuss different approaches. Among other methods they discuss using personas for the purpose, but conclude that personas only give a description of the typical user and not the representative, which is what they prefer for user-centered design (Kujala & Kauppinen, 2004, p. 298). Instead they suggest a point of departure in defining the most important user groups of the product (Ibid, p. 299). Inspired by this approach and their model for organising the different user groups (Ibid, p. 300), we have made a similar model, based on our analysis of the online fashion ecology. Our model below therefore displays the different groups that we found interesting to include in our development of Fashionality.

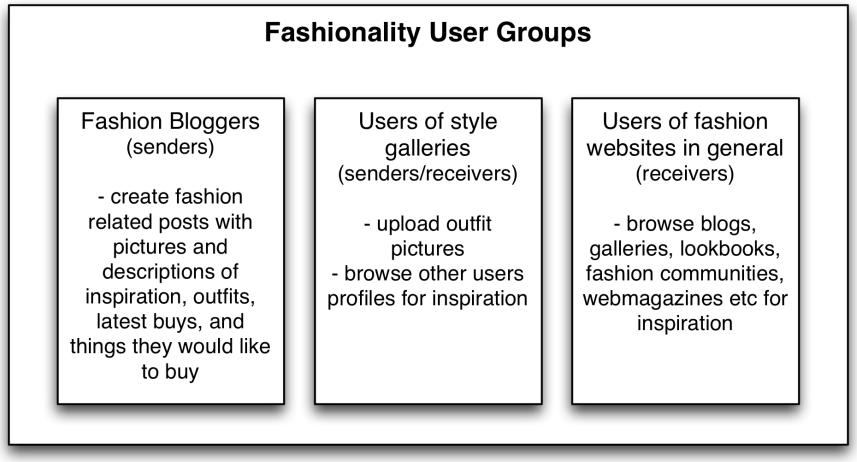


Figure 15. The user groups of Fashionality

The fashion bloggers and the users of style galleries were the two user groups we analysed in the context analysis paragraph. We have furthermore added a third group, which represents the users that find inspiration in the content created by others, but who do not contribute with anything themselves. They are similar to what Etienne Wenger and others (e.g. Nonnecke & Preece, 2000) would refer to as "lurkers". Even though we have not discussed this group earlier in our report, it is an important group to include as we want to support this type of participation in our community as well. According to Nonnecke and Preece the lurkers can count for up to 90% of online groups (2000, p. 1).
We are aware that the division into these three groups is very constructed,

as many users will find themselves as a part of more than one of them, but we furthermore find it important to make this distinction in order for us to distinguish between different roles the users have in using the Fashionality system.

7.1.2 Establishing contact

We wanted our lead users to be situated in our local area (Aalborg). This geographical limitation was merely a question of convenience, as we wanted to both meet with all the users face-to-face as well as being able to facilitate workshops in a location we were familiar with and the lead users would have easy access to in terms of transportation. We do not consider this to have biased our research in any way. While there might not be as high a percentage of people interested in fashion in our local area as in for instance Copenhagen, it was our impression that our users then had a bigger need for being online to share their passion with like-minded. Also, we were impressed with the amount of young people within the local area who actively blog and work with fashion online. The following will illustrate how we have identified the different user groups.

- **Fashion bloggers:** we took point of departure in the link lists of the blogs we followed (see the list in Appendix C). Then the different blogs were examined one by one in order to determine if the blogger was from Aalborg. We supplemented this method by googling "modeblog Aalborg" ("fashion blog Aalborg") and we also used our own social networks on services such as Twitter and Facebook.
- **Users of style galleries:** we searched lookbook.nu and styleGALLERY for users living in the Aalborg area. These two sites were picked at a time, where we had no knowledge of other style galleries, which made the selection very easy. Through our later interviews and as our knowledge of the domain grew, it became apparent that these two sites were among the most used by our target group.
- **Lurkers:** we got in contact with the lurkers via the users we got from the two other methods stated above.

We contacted the users via the style galleries, Facebook, MySpace, their blog, or e-mail according to what could be established. In our mail/message, we explained about our project and why we wanted to meet with them (see Appendix B for an example). We encouraged them to join our group on Facebook (http://bit.ly/ffbgroup) and to invite friends they thought would be both interesting to us and interested in the project. The purpose of creating a Facebook group, and inviting the users to join it, was to have them all gathered at one place. In this way we gained an overview of the users with names and pictures. The users could also see who each other were, which we hoped would create an early sense of community. We will return to discuss our use of Facebook as a tool for communicating with our users in both the following paragraph and in connection with our workshops.

We ended up with a Facebook group consisting of 26 members not including ourselves (June, 2010). Through our Facebook group, our emails, and our users we ended up having contacted 40 people in total. Some of the users responded instantly and was very interested in participating,

while others had to be contacted multiple times. A few of them declared that they did not have the time, or simply was not interested in meeting with us. Others did not respond at all. Others again could not meet in person, but were interested in helping through email. The group of people we had contacted, consisted of 11 bloggers, 19 style gallery users, and 10 lurkers. 35 girls and 5 boys. They were all between 15-28 years of age, with an average age of 18 years.

Contacting Issues

In some cases we found it very difficult to establish contact with the users. On the blogs and in the style galleries, it is common to have user names or pseudonyms, which made it difficult to obtain contact information. On sites like styleGALLERY and lookbook.nu it is furthermore impossible to write private messages and it is therefore only possible to contact the users via commenting on outfit-pictures, which we found problematic in more ways. For one we saw it as an inappropriate use of the commenting field, which might offend the users. Furthermore, the length of the message made it look like spam, which we feared would make the users delete or ignore it and finally, it was problematic to ask the users to participate in the development of a fashion community on what was essentially a competing site. The users did, however, occasionally link to the profiles, they have other places – like own blog or MySpace profile – where they might use their own name or where it is possible to send a personal message. In the end it was quite the work of a private detective.

For the sake of convenience, we used Facebook's private message function for contacting the users, when possible. This had more benefits as the users for instance easily could see who we as senders were, and had the possibility to "check us out". In this way they could get reassurance for us not being creepy stalkers and, in our opinion, this would increase the chance for them wanting to meet with us. Furthermore, it seemed natural to link to our Facebook group in the context of the Facebook message.

It did not occur to us, however, that some would feel that this approach violated their sense of private space. We had an experience with one blogger, who did not want to participate in our project, because we had contacted her via Facebook instead of her blog. It was a surprising discovery to us, as the concerned blogger had both a Twitter-profile documenting her every move and her blog documenting every buy and outfit. However, to her we had crossed a fine line between what she perceived as her online fashion personality and her more private sphere.

It is clear that people draw these lines of privacy differently and (especially) as researchers it is very important to be aware of this fact and respect them. However, as the Internet afford new ways to interact, and as people use and perceive these technologies differently, it becomes difficulty to foresee the appropriate approaches. It is important to be aware of one's own role in the context and consider what implications there might be. Researchers like Helen Nissenbaum (e.g Nissenbaum, 2010) and danah boyd (http://www.danah.org/), all engage in discussions and research about these privacy issues. As it is also important as designers to consider these issues in regards to the development of Fashionality, we will return to privacy issues in the paragraph on considerations and design in regards to motivating use.

To evaluate our approach, we ended all our interviews by asking how the

users had felt about being contacted in this way. They all responded that it had been somewhat weird, because it was an unusual situation. Some them had been flattered and surprised that we saw them as experts and found them interesting, as Christina e.g. replied: "[...] I thought it was very funny - I felt a little cool, haha. [...] I also felt that it was a bit strange that I should act knowledgeable about anything"[2] (Appendix A, p. 41). They all responded that they had showed up, because they had thought it sounded interesting, though some had felt a bit uneasy about it, because they feared it might be awkward. Many of them were also curious to know how we had located them, like Dagmar who responded: "I just thought it was fun. But I didn't understand how you had found me? How you had found the blog?" (ibid, p. 81).

None of them mentioned the tools we had used for contacting them, so this had obviously not been an issue for them. However, this data only show how the users, who we actually met with, felt about our approach. It would have been interesting to find out how the users, who were not interested in meeting with us, had perceived it.

Having described how we initiated contact with our lead users and (what type of initial activities we carried out to welcome them), we now wish to look further into the activities we have engaged in with our lead users.

7.2 Activities with the Users

As earlier explained, we wanted the users as partners in as many of our design activities as possible, as we believed that the end-product of Fashionality would benefit from the participation of potential end-users with all their domain and context specific knowledge. However, we had difficulties determine, how the users should be involved. Ideally the users should help generating ideas, wireframing design, and evaluating/testing this design in various stages of completeness. For this we were in need of some tools that could facilitate the users in these activities.

At the Department of Communication and Psychology, which we are affiliated with, there is tradition of using different kinds of tool-kits to facilitate the users in the design process. This method is inspired by the ideas of user-driven innovation, where it, according to von Hippel, is important to have an "innovation space" (Kanstrup & Christiansen, 2006, p. 323). Kanstrup and Christiansen's innovation space is a rack called LUI, which is an acronym for "Laboratory for User-Innovation". The rack is equipped with different materials for building mock-ups and other design products. The materials are a great mix of crayons, dummies, games, figures, modelling wax etc, as seen on the picture below. A similar creation is the Mobile Design Lab, which should help "designers move towards insight in the practice of users while bracketing their long-term goal: the solution [and] users move towards innovation supported by tools, techniques and situation, while bracketing their long-term goal: an improved practice" (Kanstrup & Christiansen, 2007, p. 2)

2 All quotes from our interviews in this report are our own translations.

Having tried these methods ourselves by participating in workshops, we do, however, not find them that useful. It is our impression that most people have difficulties forming information systems with tools like pipe cleaners, rocks and clay, as it requires a certain level of imagination and abstraction. To support this observation, we also draw upon von Hippel's compilation of research that showed that people had a hard time using familiar objects for unfamiliar purposes (von Hippel, 1986, p. 794). Furthermore, we think that the participants tend to focus too much on the materials given and how to incorporate them, than on the actual design tasks. If one of the materials is for instance a cell phone dummy, the participants often focus on including this in the design. In this way the provided materials can risk leading the ideas. It can, however, also be the other way around, where the participants have concrete design ideas, but feel limited by the available materials to express them. Finally, we find it difficult to transfer these creative displays into concrete elements on a web-based platform.

Figure 16. LUI - a rack with materials for design (Kanstrup & Christiansen, 2006)

It is possible that the method is useful, when the goal is to come up with innovative solutions that are not tied to a specific media or form. In such a case pipe cleaners and similar materials, might help the participants to a greater level of abstraction and to think beyond system and technology. In our case, however, where the goal was to design a Internet-based community, we found the tools too abstract.

Though we were not interested in using this method for our interaction with the users, we appreciated the use of mediating artifacts, which is a part of the method. In our opinion these can help create a more playful, creative and informal environment, which we saw as very beneficial to our development process. This is also emphasised by Donald Norman in his book "Emotional Design: Why we love (or hate) everyday things" from 2004, where he draw upon contemporary research, which show that "positive emotions are critical to learning, curiosity, and creative thought" (p. 19). Being happy and relaxed should broaden the processes of thought and facilitate imaginative thinking, while negative feelings like fear, anxiety, and insecurity have the opposite effect (Norman, 2004, p. 18-19). This in combination gave us the idea of centering both the interviews and workshops around "fun" activities with mediating artifacts.

Furthermore, to co-design with our users, we initially wanted to develop a new design language, which could make this co-operation with the users possible. In the section Communicating Design we discuss the different methods used for communicating and co-operating about design, but in our opinion none of the tools we knew, could serve this purpose, as they are not instantly understandable for the users, who were not familiar with them.

Our initial plan for working with the users in the process was to firstly meet with them in face-to-face interviews. The main purpose of these interviews was to establish the contact, get to know the person, create a relation, and prepare them for the future workshops. The purpose of the future workshops was then both to refine the Fashionality design together, but also to refine the design tool. We involved the users in two concrete activities in our innovation process. The first was face-to-face interviews carried out with a single person or as a pair, while the other was a workshop with more participants at the same time. In the following paragraph we will take a closer look at the two activities we performed alongside our lead users.

7.2.1 First activity: the interviews

The initial interviews were as mentioned our first pursuit at involving the users in our work. We wanted to use these interviews for:

- Developing user profiles by getting to know our users, their goals and wishes in regards to practising fashion online.
- Getting feedback on the Fashionality idea and some of the functionalities that we had discussed among our-selves. Essentially we wanted reassurance from potential users that Fashionality was indeed a good idea and that no other site offered the same.
- Preparing and urging the users for future collaboration and participation in workshops.
- Initiating a hype sensation about Fashionality among the users in order to create some attention among themselves and their friends and networks
- Evaluating our way of contacting the users.

For the interviews we could have made a thorough interview guide with pre-specified questions. However, as earlier mentioned, we believed that we would benefit from a more creative, exploratory, and informal approach. The interviews were therefore structured by different activities we wanted to perform with the users. This was both in order to support the elements of dialogue, make it is possible to explore the unexpected, and to create a different and more creative environment than the traditional interview.

We performed 11 interviews with 15 participants. They were all held at a local cafe in the centre of Aalborg, where the users were interviewed one or two at the time. The reason for conducting some of the interviews in pairs, was that some of them might feel more secure to both show up and to engage in the conversation, if they could bring a friend. All of the interviews were of 1-1,5 hour duration and were sound recorded for transcription (these can be seen in Appendix A).

We started out the interviews by elaborating a bit about Fashionality, our project, and the users' role in the process. We were, however, conscious about not telling too much about Fashionality to start off with, as this might bias the users. We then moved on to three planned activities, which the interview were centred on. After the activities, the idea of Fashionality was explained in more detail using user narratives and rough sketches.

Following the participants were asked for their immediate thoughts of the idea. Finally, they were encouraged to participate in future workshops and the interviews were ended, by asking how they had felt about being contacted in this way.

In the following we will describe the three interview activities in the same order, as they were performed at the interviews. We will furthermore argue for their purpose and discuss the findings of each activity. It is, however, not our intention to show how the findings have led to concrete design ideas, as they merely contributed to the idea generation and refinement of the Fashionality idea.

Building a Profile

Together with the user, we wanted to create a user profile on a sheet of paper that should develop concurrent with the interview. In the literature user profiles are described as accurate summaries of data from user research and differ from for instance personas in that they do not contain any fictional elements (Pruitt & Adlin, 2006, p. 27). Apart from that, they serve the same purpose as personas, namely "put[ting] a face on the user – a memorable, engaging, and actionable image that serves as design target" (Pruitt & Adlin, 2006, p. 11). This should help us in keeping focus on the users' needs and goals, when they were not around.

We had prepared the sheet on beforehand with printed pictures of the concerned user from her/his different profiles (e.g. from Facebook, Lookbook.nu, or/and styleGALLERY). During the interview facts and significant statements were added to the sheet on post-its.

Figure 17. Examples of our user profiles

It was a fun element that helped breaking the ice and positioning us as creative developers, which were two important elements in the interview situation. It furthermore provided us with a good foundation for developing the user profiles. It was, however, only the foundation, as the users were present and helped fill out the information. This made it difficult for us to note down that the person "have difficulties in fully understand new technologies" to the profile, when the user had just told us that she had given up trying to figure out how to use Twitter and did not know how to use the tags on Lookbook.nu for browsing, even though she was a frequent user of this site. (Appendix A, p. 88-89).

Through this part of the interview, we felt confirmed in our belief that the context of the interview influenced the meaning being created. This became obvious in the way the users portrayed themselves as fashion

addicts, with almost no other interest than shopping (e.g. ibid, p. 43-44; 91-92). It might be true to how they perceived themselves, but in other contexts this portraying could have seemed a bit odd, superficial, and materialistic.

Figure 18. The wall in our office with all the profiles

Practising Fashion Online

For this activity we had brought a laptop and asked the users to show us the websites they used for practising fashion online. This could both be sites they used for inspiration or purchase, but also for displaying their own fashion-related tools like their blogs or profiles on fashion communities. The exercise showed us what the users liked and disliked about existing systems, how they used the different sites, and which sites they used. The exercise was a way to experience how the users interacted with the different sites, even if this interaction was staged, and provided us with knowledge about how the users perceived different functions, style, design, and ways of navigation. Compared to simply asking the users how they practised fashion online, we felt that this exercise supported the user, because they by navigating in the context could explain what they recognised instead of what they tried to remember. We should, however, have asked them to bring their own laptops, as it turned out that many could not remember the addresses or names of their favourite sites, as they were used to navigate via their bookmarks.

This exercise made it clear to us that involving the users in the design of wireframes would not be as beneficial as we first had imagined. It was clear that the users focused more on content rather than form, as their remarks about design were concentrated around colors, aesthetics and discussions about the placements of advertisement. It became clear that they would be of more value to us by providing inspiration, opinions, and evaluation rather than being a part of actual sketching design from the ground.

However, as inspiration and for idea generation, this part of the interview was perfect, as many issues were raised and discussed. Below we will focus on the ones we found most interesting to our further development. They are all subjects that were brought on by the first participants as issues in regards to practising fashion online. In the following interviews,

we addressed these issues and build upon the feedback we got from earlier interviews to structure conversations and form questions. This was foremost to see if the interviewees shared the opinion of the initial interviewees, but also a useful starting point to address issues we needed opinions on. The method of building upon prior interviews in the later ones structured the interviews, while it also increased our knowledge of the field of fashion online.

Rating

In connection to discussions about style galleries, the subject of rating were often mentioned. It became apparent that most of the users had a love/hate relationship with this function. Some disliked the fact that certain people got "hyped" just because they were popular and not because the particular outfit was amazing (Appendix A, p. 26). However, most of them liked getting "hyped" and commented om themselves, like Anne Sophie who said: "Sometimes you get your picture on the front page. It is so cool with these kinds of competitions. It makes it a lot more fun" (ibid, p. 3). Another user, Dagmar, also pointed out that the focus on hyping and lookbook.nu being an invite-only site moved it from being an "all-user"-site to being an "elite-user"-site and she was not sure that she liked this exclusiveness (ibid, p. 82).

Sharing

The users also had a love/hate relationship with sharing. On one hand all the users wanted to share and get feedback on their new buys and stylish outfits, but on the other hand they did not want to give everybody else the opportunity to copy it. Ilirida for instance explained: "You might feel that: 'people shouldn't be able to see my clothes, because then they'll all just want it' [...] but then if you upload it [...] and it then gets singled out [...] then you think 'yes!' - I mean that is just so cool, right?" (ibid, p. 15). Furthermore, they all wanted to get inspiration and information from others. When criticising the street blog gademode.dk, Pernille said: "[...] it is just pictures - I can't even see, where she has bought her clothes, if I were interested in that. And then it's a little difficult to see the point [with the site]" (ibid, p. 24).

Pictures

Many of the users discussed how difficult it was to take good pictures of themselves by themselves. They perceived the standard of the pictures on for example Lookbook.nu to be too high for pictures taken with the help of for instance a cell phone and a mirror (Appendix A, p. 25). Furthermore, they described it as embarrassing to both ask and have others to photograph them, as Signe explained: "[...] I wouldn't want to ask my sister, if she would mind [taking the pictures]. That would be awkward" and "then I would have to stand there and smile [...] and look nice or something like that. That would be silly, haha" (ibid, p. 86). Mai, who was one of the users with her own blog, indirectly also addressed the issue of not feeling self-confident enough for uploading pictures of oneself: "But I don't [...] feel comfortable about taking pictures of myself and putting focus on myself in that way. In saying: 'Oh, look at me!' - I wouldn't want to do that" (ibid, p. 95)

More of them also addressed the issue of uploading pictures to the style galleries and blogs, as this could be both a difficult and unmotivating process because of strict rules (ibid, p. 35) and technical issues. Like Trine who explained about styleGALLERY: "It takes a lot of time to upload

the pictures and it is impossible to upload all your pictures. You have to crop them and make sure they have a certain size - and then you just don't bother" (ibid, p. 58). In regards to lookbook.nu, Anne explained how: "it can be hard to find a picture that is perfect. There are so many things that aren't allowed" (ibid, p. 46).

"The Point Game"

For the third part of the interview, we had invented an activity called "The Point Game". Here the users were asked to pick the five sites that were the most important for their practice of fashion online and rate these sites by distributing 15 points between them. This should give us an indication of what kind of fashion sites they rated most important. Afterwards they were asked to distribute 12 points between "Magazines", "The Street" (friends, people in the street scene, browsing in stores), " Internet", and "TV" according to how important a channel of inspiration the four "medias" were to them. This should give us an indication of how important the Internet was to these users in comparison with other media.

It was sort of a quantitative activity with a qualitative goal. Alternatively, we could have simply asked the participants in a more traditional way, but we wanted to avoid answers like: "I use the Internet a lot for fashion inspiration", because this would have been of little use to us. Instead we wanted them to actively reflect upon how important the media and different kind of sites were to them and distribute the points accordingly.

The different websites and channels were noted on post-its shaped like arrows and the participants were given small plastic diamonds to use as points. This had two purposes: first of all it made it easier for the participants to distribute the points, as they did not have to do the math otherwise required, furthermore it was another fun element that exited the participants and made them more engaged.

Figure 19 + Figure 20 Christina participating in "The Point Game"

The results of the activity can be seen below:

	Fashion communities	Online stores	Blogs	Trendsales/ebay.com	Lookbook.nu/styleGALLERY	Twitter
Anne Sophie	5	2	2	1	5	
Frederik	2		10			3
Ilirida	3	5		3	4	
Christina		1	14			
Pernille		5	3	3	4	
Sarah		3	8	1	3	
Mai	2	6	7			
Sabrina	2	5	8			
Dagmar			10	5		
Signe	4	4	2		5	
Anne	2	5	4		4	
Trine		4	4	6	1	
SUM	20	40	72	19	26	3
Average	1.7	3.3	6.0	1.6	2.2	0.3

	Magazines	Television	Internet	"The street"
Anne Sophie	4	2	4	2
Frederik	3	1	6	2
Ilirida	1	3	5	3
Christina	4	1	4	3
Pernille	4	1	4	3
Sarah	3	1	4	4
Sabrina	3	2	4	3
Mai	3	1	5	3
Dagmar	2	0	5	5
Signe	3	2	3	4
Anne	5	2	4	1
Trine	4	2	5	1
Sum	39	18	53	34
Average	3.3	1.5	4.4	2.8

Figure 19 + Figure 20 Christina participating in "The Point Game"

It is impossible to conclude anything statistically significant and valid from this exercise, but it do show us some tendencies. The participants seemed to agree that blogs, online shops, and the style galleries were most important for practising fashion online, which is why these have been in our focus in the fashion ecology analysis. Furthermore, we can conclude that television is not seen as a channel where you - at least actively and consciously - seek e.g. fashion inspiration. However, as the participants were all people we knew actively practised fashion online, the Internet did not surprisingly get the highest score.

From the interviews we got a lot of new, valuable information, which for instance the issues of rating, sharing, and taking/uploading pictures are examples of. We furthermore concluded that it would not make sense to involve the users in actual sketching sessions, as they were not the most suited for this task. However, we still wanted to include them in the refinement of the Fashionality idea and therefore still wanted them as participants in workshops with this purpose. In the next paragraph we will take a closer look at this.

7.2.2 Second Activity: The Workshop

When we made the initial contact to the users for the interviews, we felt that the majority responded very immediate and showed sincere interest in meeting with us. Furthermore, when telling the users about the future workshops we had planned, all of the them - of course under the pressure of us sitting in front them - said that they would see no problem in participating in future activities. We therefore felt confident that it would be uncomplicated for us to gather 8-10 participants at a time and then perform two workshops with different purposes within the time limit this

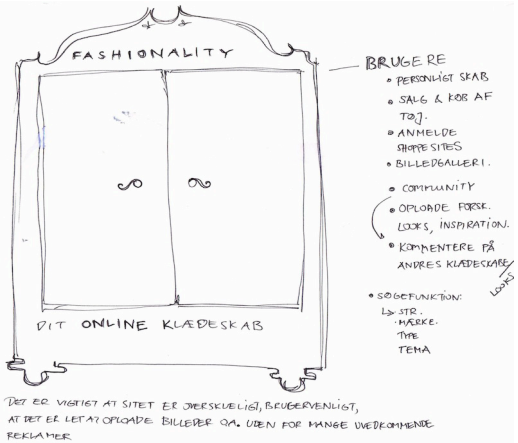
report provided us with. Unfortunately, it turned out to be more difficult to engage and mobilise the users this time around than we had participated, as 8 users had registered for the first workshop and 5 for the second, but when the day for the first workshop arrived only four users showed up.

We reckon that there are several reason as to why we had difficulties mobilising our group of identified lead users. For one we used our group and messages on Facebook as the tool communicating with our users about the workshop, though it in retrospect might have been better for us to communicated with the users individually. It did not seem like the users felt like their response to our Facebook events were binding. It is easy to imagine that our users receive many invitations via Facebook to all sorts of events, and that this caused ours to be just another one in the stream of events. Furthermore, some complications occurred in the understanding of the invitation, as we failed to make it clear enough for everybody that they had to choose between one of the two workshop days. In addition to that, we experienced that the users thought they could come and go as they wanted during both days, and not stay for one entire day as we had planned. Both workshop dates were planned to take place on a Saturday, which might have been a poor choice when we take the target group into consideration. Most of our users were teenagers and we did not put enough thought into the fact that many of them could have more important (interesting) activities on a day like this. On top of this, we did not offer any immediate reward (like for instance money, gift card, goody bag etc.), which could also implicate the matter of weak engagement further.

However, as we did get hold of four users for the first planned workshop, this were held according to plan. Like the interviews, the workshops were structured on different activities that should afford creative participation and engagement. We will describe these activities in the following in the order they occurred at the workshop. Like in the paragraph dealing with the interviews, we will argue for the purpose of the activities and discuss the findings. Again it is not our intention to show how the findings have led to concrete design ideas, as they merely contributed to the idea generation and refinement of the Fashionality idea.

What is Fashionality?

The participants were asked to imagine explaining the use of Fashionality to their best friend. They were paired up and given some time to discuss and prepare for their presentations. Pens and paper were provided for assistance. Their presentations of Fashionality were then recorded on video and showed and discussed in plenum afterwards.The purpose of the activity was to evaluate how the users had understood our explanation of Fashionality during the interviews and if the idea about Fashionality had been altered by the users in the time from the interviews to the workshops. We expected that this exercise would make the users emphasise the functions of Fashionality they perceived as most important, which we would use as their identification of the site's core functions. We thought this important in order to concretise the core use of Fashionality.



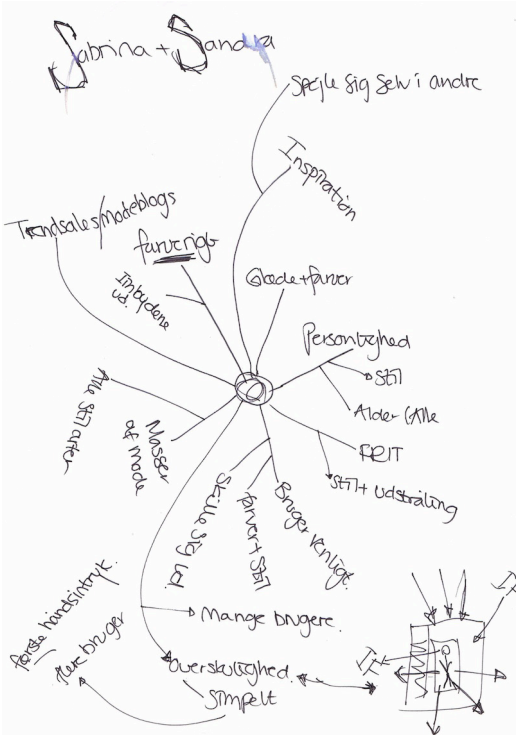


Figure 23 + 24. Drawings by the two groups explaining Fashionality

The approach of the two groups was very different, which is perhaps apparent from the two drawings. However, they complimented each other well, as the first basically covered all functions of Fashionally very thoroughly, and the second focused more on explaining the context of Fashionality. They both showed a great understanding of the system, as we had imagined it ourselves, so in that sense we judge our way of communicating about Fashionality to the users, to have been successful. Even though nearly two month had passed between our initial interview with them and the workshop, the idea of Fashionality seemed to be fresh in their mind, as they had no problem conveying it. This shows us that the idea had made sense to them and was memorable and relevant, which we perceive very important as to determine the potential of our project.

However, as they were extremely thorough in their presentations, it was impossible to determine what they saw as core-functionalities from this activity.

"The Deep Dive"

In the second part of the workshops the participants were asked to think of "cool" Fashionality functionalities, without worrying if these could actually be realised with today's technology. At IDEO they call their sessions for generating ideas "The Deep Dive" and we have in earlier projects had great experience with this kind of approach. This exercise resembles a similar one called "Future Workshop" (Bødker et. al, 2000 and Sharp et. al, 2007) which however includes more stages than the exploratory stage which The Deep Dive focus on. "The Deep Dive" is essentially a brainstorming session where ideas are written down and posted on a wall. The philosophy seems to be "the crazier, the better" and no one is allowed to criticise any

ideas. The founder of IDEO, David Kelley, explains it like this: “You have to have some wild ideas and then you build on these wild ideas and it ends up being better ideas. […] If everybody only came up with sane […] appropriate things, you would never have any points to take off, to build a really innovative idea” (ABC, 1999, 3:42).

In connection to the Fashionality project, we saw it as a way to make the participants think beyond technology and what functions they thought would be realistic. This was in order to prevent the participants for holding back ideas that might be realisable without their knowledge or in a different form, or could inspire other ideas.

Figure 25. Poster from the workshop with post-its from “The Deep Dive”

The ideas from this session were formulated on many levels of specificity and regarded different themes, but we have found it meaningful to divide them into categories. The ideas are written as formulated by the participants (however translated by us):

Aesthetics and personal style:

- There should be a mosaic of pictures on the front page that change frequently
- There should be no small picture on the website
- Advertising is okay, as long as it is fashion-related
- The website should be inviting, easy to access, and provide a good first impression
- It is important that the users can customise their profile, so it reflects their personal style

Functions:

- It should be possible to view and create reviews of different shopping sites
- You should be able to tag the clothes
- The website should afford the users getting to know each other
- It should be possible to click “new profile”
- It should be possible to develop applications for the site
- There should be applications for mobile devices
- It should be possible to combine ones profile, with the user’s profiles on other services (Trendsales, Facebook, Twitter, blogs, etc)
- The users should have an avatar on Fashionality with the user’s own

measurements. It should then be possible to apply pieces to the avatar in order to see if it fits/looks good.

- It should be possible to scan the barcode on newly purchased items and get the information/pictures instantly added to ones profile
- A "complete the look"-feature: it should be possible to recieve system-generated suggestions for how to assemble looks
- ntelligent look/inspiration robot, which can find looks and pieces that will suit the user's style

Outside the Fashionality platform

- "Fashionality events" in the real world would be a good idea
- Photo-uploading-event for start-up: people bring their clothes and gets pictures taken
- Meeting point in the street scene or camera-mirrors in shops, where it is possible to get your outfit-picture taken and automatically get it uploaded to ones profile

"Jeltsin says"

For the third activity we had invented a game called "Jeltsin says". The game was inspired by the reality television programme "Paradise Hotel", where the participants of the show have to open "Pandora's Box" once a week and answer to the difficult questions, which it held here within. Instead of a black box resembling Pandora's box, we used a Babuska doll depicting Boris Jeltsin. This was merely a question of the Babuska doll being close at hand, served the right purpose, and was quite amusing (at least to us).

Figure 25. The Babuska doll Jeltsin, "who" contained the statements we wanted to discuss.

The purpose of the game was to make the participants discuss difficult issues in relation to Fashionality in plenum and in this way the game resembled a focus group interview. However, by making it into a game and associating it with the drama of reality television, we expanded the traditional boundaries of the focus group interview with a artifactual moderator. Like in the previous activities this was in order to create a fun, creative, and informal environment, where the participants should feel inspired to and comfortable about saying whatever came to mind.

The issues inside Jeltsin were formulated like statements which related to using Fashionality. They were issues that we had either encountered

during the interviews or during other thinking in connection with Fashionality, and were some we had difficulties solving on our own. We were therefore interested in receiving the view of our participants to these issues. In the game, the participants had to open Jeltsin in turn, draw a random statement, and position themselves according to it and its overall question. Examples of the statements divided into categories can be seen below:

Statements concerning the question of promoting oneself:

- "I do not believe that I am beautiful enough to share my pictures with others"
- "I like when others see my clothes and looks"
- "I want to write to others if their look don't fit my own taste"
- "I do not like that others grade me"

Statements that concerned the question of whether or not Fashionality is needed

- "I am satisfied with other Fashion related websites"
- "I don't want to use Fashionality because I have my own blog"
- "I don't need help organising my clothes"

Statements that concerned the question of how much information the users should be able to see about each other

- "I like to hide behind my username"
- "I like to be able to find people through their real name"
- "I don't want to know a lot about the others - I just want to see their clothes"
- "I like a lot of information about the people who's fashion sense I admire"

Statements that concerned the questions of how open wardrobes should be

- "All wardrobes have to be open so I can lurk"
- "Others should not see my uncool clothes"

Statements that concern the question of how technological adapt the users are

- "I don't need to know what an RSS feed is"
- "I have no clue on how to embed a YouTube video in a blog post"

It is hard to explain our gain from playing "Jeltsin says", both the quantitative and qualitative. The main gain was a deeper understanding of how our participants relate to a set of important issues. We were confirmed in our belief that many of our selected statements represented issues which the participants also felt relevant and hard to answer. It would have been excellent if playing "Jeltsin says" had presented us with compromising solutions to some of the issues. However, opposite views were represented, and it was not obvious on the basis of the participants discussions how to come up with solutions. The interaction with users around these issues got us more equipped in order to make decision in relation to the design of Fashionality. We would have liked to have had more time for this activity as the issues were interesting and many.

Even though the number of participants who turned up for the workshop was a disappointment to us, we were positively surprised at how the participants (who showed up) had somewhat adopted Fashionality and felt a certain ownership towards it. It became clear in the way they talked about the site, that they perceived it as a tangible thing, that was very real and existing - and not just a figment of our imagination. They spoke excitedly about possible features and functions and were eager to help us on with the process. Actually, the four participants at the workshop described did also agree to attend when we tried to initiate a third workshop. However, this had to be canceled as we believed we needed input from somebody without prior workshop knowledge. This made us conclude that it was a shame that we did not get more participants for the first round of workshops, as it might have resulted in a larger group of eager participants - or it may have been a sign of the initial four participants being the only ones who actually wished to participate this much. Furthermore, this made us realise that these eager participants would be perfect to involve in the planning of how Fashionality should be launched and for creating the momentum for the site. We will return to this aspect, when we later in this report discuss how we can motivate the users.

7.3 Sum-up

In this paragraph we discussed the issues related to contacting users, who are discovered via their online profiles on various web services. In this connection we found it relevant to consider issues relevant to privacy, as some users might be offended by being contacted in contexts they find inappropriate for our purpose. These considerations we find important to incorporate in our design of Fashionality, why we will return to this aspect later in this paper when discussing privacy in relation to motivating use.

We also discussed the issue of involving the users in our development process and concluded that in our case the users were best suited as sources of inspiration and evaluation, instead of partners in concrete design sketching activities. We found it beneficial to our interviews and workshops to center them on activities that both invoked the users' creativity, facilitated the users, and help covering the issues we found relevant to the development of Fashionality.

We were disappointed in the lack of commitment from the users to the workshops we had planned and reckon that for future user involvement we will have to consider the factors we have discussed and believe to have had an influence on the number of shown up participants.

Interacting with participants during both interviews, workshops, and more informal contact we have had with them, we have learned much about their lives as fashion ecology inhabitants. This understanding we have developed is hard to articulate, however our interactions have often been referred during the other activities we have carried out. In the future, when Fashionality is at a later stage of development, we look forward to asking our users for help when we for instance have to evaluate and test the system.

8. Communicating Design

"Working in some visual medium – such as drawings – the designer sees what is 'there' in some representation, draws in relation to it, and sees what he or she has drawn, thereby informing further designing. In all this 'seeing', the designer not only visually registers information but also constructs its meaning – identifies patterns and gives them meanings beyond themselves." (Schön 1983, p. 153)

When design work becomes social it requires much of the communicative tools mediating the process. The social aspect requires articulation between the involved actors, whether this be in the form of speech, texts, diagrams or rough drafts and sketches. Designing a website may be an activity performed in solitude. Great websites have most likely been designed and developed this way. However, for the most part, and in the case of Fashionality, design work is far from a lonely enterprise.

On a cognitive level, the very complexity of the information system naturally raises the need for communicative media and tools too. In complex design situations, tools are needed to cope with the limited abstractions our minds can handle. The designer/developer might on its own be able to construct a website without the need of mediating tools, but as the level of complexity increases so does our inability to cope with it entirely in our mind. This is why we as communicators turn towards mediating tools such as sketches and prototypes when externalising, examining, and explaining our intentions.

The following paragraph will initially present our considerations on communicating design. We will discuss how design tools both supplement each other by serving a purpose in different directions. We will furthermore present the design products that assisted our work in designing Fashionality, as well discuss their methodological application. Finally, we will discuss our choices made when developing and working with the design products presented.

8.1 Different Tools for Different Purposes

One type of mediating tool is best suited for communicating the design in one situation, while another tool might be more appropriate in another. In regards of our design work, we have been moving within a grey area of mediating tools ranging from verbal descriptions on one end to navigational prototypes on the other. Both ends, and the elements in between, are of great interest to us as communicators of design. When explaining Fashionality to a fashion blogger, a prose presentation accompanied by simple wireframes is suited. However, this level of description is not enough in at least two other specific contexts. The first context is our internal communication when we as researchers and designers need to communicate among each other about the design. In our case this has basically been the three of us in our office. The next context is when the design has to be communicated to developers. In our case this is when we

use a thorough formal description to support our ability to express our intentions to developers.

We argue that communicative artifacts, tools and technologies does not have a predetermined function, and that we construct these communicative functions in order for them to support us in the mediation of the meaning we intend to communicate. Yet they differ in format, which affords a particular type of use. For instance, sketches drawn on paper are lightweight and because of their roughness they are easy to discard, get rid of and try again. On the other hand, digital design enables annotation and replication on a different scale than the analogue equivalent. This does not make any of the tools more appropriate than the others, nor does it single out one format as more effective than the others. Thus, all tools are valuable since they represent bits of ideas and concepts within a design, which later might be transferred into concrete functionality. It is our ability to use the tools as communicative artifacts when designing that is of crucial importance to the design process.

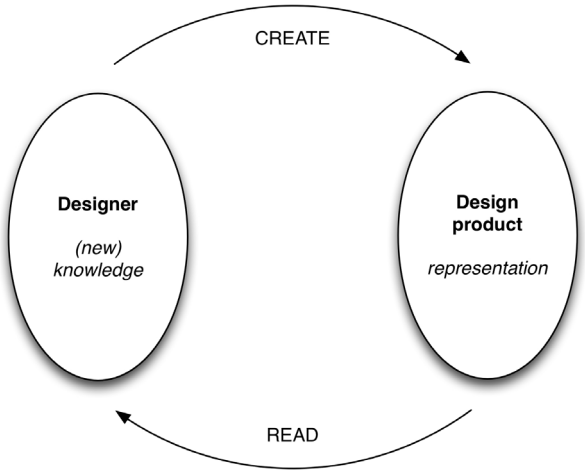


Figure 27. The feedback loop between designer and design product. Inspired by Buxton (2007)

8.2 Ambiguity and Interpretation

"Sketches are intentionally ambiguous, and much of their value derives from their being able to be interpreted in different ways, and new relationships seen within them, even by the person who drew them" (Buxton 2007, p. 113)

Ambiguity in design products opens up for various ways of interpretation. Ambiguity is much more present in rough sketches, compared to more formal descriptions, but we argue that no matter roughness or formality, whenever something is reduced to a description new ways of interpretation are made available.

The power of ambiguity is that we as designers are able to construct a design product with certain intentions in mind. We are then able to explore how other people perceive these intentions and reflect on our experiences to acquire new knowledge about the design. This is important because the feedback that takes place when others try to understand our communication is essential to our design and research. Whatever feedback they may provide in terms of comments and thoughts can give us with guidelines for how to take decisions within the design.

Taking a step back and reflecting on a sketch or wireframe may potentially lead to new approaches and design decisions. Sometimes nothing more than a fresh set of eyes or another glimpse at the original wireframe opens up to this alternative interpretation. In conversation with our design work, we loop our sketching, diagramming, narration and wireframing in an infinite process of feedbacks that seek to continuously improve our

understanding and thereby designs. Donald Schön, a scholar related to many different fields of study including design, describes the process in the following way: “In a good process of design, this conversation is reflective. In answer to the situation’s back-talk, the designer reflects-in-action on the construction of the problem, the strategies of action, or the model of the phenomena, which have been implicit in his moves” (Bennett, 1996).

In the following, we will take a closer look at the design products we have developed and used throughout our work.

8.3 Our Design Products

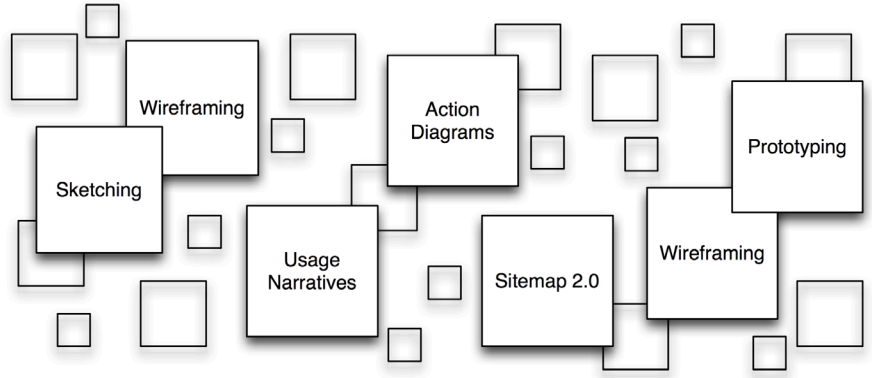


Figure 28. Our design products in between related others

The list of design products may be infinite, though the ones illustrated above are those we have leaned towards in our design work. Furthermore, what we illustrate with the image above (to the left!) is that we are aware that multiple products exist; both products that we do not know of, and products we know of, but have chosen not to use in the design of Fashionality.

Many of the illustrated methods are wide in their definition. For instance “sketching” is a very broad term and range from napkin sketching to wireframe-like sketching on A3 sized paper. Furthermore, many design products overlap and are similar to each other in their practical use. For instance, sketching when used to draw a website page and wireframing are quite closely related. Sketched website pages are also low-fidelity wireframes (a sketched webpage being a mock-up drawn on a piece of paper with a regular pencil). In our illustration, the overlap and similarity is indicated by letting smaller boxes, (representing the design products we do not know of, the products we know of but have not used or other products that resemble the products we have used) overlap the larger boxes (representing the variety of design products we have used to communicate our design).

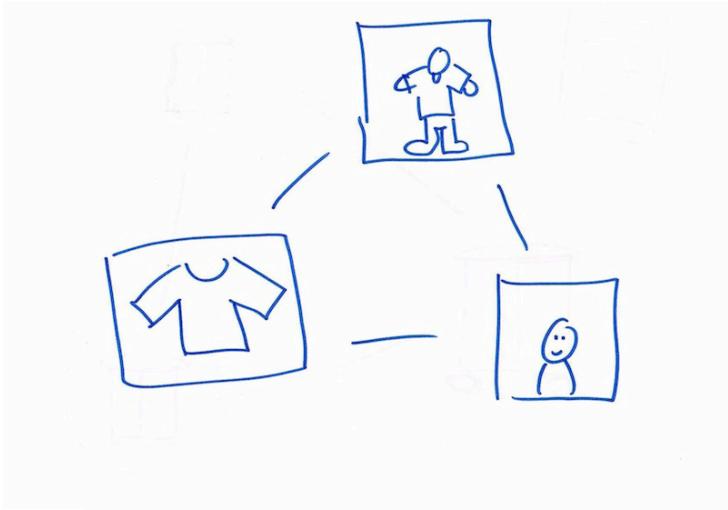
In relation to Fashionality we wish to describe five different types of design products. These have been selected because of their explanatory power in different situations, and because we have experienced their ability to inform each other. The products explain and communicate different aspects about Fashionality, and none of them are able to communicate the entire concept. All of this combined is far too complex a span of interactions and emotions, which makes it near to impossible to encompass in one specific design product. Such a design product would be the very system, we are

trying to design!

8.3.1 Sketches

Sketching has often supported our usage narratives in connection with our preliminary interviews during the first couple of months of our lead user/keystone species investigations.

For instance, this has taken place during our interview situations when we have accompanied a usage narrative with rough sketches. Examples of these sketches is shown below. The first one intends to communicate the relationships between users, pieces of clothes, and looks. The other example is actually three sketches telling the story of the advantage and potential of having a whole lot of wardrobes connected to each other. These sketches played a mediating role for us as senders of the message and for the interviewees as receivers of the message. The interviewees were motivated to interpret our intention and give us feedback on the idea and maybe even draw something themselves.



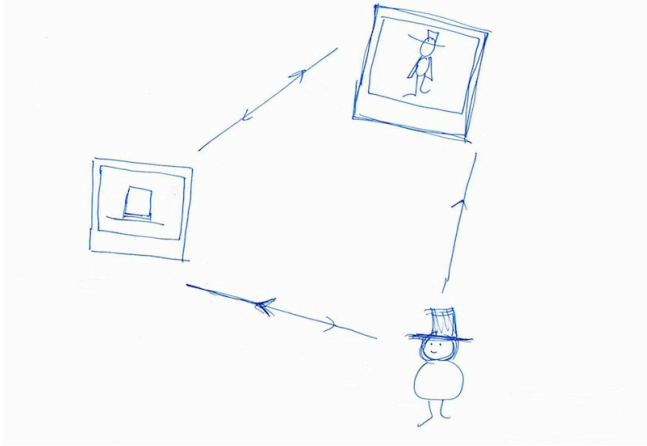
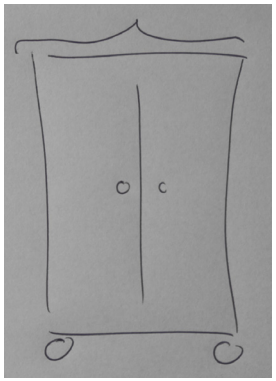
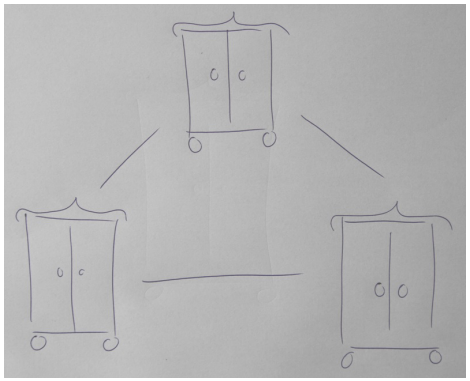
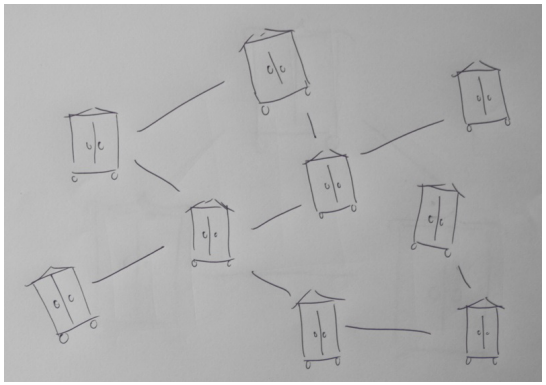


Figure 32 + Figure 33. Sketches showing the relation between users, pieces of clothes, and looks

Figure 29 + 30 + 31. Sketches showing wardrobes connected to each other.







Sketching is a good way to fast and easy mediate communication. Sketching may seem like a very informal design product, we have however chosen to describe it because sketching has served a valuable purpose in our design work both when communicating between ourselves and with other people outside the group, for instance interviewees. The ability to pull forth pen and paper, being the only requirements for sketching, is a strength that no other design product is able to compete with.

8.3.2 Usage Narratives

The second type of design product we have selected is usage narratives. Alistair Cockburn defines a usage narrative as "a situated example of the use case in operation - a single, highly specific example of an actor using the system" (Cockburn, 2001 p. 17).

To us, usage narratives are stories about the system told through the eyes of the user. They show a scenario which explains the purpose of the system in a meaningful way. Cockburn's goal is to write very specific requirements and he would probably leave out much of the information which we have chosen to include in our narratives. We have chosen to enrich our narratives with information like the thoughts of the user, information about surroundings, etc.

The process of writing a usage narrative helps us envision the system. It is able to uncover additional requirements and highlight unseen problems. The only requirements for writing a usage narrative are that you are able to imagine the system and write a story about a particular person using it. This means that users are also able to participate in constructing usage narratives without having to go through an extensive presentation of the system.

Usage narratives as a product is very helpful when wanting to communicate the general idea of the website. It makes use of narration which we are all already familiar with, and requires no particular methodological pre-understanding. Usage narratives can be used to communicate with everyone, and we have in particular found them helpful when conducting interviews with participants. We more or less memorised the usage narratives after a while, which allowed for a more fluid communication. Many times the participants responded and constructed small more or less coherent usage narratives of their own on the spot.

Close to the genre of usage narratives is the genre of use cases. Use cases are highly reduced descriptions of "actors" using the system. They usually consist of a sequence of single action sentences consisting of subject, verb, and object.

We picked usage narrative above use cases for several reasons. First of all we consider writing usage narratives to be a more open and creative process than writing use cases. When you write usage narratives you try to open up, while when writing use cases the focus is on "nailing" the description. Furthermore we did not choose use cases because this more precise description which use cases provide is covered by our next design product of choice.

8.3.3 Sitemap 2.0

Our third design product is Sitemap 2.0. The purpose of Sitemap 2.0 is to give an overview of the pages on the website. It illustrates what type of content/information is presented on which pages, and what options/links the users have. Sitemap 2.0 is a design product and method, which we have developed ourselves, however inspired by the work of others (hence the version reference in the name).

First of all Sitemap 2.0 is inspired by classical sitemaps. These share the same purpose, but have a hard time accounting for the complexity of modern websites. Morville & Rosenfeld explains that "a sitemap is most natural for web sites that lend themselves to hierarchical organization. If the architecture is not strongly hierarchical, an index or alternate visual representation may be better" (Morville & Rosenfeld 2007, p. 132).

When developing our sitemap 2.0 we also turn to another source of inspiration in the "Visual Vocabulary" (http://www.jjg.net/ia/visvocab/) developed by Jesse James Garrett, one of the pioneers within user experience design. The Visual Vocabulary is a method for developing a structural map of the navigation on a website. The method have both flaws and strengths which we have taken into consideration. First of all Visual Vocabulary it too complex to be read without a thorough introduction. The vocabulary syntax is not very difficult, but it is far from obvious, which is realised by reading through the introduction on his website. However, we find inspiration in Jesse James Garrett's way of describing the interaction that takes place within the various pages of a website. Secondly, the method's focus on structure and navigation makes it forget the experience of the user. If one element links to another element, in the Visual Vocabulary this is roughly speaking illustrated by drawing a line between the two with an arrow showing the direction of the link. At the element from which the link starts, no information is shown about the element were the link ends. Because of this, navigating his diagrams is like navigating a website with a lot of links without link titles that tell where to the link leads. While we would argue that Garrett's diagramming is more precise, our own take at mapping structure is easier to read.

The overview which Sitemap 2.0 gives of the system is related to user navigation. In this regard, we furthermore argue that Jesse James Garrett's method has a stronger focus on structure than ours, while ours is more focused on the experience and interface.

Sitemap 2.0 is used as a product for mediating communication - the communication between core designers about the structure of Fashionality. It is a tool for keeping track of functionality and features, which is easily mapped out in Sitemap 2.0. We have been in need of a method by which we could easily implement new features as we developed these, and needed a simple way to explain their relationship to the rest of the website.

When developing Sitemap 2.0, we found it important not to have a too extensive syntax. We did not want an extensive syntax interrupting us when mapping out the design in Sitemap 2.0 and it should be easy to add new functions to the map. It was also important to keep the syntax simple in order for us to easily explain the sitemap 2.0 to other people, for instance developers and designers. Instead of building a complete language, we tried to rely on natural language, first of all to ease the process but also to make the map more translatable into user interface. We argue that

Sitemap 2.0 is a key source when building a prototype, because it shows content within specific pages and illustrates how navigating takes place and where certain links refer to.

Sitemap 2.0 presupposes that we are able to draw a distinction between the content presented to a user on a page and the options of interaction available to the user. “Header” is a selection of elements which are available on every page of the website. The diagram below the header shows a particular page and the distinction between content and options. The large square box in the diagram is a page on the website. The smaller rectangular boxes within the large box are content/ information which is presented to the user on the particular page. The small boxes connected to the the border of the large box are options/links, which the user is able to interact with. Above is the profile page of a user (/<user>) in the system (illustrated by the /<user> in the square box). Outside the square box, yet connected to the border of the box, are options and links that enables further navigation. The rectangular boxes within the /<user> box are all piece of content provided on the profile page.

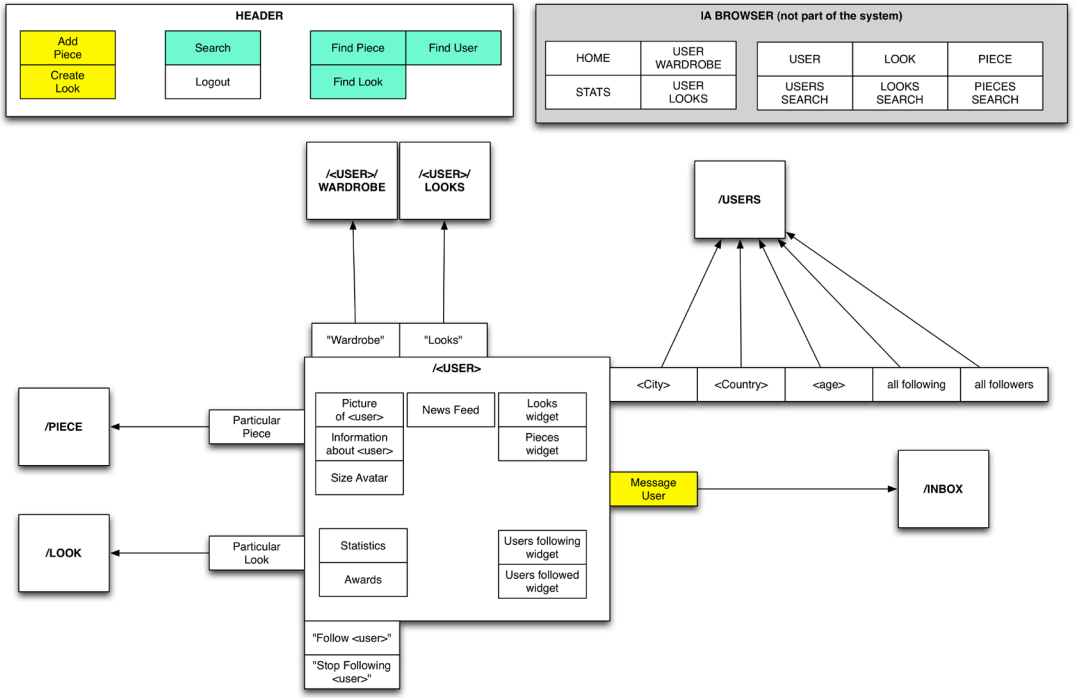


Figure 34. A user profile page illustrated in Sitemap 2.0

The colour coding show two different things. The yellow colour explains that the particular option is a process which is explained on another diagram. The green colour indicates that the particular element has further information attached to it explaining what the element is all about. Basically, green is used every time we want to explain an element further, except if the element is a process in which case we use the colour yellow. The main processes of the system is the sign up process, the process by which pieces of clothes are added to the system, and the process by which users create looks.

Like its predecessor, Sitemap 2.0 does not show the graphical layout of the system. It does not even show where elements are positioned on the screen like a wireframe does. Sitemap 2.0 only shows the structural position of elements and what type of information and options the different pages have. It does not show the positioning of elements on a screen, since this is not a part of the essential purpose of sitemap 2.0 (e.g.

the rectangular boxes within /<user> are not meant to positioned on a screen as they are represented in the sitemap 2.0).

To begin with it is possible to work within a single-page map. After some time though, information builds up on that specific map and becomes difficult to cope with. Lines which represent the direction of links travel back on forth all over the canvas, and too much energy is spent controlling all these lines a bit. At this point it is an advantage to create a canvas for each of the pages on Fashionality. If using a diagramming application like Omnigraffle, which is the one we have been using, it is still possible to link between the different single page diagrams. Furthermore, establishing these connections between diagrams makes the Sitemap 2.0 more interactive, and is able to give the experience of navigation through the system.

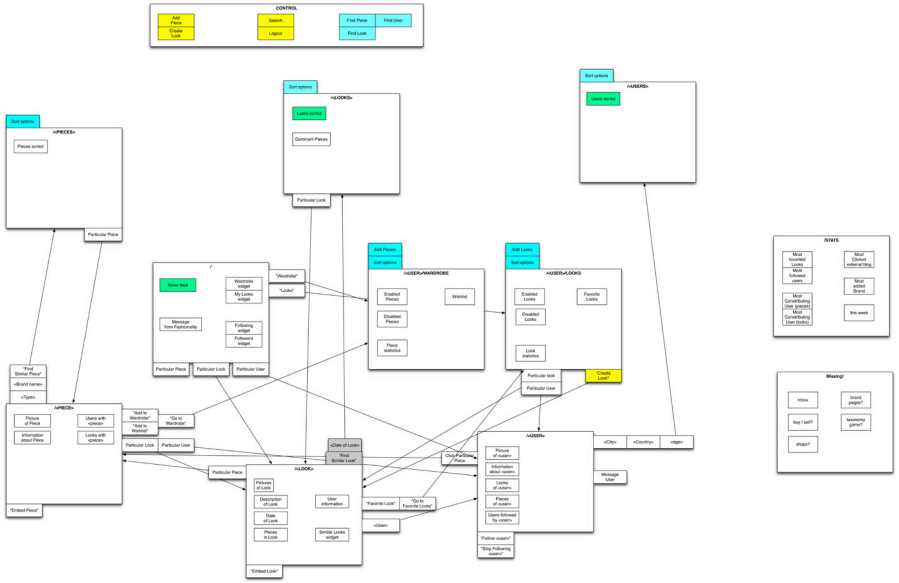


Figure 35. Complexity creates confusion

Simulating this kind of interaction with the site can give us as designers a very concrete layout of how the final design is going to be and furthermore it broadens the perspective on the design idea and may help to test vital elements in a design. It has furthermore informed us in our work with specific processes, like for instance the sign-up process, which we however have experienced to be able to describe more thoroughly as an action diagram.

We have created a pdf version of our sitemap 2.0 of Fashionality. It has been added as Design Appendix I for reference. It is possible to navigate the pdf by clicking the small boxes at the border of the large boxes.

8.3.4 Action Diagrams

Inspired by the Unified Modeling Language (UML), we have developed Action Diagrams in order to be able to design how processes happen on the basis of decisions within the interface. UML is primarily used in software engineering as a tool to specify, visualise, construct and document the artifacts of an object-oriented software ("Unified Modeling Language", 2010). Overall UML diagramming has two different model types:

- the static (or structural) view that has focus on a static structure of the system using objects, attributes, operations and relationships.
- the dynamic (or behavioral) view that has focus on the dynamic behaviour of the systems showing collaborations among objects and changes within the internal states

The static approach resemble what we intend to do with Sitemap 2.0, as it describes the relationship between elements within the structure. In

Sitemap 2.0, the yellow boxes indicate processes. However, these processes are not explained with the sitemap, which is why Action Diagrams has to account for them. The Action Diagrams are supposed to take care of the dynamic view.

We have created diagrams for the following processes: the sign-up process, adding a piece of clothes to the site (which is twofold as it is possible to both add a piece through search, but also via the the "add piece" interface), embedding a look on external website/blog, and creating a look on the basis of pieces of clothes. Inspired by UML when diagramming the "add piece" processes we have experimented with conditional logic expressed in "if" and "then" statements.

We were actually surprised to realise that Fashionality does not include more processes when we started diagramming them. This was a pleasant surprise since we until then had the feeling that Fashionality was more complex in term of processes. The Action Diagrams are added to the report as Design Appendix II.

In our development of Action Diagrams we were inspired by the three-level model of activity as described in Cultural Historical Activity Theory (AT) (Kuutti 1995). In AT human activity is divided between three levels of abstraction. The level of activity, the level of action, and the level of operation. Especially the level of action and operation is interesting in relation to interface design. It is important to underline that we did not incorporate in any length the full body of AT. We have used AT more conventionally as theoretical framework on prior semesters, but in the case of Fashionality we merely made explicit use of the distinction between activity, action and operation, which the theory provides.

We consider that the level of activity corresponds to what we have coined as the social object of Fashionality (organising, sharing and inspiring each other in relation to clothes). We find it hard to include this level, which is why it is not a part of the diagrams.

The level of action is that which we are conscious of - or directed towards, while the level of operations corresponds to "automatic" routines which we perform without our conscious awareness. In case we experience a breakdown in our actions, our attention shifts, and what used to be at the level of operation now becomes at the level of action. The level of operation is also available if we ask "how" we are performing a specific action (in opposition to asking "why", which takes us to the level of activity).

Inspired by this, the starting point of Action Diagrams was to build a bridge between how we consciously experience and talk about processes, and what operational interaction with the world we need to perform to make these processes succeed. The Action Diagram then tries to explains on two different levels. The first level is the level on which we would explain a specific process to someone else, for instance "Go to Fashionality and sign up", while the second level of explanation tries to take into account the operations which is really required when signing up on Fashionality. At each box in the diagram we ask "how" the operation must be carried out,

and unless the answer is a matter of movement of mouse or typing on the keyboard, the “how” is illustrated at a lower level in the diagram.

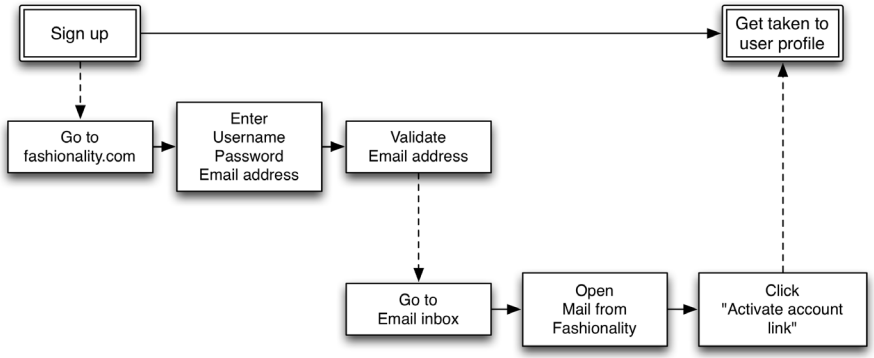


Figure 36. An Action Diagram showing the sign up process. Dotted lines indicate a shift in the level of abstraction.

The purpose of Action Diagrams is to move closer to navigation within the interface compared to what Sitemap 2.0 is able to describe on its own. Whereas Sitemap 2.0 focusses on structure, Action Diagrams focus on particular processes within the structure. Together, Sitemap 2.0 and Action Diagrams inform the development of wireframes and prototypes, which we will attend to as our last design product.

8.3.5 Wireframes and Prototypes

Wireframes and prototypes are in essence two similar mediating design products. Wireframes and prototypes are both able to answer questions concerning the positioning and size of elements on a screen.

To wireframe is to build a bridge between the architecture of a website and its interface. Wireframing is a method of communicating initial design ideas and can be used to visualise the structure of elements in an interface without too much focus on graphical details like colours or the shape of the content (Brown. 2007, p. 266-269).

Wireframes and prototypes are both created in analogue and in digital format. They range from being sketched on paper to being constructed in an advanced piece of diagramming software. The analogue format has its advantages, which we have explained in relation to sketching, but to our experience contemporary diagramming software (like Omnigraffle, which is the one we have used) is fast and versatile to work with, when a certain level of experience is reached.

A key issue when developing wireframes and prototypes is fidelity. Fidelity is used to describe to which extent wireframes and prototypes are like the finished product. The level of visual fidelity indicates to which extent the wireframe and prototype “looks” like the finished product and the level of functional fidelity indicates to which extent the wireframe and prototype “functions” like the finished product. If we create a wireframe using only grey-scale colour and illustrating all elements with square boxes, the wireframe will have a lower level of visual fidelity than of we were using the full colour spectrum and concerned ourselves the appearance of specific elements. If we create a prototype which only allows limited interaction for instance a bit of mouse-clicking, the prototype has a lower level of functional fidelity, than a prototype which allows navigation determined by conditional logic statement.

What separates wireframes and prototypes (at least in relation to software design), is their level of functional fidelity. A wireframe is most often an illustration of a particular screen, while the prototype is a set of wireframes, which are linked together affording interaction and navigation.

To our experience it is quite possible and beneficial to construct analogue wireframes, but this format is challenged when we want to increase the level of functional fidelity. Because of this analogue prototypes are really hard to construct, and the functionality, which separates them from wireframes, is best incorporated digitally.

Digital wireframes and prototypes can be seen as a next step from an analogue version, but also as an isolated exercise. Moving from paper to digital wireframe is a transition, which has been a popular approach in our case. This transition give room to interpretation and new ways of looking at our design. Wireframes do not just move from analogue to digital but also within the two formats. An analogue wireframe can develop within several sketches, as well as a digital wireframe can develop over the course of several digital versions. Furthermore, having analogue and digital wireframes support each other in the development process can also take place.

Our analogue wireframes are often drawn with a minimum of elements, such as rectangles and labels to explain the different parts on the screen. Some analogue wireframes may consist of colours and shading that sketch out the page's behaviour or the user interaction.

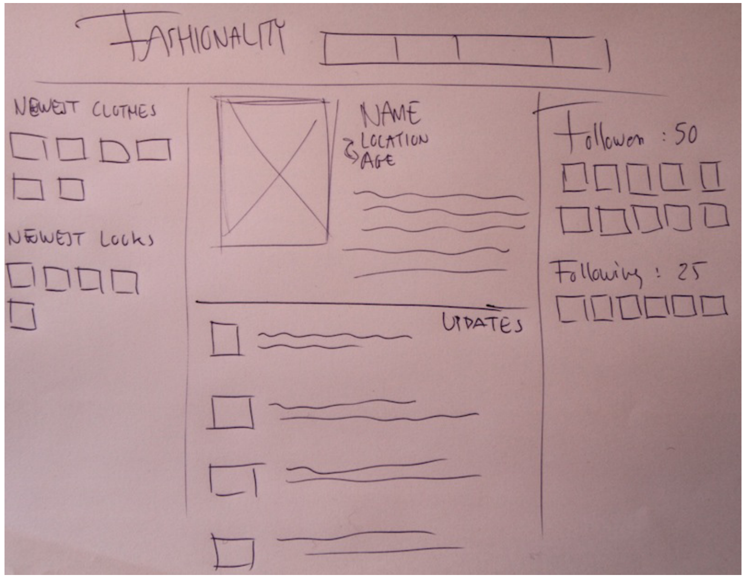


Figure 37. An analogue wireframe showing the page of a specific user. A more elaborated analogue user profile page is added to the report as Appendix III.

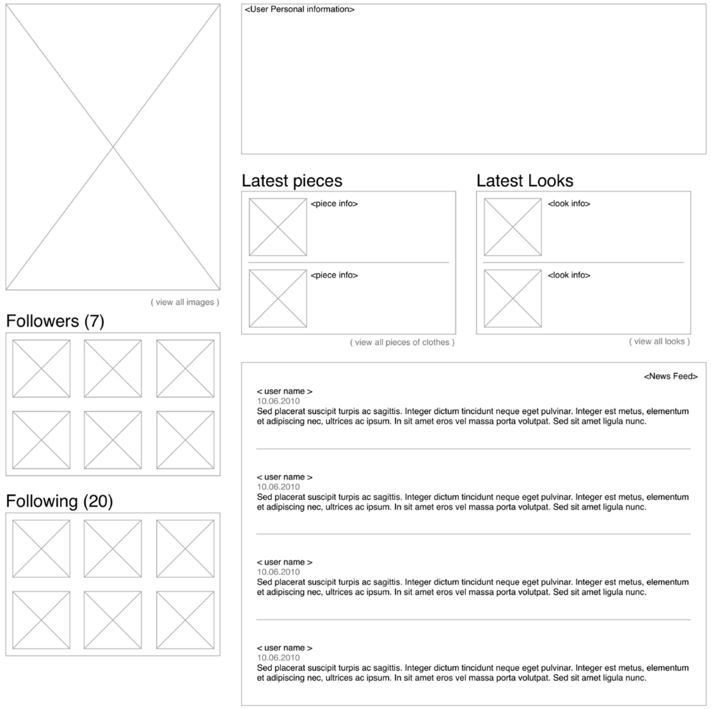


Figure 38. A digital wireframe showing the page of a specific user.

To begin with we intended to develop a single prototype. We wanted a version of Fashionality as close as possible to the future released version. However, in the course of our work we have reconsidered this approach and do not consider it as meaningful as to begin with. Instead we want to address specific and especially critical parts of Fashionality with our prototyping. We therefore find it more meaningful to target these critical parts by developing several prototypes.

Besides using our prototype(s) to communicate with developers, we would like to use them to perform testing together with our users. We would like to test if our interface is working properly and if the users understand our intentions. In this relation it does not make much sense to develop a single and complete prototype, because much of the interaction on Fashionality includes other users. So far, we havent figured out a clever way to simulate the presence of other users in the prototype, and until then is makes better sense to focus on particular critical processes, for instance the signup process or the process by which users add pieces of clothes to the system.

Even though we feel that much work still has to be done in relation to our prototypes, we have added a couple to the appendix. The sign-up prototype is added as Appendix IV, and the add piece prototype is added as Appendix V. We are currently working to figure out the best way to demonstrate our prototypes, in this case we have exported them as Adobe PDF files.

8.4 Sum-up

Our design products have been selected for several reasons. Each design product is particular suited as a tool for communication; they perform a communicative task on their own. Depending on the method we choose to use, different parts of the design is emphasised. If we choose a usage narrative to explain how Fashionality works, we give attention to an overall purpose of the design, while sequential wireframes and action diagramming models provide a much more elaborate idea of how one action leads to another. For instance, when we illustrate the sign-up process, we are aware that describing the sequential states is of importance in order to show how the users progress in becoming a Fashionality member. The process of signing up to become a member is sequential in the way that one action leads to another. This focus on sequentially makes wireframing or actions diagrams more appropriate mediators compared to for instance sitemap 2.0.

To explain the relation between the design products we can compare a similar description made by three of the tools (usage narrative, sitemap 2.0, and wireframing). A suited example, however somewhat trivial, is the picture which users have on their profile. In the usage narrative the user picture is brought to attention through a sentence like “she looks at the picture of the other user”. In the sitemap 2.0, the user picture is illustrated via a box that says “Picture of user”. In the wireframe the user picture is a box with proper dimensions and two diagonal lines also saying “Picture of user”.

The selected design products are able to inform - and translate into - each

other, making it somewhat possible to keep track of the trajectory of ideas. However, we do not experience the use of different tools as a temporal process where the we start out by sketching, then move on to usage narratives and so forth. Furthermore, we believe that some of the design products are more appropriate in earlier stages of development while other design products are more appropriate when moving on to later stages of development. We do not consider it beneficial to jump straight to prototyping without a more preliminary examination through other design products. The uniqueness and interrelationships among different products show that it is not a question of either/or when working with mediating products, but a question of allowing the products to supplement each other.

9. Digitising Clothes

As stated earlier, what will make Fashionality unique compared to other fashion-related websites, like fashion blogs and the style galleries we have identified, is a strong database where entities of identical pieces of clothes are tied together. In this way, a specific piece of clothes (e.g. Levis 501 Bootcut) will only appear once, but with many users and looks connected to it. These links, between identical pieces of clothes, are the "glue" of the system and ensure that the pieces of clothes of a single user are connected with other instances of the same pieces of clothes owned by other users. In the same way as outfit pictures are linked together through the pieces of clothes they consist of. In relation to this, clothes is a challenge compared to for instance books. If we were cataloguing books we would be able to use the ISBN number as a unique identifier, but such a number (or an equivalent identifier) does not exist in relation to pieces of clothes.

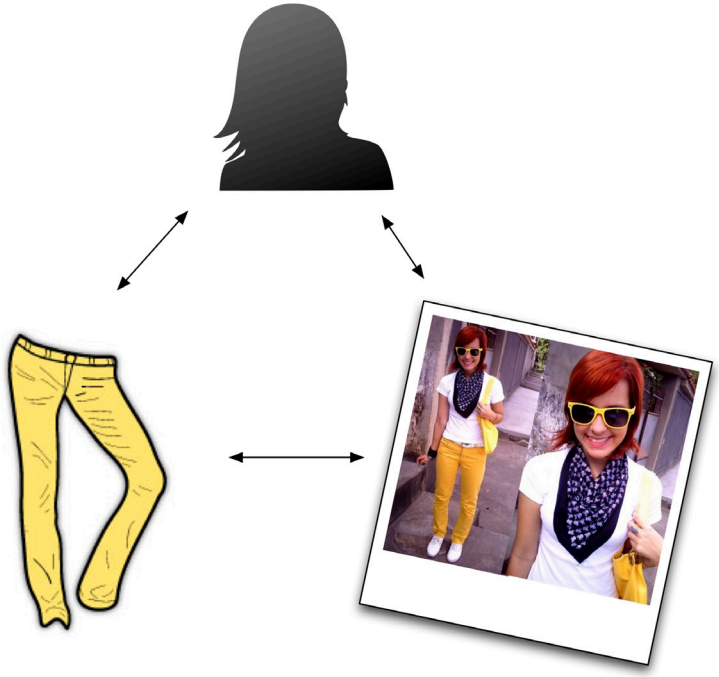


Figure 39. The illustration shows how users are related to pieces that are related to looks that again are related to users.

These connections - especially the ones between identical pieces of clothes - should make it possible to do interesting queries like: "show me all looks with Levis 501" or "show me all users with Levis 501" and even more advanced queries like "show me all acquired clothes by users I follow within the last 2 months" or "show me all black jeans similar to these Levis 501"

When digitising clothes it makes sense to look at the methods used within Library Science, where an essential discipline is to catalogue entities in a way that ensures both later retrieval and relations between entities. In this domain, however, the entities are often referred to as "information packages" (Taylor, 2004, p. 3) or simply "documents" ("Dokument", 2009) which covers all information# bearing objects. This is defined as being everything from books and journals to cds, dvds, video games, music notes, pictures, cartographic representations, web pages, and museum artifacts. So even though the most common catalogued entities in this domain are books and journals, it can be used for other artifacts as well.

Cataloguing is closely connected to searching, which makes it difficult to talk about the one without including the other. In our discussions about the processes, we found ourselves constantly switching between the two, as the decisions made in regards to cataloguing affected the possibilities

for search and the other way around. An example of such a problem is the number of attributes describing a piece of clothes: the more metadata added to an entity, the easier it will be for the users to retrieve and verify the items they seek. However, the more data a user have to enter when adding a piece to the database, the more demotivating and immense the process might seem. The Fashionality users should be able to add a piece of clothes by only providing a minimum amount of information, even though we would like them to add as much information as possible.

Despite the fact that these two processes are closely related, we will divide the them in the following and discuss them in relation to Fashionality.

9.1 Cataloguing

Cataloguing is the process of creating representations of entities by adding formal and descriptive metadata (Grauballe et al, 2001, p. 2) "in a form that is suitable for inclusion in some type of database" (Lancaster, 2003, p. 1). The representations should contain the metadata decided necessary for later retrieval and verification in the specific context (Taylor, 2004, p. 163).

Charles Cutter is a known figure in the history of Library Science for the development of a classification system and for stating the purpose of a catalogue in a library. In the case of Fashionality, the "library" is the collection of the users' pieces - or the pieces they choose to add to the Fashionality database. As the entities are (primarily) pieces of clothes, the attributes that are relevant and purposeful to include are in some ways similar to, but not quite the same as, those of the document.

In the table below[3] we have altered Cutter's rules (Cutter, 1904) for the library catalogue to fit the purpose of Fashionality's database.

Charles Cutter	Fashionality
1. enable a person to find a book of which either (A) the author is known (B) the title is known (C) the subject is known	1. enable a user to find a piece of which either (A) the brand is known (B) the style name/number is known (C) the type is known
2. show what the library has (D) by a given author (E) on a given subject (F) in a given kind of literature	2. show what Fashionality have (D) of a given user (E) of a given attribute (F) in a given kind of look
3. assist in the choice of a book (G) as to the edition (bibliographically) (H) as to its character (literary or topical)	3. assist the user in the verification of a piece (G) as to the collection and/or designer (H) as to the picture

9.1.1 The Attributes

To determine the relevant attributes of "digital clothes", we have found it necessary to investigate what kind of information is available and important about a piece of clothes to our users. For this purpose we have examined information available about pieces of clothes in various places.

3 In relation to verification in 3. this is for instance relevant, if there are more pieces in the catalogue that meet the search criteria. In this case the catalog should present them in a way that facilitates verification or selection by the user.

Within the first couple of months we spend a lot of time investigating both physical and online representations of clothes in order of for us to get an insight into how others present and catalogue clothes in terms of data. First of all we examined price tags of the pieces of clothes in physical, local stores like Tiffany, H&M, Gina Tricot, and Companys. This made us realise that the available information here were very different from brand to brand. Furthermore, the private stores like for instance Tiffany, replace the original tags from the manufactures with their own customised price tags. In this connection it also became obvious that the barcodes on the tags could not be used for adding pieces to the database, as these are not unique across brands or stores. We also examined online stores like topshop.com, asos.com, urbanoutfitters.co.uk, nelly.com, and hm.com for the information they provide about the different pieces. Furthermore, we examined the labels of our own clothes and discovered that sometimes a lot of information is available like size, brand, material, style name/ number, and treatment instructions. At other times this information is very limited. In addition, it is our experience that the label can often be very difficult to read or simply has been cut out. Through our interviews with the users, we furthermore discovered some of the types of information they find important. Finally, we also contacted the companies Bestseller and H&M to find out what kind of data they registered about their pieces in their own system and in what way. However, apparently this kind of information is very secret, so unfortunately they were not willing to help us, and we did not pursue this angle further.

The investigation have made it possible for us to decide on the following list of attributes, which we found important to analyse and perhaps include in the representation of the piece:

- **Picture:** a picture of the piece.
- **Type:** the categorisation of the piece. Basically, it is the term someone would use to describe the piece, when asked what the specific piece is. On the lowest level of specificity this could be e.g. pants, skirt, dress, or top.
- **Brand:** the name of the manufacturer. This would most often be the name printed on the label in the back of a piece. Examples of this data are Gucci, Acne, Vila, and Adidas.
- **Style name/number:** some manufactures provide their pieces with a name or a number of the style. Examples are “Sanna top” from Gina Tricot, “Julle Tee 1242” from Samsøe Samsøe, and “506 Straight” from Levi’s.
- **Colour:** the colour of the piece.
- **Material:** the combination of materials that the piece is made up by. An example is “40% cotton, 48% modal, 12% spandex”.
- **Size:** the size as written in the piece. Examples include 38, M, or 10.
- **Collection:** name of the collection that the piece is a part of. Examples include “FW10” from Chloé. “Resort Collection 2011” from Acne, and “Fashion Against Aids” from H&M.
- **Designer:** the name of the designer if different from and exceptional for the brand. Examples are Jimmy Choo for H&M, Alexander McQueen for Puma, and Stella McCartney for Gap.
- **Comments:** user-specific notes about the piece of clothes. Both

personal notes, and public ones.

- **Price:** the amount of money the user have paid for the piece.
- **Shop:** the shop where the piece has been purchased.
- **Date:** the date the item has been purchased.
- **Modifications:** personal alternations made to the piece.

We find it beneficial to talk about “token” and “instances” in regards to the attributes. While some of the attributes are attached to the general representation of the piece - the token - other attributes are attached to the user’s personal example - the instance.

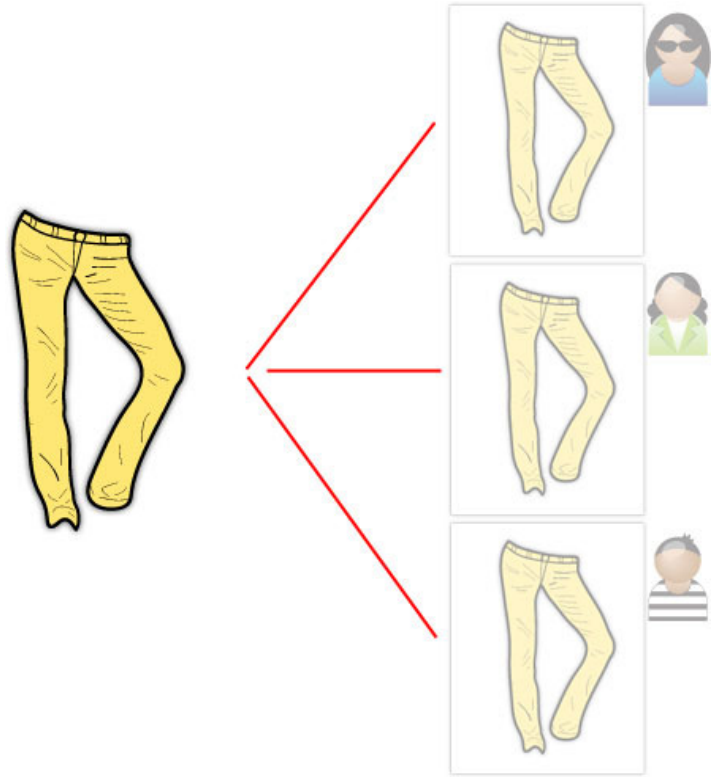


Figure 40. A token pair of pants and its user-specific instances

We find the distinction between token and instance beneficial, due to the fact that it is important for Fashionality to provide the possibility for the users to add further information about their personal example of the piece. This could for instance be a note about how the piece have been redesigned by the user and if the user are willing to sell it. By providing the users with the possibility of adding personalised metadata to the content, we intentionally ask the users to make their instance of the specific token “their own”. An optimal situation for the users would furthermore be that the manufacturers or clothes stores registered all their clothes to the Fashionality database. The users could then be able to use these representations in their wardrobe and simply add their personal information. This is, however, not initially realistic and in the following we will therefore take point of departure on the premise that it is the users, who make the representations of the pieces.

As the database is based on user-generated content, it will make sense to evaluate the chosen attributes with time. If some are not used, they should be deleted. In the present report we have chosen to analyse the above listed attributes to a greater or lesser extend. The extend to which we analyse the different attributes is determined by how important we consider the particular attribute to be, how much we have had to take the particular attribute into consideration, how problematic the attribute is to deal with, and to which extend we believe to have come up with a solution. We will begin by analysing the token-specific attributes, and then the instance-specific attributes will follow.

Picture

Per default each user should have the opportunity to add their own

photograph of their specific piece. In practise this would mean that every token will have a number of instance-specific pictures attached. We find it very likely that these pictures will differ a lot in terms of e.g. quality and style, as some might photograph with their cell phones, in a room with bad lightning, or with other things than the actual piece in focus.

A solution to this problem could be an option of using pictures from the manufacturers' online catalogue, but also to use other users' pictures if they are of a better quality. This could, however, raise some copyright issues, why it is important that the source of the picture gets credited in some way. In practise the users could get a notification every time a new picture of their piece was uploaded and then get the opportunity to switch it with their own. The picture that most users have chosen to depict their piece should then be the one shown at the token representation.

Type

The determination of "type" can be very difficult, as different words are used to describe the same. For example are "trousers", "leggings", "jeans", "chinos", "bottoms", "hip-huggers", "capris", "lederhosen", and "overalls" all terms that describe a form of pants on different levels of specificity.

As Peter Moville states about adding metadata to objects: "Even collections of images and software and physical objects rely on words in the form of metadata for representation and retrieval. And words are imprecise, ambiguous, indeterminate, vague, opaque; you get the picture. Our language bubbles with synonyms, homonyms, acronyms, and even contronyms (words with contradictory meanings in different contexts such as sanction, cleave, and bi-weekly)" (Morville, 2005, p. 51)

In many ways the difficulties of type in our Fashionality database resembles the difficulties of subject indexing in Library Science, which we will take a closer look at in the following paragraph.

Subject indexing and "type"

Indexing is about categorising the documents by analysing and assessing its "aboutness". It is the process of finding and adding descriptive keywords to the document representation, which will function as both subject access points for the retrieval and indicators of relevancy to the user's information need. It is furthermore the process of classifying the document and thereby placing it in a relation to the other documents in the collection.

For the purpose of indexing documents in a specific system an indexing language has to be developed. In connection to this language, it is possible to talk about the level of control and specificity. If the indexing language is controlled, the documents can only be indexed with terms from an authority list consisting of preferred indexing terms. These lists can be both structured (e.g. a thesauri) or unstructured (e.g. an alphabetical list). If the language is uncontrolled - also called natural - the document can be indexed by whatever keywords the indexer finds adequate (Grauballe et al., 2001, p. 6-7). It can be argued that tagging is a form of uncontrolled indexing, as it allows users to annotate documents with their own words,

which opens up to a more free list of words (e.g. Shirky, 2005). However, tags are often not limited to only describing the "aboutness" of the document, but also for describing tasks (e.g. "To read"), qualities (e.g. "Fun"), or for personal organisation (e.g. " For work") (Golder & Huberman, 2005).

In natural language both synonyms (different words to express the same meaning), homonyms (same words with different meanings), and polysemes (same word, but with nuances of meaning within different contexts) are used. This can make the retrieval difficult, as the users have to "guess" what keywords that have been used for the indexing. They therefore need to think of potential synonyms and alternative ways to spell the word, which can be a difficult and frustrating process. In comparison the use of a controlled vocabulary improves the consistency of the indexing by avoiding spelling errors, difference in form, and level of specificity.

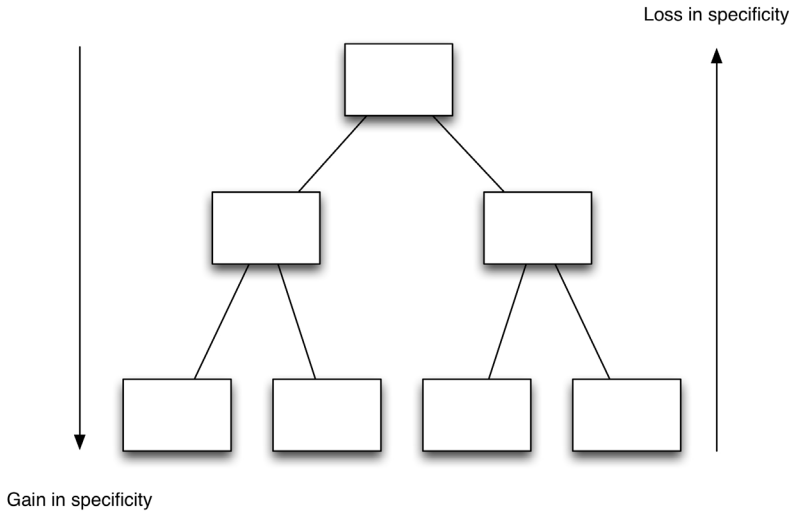


Figure 41. Loss and gain of specificity in a hierarchical structure

However, the terms in the controlled vocabulary can be inaccurate for describing the document's aboutness - in this case the type of a specific piece of clothes. In this connection the level of specificity is an important aspect of the indexing language. It is an expression of how well the keywords can describe the subject of the document. Loss of specificity occur when the subject of a document is expressed by a more general term (Grauballe et al., 2001, p. 7). An example would be a document about usability testing being indexed as simply "testing".

Developing the Taxonomy for Fashionality

From the beginning of our work, dealing with the types of clothes have been a challenge. The most obvious problem is how we decide what to consider as clothes and what not to consider as clothes. This problem is however not the biggest one in relation to types on Fashionality. Rather the above paragraphs have pointed towards challenges of categorisation.

On one hand, we have the option of dealing with types through a controlled vocabulary. This means that we decide on a structured taxonomy and when adding a piece of clothes to Fashionality, this specific piece has to match one of the predetermined types in the taxonomy. The problem with this is that clothes is a complex domain and it is very unlikely that we can predetermine the "perfect" taxonomy, where all pieces of clothes will fit. Even though much rigor is gained by using a controlled vocabulary, the attribute "type" looses its relevance in relation to the particular piece of clothes, if the vocabulary does not support the specific term which best describes the particular piece of clothes.

On the other hand, we have the option of dealing with types through

uncontrolled natural language like tagging. This means that pieces of clothes do not have to match an already predetermined vocabulary. When adding a piece of clothes the person merely types in the term which he or she considers most meaningful. Sometimes this would be very general terms like “pants” and sometimes much more specific terms like “chinos”. However, as opposed to using an hierarchical, controlled vocabulary, the terms used in tagging are traditionally not related in any way. This means that chinos are not structured as children of pants like in a hierarchical, controlled vocabulary. When searching for “pants” the pieces of clothes indexed as “chinos” will not appear. Obviously this is not a good idea since it amputates the quality of search on Fashionality. Even though we gain relevance in relation to each particular piece of clothes, we loose the rigor which we consider essential to having a strong database system.

Fashionality would definitely benefit from both approaches, and much effort have been dedicated to exploring how to get the best of both worlds so to speak. The result of our work is a mechanism which have not been tested in practice yet. In theory we believe that the mechanism will work, and that the mechanism will bring much value to Fashionality because of the balance between rigor and relevance which the mechanism involves.

To begin with we build a preliminary taxonomy. This taxonomy has to be very simple and only contain the least specific terms to describe the type of pieces of clothes. Asos.com has a suited taxonomy which we consider a proper starting point, but we remove some of its terms to make it less specific. Furthermore we populate the taxonomy with terms from trendsales.dk’s “most commonly searched terms” (http://bit.ly/trendsales) list.

The next “step” in the mechanism is best illustrated by showing a screenshot from our prototype, which the user encounters when having to specify the type of the piece he/she is adding.

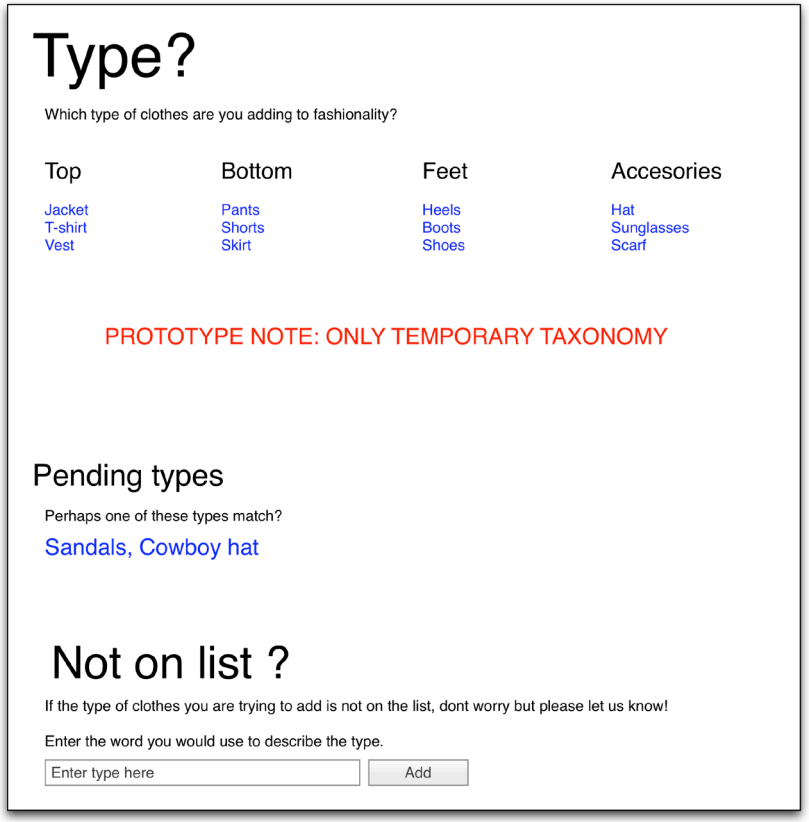


Figure 42. Prototype screenshot showing the selection of type.

Initially the user is prompted to consider which type of clothes he/she is adding to Fashionality. The user is presented with the preliminary taxonomy, and is able to select a type here if he/she experiences a sufficient match.

If the user does not experience a suited match the pending system steps in. The pending system outputs a list of terms, which other users have determined as a result of not being able to find a suited match in the current taxonomy. Like with the taxonomy the user is able to select a type here if he or she experiences a sufficient match.

As a last resort the user has to specify a new type. This is done via the last element on the page saying "Not on list?". The terms users add here are inputs to the pending system.

In short the pending system inputs terms added by the users and outputs a structured taxonomy. It is actually two separate subsystems performing two separate jobs. First a subsystem sorts out words that do not describe types of clothes, and secondly a subsystem accommodates the terms into the current taxonomy.

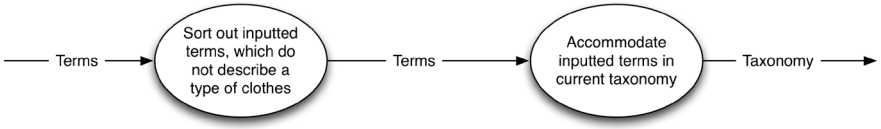


Figure 43. The pending system illustrated

The two subsystems (marked by circles) can happen in multiple ways. By using the word "system" we are not referring to something which necessarily has to be handled by a computer. Instead, the idea behind the pending system is to let people interact with the terms. The pending system is not an expert system but a system for experts.

The first subsystem is easier to deal with than the second. It is basically a matter of sorting out unwanted words, for instance inputted by users who want to sabotage the system. At least in the beginning this can be handled by a small group of people (ourselves), and does not require that we include other people. In case we should end up being so lucky and experience this task as too overwhelming because of too much clothes being added to Fashionality, we could contact some of the core users (that we might even know through our thesis work) and ask for them to help us out as editors.

The second subsystem is much more difficult. Notice our use of the word "accommodate", which we use in opposition to assimilate. If we had used assimilate, we would have meant that the inputted terms were merely to be added to the taxonomy without any change occurring to the structure of the taxonomy. However accommodation means that the system has to handle alteration of the structure of the taxonomy as well. This will probably not happen very often, but new terms might jeopardise the current taxonomy to such a degree that structural changes are beneficial. We have thought of different solutions to this:

Solution 1

The first solution is to handle the accommodation ourselves. This means

that we evaluate the inputted terms and reorganise the current taxonomy to fit the new terms. There is no real method for doing this, other than heightening our understanding about how people experience different types of clothes in relation to other types of clothes. "Is knickers considered pants or shorts, and is shorts considered pants?" and so on.

Solution 2

The second solution involves users, however, not all the users of Fashionality. The idea is to have a "loyal" group of fashionalities who like to help, and to organise these in accommodating the taxonomy. This can be done under more or less formal circumstances, we imagine a wiki-like approach where we are able to prompt these users for help in deciding on the taxonomy structure. The new terms are then made available on the wiki, where we discuss their relation to the current taxonomy.

Solution 3

The third solution is perhaps the most innovative. It revolves around "games", which facilitates the accommodation of the taxonomy. Again the users of Fashionality are important, because they are the ones who are supposed to play the games. The output of the game is supposed to help us taking decisions in relation to the taxonomy. One game could go something like this; The user is prompted to decide on a question like "Is <pants> a type of <Jacket>?" preferably asked in a illustrative way using pictures of each type. New terms are asked in relation to current terms in the taxonomy to help figure out the most meaningful position of the new term. Another game could involve card-sorting; The user is shown images of a new type. Sometimes this is only one image, because only one user has added a piece of clothes of the particular new type, but sometimes more pictures are available because other users have selected the type in the "pending list". The user then has to sort the new type term and its image(s) into the current taxonomy, to help us figure out the most meaningful position of the new term.

Until a new type term is accommodated into the taxonomy, or perhaps completely "consumed" by another term, the pieces of clothes it relates to will be of this particular type. Until the accommodation has taken place these pieces of clothes will not be related to the other pieces of clothes properly, but when the accommodation has taken place the relations, position, or changes to the type will reflect back on the pieces of clothes.

The sorting and accommodation of new type terms is not something which has to happen in real-time. We do not consider it a problem if the taxonomy is updated e.g. once a week or month. In the beginning, right after having released Fashionality, we think we have to give more attention to developing a proper taxonomy for type than we will have to do after some time. It seems obvious that this task will not require much attention when a proper taxonomy has been developed. However, the strength of the pending system is its adaptability, and perhaps we are misjudging when we write that the task will require less attention after time. Perhaps the opposite will be the case, because of the higher level of complexity as a result of a lot of user-contributed type terms.

Brand

At first brand might seem very straightforward, as the users are able to simply enter whatever the label on their piece say. However, it is very important for the functionality of the database that the brand is entered correctly and identically every time.

One of our interviewees addressed her technique in relation to searching for pieces of a specific brand in a system, where there were no control of the names: "I was once searching for a Dharling jacket and used four... three or four different spellings to get all the results. First I took the common one, how you spell it correctly, and after that alternative ways I imagine others to spell in... in a wrong way. And there really is a lot of items under the wrong names - from when people type it in incorrectly. So it is... It is of course difficult to find the right stuff." (Appendix A, p. 77). As with type, we want to ensure that all pieces of a certain brand are linked together.

Later in this paragraph we will discuss the element of "autocomplete" (where the system finishes the word being typed) in connection to search. An autocomplete feature that could help the user to avoid spelling errors and furthermore speed of the process of entering the brand name. However, in order for autocomplete to function, there has to be developed an uniform list of brand names for the database.

This could be done in more ways. As one, we could make a list of all the brand names we know and the ones we could find by investigating online shops, physical shops, blogs, and style galleries for more. However, besides spelling, there is also an issue with sub-brands and to what extend they should be included in the database. When buying a piece from H&M, one might simply state that the brand is H&M, but all of the pieces from the manufacturer are divided into sub-brands like L.O.G.G, Sport, Divided Man, Divided Female, Ladies, Ladies Trend, &Denim, Mama, and BIB. We therefore have to decide if including the sub-brands in the database would make it stronger or weaker.

As with our taxonomy of type it would make sense to create a list of brands on a low level of specificity to start out with. If the users do not find a suited match on the list to express the brand, they get the opportunity to add it to the list in much the same way as the "pending list" described earlier. Except that in relation to Brand we do not need the same level of structure as we need in relation to type.

Style name/number

When entered properly the attribute of style name or number can serve as a very strong identifier. In some cases the style name will be a unique information about the piece and therefore be the only information the user would have to enter to retrieve the piece - just like ISBN for books. Even if the style name is not unique across brands, it can still have great value in combination with the attributes brand and/or type.

However, through our investigations it became clear that the style name/number is only sometimes available information to the user. Levi's jeans is a classic example of how style names can be used actively by both customers and stores to differentiate between models. The same is true about some designer items, like for instance designer bags (e.g. Balenciaga's "First", "City", and "Giant City"). In both these cases there are, however, only a limited and rather static number of different styles at hand.

This in fact makes these examples the exception, rather than the rule. For most manufactures the style name/number is only for internal use to keep track of a great number of different styles from different collections, and are not commonly used for identification among customers. This make us fear that this is an attribute the users might have difficulties with both adding, but also to some extent understanding. The attribute could for instance be interpreted more literally, like on styleGALLERY where "style" is more genre describing terms like casual, punk rock, bohemian, classic, girly, vintage, or similar.

Even if the information about style is available to the user, it is furthermore a challenge to ensure that the data is entered in an uniform way. An example of how this can be problematic, has actually taken place right here in this text. Above when we listed the attributes we mentioned "Julle Tee 1242" as an example of a Samsøe Samsøe style name. We found this style name in their online catalogue (http://bit.ly/toxsamsoe) where it is written in capital letters only. However, when we transferred the style name to this document, we decided to only write the first letter in capital, simply because it "felt wrong" to write the name in capital since our other example had a different form. Another example from Samsøe Samsøe is the information available from the label on a piece, where it says: "Style: Sue Long. Dess: 265 Basic Light Jersey". All of this information seems to be attached to the style name, but how much of it should the users include?

In terms of connecting identical pieces of clothes via the style name is not something we have a straightforward solution to. Searching and navigating style names is something we consider taking place through a text input in the main search box.

Figure 44. Information available on the label of a Samsøe Samsøe top

Colour

Colour is another attribute that is not easily defined, as it often include a very subjective assessment. It is furthermore a challenge how this information should be entered in the database. One option is to use the same descriptions as the manufacturers do in their catalogues or in online shops. However, in some cases this would be names as "Tobacco Destoy", "Harvest Green", and "Coral Orange", which is very specific and not that informational to all people. In this case it would be necessary to develop yet another hierarchical taxonomy, which could clarify that "Tobacco Destoy" is a kind of brown, "Harvest Green" is a kind of green, and "Coral Orange"

is something between orange and pink. However, the exact names of the colours as the manufacturers use them could be valuable information to the users, who would want to purchase the items and therefore have to locate them in a store (physical or online). Also, if the users are aware of how the manufacturers describe the clothes in terms of colour names (e.g. "Tobacco Destoy") this could improve the way users find specific pieces of clothes. However, there is very little chance of this taking place very often, and it might not be worthwhile compared to how difficult it will be to structure the colour names (e.g. what basic colour is "Tobacco Destoy" closest to?).

Another option is to let the users choose the colour from a predefined colour palette. By doing this we get the colours essential to the users piece. The problem with this approach is that the available colours might not reflect the color of the piece very well. However, it is likely that most users will want to search rather broad on the colour spectrum and therefore the specific shade might not be that important.

A third approach is to have the system identify the colors on the picture of the piece and for instance output these as related to a set of basic colours (e.g. many scales of red will get the output "red"). This can be a problematic approach if the picture is not true to the actual colour of the piece or if the system also identify other colours in the picture, like for instance colours in the background. The user would then have to select or deselect some of the colours manually.

Regardless of the approach chosen, it should be possible to choose more than one colour, as some pieces consist of multiple colours.

If we consider colour in connection to search, we have a few issues at hand. Users will not be searching via a hex colour code (where red is identified as "#FF0000") nor via advanced colour descriptions (chocolate brown shirt, harvest green pants, etc.). We argue that most often search queries will include simple basic colour like "black leather jacket" or "red dress". However, we do not find it appropriate to only use basic colour when describing the colour of clothes just because basic colours might be the most used in search queries, because there will be times when basic colours are not sufficient when describing the colour (khaki shorts, navy tee, golden pants, beige shirt, etc.).

When users need to input the colour of the pieces of clothes, we have planned the following process. Users point at a certain position on the picture of the piece of clothes they have to identify with colour. The system outputs a set of predetermined colours from which the users pick the most suited match in accordance with their piece. If the users are unable to pick a matching colour, they can notify the system about this, and eventually we would have a list of colours that the users have found difficult to match to any of the predetermined colours. This list would help recognise patterns in these colours and guide us in the expansion of the predetermined list.

Material

Through our interviews we became aware that including the material as an attribute for the pieces would be valuable for the users. Trine for instance said: "[...] often I look at things like - if it is clothes, right? - what it is made of and then I look in my wardrobe and think 'Hey, didn't I have a sweater in that same percentage of polyester?' [...]. And then I can feel the material of that sweater: 'well, then it is about this quality, right?'" (Appendix A, p. 69). So when Trine is browsing for clothes online, she compares the

clothes she has in her own wardrobe in terms of fabric to the clothes she is considering to buy online, because it can be difficult to judge the feel of a garment based on a picture.

We want the users of Fashionality to be able to perform the same kind of judgement of the pieces in the database. However, "material" can be interpreted in several ways. It can be the combination of fibres of the textile that the piece consist of (e.g. 48% cotton, 48% modal, 4% elesthane). Furthermore, it can also be the term describing the type of textile. The best examples in this connection are denim (made from cotton), lace (made from linen, silk, cotton, or synthetic fibres), velour (made from cotton or polyester), fleece (made from polyethylene terephthalate and synthetic fibre), and velvet (made from silk, cotton, polyester, nylon, viscose, acetate, linen, mohair, or wool). We think that both interpretations have great informational value to the users.

The users might not want to search on "45% cotton", but they most likely want to search on cotton - e.g. "cotton tee". It is also very likely that the users would want to search on lace, denim, or fleece, even if these textiles can be defined more specific by the fibres they are made of. Many users might not even be aware that denim is made of cotton, but see it as two different textiles.

It should be possible to perform both kind of searches in the Fashionality database - both on textile and fibre. The materials should be structured so that we have control over a list of well-defined materials. This list will be constantly reviewed in order for us to spot material terms that are popular or not used (e.g. natural rubber will probably never be used as a term to find pieces made of latex!).

Size

Size can be problematic as different systems are used across both manufacturers and countries. This means that the same piece could in principle be both an UK size 10, US size 6, European size 38, or a Small (S). The user should, however, enter the size as it is written in the label of the piece. By incorporating a standard conversion model (e.g. http://bit.ly/asosize) it would be possible to relate these sizes to each other in the database, meaning that if a user searched on a sweater in a size small, she/he would also retrieve the sweaters that were registered as UK 10, US 6, and EU 38.

As discovered through our "Deep Dive" activity in the workshop, the participants furthermore found it valuable if every user had a personal avatar with the users own measurements. Doing this we would bypass refering to regular sizes and instead measure in terms of body size. This should make it possible for the user to see how different sizes and pieces would fit. We see this as a very interesting and potentially valuable tool, as it could make it possible for the users to compare themselves to other users (instead of using regular measurements) in order to assess the size that would fit themselves. However, this could also be very problematic, as it might not be all users who would like to display themselves in this way, and make it possible for others to perform this kind of comparison.

Furthermore, we do not see this solution as an either/or situation, but merely designing the size element so that regular sizes and body size compliment each other.

Collection

It will not always make sense to add information about what collection a piece is a part of and furthermore it will often not be available information to most users. However, for those users who have a high knowledge of the fashion domain and are knowledgeable about different collections from different designers, this will be valuable information. High street brands like H&M also make special collections (e.g. "Fashion Against AIDS" and "The Garden Collection"), where it would make sense to include this information.

It can, however, be hard to ensure that the data is entered in a uniform way. A collection of pieces for the Fall and Winter this years can for instance be entered in multiple ways, like e.g. "Fall/Winter 2010", "FW2010", "FW10", "Fall Winter 10", "F/W 2010", and so on. If the collection attribute only entailed periods of the year (spring, summer, fall and winter) it would be a lot easier to categorise the information. However, when taking the special collections above into account, a structured organisation seem impossible.

It is very unlikely that the collection information will be filled out very often and when it is filled out it might not even be done correctly (e.g. a user buys a H&M dress during the spring 2010 and believe this dress to be brand new, however it is actually from the H&M 2009 fall collection). Also, a piece of clothes that has a collection term like "spring 2010" might be in the Fashionality database, but without this listed. All this considered, we find it unlikely that the collection attribute will add "glue" between piece of clothes in the system. However it is worth mentioning that it could be useful when browsing through brands (e.g. collections listed within H&M brand page). This underlines the fact that the data on Fashionality would benefit from having manufacturers organise their catalogues in terms of collection.

Designer

Like the case with collection, the designer attribute is not always relevant to include. However, in cases where designers create designs for others - like when they co-operate with high-street brands - it will be beneficial.

It should be possible for the users to find all the pieces designed by a specific designer in the Fashionality database, regardless of the brand. As an example "Tom Ford" is both a brand and a designer. Regardless of whether the user search for "Tom Ford" as a brand or as a designer in the database, all the pieces that Tom Ford has designed should be retrieved.

In order for this to function, we would have to make a relation between the specific brands and designers in the database. This should be done by surveying the names that the users add as designers and relate them to the relevant brands in the database.

User Comments

It should be possible for the users to comment on the different pieces of clothes. In this connection, we find it beneficial to distinguish between private and public comments.

Private comments are comments that might only have value for the specific user's organisation in her/his wardrobe and should only be visible to the owner of the specific instance of the piece. This could be comments like "Stains on the front won't come off", "Lent to Marie in July", "Should perhaps be made into shorts?", or "Have to get rid of these".

Public comments are attached to the piece on the token level. This could be comments like "The pants should be ironed immediately after wash", "Be careful! The colour comes off", "Looks great with a belt", "Wow, this is cool", which are comments that are relevant for all the instances of the specific piece. It should be possible for all users to add comments to the piece on the token level. Even if they are not owners of an instance, their opinion of the piece could still be valuable to other users. In regards to public comments, we have both the possibility to limit it to one comment per user or have a list sorted by the time posted without any limitation to the number of comments each user is able to post. The first solution will afford more formal and considerate use, while the latter will enable more conversation-like threads.

Price, Shop and Date

Price, Shop, and Date are all instance attributes which are associated with the purchase of a piece of clothes. These three attributes will therefore be handled somewhat together.

The attribute "Price" is the price which the specific user has paid for his/her piece of clothes. Through the users, this is the only genuine price that we are able to get a hold of. This means that the price attribute is not a direct indication of how expensive a specific piece of clothes is in the stores, it is an indication of the price the users have paid.

Since price is an instance attribute, we do not automatically have a token price. However, we find it beneficial to pull the instance prices to the token representation and for instance display a list of instance prices, a median price, and an average price.

In relation to search the attribute price is quite significant. We find it meaningful to allow the users to use price as a search parameter, and for instance be able to search within a specific price range, "show me all pants bought between 1000-1500,-". Price is easy to deal with because it is merely an integer, and we do not believe that entering a price will cause our users problems.

A problem, however, is the trouble we experience in relation to price if we choose to include an auction function on Fashionality. In this case, it will most likely be an issue that users are able to see the original price of a piece of clothes they are bidding on. If users plan on selling the clothes later on, they will probably be discouraged from letting us know how much they have paid in the shops.

Like price the attribute "Shop" is an instance attribute which show where a specific instance of a piece of clothes has been bought. These shops might both be physical stores or online shops. Like with price, "Shop" is not a

direct indication of which stores that have the piece of clothes for sale, as it only shows where users have bought the piece of clothes.

Like with price, we do not automatically have a token shop, and would have to pull instance information to the token representation. In opposition to price, shop is not an integer, and it is harder to ensure that users use the same name for the same shop. Neither are we able to calculate median nor average "shop" for display on the token.

We do not experience quite the same need for shop in relation to search as we did with price. However, some might find it interesting to search for all clothes bought at a specific store. Furthermore, an interesting idea could be to add location-awareness in a way, which lets users search clothes within a specific area - for instance all clothes bought in Copenhagen. We will discuss this a bit further in relation to our Application Programming Interface (API), which we attend to in the section on motivating use.

Date is the last attribute associated with the purchase of a piece of clothes. This instance specific attribute show when the different owners of a pieces of clothes have bought it.

The input we get from "Date" is very similar to the input we automatically get when users add a piece of clothes to Fashionality. Here we automatically record the time of the adding. However, difference exsists between date of purchase and date of adding. Our users might not add the piece of clothes the very same day as they have bought it, and the two dates will often not be the same.
In relation to search, the Date (of purchase) attribute is very similar to Date (of adding). Both of these attributes would make it possible to see clothes from a specific period, and often a query to display either would result in the same output. It is not obvious to us if the two different dates would confuse the users more than help them.

In helping the users organise their clothes, the Date attribute might prove valuable. Via the Date attribute the user will be able to get an overview of when he of she has bought different piece of clothes - and perhaps determine some patterns of interest.

Price, Shop, and Date are not attributes that help us link identical instance of the same piece of clothes to each other, like it is the case with for instance type, brand, and material. Price, shop and date - because they are instance specific attributes - do not have to be identical in different instances of the same piece of clothes. Because of this, Price, Shop, and Date are not as critical as other attributes, but we acknowledge that the information these attributes provides might be interesting to a lot of users. These attributes facilitate that the users (and ourselves) are able to analyse tendencies and trends in people's purchases of clothes. We would be able to query for "all clothes bought in the Copenhagen area, between June and August, and at a price between 500-1000,-".

The figure below displays how we roughly imagine that these three attributes (shop, date, and price) will appear on the pages of particular pieces of clothes. This will make it possible for users to determine, at least to some extent, where to buy the clothes - if they are not buying from each other.

Figure 45. Price & shop as displayed on the page of a particular (expensive) piece of clothes

Exposing shops in this way is interesting. First of all, users get an overview and is able to locate cheap shops - for instance online - which might motivate competition between shops. Furthermore, and most interesting, the exposure can be used as argumentation to why the shops ought to help us in filling the database with clothes. A solution could be that the particular shop which adds a particular piece of clothes to Fashionality will be the one listed on top in the above figure. Perhaps this would motivate the shops to participate, because their name would, at least, be directly associated with every piece of clothes that they add themselves.

Modifications

The attribute modification is also connected to the user's specific instance of the piece. It should be a free text field, where the users can describe the alterations they have made to the piece, if any. Examples include: "Shortened the pants five centimetres", "Replaced the buttons", "Removed the shoulder pads", "Tie-died the shirt", "Added laces to the neck", or "Have made it into a dress". The attribute should only be used as an additional description of the specific instance and not be available for search.

9.2 Searching

As mentioned earlier it is difficult to discuss cataloguing without discussing search as they are two mutually dependent processes.

We all know how frustrating it is when dealing with an "impossible" search system that do not help us in retrieving the information we seek. This experience can possibly lead to anger towards the company behind the failed search interface, forcing us to exit the site without having found what we were looking for, and turn to Google for help. In their recent publication "Search Patterns: Design for Discovery" Peter Morville and Jeffery Callender explains how quitting is the most common search pattern (Morville & Callender, 2010, p. 52).

In order for us to design a search interface that will keep users within the system, we need to pay attention to this. Luckily, the general Internet users has become a more adapt searcher:

"When users don't quit, they refine. Narrow is the second most common pattern around. Our initial query casts a wide net. Upon seeing results, we pull back. Sometimes, we can avoid such initial imprecision. A wider box invites more words. So does experience with large (and growing) bodies of content. In fact, the average number of keywords per query in web search has moved from 1–2 to 2–3 in recent years." (Morville & Callender,

2010, p. 54)

Taken both patterns into consideration, on one hand, the Fashionality design must therefore support ways of avoiding users giving up because they simply cannot find what they are looking for. On the other hand, Fashionality must provide exploratory and hopefully exciting ways of searching for clothes.

In regards to designing search elements for Fashionality we wish to present auto-completion and faceted search, since these are two contemporary trends within the field of search that we lean towards in our design. While we have experienced both autocomplete and faceted search as helpful ourselves, it is also these that Morville & Callender recommend as essential search functions (Morville & Callender, 2010, p. 81).

9.2.1 Autocomplete

Autocomplete is a simple, but also very helpful search function, which is seen increasingly on websites. Auto-completion takes place when users type into an entry box and the system outputs some suggestions that appear automatically. This solves some common problems, some of which we have briefly touched upon above. Firstly, it minimises typing. Secondly, it helps avoid spelling errors. Thirdly, it might enable users to find things they can not figure out how to spell completely (Morvile & Calender, 2010, p. 82).

Autosuggest is closely connected to autocomplete, as it a search function where the system suggests keywords or related items as the user types. It is, however, worth mentioning that while autocomplete and autosuggest are two different search functions, they are often referred to as the same (Morville & Callender, 2010, p. 84)

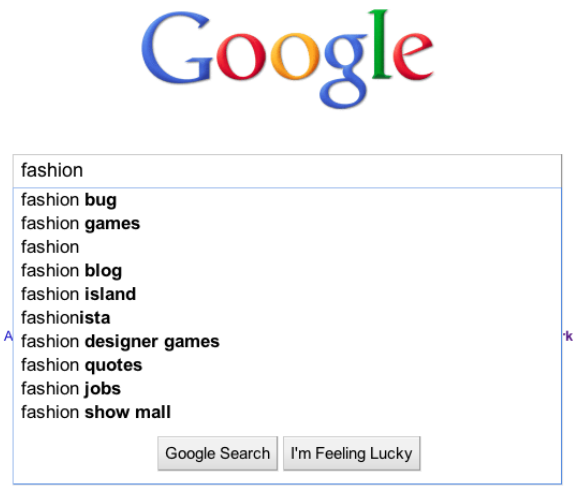


Figure 46. Google's autocomplete function

As we have pointed towards when discussing the attributes, autocomplete is a search function which we consider important in relation to Fashionality. We have chosen to focus on autocomplete, even though is might seem trivial, because we believe that autocomplete adds an aspect of exploration to searching. Fashionality will have a lot of search parameters, different brands, designers, materials, types i.e. and to our experience you feel more comfortable searching when supported by the autocomplete function. Hopefully the autocomplete will help avoid too many spelling errors, and assist the user when he or she can not figure out exactly how to spell a specific piece of information. Autocomplete is important to help ensure that instances of the same piece of clothes are connected to each other, without errors occurring because different users formulate or spell

otherwise identical parameters differently in comparison with each other.

9.2.2 Faceted Search

"In the world of search, faceted navigation is everywhere" (Morville & Callender, 2010, p. 95)

The dynamic (hereof the term "faceted") type of searching and browsing called faceted navigation/search is a concept one get to explore in various instances and with varying results. A tendency shared among many of the websites presented in this paragraph is the implementation of facets as an element of the advanced search:

"Also called guided navigation and faceted search, the faceted navigation model leverages metadata fields and values to provide users with visible options for clarifying and refining queries. Faceted navigation is arguably the most significant search innovation of the past decade" (ibid, p. 95)
When looking up clothes and its related users, we need the search element to be exploratory and narrowing, as more keywords and boxes are taking into use:

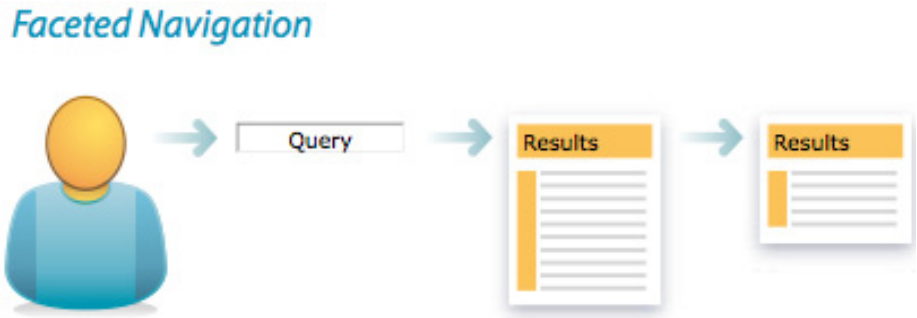


Figure 47. Faceted Navigation illustrated by Morville & Callender (2010, p. 101)

"[...] users can formulate the equivalent of a sophisticated Boolean query by taking a series of small, simple steps. Faceted navigation addresses the universal need to narrow" (Morville & Callender, 2010, p. 95)

When looking at other websites, we for instance find inspiration in the faceted navigation used on the clothes retailer Asos.com. A huge catalogue of clothes (in this example men's tshirts) can seem chaotic, but a few facets may make organisation seem more ordered and thereby maybe easier to access and "dig into".

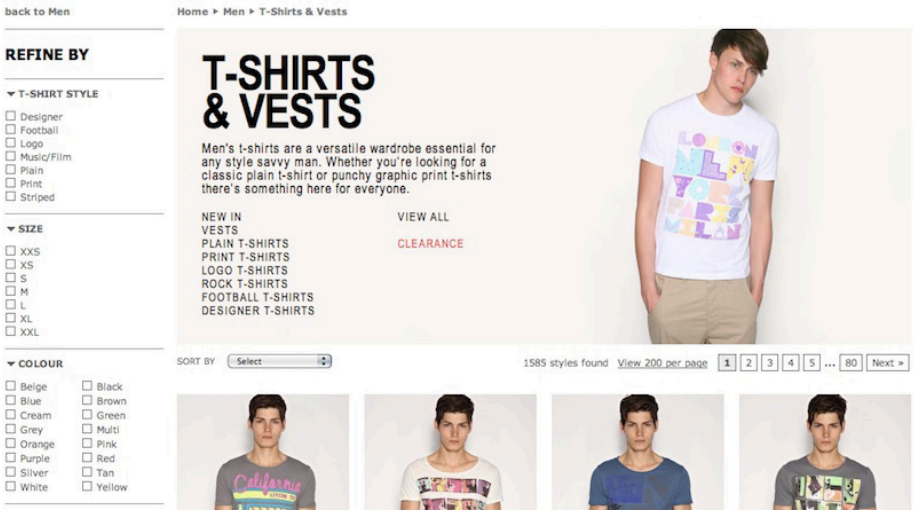


Figure 48. Men's tshirts faceted search on asos.com

Another fashion-related website using faceted navigation is Lookbook.nu. The path from clicking a colour tag in a look and ending up in a faceted search is available when clicking other tags related to a look. This could for instance be when clicking the tag “jacket”. The same set of top-level categories apply when clicking the different tags, but the starting point is based on whatever tag has referred the user to the search.

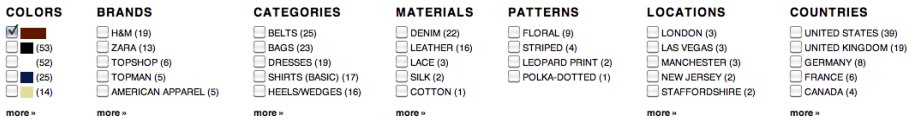


Figure 49. Faceted navigation menu on lookbook.nu

However, the different options available in lookbook.nu’s faceted search is attached to tags of the entire look. This means that it is near to impossible to find a red pair of jeans by selecting both “red” and “jeans”, since the system would merely output looks tagged with both words.

Even so, we acknowledge how this way of navigating through facets and making browsing a form of exploration of the site’s content is a great source of inspiration in how to discover clothes and the people related to clothes.

A way of navigation the faceted search is illustrated by an example from the German car manufacturer Volkswagen. They have used the faceted navigation when browsing their online car catalogue (http://www.vw.com/lineup/en/us/). It is possible to adjust the variables in the menu and the search page will adjust accordingly, though not removing the cars that does not match the criteria, only fading them out in a grey tone.

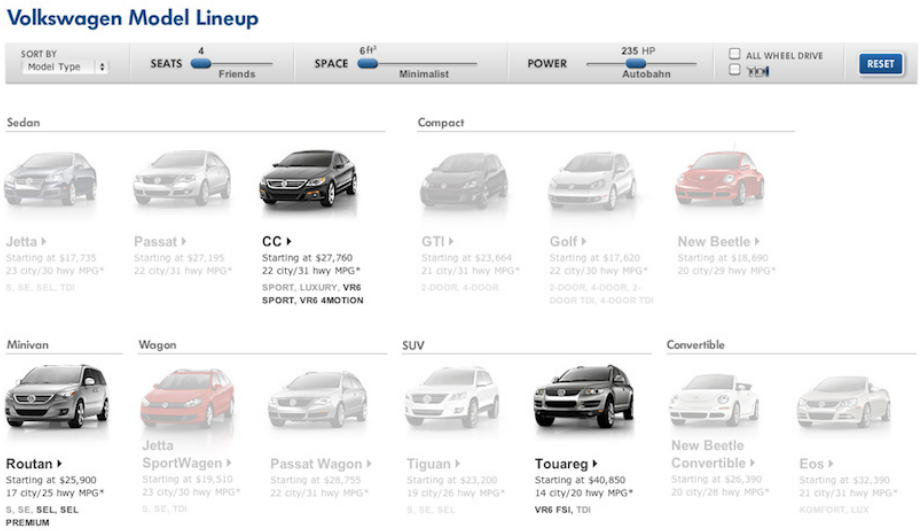


Figure 50. Volkswagen’s faceted search fades out cars

The ideal faceted search on Fashionality would resemble the way a shopping trip would take place, in the sense that the faceted search should evoke the feeling of browsing through racks of clothes. Searching in facets also opens up to the possibility of adding and removing elements in the search, which enables a more flexible navigation. By selecting and deselecting various choices and facets, a complex search query is easily build.

We have added a set of wireframes to the appendix (Appendix I) which show the faceted search on Fashionality when searching for pieces of clothes. It is important to underline that the purpose of these wireframes is merely to illustrate the faceted search function. A proper way of displaying all relevant attributes have not been thought through, neither is the sorting options in the search results displayed in detail. Furthermore, we are displaying an unrealistic number of pieces in Appendix I; at least

we would hope to get more results than 19 when only entering “Levis” as a faceted search parameter. In the wireframes we begin at a default search query where no parameters have been selected. In the following steps different parameters are entered and the search result narrows in. First Levis in brand, then Denim in material, and then Black as colour.

A situation potentially suited for new additions to the Fashionality database is when the faceted search does not give any results. This would cause a page to show, where the user, using the terms already added to the search boxes, is able to add a new item to his or her wardrobe or wish list, or as a last option just to the database. The last page of Appendix I illustrates this.

9.3 Sum-up

Digitising clothes in a meaningful way is the greatest concern we have in relation to Fashionality. It is of critical importance that our system supports the linking of instances of the same piece of clothes.
To aid us we have taken departure in library science, a discipline which have millennia of experience in cataloguing and enabling search of information packages of various sort.

Throughout our work with Fashionality, we have put a lot of effort into identifying a range of attributes that can be ascribed to a piece of clothes. We have identified a range of attributes where some are definitely more important than others. The attributes have been divided between token and instance attributes to account for personal information which each instance of a particular pieces of clothes might have.

We have especially given the attribute “type” attention because we view type as the main identifying attribute of pieces of clothes, and because type is especially interesting in relation to specificity. Furthermore, we view the attributes of picture and brand as important attributes in relation to linking instance of the same piece of clothes together. We look forward to find out if these three attributes combined are sufficient, and especially to find out to which extent we are able to rely on the use of pictures to guide our users.

Developing a well-functioning search engine is of great importance to Fashionality. We both want to enable users to easily retrieve specific pieces of clothes, while also making it an exploratory experience to browse through the database. We have briefly been around interesting search patterns, and have in particular taken note that while people tend to quit faster than we might assume people have also become more adapt searchers. Especially on the Internet we are becoming more skillful searchers, supported by contemporary search functions like autocomplete and faceted search. In the demonstration of different variations of faceted search we have displayed how we imagine the faceted search function to be on Fashionality.

We find both autocomplete and faceted search essential to the Fashionality search system, as it should make it easier for the users to find what they

are seeking. Integrating auto-completion into a variety of functions on Fashionality will improve the way users type in queries (e.g. avoid typos and incorrect spelling). Combined with the way of performing faceted search, we imagine the search function to become both extensive and useful.

Through this section of the report, we have hopefully been able to communicate that digitising clothes is quite a challenge. Even the most trivial attributes prove harder than assumed and no easy answer exist for what design decisions are the best.

The Fashionality cataloguing system has to developed over time. We are not able to foresee all possibilities and limitations before we experience the system in tests or in actual use. We rely a lot on users ability to identify pieces of clothes based on primarily the picture, brand and type name, which might not prove at all sufficient.

In our conversations and discussion, around the development and maintenance of the cataloguing system, we have become accustomed to using the metaphor of a gardener. The job of the gardener in Fashionality is to trim the data by for instance connecting identical piece of clothes and removing unwanted information. During this section of the report we have several times pointed towards how “gardening” in relation to our data is important - we have mentioned, how we will have to interact with the data in different ways to secure its consistency. We can not hope to build a system that handles this entirely by itself. Perhaps in corporation with users, we will have to build a set of mechanism to garden the data in the Fashionality database.

10. Motivating Use

As mentioned earlier in relation to our web 2.0 definition, it is the users that add value by creating and enriching the data of the platform. Therefore engaging the users to participate and contribute with content to the database is essential for the success of Fashionality. Without clothes added to the Fashionality database, the site has no function, so it is important for us as designers to be aware of how we can design to support the users in digitising their wardrobe. Motivational factors are a great part of engaging the users as they need to feel that adding content is beneficial to both themselves and other users of the site. Even though it is impossible to know for sure what kind of elements that will have a motivational effect in the future use of Fashionality, we find it beneficial to discuss some of these elements.

Through our interviews with our lead users, we were repeatedly confirmed that the need for organising clothes digitally exists. We are aware, however, that a significant difference might exist between how people assume their needs to be, and how their needs are reflected in the actual use of the released Fashionality.

In this paragraph, we will discuss and reflect upon some of the design considerations we have had and choices we have made while working with questions relating to motivating use.
They are all on different levels of completeness. While some are mere considerations, others have resulted in wireframed design products. We will initiate this paragraph by discussing the appeal of the community and how we can make users aware of Fashionality in the first place and evoke interest leading to signing up. Then we will discuss the process of signing up to join Fashionality and how we can motivate the users to add personal information and content to their profile and the site in general. Finally, we will discuss how building a useful Application Programming Interface (API) can motivate external use of the data provided by Fashionality.

10.1 The Appeal of Fashionality

"It is a truism that the greatest Internet success stories don't advertise their products. Their adoption is driven by "viral marketing"--that is, recommendations propagating directly from one user to another. You can almost make the case that if a site or product relies on advertising to get the word out, it isn't Web 2.0." (O'Reilly, 2005)

As O'Reilly we acknowledge the value of viral marketing, where users spread the knowledge of an application. However, some users have to be the first in order to be able to spread the message about how incredible a tool and network Fashionality is. We therefore find it important to create some hype and momentum about the site in the start-up phase. At our workshop the participants came up with several ideas for events that could help promote Fashionality in the beginning and as we concluded from our workshops, our group of lead users would in general be valuable

for this kind of idea generating. One of the ideas was for instance an event, where people could bring their clothes, have it photographed, and get help to catalogue it for their personal Fashionality wardrobe. Another idea was to hire professional photographers to take pictures of people on the street. These pictures could then be automatically uploaded to different Fashionality accounts, which the photographed individuals would have access to afterwards. They could then later add additional pieces of clothes and information to their accounts. Furthermore, our group of lead users expressed their intentions to create a profile on Fashionality as soon as the site has been launched.

However, we also find it relevant to look at how the site appeals to different people. As before mentioned, lookbook.nu is for instance an invite-only community where the users either have to apply via the website or get invited from another user already within the community. If an application is filled out via the website (http://lookbook.nu/apply), a "first look" must be attached, most likely to show the initial commitment to the website and its community of posters. The user then have to wait for acceptance before being able to contribute to the site. The invite-only element is a display of exclusiveness, emphasised by the fact that users have to upload a look as a part of their membership application. It evokes a feeling of being judged and that the outcome of the application is based on the appearance of the uploaded look, which may motivate users to "do their best" when attaching their "application look". Furthermore, by forcing people to apply for membership, lookbook.nu reduce the number of "unwanted users", who they see as unsuited for the community. We argue that this process of application acceptance is too much a mirror of a real life fashion setting with a high entry level making it hard for amateurs to get attention.

We can see both benefits and drawbacks of having an invite-only website. On one hand, it is not bad to have an exclusive reputation in the world of fashion and this VIP element could give the site a certain status. It could furthermore be a way of limiting the number of users, who merely create a profile, but never uses it. On the other hand, we want as many Fashionality active users as possible and we do not want to judge, who is worthy and who is not.

It is not our intention to make Fashionality an exclusive community. Everybody that wants to organise clothes, should be able to do it. As a matter of fact, we have put a lot thought into how we make sure that first-time users can get started as fast as possible.

10.2 The Sign-Up Process

"In a theoretically perfect world, the people who try your software for the first time have unlimited time on their hands: they hear about your web application, they go and find out more about it, and, discovering how valuable it is, they sign up for the service immediately. They appreciate the time and energy you've put into your work. The end results is a real, valuable connection between the maker and the user" (Porter, 2008, p. 65)

We are more than aware that the above only takes place in the perfect world. Motivating people to use any type of system, whether it is new or familiar to the user, is a design challenge. According to Joshua Porter, there are eight seconds to make that perfect world connection between the web application and the user (Porter, 2008, p. 65). In our design, we have

considered the sign-up process as one of the key interactions. It is most likely the first interaction the users have with the system and it will force them to think about whether or not it is worth their time to go any further. In the chapter "Design for Sign-up" taken from his book "Designing for the Social Web" (2008), Porter writes about what he considers important when motivating people to sign up for Internet-based applications. Despite having its focus on giving useful and ready-to-use information to practitioners and web designers, we consider some of Porter's arguments and considerations useful in our context.

Porter illustrates signing up as being part of a general usage cycle, a notion which we draw inspiration from. Naturally, the first impression is important, and a bad sign-up experience can keep a user from returning to the website. Right after signing up to the website, the user needs guidance in order to stay focused on the purpose of the website. If an element of excitement can be infused and create a feeling of moving from wanting to use the system and on to actually using it, the initial stages of interaction has been successful. Chances then are that the user will return, use the site continuously and grow to become a passionate user that might even refer the site to other people (Porter, 2008, p. 67). These steps are illustrated below in Porter's usage lifecycle, which he presented at UX London 2010 (Porter, 2010). However, it is our personal experience that the element of referral can occur merely based on the appeal or hype of the system, and therefore can take place even before signing up or using it.

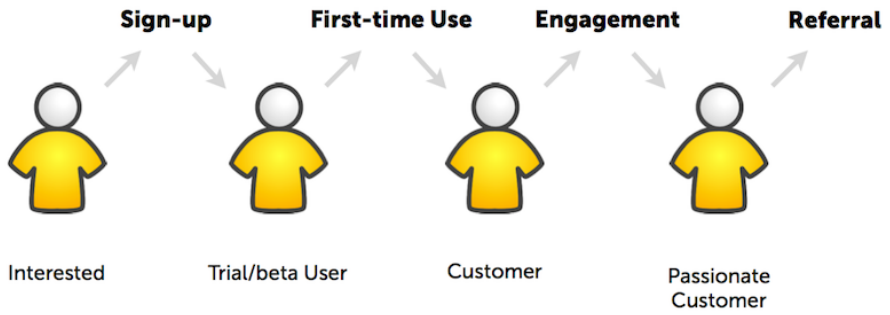


Figure 51. Joshua Porter's depiction of the usage lifecycle of engagement (Porter, 2010)

Porter argues that designing a sign-up framework will increase the momentum that people bring with them to the application (Porter, 2008, p. 68). A sign-up framework can consist of the following:

- An elevator pitch, a tagline, or some other pithy explanation of the service.
- Graphics or illustrations that show how the software works
- Carefully crafted copy-writing that describes the software
- In-depth feature tour or feature pages
- Video or screen cast showing actual use
- Get people started using the software as early as possible
- Evidence of other people successfully using the software

According to Porter, a successful sign-up framework will make the hurdle from being interested into becoming a first-time user less complicated.

"Like journalists, web designers have a core task when designing for sign-up: they have to answer basic inquiry questions" (Porter, 2008, p. 69)

The sign-up framework is much inspired from journalism, asking the straightforward questions: What is the site about? The service should be designed with a simple statement that will encourage people to learn more. How does it work? This question could involve video or a simple four-step graphic description on the front page. In relation to the Fashionality project, a step-by-step guide of the activity of adding a new piece of clothes and ending up sharing it with your entire network would be a handy, front page tutorial. Why use the service? Exemplify who is using the service, as "people respond to the activity of others" (Porter, 2008, p. 80). Porter refers to how we let "social proof" control our behaviour: "So to make a person's decision easier, show them how others have made the same decision and succeeded. Give evidence that others are using it" (Porter, 2008, p. 81). Letting users find their friends through various search elements have become popular and is an easy way to make quick connection and check if the service is being used by any friends at all. Besides referring to the concept as a framework, we also see the process as an analysis of how possible and first-time users might think when interacting with software.

"Upon sign-up, ask only for information that's absolutely necessary" (Porter, 2008, p. 92)

Luke Wroblewski uses the term "progressive engagement" to describe how users should be able to do as much as possible on site without having to sign in (Porter, 2008, p. 93). It is crucial to the Fashionality design that the users are able to engage as soon as possible with the actual service. The users should not be hindered by a complicated and demanding sign-up process if they merely want to add clothes to their virtual wardrobe as fast as possible.

As mentioned above, lookbook.nu is an invite-only community where applications must be processed and accepted by someone within the organisation behind the website in order for users to start uploading looks. However, lookbook.nu has opened up to some features within the community that does not demand an invitation or accepted application, as it is possible to connect to lookbook.nu and comment and rate/hype via a Facebook, Twitter og Tumblr account. However, to post one's own looks, the process of acceptance must be initiated.

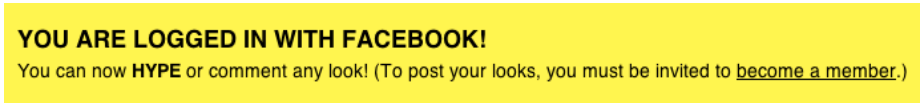


Figure 52. Connecting on lookbook.nu via a Facebook account

We argue the function of signing in via external accounts to have both positive and negative effects. The positive effect is that users who do not have the urge to post looks - and do not want to spend time going through an application process just to comment on or rate a look - can with a few clicks sign-in via an external account and begin to rate and interact with users of the community. The negative effect would be if everybody chose to sign-in via an external account instead of creating a Fashionality wardrobe. This disables them from adding pieces and looks, and as we have mentioned earlier, the success of Fashionality depend on users adding this kind of content.

Inspired by the online fashion communities we have been investigating,

and with Porter's considerations in mind, we have designed a set of sign-up process wireframes illustrating how we intent to make the entry and introduction to Fashionality quick and easy (these are included as Design Appendix IV).

The first wireframe illustrates the sign-up front page. Here it is possible to view a short video introduction, explaining why Fashionality is such an amazing (!) tool and how it can be used. At the bottom of the page - actually on every page in the sign-up process - we furthermore illustrate the core functions of Fashionality in three boxes: share, organise, inspire. The two elements - the video and the boxes - should help answer the What, How, and Why questions that the users might have towards the purpose of the site. On the front page, the user have to submit an email address in order to initiate the sign-up process.

The second wireframe illustrates the confirmation page the users are sent to immediately after submitting their email. Besides giving instructions, there is the possibility to browse through looks of Fashionality users. This element establishes a progressive engagement; inviting the users to interact with the community without actually having fully signed in yet. Furthermore, it puts current users on display and proves that other people are successfully using the service, which Porter emphasised as important.

The third wireframe does not illustrate a part of the site itself, but the email confirmation that the users receive after having signed up in the first wireframe. The short three-step guide indicates that the users are almost ready to begin adding clothes. We have included the boxes from the site that illustrate the core functions of Fashionality, in order to ensure consistency within all the steps of the process.

The fourth wireframe illustrates the final step before proceeding to the wardrobe. The user have to make up a username and receives feedback from the system whether or not the desired username is available. The wording of the feedback: "It's a great name!" is a part of the overall informal style that has been established throughout the wireframes: "We'll use your email address to send you a link to the final part of the signup process! Nothing else - pinky swear!" (first wireframe) and "Browse some cool wardrobes while waiting for the mail man..." (second wireframe) are other examples of this.

10.3 Adding Content

With the users signed up to the community, adding content is the main activity. Adding content can be interpreted in different ways. The primary activity is uploading pieces of clothes to the virtual wardrobe, but other additional activities of contributing with content are also present when joining Fashionality. Filling out specific profile information like for instance body measurements is another activity related to adding content to Fashionality, and this one in particular raise interesting questions in relation to privacy issues, which we will be discussing in this paragraph.

10.3.1 Rewarding Interaction

On the style gallery Chictopia it is possible to earn "chic points" when adding a look, posting in the forum, writing reviews, commenting, getting comments, and obtaining fans to the user's own profile. These chic points can eventually be redeemed in the "chic rewards" section of the site, where various retailers sponsor items users can "buy" with their points. It is a good example of how different elements can motivate user interaction, which is an essential inspiration to the Fashionality design. However, the model used on Chictopia have risk of affording trivial comments from users only interested in earning points and not in adding value to the community.

Rewarding systems are also known from many forums (e.g. experten.dk) across the Internet, where the users get rewarded with points for providing a good solution to a problem stated by one of the other users. The amount of points the users have, provides them with a certain status, which again can be used for assessing the value of their suggested solutions. In this way this rewarding system can have a reinforcing effect. However, in comparison to the system used on Chictopia, this system rewards valuable contributions to a higher degree.

While we find these different approaches inspirational, we do not want to copy any of them in their specific form. Instead we have come up with some suggestions to how Fashionality can reward interaction:

- Weekly/daily lists showing the "most active user" (based on the amount of uploaded piece of clothes/looks), "most commented look" and "most favourited look" (based on the amount of users who have added a certain picture to their favourites-list)
- Competitions with for instance the following descriptions: "Combine a look using black leather pants from H&M" or "Combine a look using something blue"
- Interviews with the most active users

10.3.2 Profile Information

Having an account within the Fashionality network is essential since it is here a user can gather personal information and access his/hers uploads and updates. In relation to this, we have put some thought into how we can design to get people to fill out as much information as desired. Since we designed a minimalistic sign-up process where the first-time user do not have to fill out any personal information besides username and email address, we need to involve people in filling out data as soon as they log-in for the first time. At UX London 2010, Stephen Anderson gave a presentation called "The Art & Science of Seductive Interactions". The presentation analysed how designing for engagement on social media websites has become an increasingly successful implementation in many instances. As one example Anderson mentioned the LinkedIn "profile completion percentage" feature as one of the interactions designed to give the users an overview of how close they are to have a complete profile.

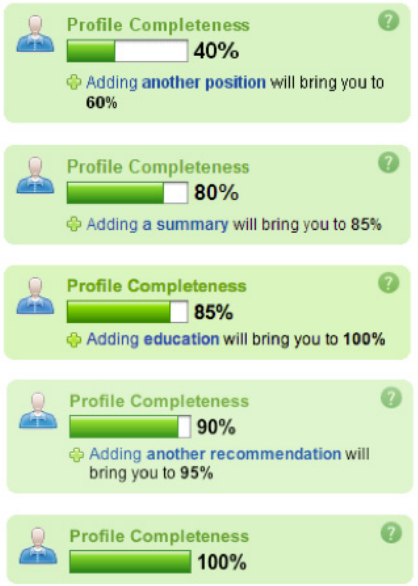


Figure 53. Profile completeness on LinkedIn (Anderson, 2010)

This element can stimulate some users to fill out their profiles faster or more thoroughly in order to reach the goal of 100% completeness. We find this element very interesting and would therefore like to include it in the Fashionality design.

Privacy Issues

The considerations towards the profile also involve focusing on privacy in regards of the information users have to pass over to the Fashionality site. Terms like "peripheral participation" and "social surveillance" are brought on to the social web scene by social network sites such as Twitter and Facebook, where social surveillance is happening on different levels: from friends monitoring friends to authorities monitoring certain groups or individuals.

"Online social networking can also be empowering for the user, as the monitoring and registration facilitates new ways of constructing identity [...] This changes the role of the user from passive to active, since surveillance in this context offers opportunities to take action, seek information and communicate. Online social networking therefore illustrates that surveillance – as a mutual, empowering and subjectivity building practice – is fundamentally social." (Albrechtslund, 2008)

Every service users sign up for today demands them to hand over information about themselves. Whether it is Google, Facebook, Skype, Flickr, Twitter – or any other kind of Internet-based service – they will have to provide some information about themselves at some point. In return for the free account, email service, or profile page, the services get information about users and store it somewhere "in the cloud".

The issue of online privacy and rights concerning the use of user-created content must have been one of the most debated issues of social media in the last couple of years (e.g. by Fred Stutzman on http://fstutzman.com and by Michael Zimmer on http://michaelzimmer.org). Facebook, as an example, has been very criticised for their privacy policies, which for instance make it possible for third parties to harvest information about the users and use it for marketing purposes (Nissenbaum, 2010, p. 222). The style gallery Chictopia has also been criticised for their handling of user-created content, as users have found their outfit pictures uncredited used in an advertising campaign for a shoe company, without their knowledge or consent (Epstein, 2010). In this case it becomes a discussion that resembles the one concerning "Loser-generated content", we included in the discussion of web 2.0, as the users are exploited in situation that are not beneficial for all parties involved.

Furthermore, it is a question of what kind of content Fashionality should demand of the users to fill out and consequently publish on their profile. When establishing a community of people interested in fashion, information about the individual user's size, height, weight, and the like will be value information in regards to estimating how similar a user is to one self. This is, however, sensitive information for young, appearance-aware people and the publication of these data must therefore be carefully handled - if published at all.

Paul Adams, Senior User Experience Researcher at Google, explains how trust towards a system is closely connected to privacy: "Privacy and trust go hand in hand. If people trust you, they'll do business with you. And on the social web, people need to trust you with a lot of very personal, very private data. How you manage their privacy will often determine how much they're willing to trust you. So this is important not just for maintaining people's sensitive information, but important for building long term repeat business. If your privacy practices aren't transparent, then you introduce doubt. Doubt leads to lower usage" (Adams, 2010, slide 209-210).

As described earlier, the Fashionality database works best when supplied with a lot of data (in the form of many pieces of clothes), but how much clothes are the users willing to share? For instance, the users might be reluctant to put every little piece of underwear in their virtual wardrobe, if they knew that everybody would be able to look at it and comment on it. In this connection it will be necessary to decide if the virtual wardrobe should be open for everyone or be limited to "friends"/"followers". As the virtual wardrobe is able to also function as a personal tool for organising a user's pieces of clothes, a model could also be that it is possible to "hide" certain pieces of clothes for others to see.

10.4 An Open API

In connection with our investigation of fashion blogs, we have given a lot of thought to how we could integrate them on Fashionality. At the earlier stages of our thesis work, fashion blogs were a huge concern to us as we did not see the potential of Fashionality to "overtake" what the bloggers are doing in a successful manner.

In relation to the motivational level of Fashionality, we find it inspiring to look at the contemporary use of Application Programming Interfaces (API). An API is used to enable a service to interact with other services or software, and every succesful web 2.0 website seems to have an API. Perhaps the most tributed example of a well-functioning API is the Google Maps API. Over 350,000 websites use the Google Maps API, making it the most heavily used web application development API (Pegg, 2010). Through the API, people are able to integrate Google's maps on their own website on to which site specific data can be overlaid. In essence, any social software with user-generated data has the possibility to develop an API in order to let users extract data from the applications' database and onto their own application, service, website, blog, etc.
Facebook's role in social media today comes from partly its creators' decision to open up the foundation of Facebook and allow external sources to develop applications and publish them on the platform. This has led to many thousands of different applications and games that let users interact with each other. This type oof success is difficult to overlook, however not in a sense that we want to develop a Fashionality Facebook application. Instead, like in the case of Google, we find inspiration in how Facebook's API allows people to develop applications using Facebooks data. Another example of Facebook's API is the "Facebook Connect" feature, which lets users use their Facebook profile as authentication on other service platforms. We touched briefly upon Facebook Connect when we discussed how lookbook.nu involves users by letting them sign partly in via Facebook, Twitter or Tumblr. Besides lookbook.nu, several other internet-based

services such as Foursquare, Twitter and Wordpress have implemented the Facebook Connect API (Morin, 2008). Connecting to Facebook has also spread to traditional media companies like the newspaper The Guardian where online readers are able to connect to share and discuss articles. Furthermore, gaming platforms like Xbox 360 and Nintendo DS have Facebook Connect enabled.

Enabling user to extract the data from the Fashionality database in all kinds of ways is something we wish to design for. In the paragraph on digitising clothes we briefly touched upon the idea of using the attributes of price, store, and date to generate "mash-ups". For instance, mashing our data with Google's maps to create maps overlaid with information in relation to clothes. On such maps it would for instance be possible to see where pieces of clothes are being bought. Another example is to integrate the Google Maps with the wishlists on Fashionality to create "shopping maps" that users can use when they go to a foreign city. On such maps it would be possible to see where to go to get the piece of clothes on ones wishlist - perhaps at the lowest price.

The mash-ups described above are however not examples of something the average user is able to develop. APIs are often used to share content, and to the average user, we find much inspiration in how for instance YouTube and Flickr makes it possible to "embed" their content on other websites. By merely clicking on the "embed" button at the video player on YouTube the user receives a piece of "video embed code" which he or she has to paste on the website where the video has to appear.

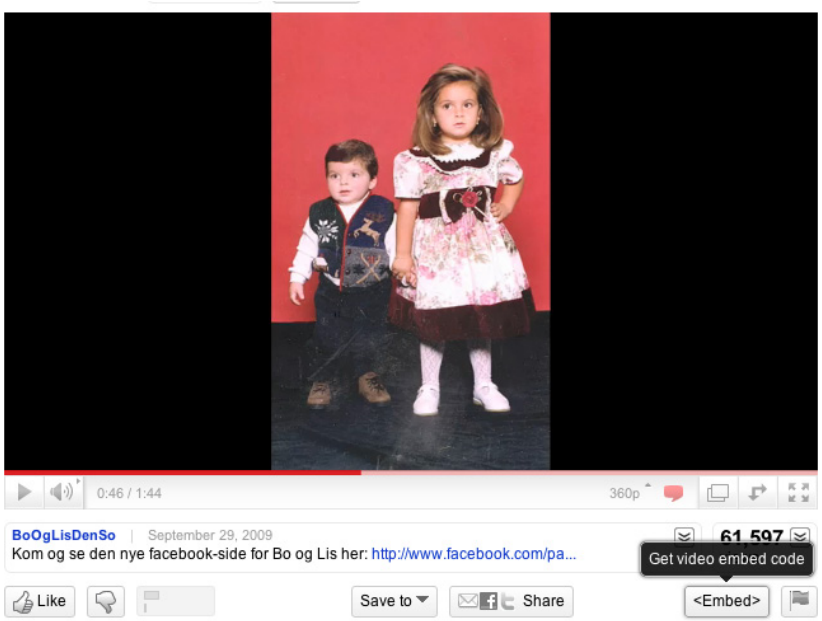


Figure 54. Screenshot showing the <EMBED> button on YouTube

Something very similar to this should be possible on Fashionality. The fashion bloggers, who we initially could not figure out how to integrate, should be able to pull content from Fashionality and embed it on their own blogs. From our interviews and exploration of fashion blogs we experienced that almost every time a fashion blogger posts a look on their blog, they also write which clothes they are wearing in the look. Furthermore, in the comments that readers write, we experience that it is almost more the rule than the exception that the readers ask for more details about the clothes - "where did you buy it?", "how much did you pay?", and various other questions in relation to the specific look.

If the fashion bloggers use Fashionality as a tool, it will hopefully be easier for them to post information about their clothes on the blogs. Clothes that have already been added to the database, for instance in the fashion blogger's virtual wardrobe, should not require more than a few clicks to embed. Using fashionality the fashion blogger will be able to save time every time he or she posts a piece of clothes on the blog more than once, which often is the case since the same piece of clothes often is present in more than one look picture. In the usage narrative in the beginning of the report we illustrated this use of embedding, when we told the story of Pernille. Pernille furthermore embeds an entire look on her blog through her mobile phone, which should be possible as well. A last, and a bit more technical, example could be that the fashion bloggers synchronize their Fashionality wardrobe with their blogs, which for instance could display a list of newly added looks as a widget in the sidebar of the blog. In all examples, the readers of the blog should be able to interact with the embedded content, which would direct them to further information and relations on the Fashionality website.

When the piece of clothes or look is displayed on the users own blog, he or she should be able to customise which pieces of information he or she wants to include from Fashionality. We do not want to dictate how the users should embed our information, instead we would like to make it easy for the users to make this judgement by themselves. A solution would be that a set of default pieces of information will be displayed unless the user chooses to customize the embedding. Such a customization could also make it possible for users to change aesthetic aspects about how the information is presented - the colour, the border size i.e.

We hope that by presenting Fashionality's API to the fashion bloggers in this way, they will be motivated to try out Fashionality as a blogging tool. The ones we have been able to tell about Fashionality in this way have responded with enthusiasm. A further positive side to this is that this type of use of Fashionality is not dependent on a lot of clothes already existing in the Fashionality database. The fashion bloggers would only really need the clothes they are adding themselves, which would make Fashionality a much more personal tool as well.

10.5 Sum-up

By looking at how we can motivate use and users, we have tried to answer the question of how we can design to support users in their need to digitise their wardrobe.

We started out by discussing how we could make Fashionality appeal to potential users. Some of the possibilities were to establish momentum and hype about the community by creating various events. In this connection it would be beneficial to include our group of lead users for the generation of further ideas. In regards to our group of lead users, we also see them as some of the first actual users of Fashionality. We also discussed the possibility of making Fashionality an invite-only community, but concluded that Fashionality should be open to all fashion-interested people.

In the paragraph we also looked at how a smooth and informative sign-up process could motivate users to create a Fashionality wardrobe. We presented a set of wireframes displaying the process, which we

intentionally designed not to be too complex and demand too much information of the user.

We furthermore discussed how users could be motivated to add content on Fashionality by rewarding their interaction in some way. In this connection we discussed the benefits and drawbacks of rewarding systems in other communities and used these as point of departure for developing some of our own. Our considerations towards rewards included “look of the week”, competitions, and interview with popular Fashionality users.

In connection to adding profile information, we concluded that the use of a “profile-completion-bar” would motivate the users to add more content to their profile. We also discussed the nature of this information as regards to privacy and concluded that it is information that should be carefully handled.

Lastly we discussed the design of a functional API. This included considering how to externalise the use of data added to the Fashionality database; how bloggers can use the data added to Fashionality on their own blog. We also discussed how various different mash-ups between external applications and the data from Fashionality could provide functionalities such as Google Maps showing a user’s wishlisted clothes in a city of choice useful when shopping. We concluded that the use of an open API could motivate people, both technically novice and experienced, to use Fashionality.

11. How Fashionality Has Grown

"When the inventor looks back at the end of his journey, he sees no straight line but a jagged path in which each deviation from plan represents the discovery of a new relevant variable or the addition of an important new requirement." (Schön, 1967, p. 13)

In retrospect it is interesting to look back and examine how Fashionality has developed over time. It is interesting to compare the initial idea with the idea we have of Fashionality now, both in our minds and mediated in design products.

When we started out, the primary goal of Fashionality was to compete with Trendsales, which - as mentioned earlier - is a auction website with its focus on clothes. At that time Fashionality was not even called Fashionality yet, and the idea of mixing the words fashion and personality was not thought of until much later.

Trendsales has a lot of users, but their system is not very user-friendly or inspiring, and we saw an opportunity to build a system that users would care more about than Trendsales. We wanted to build an alternative auction system and incorporate web 2.0 inspired technologies. The idea of having a strong clothes database was part of Fashionality from the beginning. So was the idea of users having their clothes in virtual wardrobes and enable them to create looks. Through this we saw the opportunity to construct a "reverted auction" where, instead of focusing on how people set their clothes for sale, we wanted to focus on how people would be able to bid on clothes in each others wardrobes. In general, we wanted to build a more user-oriented and inspiring system than the 10 year-old Trendsales.

It troubled us, however, that Trendsales was such an obvious place for us to let people know about Fashionality. Because of the huge amount of users on Trendsales, it would be perfect to promote Fashionality on Trendsales in some way or another. However, it did not seem morally right to expose our alternative on the very site which we wanted to be an alternative to.

Because of this we decided that it would be best to launch Fashionality without the buy and sell function and instead began focusing on other things. For instance we began exploring the possibility for Trendsales users using data from Fashionality when selling pieces of clothes. Even without the buy and sell function which initially had been important to us, we felt that Fashionality was a strong enough concept.

From the beginning - after having identified fashion bloggers as our keystone species - we tried to figure out ways for these bloggers to benefit from using Fashionality. From the beginning, we considered the bloggers one of our main target groups, because of their role as lead users, keystone species, and trendsetters. The fashion bloggers spend a lot of energy on their own and others blogs, and we wanted some of their attention.

However, it was not clear to us how to associate ourselves with the fashion bloggers. Initially, we imagined that Fashionality would be a good platform for people who are not starting a blog of their own, but it was not clear how we could benefit from the activity carried out on the fashion blogs. We experimented with different ideas on how to include the fashion bloggers; for instance pulling feeds from the blogs to Fashionality making it possible for others to see blog posts (originally posted on respective blogs) right on the user profile on Fashionality. However, we were not very satisfied with this idea, because we felt that it to some degree tried to undermine what the bloggers were already doing perfectly well on their own websites, and we did not think that they would be interested in using Fashionality in this way.

Our frustration of not really feeling that we were contributing to the already well-thriving fashion blogosphere, made us shift our way of thinking. We moved away from thinking how we could pull data from the blogs to Fashionality, and instead began thinking how we could pull data from Fashionality to the blogs. It was almost a moment of eureka when this happened, and it opened up to a completely new way of thinking about Fashionality. To us, thinking beyond the boarders of our own system, was a much more ecological approach.

This shift in thinking made us move away a bit from interface design, which had been a main interest of ours until then. We began exploring different APIs and started to wonder how the data of Fashionality would be able to interact with other systems - for instance the personal fashion blogs. To some extent we moved away from the idea of trying to have Fashionality handle everything in relation to clothes, and instead we moved towards a more realistic niche for our system. At least, when Fashionality is initially released it is important to focus on the role as tool for fashion bloggers.

The shift also made us more comfortable in relation to our own ideals. As we mentioned in the section on web 2.0, we value the openness of the Internet and would like to participate in strengthening this openness further. Our ideals and ideas come together when we shift from viewing Fashionality as a business case to viewing Fashionality as a contribution to the open platform of the Internet.

Today we believe to have a strong concept. On one hand, Fashionality is supposed to be an interesting standalone website with an excellent navigational interface, and on the other hand Fashionality is supposed to be a rich database of clothes that through an open API is ready to get exploited by whoever wants to.

During the fall of 2010, we will attend business development courses as a part of an optional 11th semester offered by Aalborg University's Career Centre and focus on how we continue to progress working with Fashionality. Our forecasted goal is to launch Fashionality as a web-based fashion community during the fourth quarter of 2010 or first quarter of 2011.

12. Conclusion

The journey of moving from the rough idea closer towards a formal description has been exciting in many ways, which we have tried to express throughout this report. In the following, we will conclude and reflect on the different parts of our work.

12.1 We Explored the Genre and Ecology of Fashionality

The analyses of both web 2.0 and online fashion in The Genre and Ecology of Fashionality has supported our establishment of a common ground when talking about the world that Fashionality is supposed to become a part of. We have portrayed the phenomenon of web 2.0 and captured different views in our quest for definitions, which subsequently strengthened our technological conception of the phenomenon. Furthermore, this has guided our understanding of how to carry out our design work while paying attention to contemporary trends of connectivity. Exploring and researching the online fashion ecology were the primary activities from the beginning. Concurrent with and informed by these exploratory approaches we decided on a set of subproblems. We argue that these subproblems are important both in bringing Fashionality to life and for us to communicate our thesis work in a meaningful and relevant way.

12.2 We Interacted with Participants

Working within User-Centered Design it was natural for us to interact with participants. In correspondence with our analysis of the fashion ecology we began to engaging with the inhabitants. We familiarised ourselves with the fashion ecology through its keystone species - the fashion bloggers and the style gallery users. We did this both to seek help in the design of Fashionality and to get confirmation of the niche which we had planned for.

In the section on Interacting with Participants we discussed how it is far from easy to include participants in a design process. We discussed problems in relation to establishing contact, presented and analysed our concrete interactions with users, our interviews and workshop. Even though our theoretical background points towards user participation in an almost religious way, we argue that the decision to include users is not obvious, and not all developmental projects will benefit equally from such inclusion.

It was truly an educative experience to interact with possible future users, and we feel significantly better equipped for both later work in relation to Fashionality, but also future projects where we will have to draw upon our experiences with users.

12.3 We Communicated Design

In Communicating Design we have been discussing the notion of design and portrayed it as an activity that involves much more than merely transferring thoughts onto a specific media. In design we enter in a reciprocal relationship with our design products.

Through our design work we have become increasingly aware of how the design methods we choose to use, mediate our communication in certain ways. Our use of different design products show that each has a specific communicative purpose of its own, and it has become apparent to us that utilising several design products in a complementary process has turned out to be beneficial in the situation of communicating the design of Fashionality. No design product is able to completely illustrate a design on its own.

No matter what design method we use, from sketching to prototyping, it is a craft which takes years of practice to master. We feel comfortable having experienced a variety of methods, and at the same time we feel excited when eyeing towards the work that still lies ahead.

12.4 We Digitised Clothes

Through our work we have shown that digitising objects within complex domains is not easily done. In the section on digitising clothes we have underlined that a strong database system together with contemporary search functions is a key parameter in the survival of Fashionality. Without it Fashionality would just be yet another style gallery. In the section we have examined what is required to digitise clothes in a meaningful way. We argue that the body of knowledge, which is available from library science, is valuable even in relation to a system like Fashionality. Through our examination of clothes we have identified a set of attributes which we have thoroughly analysed. This analysis has made it possible for us to determine which attributes are more or less important, and furthermore the analysis has heightened our understanding of the complexity of clothes in general. Many times during our analysis we have been confronted with a level of complexity, which we do not believe that any information system would be able to organise by itself. We argue that if a system like Fashionality has to survive, the design of the system benefits from including ways to let both developers and users “garden” the data in the system.

12.5 We Explored Motivational Elements

We are not able to create needs within people, but in relation to motivating use we have identified a need to use a system like Fashionality. Our job has been to analyse different parametres that all affect the motivational value of Fashionality. From our interaction with participants we experienced a high level of motivation in regards to building a momentum for Fashionality, and in the report we have discussed some of these approaches. Furthermore, we have worked informed by the assumption that if we make something more convenient for people to do, they will do it more often or be more

likely to do it in the first place. We have focused on the process of signing up on Fashionality, which we believe is of essential importance in relation to motivation. Of course we do not believe that a well-functioning sign-up process alone is able to motivate anyone, but we argue that this key point of interaction need to be thought thoroughly through. Lastly we concluded that a well-functioning API is essential in order to let Fashionality communicate with other systems. The use of Fashionality data on other websites is of high value when motivating the fashion bloggers, a user group we have been interested in integrating in some way or another.

Fashionality is worth nothing if we do not have any users. Furthermore, Fashionality is worth nothing if the users we have are not contributing.

13. Reflections on Research and Design

The common interpretation of the relationship between research and design is that first you do research and then you do design. The activities of design takes over the activities of research, and are informed by research. This is also the relationship which Morville and Rosenfeld intend to illustrate in "The process of information architecture", which we included in the introduction to our report.

When the designer is asked how he or she arrived at a particular design, the designer is able to point towards the research done in advance. For instance; "the specific button is colored red instead of green, because research shows that a larger number of users drop out of a process if the button is green than if its red", or "the design makes it possible to comment on other people, because 87% of the interviewed participants asked for it". To some people at least, the quality of the design is then measured by the extent to which the designer is able to account for his or her choices. The more scientific this account is the better. If the designer is able to say that calculation determined that the design had to be in a particular way, it weighs more than a designer who says that he or she was inspired, or in the best case is able to retrospectively tell the story of how he or she arrived at the particular design.

Based on our experience we find the above problematic. At least it is not how we have experienced our work, and neither is it a description of how we would like our work to be. In the following we will reflect on the relationship between research and design and present issues which we find challenging, if the above description is a description of how the relationship between research and design "ought to be". During our work, two major issues have occurred in relation to research and design. The first issue concerns the demarcation of research and design respectively. We have found it hard to draw a line between which activities are considered to be research and which are not, a line which is also hard to draw in relation to design. The second issue concerns a reciprocal relationship between the two. We have experienced that research have a tendency to become design and design have a tendency to become research. In our reflection, we are able to consider both research and design as being subject to or part of each other.

13.1 Non-demarcation of Research and Design

Some activities are conventionally easy to interpret as research. In our case an example of this is for instance interviewing users. However, during our work we experienced that the project is somehow always more or less present in everything we do: in other words, we are always researching. Between (or underneath) the conventional research activities we are directing our attention at how Fashionality ought to be. We communicate with family, friends, acquaintances, professionals and most of all each other. We try to understand the people we consider future users, and in

the process we find ourselves following random fashion links and even becoming more aware of the clothes we wear.

The same is the case with design. Some design activities are more conventional than others. In the literature related to Information Architecture, activities like constructing wireframes, prototypes and diagrams are treated as conventional design activities. However, like with research we find ourselves beyond structured design work performing ad hoc sketching either alone or together with others. Especially in the company of each other we frequently pull forth paper and pen to illustrate or examine ideas. Taken this into consideration it is hard to demarcate both research and design and merely conceive of these as being structured activities like performing a planned interview or constructing a wireframe.

13.2 Reciprocal Relationship Between Research and Design

We argue that the "ordered" interpretation of the relationship between research and design is not very aligned with the process in reality, at least not unless the process is forced to fit the description. By forced we argue that this could for instance be economical and manage mental boundaries that 'force' a developmental process to stay within a certain plan. However, in our somewhat more creative and open process of development, our research activities and design activities melt together as we do not work under these constraints.

In general, research activities are 'interrupted' by design activities when the need for mediation design products arise. In an interview situation, typically considered within research, we often find ourselves presenting parts of Fashionality to participants. While some of this presentation is planned, some also emerge ad hoc and afford us to perform design activities on the spot either through sketching, diagramming, or even narration. In this case, design is acting as a tool for research and aids the communication between participants and us. Another example is what happens if we are exploring related websites. In situations like this, findings often motivate us to say something like "would it be possible to do something like this on Fashionality?", and then forget the website in question for a while and instead begin sketching.

In general, design is taken over by research when we encounter a problem during our design work, which requires further research. A breakdown that either result in new ideas or forces us to question some of our already established design ideas. The most obvious example is if we for instance return to interview participants to understand their view on a specific design decision. But design itself is not just a matter of projecting ideas on to a mediating product. We decide how Fashionality ought to be on the basis of our experiences. It has a certain "shape" to begin with, but is transformed and refined as a result of the activities we participate in. During our work we encounter situations - formal as well as informal - that motivate us to change something about Fashionality. We constantly move between a mode of questioning and a mode of answering - between research and design. We come up with new ideas that are either compatible or not just yet compatible with our current image of Fashionality - ideas that are either assimilated into the current image or ideas that force us to rethink past decisions. Fashionality releases itself from only being

represented to us in thought and speech and takes on the form of mediating design products as well.

There are plenty of examples which illustrate that research and design are not easily thought of as being separate activities. Research can be considered part of design, and design can be considered part of research. In our experiences it is hard and even unwanted to separate the stages of research and design, and these are best treated as parallel activities in a reciprocal relationship with each other. When doing a development project as Fashionality, at our own expense with no time limit, it can be very limiting to force a specific direction. The inability to go back and research further into a specific matter, because of some conclusive design decision, will be hindering to the creative process which we have experienced our work with Fashionality to have been. Furthermore, the inability to take design decision without research to back it up is equally hindering. As illustrated below in figure 55, we consider the relationship between research and design as reciprocal activities that constantly inform and adjust each other.

The figure tries to take into account that the activities of research and design are not always carried out within structured boundaries. Findings of research occur in unexpected situations and products of design are created as an ongoing process. Furthermore, the illustration tries to take into account the reciprocal relationship between research and design, it does not try to force a specific direction between the two.

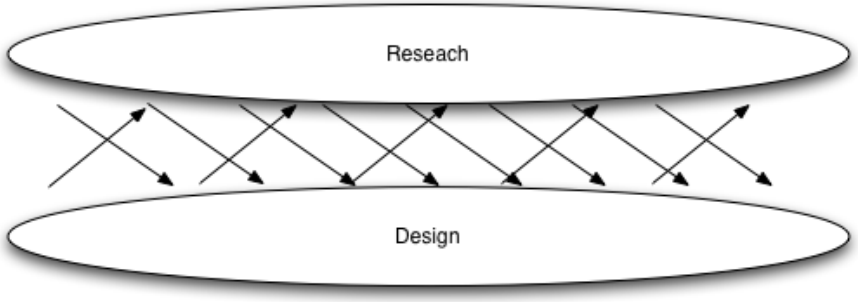


Figure 54. Reciprocal relationship between research and design

Early in the report we used a figure to illustrate the movement from rough idea to formal description. We have blended this figure with the one above which have resulted in a figure, which we believe illustrates our process quite well. In the figure, activities of both research and design inform the design process, but it is not a matter of first doing research and then doing design.

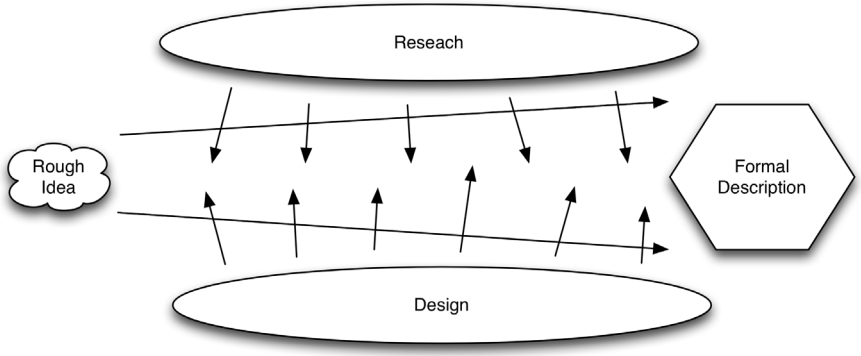


Figure 54. The Process of Fashionality

Coming to the end of our report, we would like to take a stance in relation to the role of the information architect. Even though each of us individually choose our role, our fields as a whole can move in different directions. There is a vast difference between how the accountability of design decisions are valued in different organisations and companies. Some lean towards the designer as an artist, who do not really have to account for his or her decisions, while an increasingly large number lean towards the designer as a scientist, who is able to calculate the right decisions. A company like Google will not implement a feature in their catalogue of systems, unless the feature has been thoroughly accounted for through scientific testing and research (Porter, 2010). To some extent we fear that this tendency will spread to software design in general and in that way structure in which direction information architecture will go.

At least, we find it meaningful to distinguish between ideation and refinement in relation to development. We argue that especially in relation to ideation it is not meaningful to limit ourselves to the decisions, which we are able to trace back to parts of our research. In some cases our concrete design decisions are traceable to clearly defined research activities. However, many of our design decisions are not considered a result of a set of well-defined activities, instead they have emerged from unexpected situations.

Especially in relation to creative and innovate processes, which we would like to argue that ours have been, there is a need for the artist acting on behalf of inspiration. It is obviously beneficial to reflect on why we have taken a specific design decision, though it is not beneficial if this reflection is reconstructed and organised as an argument as to why the specific design decision was taken.

Regardless the level of accountability we as designers are able to raise as an argument, as to why we have taken a specific design decision, this design decision will always be a decision. No matter what, we will not be able to completely seek refuge in research data, in the end the decision is always ours.

14. Division of Responsibilities

Content	Mia	Mathies	Anders
Usage Narratives		X	
Introduction	X	X	X
Problem			X
Reading Guide		X	
Method	X		X
The Genre and Ecology of Fashionality	X	X	
Interacting with Participants	X		X
Communicating Design		X	X
Digitising Clothes	X	X	X
Motivating Use	X	X	
How Fashionality Has Grown			X
Conclusion	X	X	X
Reflections on Research and Design		X	X

15. Literature

ABC (1999, July 19). Inside IDEO part 2 [video file at Youtube]. Retrieved 02.08.10 from http://www.youtube.com/watch?v=_civr9fr4iw

Abras, C., Maloney-Krichmar, D., Preece, J. (2004). User-Centered Design. In: Bainbridge, W. Encyclopedia of Human-Computer Interaction. Thousand Oaks: Sage Publications.

Adams, P. (2010). The Real Life Social Network v2. [Slide show]. Slide Share. Retrieved 01.08.10 from http://www.slideshare.net/padday/the-real-life-social-network-v2,

Albrechtslund, A. (2008). Online Social Networking as Participatory Surveillance . In First Monday. 13(3). Retreived 19.07.10 from http://www.uic.edu/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/2142/1949

Anderson, S. (2010). Stephen Anderson's presentation "Seductive Interaction" from UX London 2010. Retrieved 21.06.10 from http://uxlondon.s3.amazonaws.com/slides/SeductiveInteractions.pdf

Bennett, J. (1996). Reflective Conversation With Materials: An interview with Donald Schön. In: Winograd, T. Bringing Design to Software. Addison-Wesley

Blogger.com (2010). What is a blog? Retrieved 02.08.10 http://www.blogger.com/tour_start.g

Brown, Dan. (2007). Communicating Design: Developing Web Site Documentation for Design and Planning. New Riders Press.

Buxton, Bill. (2007). Sketching User Experience: getting the design right and the right design. Morgan Kaufmann.

Bødker, K., Kensing, F. & Simonsen J. (2000). Professionel IT-forundersøgelse. Samfundslitteratur.

Bøgh-Andersen, S. (2010, May 28). Tematisering af den danske blogosfære. In Overskrift.dk. (Retrieved 02.08.10 from http://blog.overskrift.dk/2010/05/28/tematisering-af-den-danske-blogosfære/

Cockburn, Alistart. (2001). Writing Effective Use Cases. Addison-Wesley.

Corcoran, C. T. (2010, 17. February). Fashion's New Fever : Bloggers in Spotlight As They Aim for Fame/Bloggers : The New Celebrities. In Women's Wear Daily, p. 1 & 18

Cutter, C. (1904). Rules for a Dictionary Catalog (4. edition). Washington, D.C.: Government Printing Office

Danmarks Statistik (2009). Vi blogger, chatter og downloader som aldrig

før. In Nyt fra Danmarks Statistik, (273). Retrieved 02.08.10 from www.dst.dk/nytudg/12287

Danmarks Statistik (2010). E-handlende kvinder nærmer sig mændene. In Nyt fra Danmarks Statistik. (287). Retrieved 02.08.10 from http://www.danmarksstatistik.dk/upload/e-handlende_kvinder_nærmer_sig_mændene_nr2871.pdf

Duedahl, M. (2010, 31. March). Nettøj. In JP Århus. Retrieved 02.08.10 from http://www.aarhusportalen.dk/default.asp?Id=316&AjrDcmntId=19240

Dokument (2009, March 13). In Informationsordbogen : ordbog for informationshåndtering, bog og bibliotek. Retrieved 02.08.10 from http://www.informationsordbogen.dk/concept.php?cid=456

Ebbesen, A. (2009, March 28). Danske modeblogs – på vej mod svenske tilstande?. In Kommunikationsforum. Retrieved 02.08.10 from http://www.kommunikationsforum.dk/anna-ebbesen/blog/danske-modeblogspaa-vej-mod-magtfulde-svenske-tilstande

Ebbesen, A. & Haug, A. (2009). Lyt til elefanterne : digital kommunikation i praksis. Gyldendal Business.

Engeström, J. (2005, April 13). Why some social network services work and others don't — Or: the case for object-centered sociality. Zengestrom. Retrieved 02.08.10 from http://www.zengestrom.com/blog/2005/04/why-some-social-network-services-work-and-others-dont-or-the-case-for-object-centered-sociality.html

Engeström, J. (2009). Building sites around social objects. Retrieved 02.08.10 from http://www.slideshare.net/jyri/building-sites-around-social-objects-web-20-expo-sf-2009

Eppstein, L. (2010, May 10). Chictopia Users Find Themselves Unexpectedly Starring In Payless Ads. In The Frisky. Retrieved 02.08.10 from http://www.thefrisky.com/post/246-chictopia-and-lookbook-users-find-themselves-unexpectedly-starring-in-p/

Fashion. (2010, July 10). In Wikipedia, The Free Encyclopedia. Retrieved 02.08.10, from http://en.wikipedia.org/w/index.php?title=Fashion&oldid=372810736

Fashion blogs. (2010, July 15). In Wikipedia, The Free Encyclopedia. Retrieved 02.08.10, from http://en.wikipedia.org/w/index.php?title=Fashion_blog&oldid=373649779

Flaherty, E. (2009, November 17). The Old-School Fashion Hierarchy Is Falling Down. The Frisky. Retrieved 02.08.10 from http://www.thefrisky.com/post/246-the-old-school-fashion-hierarchy-is-falling-down/

Foursquare. (2010, July 14). In Crunchbase. Retrieved 02.08.10 from http://www.crunchbase.com/company/foursquare

Gardner, J. (2009, 14. September). Is this going to be the new route to planet fashion?. In London Evening Standard. Retrieved 02.08.10 from http://www.thisislondon.co.uk/fashion/article-23743777-is-this-going-

to-be-the-new-route-to-planet-fashion.do

Garrett, J. J. (2002). The Elements of User Experience: User-Centered Design for the Web. Peachpit Press.

Georgiou, K. (2010, April 14). We talk to the Chictopia blogger! Grazia Daily. co.uk. Retrieved 02.08.10 from http://www.graziadaily.co.uk/fashion/archive/2010/04/14/we-talk-to-the-chictopia-blogger.htm

Golder, S. & Huberman, B. A. (2005). The structure of Collaborative Tagging Systems. Technical report, In-formation Dynamics Lab, HP Labs. Retrieved 02.08.10 from http://arxiv.org/ftp/cs/papers/0508/0508082.pdf

Grauballe, H. et al (2001). Klassifikationsteori (2. edition). Danmarks Biblioteksskole.

Grossman, L. (2006). Time's Person of the Year: You. In Time.com. Retrieved 02.08.10 from http://www.time.com/time/magazine/article/0,9171,1569514,00.html.

High Street. (2010, July 25). In Wikipedia, The Free Encyclopedia. Retrieved 02.08.10 from http://en.wikipedia.org/wiki/High_Street

Juncker, L. (2004). Mode. FaktaLink. Retrieved 02.08.10 from http://www.faktalink.dk.zorac.aub.aau.dk/faktalink/titelliste/mode/modehele

Kanstrup, A. M. & Christiansen, E. (2006). Selecting and evoking innovators: combining democracy and creativity. NordiCHI 2006, 14-18 October 2006

Kanstrup, A. M. & Christiansen, E. (2007). A mobile design lab for user-driven innovation : history and concept. IN: Proceedings of the Seventh Danish HCI Research Symposium. Copenhagen, Samfundslitteratur.

Kuutti, K. (1995). Activity Theory as a potential framework for human- computer interaction research. In: Nardi, B. (ed.): Context and Consciousness: Activity Theory and Human Computer Interaction. MIT Press.

Laningham, S. (2006). DeveloperWorks Interviews : Tim Berners-Lee. Retrieved 02.08.10 from http://www.ibm.com/developerworks/podcast/dwi/cm-int082206txt.html

Lund, J. (2010, March 18). Second-hand rules Danish clothing retail online. Jon Lund. Retrieved 02.08.10 from http://jon-lund.com/main/second-hand-rules-danish-clothing-retail-online/

Locke, C. et al. (1999). The Cluetrain Manifesto. Retrieved 02.08.10 from http://www.cluetrain.com/

Morin, D. (2008, May 9). Announcing Facebook Connect. Facebook Developers : developers blog. Retrieved 02.08.10 from http://developers.

facebook.com/blog/post/108

Morville, P. (2005). Ambient Findability. O'Reilly Media, Inc

Morville, P. & Callender, J. (2010). Search Patterns : Design for Discovery. O'Reilly Media, Inc.

Morville, P. & Rosenfeld, L. (2006). Information Architecture : for the World Wide Web (3. edition). O'Reilly Media, Inc.

Nielsen. (2009). Global Faces and Networked Places. The Nielsen Company.

Nissenbaum, H. (2010). Privacy in Context : Technology, Policy, and the Integrity of Social Life. Stanford Law Books.

Nonnecke, B., & Preece, J. (2000). Lurker demographics: Counting the silent. Proceedings of CHI 2000. The Hague: ACM.

Nardi, B. A. & O'Day, Vicki L. (1999). Information Ecologies: Using Technology with Heart. The MIT Press.

Norman, D. A. (2004). Emotional Design : Why we love (or hate) everyday things. Basic Books, New York. Paper back version.

Norman, D. A. & Draper, S. W. (1986). User-Centered System Design: New Perspectives on Human-Computer Interaction. CRC Press.

O'Reilly, T. (2007, May 21). Tim O'Reilly on What is Web 2.0? [Video file]. Retrieved 02.08.10 from http://www.youtube.com/watch?v=CQibri7gpLM

O'Reilly, T. & Battelle, J. (2009). Web Squared : Web 2.0 Five Years On. Web 2.0 Summit. Retreived 02.08.10 from http://www.web2summit.com/web2009/public/schedule/detail/10194

Oreskovic, A. & Chan, E. (2010, April 24). Twitter snags over 100 million users, eyes money-making. Reuters. Retrieved 02.08.10 from http://www.reuters.com/article/idUSTRE63D46P20100415

Pegg, M. (2010, June 29). Big Birthday... Google Maps API Turns 5! In Google Geo Developers Blog. Retrieved 02.08.10 from http://googlegeodevelopers.blogspot.com/2010/06/big-birthday-google-maps-api-turns-5.html

Peripheral Vision. (2010, July 3). In Wikipedia, The Free Encyclopedia. Retrieved 02.08.10 from http://en.wikipedia.org/wiki/Peripheral_vision

Porter, J. (2008). Designing for the Social Web. Addison-Wesley

Porter, J. (2010). Joshua Porter's presentation "Metrics-Driven Design" from UX London 2010. Retrieved 02.08.10 from http://uxlondon.s3.amazonaws.com/slides/MetricsDrivenDesign.pdf

Pruitt, J. & Adlin, T. (2006). The Persona Lifecycle : Keeping People in Mind Throughout Product Design. Elsvier.

Rangaswami, JP. (2008, February 16). Musing about Social Objects:

Molluscs that Matter. Confused of Calcutta. Retrieved 02.08.10 from http://confusedofcalcutta.com/2008/02/16/musing-about-social-objects-molluscs-that-matter/

Ravn, L. B. (2009). Modeblogging. [5th semester student paper from Interaktive Digitale Medier, Aalborg University]. Retrieved 02.08.10 from http://tinyurl.com/32dkt6p

Rawi, M. (2009, September 23). Move over Geldof girls: Meet Tavi, 13, the 'tiny' blogger with the fashion industry at her feet. In Mail Online. Retrieved 02.08.10 from http://tinyurl.com/mv946n

Real-time web. (2010, February 19). In Wikipedia, The Free Encyclopedia. Retrieved 02.08.10 from http://en.wikipedia.org/w/index.php?title=Real-time_web&oldid=344944253

Sanders, E. B. N & Stappers, P. J. (2008). Co-creation and the new landscapes of design. In CoDesign, 4(1), 5–18

Schmidt, M. (2010, January 15). Modebloggerne sidder på første række. In Information, sec. Paradoks, p. 14

Schön, D. A. (1967) Technology and change : the new Heraclitus, Oxford: Pergamon.

Schön, D.A. (1983). The Reflective Practitioner: How Professionals Think In Action. New York: Basic Books.

Sharp, H., Rogers, Y. & Preece, J. (2007). Interaction Design: Beyond Human-Computer Interaction. John Wiley & Sons, Ltd. Second Edition.

Shirky, C. (2005). Ontology is overrated : categories, links and tags. In Clay Shirky's Writings About the Internet, Shirky.com. Retrieved 25.07.10 from http://www.shirky.com/writings/ontology_overrated.html.

Shirky, C. (2008). Here Comes Everybody - The Power Of Organizing Without Organization. Penguin Press.

Signe (2010, 11. March). Come on... A Pash For Fashion. (Retrieved 02.08.10 from http://www.pash4fashion.com/?p=1426)

Social Network (2010, July 28). In Wikipedia, The Free Encyclopedia. Retrieved 02.08.10 from http://en.wikipedia.org/wiki/Social_network

Sofie (2010, July 6). Er der nogen? Sofies Blog. Retrieved 02.08.10 from http://sofiesblog.dk/2010/07/06/er-der-nogen/

Spinuzzi, Clau. (2002). A Scandinavian challenge, a US response: Methodological assumptions in Scandinavian and US prototyping approaches. In Proceedings of the 20th annual international conference on Computer documentation, 208-215

Spool, J. (2007, August 7). Web 2.0 : The Power Behind the Hype. User Interface Engineering. Retrieved 18.07.10 from http://www.uie.com/articles/web_2_power/

Stutzman, F. (2007, November 5). Social Network Transitions. Fred Stutzman. Retrieved 02.08.10 from http://fstutzman.com/2007/11/05/social-network-transitions/

Taylor, A. G. (2004). The Organization of Information (2. edition). Westport, Conn.: Libraries Unlimited.

Thielke, E. & Westerkam, M. (2010, May 16). Kcast 163: styleGALLERY. [Interview with Anders Kragelund, Interactive Manager at Benjamin Media, Audio podcast]. Retrieved 02.08.10 from http://www.kommunikationscast.com/2010/05/16/kcast-163-stylegallery

Tolborg, A. (2010, June 9). Comment on Why some social network services work and others don't — Or: the case for object-centered sociality. Zengestrom. Retrieved 02.08.10 from http://www.zengestrom.com/blog/2005/04/why-some-social-network-services-work-and-others-dont-or-the-case-for-object-centered-sociality.html#comment-4355

TV Avisen (2009, April 16). Modeblogging : Magtfulde Trendsættere. [interview with Sergei de Cardinal, marketing manager at Diesel, 1:34, video file]. Retrieved 02.08.10 from http://www.youtube.com/watch?v=VItS72NfOfQ&feature=channel

Unified Modeling Language. (2010, July 16) In Wikipedia, the free encyclopedia. Retrieved 02.08.10 from http://en.wikipedia.org/wiki/Unified_Modeling_Language

Wenger, E., White, N. & Smith, J. D. (2009). Digital Habitats: stewarding technology for communities. CPsquare

World Fashion Industry. (2010, August 2). In Wikipedia, the free encyclopedia. Retrieved 02.08.10 from http://en.wikipedia.org/wiki/Fashion_design#World_fashion_industry

16. Appendix Overview

The appendices have been included on a CD

16.1 Appendix

Appendix A: Transcriptions of interviews
Appendix B: The initial contact message
Appendix C: List of blogs

16.2 Design Appendix

Appendix I: Sitemap 2.0
Appendix II: Action Diagrams
Appendix III: Analogue wireframe of user profile
Appendix IV: Sign-up prototype
Appendix V: Add Piece prototype
Appendix VI: Faceted search