

The Role of Aesthetics in Web Design

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Abstract

Web sites are rapidly becoming the preferred media choice for information search, company presentation, shopping, entertainment, education, and social contacts. At the same time we live in a period where visual symbols play an increasingly important role in our daily lives. The aim of this article is to present and discuss the four main areas in which aesthetics play an important role in the design of successful Web sites: aesthetics play an important role in supporting the content and the functionality, in appealing to the taste of the target audience, in creating the desired image for the sender, and in addressing the requirements of the Web site genre.

Key Words: web design, visual communication, aesthetics, functionality, taste, image, website genre

Introduction

The term *aesthetics* in the context of this article covers visual, sound and interactive means of effect. However, the article focuses primarily on the visual means of effect in terms of colours, typography, design, pictures, video clips, flash animations, etc.

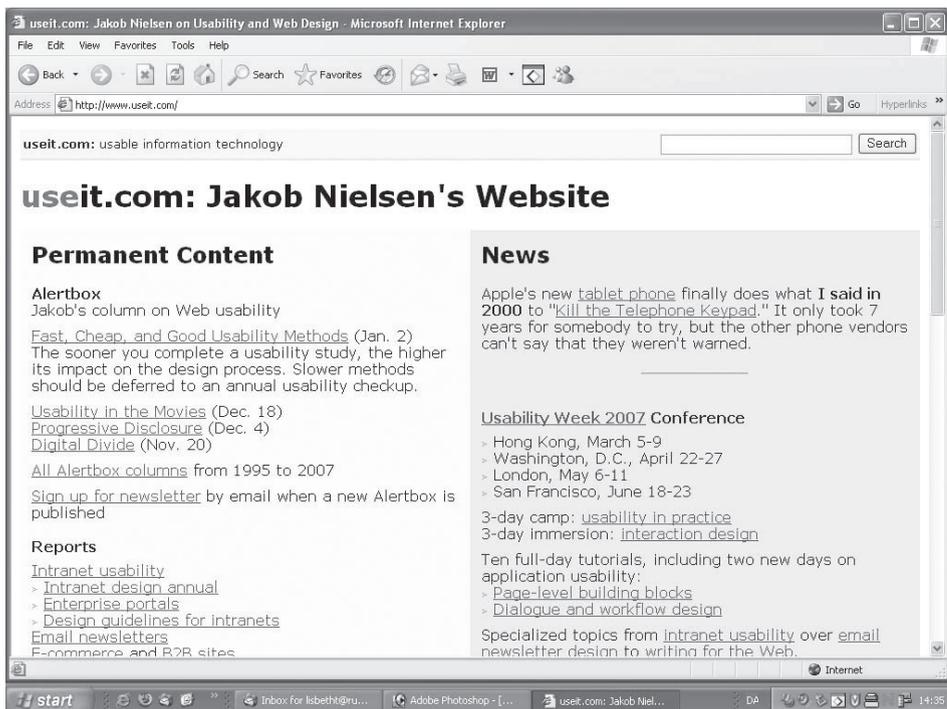
Visual communication is a reality as soon as a word is typed, a colour chosen, or a text displayed on the screen, and any visual expression, whether it is intentional or not, communicates something to the visitor of the site. The Web designer can never bypass the effects of graphic design elements. These are given on every Web site. If we choose a vibrant, warm red colour for the menu, we communicate something different than if we had chosen a calm, cool blue colour. If we have a specially designed typography made for our headlines we leave a more personal impression on our Website than if we choose the most common typography such as, for example, *Verdana*. However, complex, multimedia installations, impressive pictures, and video clips are, at least in principle, optional extras, since they are not given factors that must be dealt with in any Web design. We are forced to work with the visual elements of text and colour, but we can bypass aesthetic effects in the form of stimulating multimedia Flash installations and pretty pictures.

The only thing we cannot avoid is that there is always visual communication on a Web site, whether the use of visual effects is deliberate or not. We need to know about graphic effects and visual symbols, so that our communication can be intentional.¹ The visual effects play an important role in the communication of content, in addition to creating more or less aesthetic experiences.

Functionality

The term *functionality* in this context covers the user friendly aspects of interfaces and Human Computer Interaction (HCI), where the main objective is to create effective websites where the user quickly and efficiently can obtain the desired pieces of information without being delayed by long downloading times or blind alleys when navigating on the site. Jakob Nielsen has played an important role worldwide in giving directives for the design of hyper-functional Web sites in, for example, *Usability Engineering* from 1993 and *Designing web usability* from 1999. Nielsen's definition of user friendly Web design embraces five central components: *learnability*, *efficiency*, *memorability*, *errors* and *satisfaction*. The usability expert, Rolf Molich operates with an additional component within user friendly Web design which is the aspect of *understandability*. These components are all important in considering the quality of the Web site in terms of functionality.

Figure 1. www.useit.com



The large amount of visually and graphically ill-considered, rash Web sites illustrates that there are still some Web designers who operate according to a narrow conception of “functionality” and completely neglect the value of the visual communication in supporting the functionality. The Web site of Web guru Jakob Nielsen, www.useit.com, is an example of a site that downplays the use of graphic effects. This is confirmed by Nielsen himself in the entry “Why this site has almost no graphics.” He explains that he did not want to waste money on an artist and chose instead to do the graphic design himself. The problem with Nielsen’s Web site is that even though Nielsen feels that his

site has almost no graphic effects, he can not bypass the fact that the few graphics on the site do communicate something; but the visual communication at www.useit.com has not been carefully considered. The garish yellow banner at the top of the home page will for many people clash against the pastel yellow and blue colours used elsewhere on the page and call attention to that which according to Nielsen should be "invisible" to the user.

In this case, the casual handling of visual effects indicates a sloppy and unprofessional sender, which is not an accurate image of Nielsen and probably has not been his intention with the Web site. However, another page on the Web site, "About Jakob Nielsen", which contains a biography and pictures of Jakob Nielsen, is created with harmony and balance between the colours and their placement. There is open space and a consistent use of blue colours. This page gives an impression of a sender who is organized and has a sense of quality, which probably is more aligned with how Nielsen wants to appear through his Web site.

The graphic effects, in other words, are an inevitable part of any Web site. We cannot choose whether or not they should be included. We have to consider graphic effects, even when the goal is to create "invisible" visual communication, which achieves its purpose through seamless integration with functionality and content.

What might indeed be considered optional and open to discussion is the extent of additional aesthetic experiences in the form of video clips, Flash animation, pretty pictures, etc. The use of such effects on Web sites should depend on the intended target audience, the sender image and the Web site genre.

A Historical Look at Web Sites

Since the proliferation of Web sites began in the early 1990s, the relationship between functionality and aesthetics has been a topic of heated discussion.

One of the proponents of functionality and usability on the Internet is the above-mentioned Jakob Nielsen, who has contributed some of the most important research regarding software development and Human-Computer-Interaction (HCI). Nielsen advocated the hyper-functional approach in his book "Usability Engineering" from 1993, where he introduced the slogan "Less is More", a phrase that he borrowed from the modernist architect Mies van der Rohe (Engholm, 2003, p. 127). But as the role of aesthetics in Web design increasingly became an issue of contention in the first half of the 1990s, different opinions regarding the relationship between aesthetics and functionality were expressed.

David Siegel, who in the book "Creating Killer Web Sites" from 1996 argued for the importance of aesthetic dimensions, was a proponent of aesthetic Web sites. The functionalists, on the other hand, argued that it did not matter if a Web site was blue or red, as long as it was functional and user-friendly. The introduction of Flash spurred heated arguments. The Web designer Curt Cloninger argued that Flash, with its amazing possibilities for creating aesthetic experiences, was an important supplement to html. Nielsen argued against the use of Flash because of long downloading times that decreased functionality and usability. But during the second half of the 90s, there was a growing interest in placing more emphasis on aesthetic effects.

However, in the beginning of the 21st century there has been a renewed tendency to favour hyper functional Web sites without any superfluous aesthetics. There are several reasons for this. First of all, Web designers had to realize that the use of Flash-elements

on Web sites created too many frustrations, since many users could not even open the pages, or the downloading time was too long. Furthermore, in most cases the Flash elements did not provide any kind of aesthetic enjoyment; rather, they often disrupted and annoyed the users. The designers could not control their excitement over this new toy, and Flash was often used haphazardly by people with no graphic design background. That resulted in messy Web sites with Flash elements that blinked and moved across the page without creating aesthetic experiences for the user. Again and again, one was forced to agree with Jakob Nielsen that less aesthetics on Web sites was more.

In addition, the dotcom-crisis towards the end of the 1990's and the international financial crisis caused many organizations to cut down on the large costs of designing unique Web sites with Flash and other advanced aesthetic effects. This resulted in a growing interest in cheaper solutions in the form of standard layouts, such as "Obvious", leading to less emphasis on aesthetic expressions, especially for many information and presentation sites from both private and public organizations.

The Role of Aesthetics in Contemporary Web Design

While the relationship between functionality and aesthetics has been discussed for a long time, a renewed discussion that focuses on aesthetic effects in Web design in a broader perspective is desirable. There are several reasons for this. Firstly, the fast development in IT-technology and the introduction of broadband in present times have made it possible to accommodate the users who wish to receive communication in the form of multi-sensory aesthetic experiences, without necessarily sacrificing content and function because of long downloading times. And just as people today are increasingly expected to be up-to-date on IT-development, it will also be expected that people who work with Web design possess not only knowledge of functional aspects, but also understand how to communicate through aesthetic means. We have reached an era where the technical and functional aspects of a Web site are taken for granted. People just expect it to work. The technology is viewed as a basic foundation for aesthetic experiences. According to Ida Engholm, the discussion of function and aesthetics in Web design resembles the shift in design styles during the consumption growth in the post war era, when many of the products that were marketed – from bicycles to electrical appliances – only differed from each other by minor variations of the basic concepts. All technical and functional problems were in reality solved; people expected that the product worked and utilized the latest version of the technology. Next followed an interest in "differentiating" through external aesthetic and image-related signals (Engholm 2003, p. 134).

Secondly, the growing tendency to replace language with visual symbols in the 20th century, especially in the marketing of products, seems to have exploded in the 21st century. Life style expert Henrik Vejlggaard states in his book "Forbrug i Designersamfundet" [Consumption in the Designer Society]: "In a world where a picture means more than words, no one has the time or bothers to read lengthy advertising copy." (Vejlggaard 2004, p. 49). Visual symbols have become an integral part of our daily lives; therefore, it is increasingly relevant to understand their communicative effects. The orientation towards visual communication is not only prevalent in marketing, but in all forms of professional communication, including the Web site as a medium. In particular, young people communicate – and want to be communicated to – through visual symbols.

Aesthetics Support Sender Image, Content and Function, Web Site Genre and Target Audience

It is important – especially for Web designers – to be able to differentiate between the different ways in which visual aesthetics play a role in the creation of Web sites.

- 1) The aesthetic effects have an important role in all types of Web sites concerning how the sender is perceived, i.e. the image that is conveyed of the organization or individual behind the information. All Web sites have a sender or information source, and all the linguistic, functional, and aesthetic effects on a Web site communicate something about that source.
- 2) The aesthetic effects must support the content and the functional aspects. Web sites are more user-friendly when they contain aesthetic effects that support the navigation and interaction functions.
- 3) The aesthetic effects must be adapted to the genre of Web site. For example, we expect an entertainment Web site to offer a reasonable amount of aesthetic experiences, whereas our primary expectation of an information search Web site is that we can get the desired information as efficiently as possible.
- 4) The aesthetic effects should be adapted to the target audience. A presentation site targeting a young audience must be designed in accordance with the contemporary trends in visual aesthetics and should differ from a presentation site that targets the general adult population.

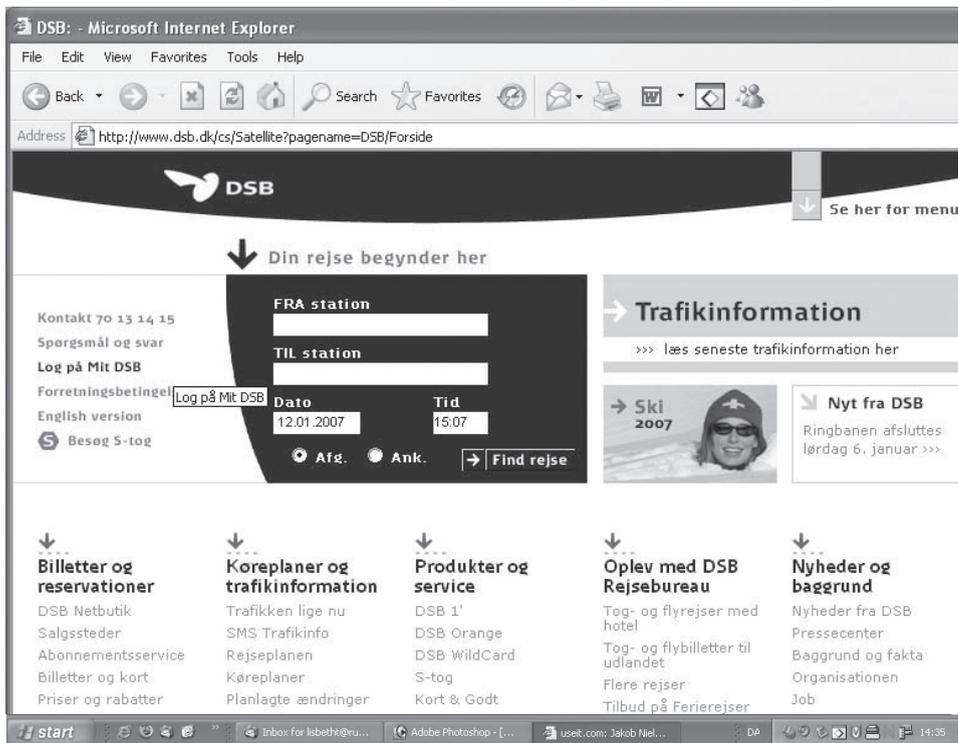
The most successful Web sites are therefore the sites where the Web designer has created the aesthetic aspects in accordance with the four above-mentioned areas: sender image, functionality, genre and target audience.

Aesthetics Support Sender Image

The aesthetic effects play a crucial role in creating the profile of the sender and thus the image of the organization or individual behind the Web site. Therefore it is important that even Web sites that mostly have an information purpose also aesthetically reflect the organization behind the site.

For instance, The Danish Railroad Service (DSB) has created a visual profile on their Web site in an exemplary way². DSB's Web site contains a unique and modern design, unlike the more simple and anonymous designs commonly used by service organizations that target a broad segment of the population. To obtain a unique expression, DSB has created an untraditional and dynamic design, including their own typeface "via", which is used in the headlines. The layout is clean and indicates that DSB is a well-organized company that understands contemporary trends. Every detail seems well-planned: contemporary typeface, use of pictures, and a well-arranged layout.

Figure 2. www.DSB.dk



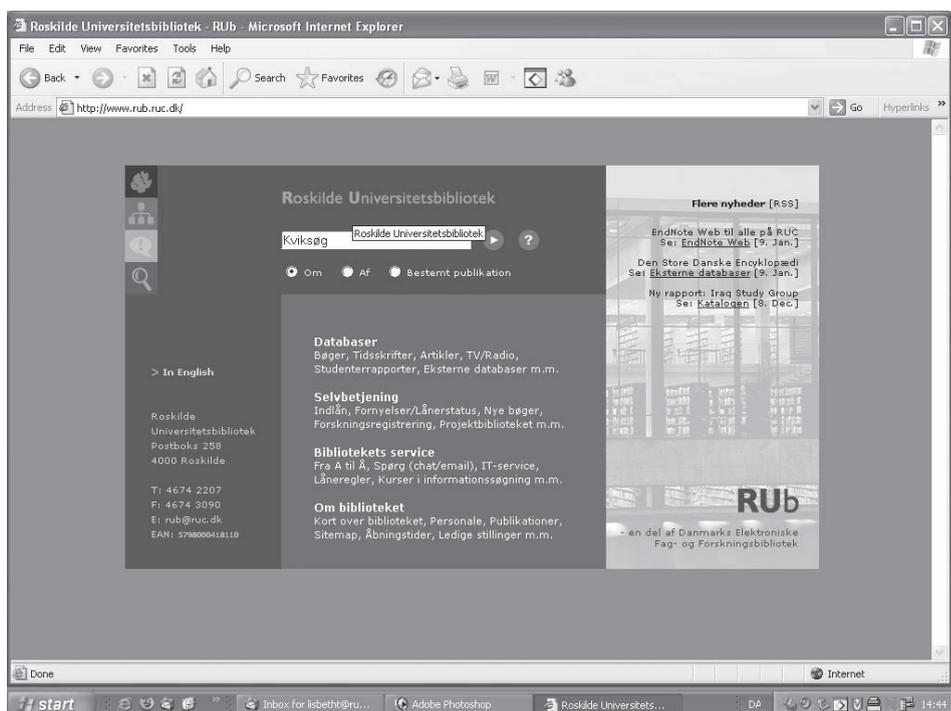
Aesthetics Support Content and Function

For many Web sites on the Internet, functionality has the highest priority and aesthetics are only included to support it. This is typically the case in the genre of information sites, where the primary purpose is to get the needed information as quickly and efficiently as possible, which is the case in for example www.google.com.

However, it becomes increasingly difficult to argue that aesthetics should be downplayed in favour of functionality, even for information search sites, though of course functionality is of primary importance. There are good reasons why information search sites should attempt to communicate through visual symbols. Visual icons are useful and simple intersemiotic visual means of effects in terms of anchoring the texts. They can be useful means of effect leading the attention of the user to the links. A subtle movement can be useful to catch the attention of the user and direct his attention to a specific area of importance. The use of dominant colours such as red and yellow are effective to catch the attention of the user and direct the attention to specific pieces of information. The use of illustrations can be helpful to explain complex or lengthy pieces of information.

The user of the information site www.rub.ruc.dk can, for example, look at a map of RUC's library and see exactly in which section of the library and on which shelf a book is located.

Figure 3. *www.rub.ruc.dk*



For the large group of serious, factual presentation sites that are constrained by conventions, such as banks, government offices, public agencies, educational organizations, etc., the functional aspects are usually emphasized. On these sites, the designers attempt to accommodate the requirements of the organization by operating within the set of expectations pertaining to the genre and according to the needs of the user. In this Web site category, there is a large, untapped potential for better user-friendliness through visual effects that could support the navigation aspects and the content in an appropriate way. The visual effects would not have to provide great experiences, even though from a narrowly functionalistic viewpoint they might still be regarded as extraneous aesthetic effects.

Aesthetics Support Web Site Genres

Web site genres have received relatively little scholarly attention. Jennifer Fleming defines in her book *Web Navigation* six categories of navigation designs: e-commerce sites, community sites, entertainment sites, presentation sites, educational sites, and information sites. Fleming's six categories focus on the navigational and functional aspects.

Very few Web sites appear in a "pure" form following just one of Fleming's six navigation designs, although one category is usually more prominent. For example, most bank sites are a mix between presentation, e-commerce, and information according to Fleming's categories. This indicates that it is hardly possible to find one way of categorizing Web sites that would encompass all issues.

Ida Engholm, in her doctoral dissertation from 2003, has categorized Web sites based on technical but also stylistic aspects as well as type of organization or business. In her

dissertation *WWW's designhistorie – website udviklingen i et genre- og stilteoretisk perspektiv* [WWW's design history – the development of Web sites in a genre and stylistic perspective], Engholm contributes with a categorization of Web sites in terms of stylistic characteristics. For example: The HTML-style, the modernist style, the digital modernist style, the trash-style, the CAD-style, the pixel-style, the Kawaii-style, the Manga-style, the Japanese minimalist style, the digital deconstructivist style, the punk rock style, etc.

Engholm's categories of Web sites based on the stylistic aspects are a useful supplement to Fleming's six Web site categories based on the navigational and functional aspects.

The navigation design and the graphic and stylistic aspects must be adapted to the specific needs of that particular organization. It is important that the Web designer understands that the functional aspects should not always take priority over the aesthetic aspects. A presentation site for an art museum or furniture design company must of course be user-friendly, but the graphic, stylistic, and aesthetic effects play an important role. A functional Web site, but void of well thought out aesthetic means of effect, for an art museum would have low credibility and might be detrimental to the museum's image, even if navigation and information search worked perfectly.

If you wanted to visit the Bauhaus Museum in Berlin and on their Web site www.bauhaus.de was met with the same kind of aesthetics you find on www.google.com you would probably doubt that this museum would be worth a visit. Google's Web site, however, belongs to the information search genre, where users have completely different expectations to aesthetic experiences. Google's target audience does not visit this Web site to be aesthetically stimulated, which is entirely consistent with Google's intentions.

Figure 4. *www.google.com*

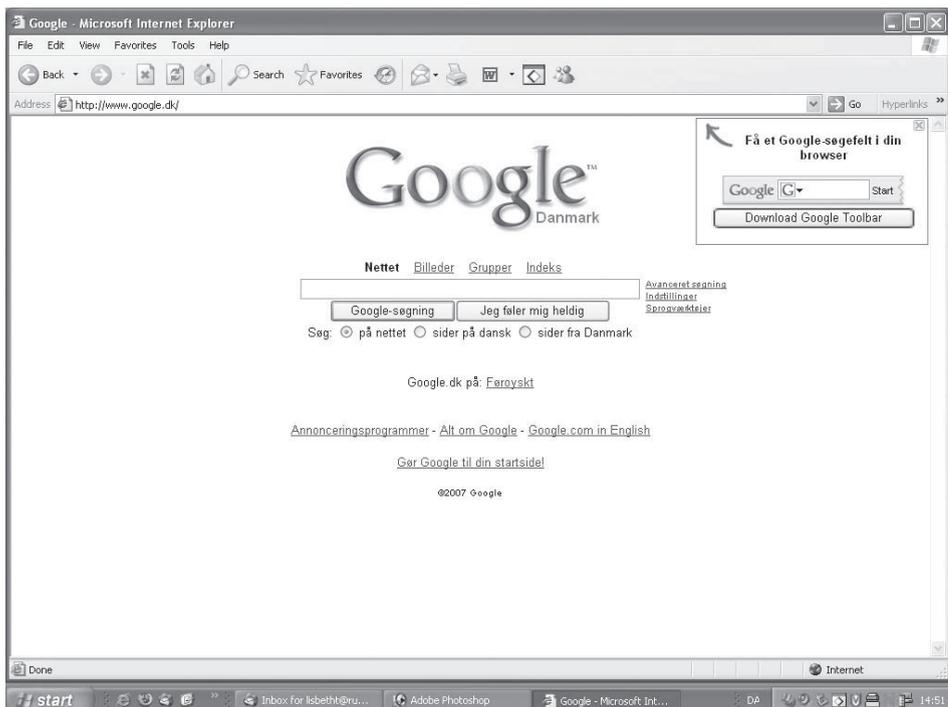


Figure 5. *www.bauhaus.de*



Aesthetics in Support of the Taste of the Target Audience

There are two domineering trends within Web design that reflect respectively a taste for the modernist, style and a taste for an eclectic experience-oriented style. Whether to choose the modernist style or the experience-oriented style should depend on the taste and the needs of the target audience.

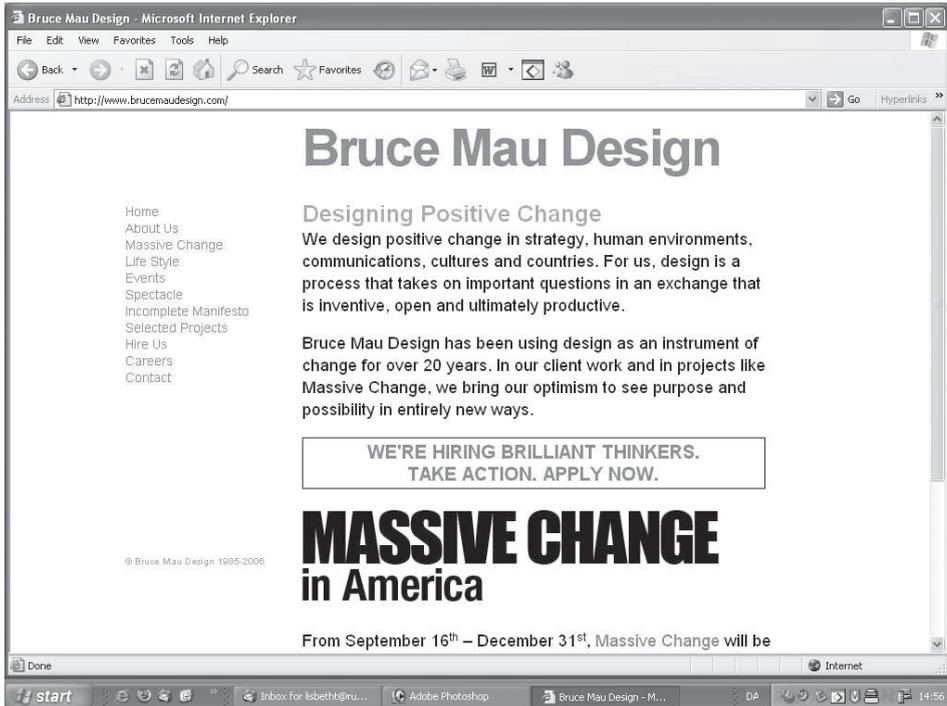
Modernist Aesthetic Web Sites

The modernist taste for minimalist design in a broad perspective originated in the early part of the 19th century with the functionalist movement in architecture and design. The functionalist movement was opposed to external ornamentation and all kinds of eclecticism within art and design. The functionalists believed that architecture and design should primarily be functional and devoid of superfluous ornamentation. From an aesthetic point of view, the functionalists found minimalist and functionalist design more appealing and formed an opposition to the aesthetic values of the Art Nouveau movement which were dominant in the early part of the 19th century. This taste in design is still one of the dominant discourses within taste in our present times.

The presentation site of the New York designer Bruce Mau, www.brucemaudesign.com, is an example of a modernist, minimalist site with a pleasant balance between functionality and aesthetics. The site has no extraneous aesthetics; however, its few visual effects in the form of colour, typeface, and layout convey a superior aesthetic quality within a minimalist paradigm. A minimalist Web site with no extraneous aesthet-

ics, and visual effects only in the form of typeface and text layout, can be just as aesthetically pleasing as a Web site with lots of pretty pictures and fancy Flash installations. Which style is preferable will depend on the purpose of the site and the taste of the target audience.

Figure 6. www.brucemaudesign.com



The trend toward simplicity has also reached the e-commerce genre, where many companies have re-designed their experience-oriented Web sites to be more simple and anonymous. For example, in 2003 Sony replaced their Flash-based, multimedia Web site, which they had launched in early 2002, and which contained the full spectrum of aesthetic effects in the form of sound, pictures, and animation, with a more plain and anonymous site. The return to a more functionalist, digital-modernist style was partially caused by too many downloading difficulties with the more complex Web site. In 2006, however, due to the introduction of the broadband, Sony offers experience-oriented video clips on their Web site, but they have, as an overall means of aesthetic expression, maintained a modernist, digital style on their Web site.

Experience-oriented, Aesthetic Web Sites

Along with a taste for a modernist, minimalist design devoid of extraneous aesthetic means of effects, a taste discourse is simultaneously flourishing with roots in the postmodern aesthetic values that favour the eclectic, multi-sensory, experience-oriented design.

Figure 7. www.sony-europe.com/walkman 2002

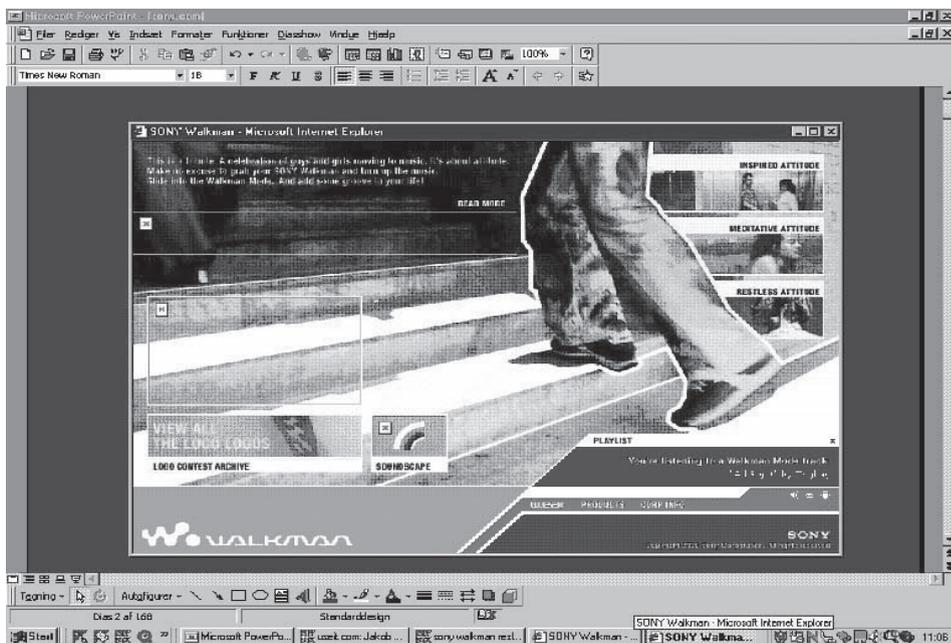
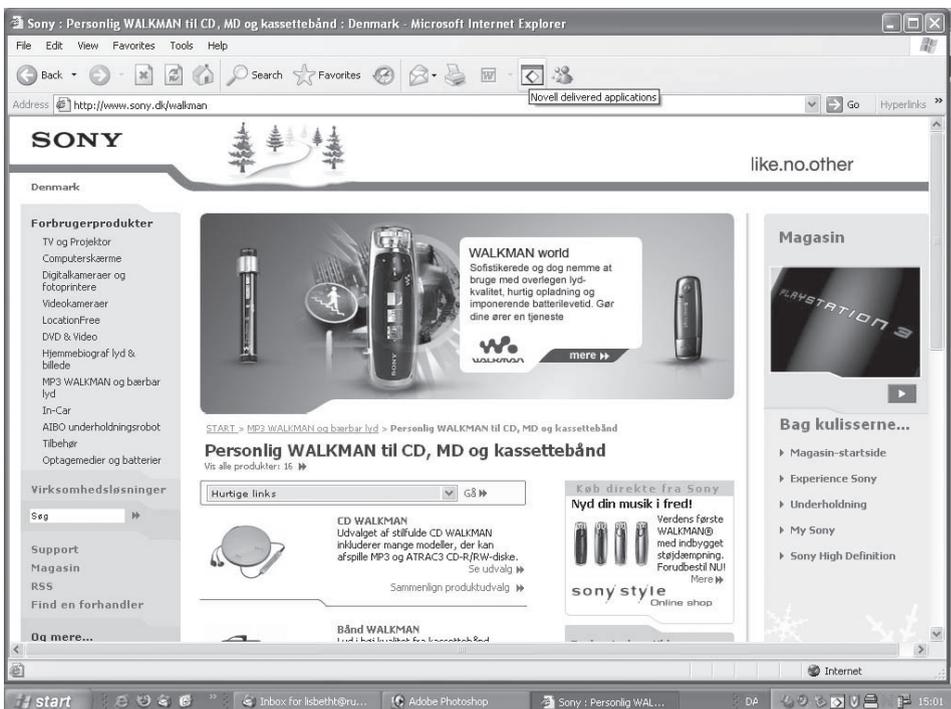


Figure 8. www.sony-europe.com/walkman 2006



Jean-Francois Lyotard introduced the term *the postmodern* as a term for a tradition or a state that is a development of the modern (Lyotard 1986, p. 19). Postmodernity rejects the idea of a universal truth and is characterised by the replacement of the great narratives by many small narratives. There no longer exist, social directives of how to think or behave.

People in the postmodern society, especially today's youth, have grown up with a large degree of wealth, among other things due to developments in digitalization. This means that basic physical needs such as the needs for food and shelter are met, and when the basic needs are met, there is a growing need for self-actualization and experiences in daily life.

There is a growing trend for everything from shopping malls to banks to attract attention through events and exhibitions that present exciting possibilities for interactive and sensory experiences. It is no longer enough to sell products based on basic facts. Products are increasingly sold on the basis of non-material values, i.e., the experiences and narratives with which they are associated.

When we go to shopping malls, cafes, etc. we also expect to experience something in addition to the product itself. It might be in the form of an exciting store design with new, unexpected combinations of product assortments, fragrances, music videos, interactive experiences with the products, and, not least new and innovative packaging of the product. These factors become decisive in our choice of shopping place.

These postmodern values have also influenced a large amount of Web sites, more and more of us begin to expect aesthetic experiences when we visit a Web site, both in the entertainment genre and the e-commerce genre.

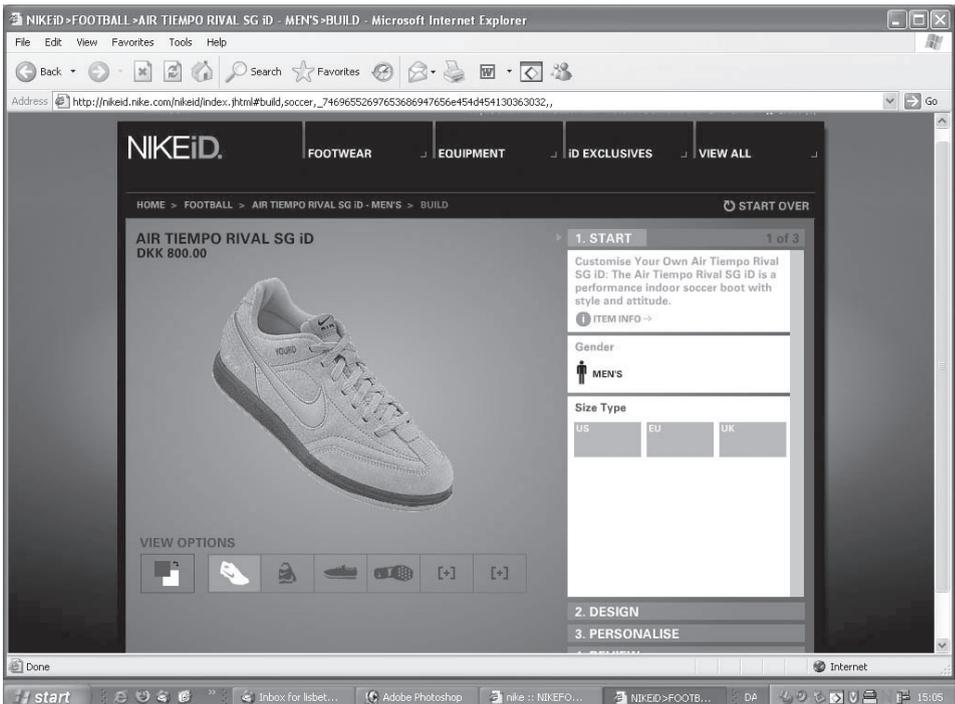
For example, that's what Nike attempts to accommodate at www.Nike.com, a Web site that is full of experiences for both children and adults. At www.Nike.com thoughtful consideration has clearly been given to target audiences, which is reflected in different links at the Web site. www.Nikefootball.com targets boys ages 12-16 and the navigation structure of the page resembles computer games. Functionality is illogical and user-friendliness is not in focus, which is undoubtedly intentional. There are challenges to overcome when navigating the site. The primary purpose of this part of the site is not to sell shoes, but to build an image and create a universe that appeals to young males who are interested in football. Nike's purpose with the [Nikefootball.com](http://www.Nikefootball.com) link is primarily branding in relation to young males. It reflects the postmodern values of today's youth: a lifestyle that's characterized by sampling, self-staging, self-actualization, and a demand for challenges combined with multi sensory experiences.

The link www.Nikeid.com, which is the actual e-commerce part of the site, targets a broader audience; namely, children, youth, and adults, who want to buy a pair of Nike shoes. Buying a pair of Nike sports shoes through www.Nikeid.com, which contains Nike's product assortment, provides a pleasant, interactive experience. Nike is in that respect ahead of the times. Nike's Web site is an example of a site where visual and sound effects combined with the interactive aspect provide a pleasant experience and a playful approach to shopping. When we purchase shoes on the Web site, we first have to choose the type of sole. Next, we choose between a large number of colours, and we can coordinate the shoe's colours according to our own preferences. We can also sign the shoe with our personal signature if we wish. Navigating the site is easy and user-friendly, and there is clearly an experience connected with the purchase. The interactive functions and the possibility of creating one's own personal shoe makes it a game to shop at Nike on the Internet. That is fully consistent with contemporary value trends, which focus on a desire for personal touch and individuality.

Figure 9. www.Nikefootball.com



Figure 10. www.Nikeid.com



www.Nike.com is a hybrid between several genres: the presentation, e-commerce, and entertainment genres. The presentation genre, which in Nike's case could also be described as a branding site, conveys how Nike wants to be perceived by the public. The e-commerce genre gives the customer an opportunity to buy Nike shoes through the site. The entertainment genre provides opportunities to play games and be entertained.

This site is just a precursor for what awaits us in the future in the form of aesthetic and interactive experiences on the Internet, especially targeting young audiences who are in favour of postmodernistic design in terms of the eclectic and experience-oriented means of effect.

Notes

1. For further readings on colour symbolism and typography I will refer to Lene Bjerregaard's *Farveordbog* [Colour Dictionary], Theo van Leeuwen and Carey Jewitt's *Handbook of Visual Analysis*, Gunther Kress and Theo van Leeuwen's *Reading Images. The Grammar of Visual Design*, and Rudolf Arnheim's *Art and Visual Perception*.
2. For a more thorough discussion of the analytical method used to analyze the DSB Web site, as well as other Web sites, please see my article: "A Model of Visual, Aesthetic Communication Focusing on Web Sites". In: Nielsen, Janni (red.) *Digital Creativity*. Vol. 13, No. 2. Maj 2002. Holland. Swets & Zeitlinger. 2002, page 85-98.

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