Localization of web user interfaces. Cross-cultural differences in home page design.

Wissenschaftliche Arbeit zur Erlangung des Diplomgrades im Studiengang Sprachen-, Wirtschafts- und Kulturraumstudien (Diplom-Kulturwirt)

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1 Login – Introduction

If I’m selling to you, I speak your language. If I’m buying, dann müssen Sie Deutsch sprechen [then you must speak German].

Willy Brandt

Think about your favourite web site. How might this site be understood and used in New York, London, Barcelona, Budapest or Berlin, assuming that adequate verbal translations were accomplished? Might something in its metaphors, navigation, mental model, interaction, or appearance confuse, or even offend and alienate, a user?

This paper is concerned with web user interfaces, the means by which an application communicates with the user, and the user with the application1. The focus lies on the design-aspect of web pages, especially of home pages. Home page usually denominates the first page, starting page or entrance page through which the user accesses the web site2. The author takes the home page to be not necessarily the “first” page, such as splash introductions or just logo-pages welcoming the user might precede. The home page might well also be – and in many cases is – a navigation page, which provides a significant amount of links to navigate the web site and can provide links to related sites.

It is assumed that every person is influenced by his or her culture. Thus, perception, preferences, communication and social acceptance are subject to culture. Culture-caused assumptions leave their mark, for example, in the design of a home page. These culture-related home page elements bear a high cultural potential and accordingly their perception is influenced by the user’s culture. They can reduce the fit between web site and foreign-culture users and so affect acceptance and usability negatively. Localization consists of the identification of such culture-related home page elements and the adaptation to a target culture. A pro-localization perspective will be adopted throughout the paper.

1 “The effectiveness and user acceptance of an application are determined primarily by the design of the user interface.” See Aaron Marcus, Nick Smilonich, Lynne Thompson, The Cross-GUI Handbook: For Multiplatform User Interface Design, Reading, Massachusetts: Addison-Wesley 1995, p. 3

2 The term web site refers to the totality of pages belonging to the same online presence.
The intention is firstly to identify culture-related home page elements. General information on web design – concerning the translation of web sites, technical information and perception and information decoding – will be provided in Chapter two. Secondly, culture-related user preferences will be described from a theoretical and practical point of view. Possible indications from cross-cultural theory and international advertising for the web will be considered for the theoretical part in Chapter three. The empirical part is based on a questionnaire and the author’s observations of selected home pages. Results are presented in Chapter four. And lastly, indications on how these elements could be considered in international web user interface design will be given in Chapter five. This will be illustrated by presenting homepage-models for the USA, Great Britain, Spain and Hungary.

The models will be developed for the ICUnet.AG, an intercultural network concerned with global communication on demand of which this paper was developed. Four countries have been chosen in order to illustrate cultural differences among them; two English-speaking countries may serve as examples for existing differences between countries of the same language; differences within Europe become apparent with the help of three European countries, representing Northern, Southern and Eastern Europe. The set of countries mentioned above was chosen on demand of the ICUnet.AG as the company considers expanding into these markets.

The paper is based on the notion that the user has to be at the centre of (commercial) web site design. Design should provide good and manageable tools to the surfer, so it is their characteristics and motives for using the web site which have to be considered when designing a web site. Motives might be fast and convenient communication, finding information, solving problems, entertainment. User characteristics do not only include factors like age, education, income, software and hardware, etc., but also the cultural background of the user. This is to say that having identified your user – say in socio-economic terms – and working on an international level, the cultural origin and the culture-specific requirements of the user should be accounted for in web design.

3 see http://www.kommdesign.de, (12/2000); Thomas Wirth is psychologist, consultant and author of kommdesign.de, a web site concerned with communication design.

4 Culture-specific user requirements are requirements not generally placed upon a product or system, but due to culture-based differences between user groups and user situations. They are shared by a specific group and thus are not individual, subjective claims. They can be determined in concrete situations of use. And they are dynamic, so they can change with time. See Pia Honold,
Why did I focus on home pages?
The home page, as mentioned above, is usually the first page of a web site.\(^5\) And not only in “real” life but also in “web” life, it is the first impression that counts. In her study Fantapié Altobelli found out that generally home pages are more frequently accessed than sites further down in the hierarchy because they usually list the content of the web site, and that users pay attention to home page contents.\(^6\) The ProfNet Institut für Internet-Marketing emphasizes the importance of the home page as well and recommends designing this page with special care.\(^7\)

With some web sites you might enter the home page through a so called *site cover* which can serve a number of different purposes. Some function as *splash screens* that load fast, offer little information, but are intended to entice users into a site by using catchy graphics or effects. Others are designed to create an overall “look-and-feel” for a site. The underlying idea of the cover sites is to draw the user into the material with a combination of text descriptions and interesting graphics related to the subjects. “The most efficient designs for general (mostly modem-based) Internet audiences tend to use careful layouts of text and links with relatively small graphics” as Yale found out.\(^8\) Whether to use cover sites or not is a question discussed among web designers and users alike.

What are the functions of a home page?
The home page is not just the business card of the company – an image still used quite frequently but which does not reflect the function adequately. The home page rather has quite similar functions to the reception of a company. Therefore the home page should be as competent as a good receptionist would be and needs to: receive visitors, inquire about their problems or wishes, be able to answer their questions, be a “good” representative of the company and be friendly and maybe even humorous.\(^9\)

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\(^5\) At least it is intended as such; due to external links to content pages the user might enter the site bypassing the home page.
\(^9\) see [http://www.kommdesign.de](http://www.kommdesign.de)
Do you recognise immediately what is inside a web site? The home page also fulfills the functions of the “packaging” of the web site. The packaging has to speak for itself, as there is no shop assistant to give help as in “real” life. Or as Thomas Wirth demands, the home page should give a promise and be fast in fulfilling this promise.10

What does culture denominate in this context? Culture can be defined in many different ways and an abundance of characteristics is attributed to the concept. Among the many existing theories and definitions of culture, the following are considered relevant for web design:11

- Culture defines members of a group distinguishable from members of other groupings.
- Culture creates a system providing orientation and scope of action for these members.
- Culture manifests itself in cultural models. These can be internal cognition and external artefacts as well as institutions.
- Cultural models can differ in scope and thus also in their significance for the culture.
- Cultural models are acquired in interaction with the environment. Concrete action and experience and cultural models mutually influence each other through the process of accommodation and assimilation.
- Culture does not determine the behaviour of the individual, still it does indicate the likelihood of specific ways of perception, thinking and acting. Culture is thus structure as well as process.

As de Mooij resumes it: “Culture is what the individual members of a group have in common. The term culture may apply to ethnic or national groups, or to groups within a society, at different levels: a country, an age group, a profession, or a social class.”12

In the paper the concepts of nation and country are used to operationalise the term culture/culture-specific. Certainly, national boundaries are not necessarily identical with cultural boundaries. However, they are considered to provide the delimitation easiest to

10 see http://www.kommdesign.de/texte/verpackung.htm; Wirth claims that the home page should only contain the starting points for navigating the site and informative texts should be scarce; they could annoy regular visitors by offering them information again and again which they do not need.
11 see Honold, pp. 44-45
12 de Mooij, Marieke K., Global marketing and advertising: Understanding cultural paradoxes, Thousand Oaks 1998, p. 43
handle concerning web design. A further differentiation – whether concerning region, age group or job – would depend very much on the products and strategy of a company planning an international web presence.

In a global economy, demographic diversity, or in other words differences between the users, may reflect world-wide cultures. Neglecting culture-related elements can result in decreased efficiency, effectiveness and satisfaction on the side of the user or, in other words, users will probably not remain on the page – which, as a consequence, can not fulfil the company’s intention. Companies which want to do international business on the web should therefore consider the impact of culture on the understanding and use of web-based communication, content, and tools.

13 This does not impede to apply the ideas or concepts presented on a deeper level as well, for example providing a Basque or Catalan home page along with the Spanish one.
2 Basics – web design and information decoding

Translation is a basic step in achieving international web presence. Thus, a closer look will be taken at language, translation process and localization of web sites. Technical aspects of web sites and how sites are perceived by the user will be examined to whether these can provide culture-related or generally valid implications for web design.

2.1 Translation process and web design

2.1.1 One language serves all?

The internet started off in the United States, using English exclusively. Meanwhile the audience has become more international, and English does not suit everyone any longer. According to the Pan European Internet Monitor – a survey by Pro Active with more than 150,000 Internet users in fifteen European countries – 82 percent of the European online users can read English. However, 65 percent of them prefer sites in their own language. In December 2000 the number of internet users world-wide was 374.9 million. 36 percent of the users came from the US, 5 percent from Germany, 4.77 percent from the UK and 1.39 percent from Spain. The US share of the global internet population is supposed to drop from 36 percent today to approximately 24 percent in 2005.

Even if the web sites written in English still account for 80 percent today – the image of the user has changed: more than 50 percent of the users in 2001 have a mother tongue other than English. According to Global Reach Inc., the number of non-English speakers online had tripled from twelve months previous by mid-2000 already.

17 see Maxim Pouska, “Goethe korrekt in allen Sprachen”, in: E-commerce magazine, 01/2001, pp. 34-38
Projections for the coming years indicate that the growth in the number of non-English speaking Internet users is going to accelerate. By the end of 2005, there will be three non-English speakers online for every one user who is a native speaker of English.\(^{20}\)

German researchers have found that “by localizing a site into six languages other than English (Japanese, German, French, Spanish, Portuguese, and Swedish), a site can reach 90 percent of the online population today.”\(^ {21}\)

System Concepts showed the following in their usability testing of an e-commerce site for one of the world’s top three computer companies: Assuming that 1,000 people per week, based in Germany, visited the web site to buy a computer peripheral valued at $200 with the localized site, 89 percent would be successful. In contrast, if the localized site did not exist and customers had to use the English site, 64 percent would

\(^{19}\) [http://builder.cnet.com/Authoring/Globalize/](http://builder.cnet.com/Authoring/Globalize/)


be successful. This is a difference of significant 25 percent or in this example, 250 customers.\footnote{22 see Travis, \url{http://www.webword.com/moving/global0001.html}}

The figures clearly indicate the need to account for languages other than English when doing international business on the web. However, this raises numerous questions:
- Is it only the language which has to be considered?
- Can you standardise your website and just translate your content?
- Or are there other ways to address your user more effectively?

2.1.2 Standardization versus localization\footnote{23 The following section draws on the considerations by Wendelin G. Müller, \textit{Interkulturelle Werbung}, Heidelberg 1997, pp. 3-7}

Companies which want to be involved in international business rely heavily on media presence. One form of media presence is the internet, which - in the times of e-commerce - is taking on more and more importance. In the last ten years it was important for many companies to create an online-presentation and accordingly the emphasis was on being online, and not that much on the quality of the web site. So numerous English-only sites emerged. With the expansion of the internet, quality became more important, while the fact that the users are increasingly from outside the US or non-native English speakers means online presence in other languages is required. Within this context, two strategies of opposing “ideologies” have emerged: standardization on the one hand and localization on the other.

Supporters of standardization consider cultural factors, which might have a negative influence on the efficiency of web sites, to have become irrelevant. In their opinion, the cost reduction when offering a standardised version weighs more heavily. The approach is also motivated by the aim to create an internationally consistent image of a brand, by making planning easier due to a uniform intention and an easier co-ordination and control.

Standardization is supported by the following assumptions:\footnote{24}
- Cultures converge and cultural differences are overcome.
- The political and technological developments related to globalisation, especially the global media, facilitate the exchange of experiences among members of different cultures. The knowledge about other cultures levels out differences and leads to a homogenisation of cultures.
• Globalisation is experienced by the individual in migration, in multiculturalism and via the media.
• Experiences, life styles and living conditions are growing more and more alike. A global culture would offer an interculturally similar world of experiences – a process which could make a successful standardization possible and provide a basis for a global understanding of web sites.

Additionally, the internet itself is thought to create its own culture, leading to an increased homogenisation, and facilitates mutual understanding of individuals from different backgrounds.

The assumption that cultural differences impede a successful standardization is held by the opponents of standardization and weighs out cost considerations.

Developing a product for international, intercultural audiences usually involves more than merely a translation of verbal language. Visible (or otherwise attainable) language must also be revised, and other user interface characteristics may need to be altered.\textsuperscript{25}

The position is supported by study results proving that “people who can interact with computers in their own language, learn and progress faster”.\textsuperscript{26} Users have also been found to perform more successfully on localized pages, for example when purchasing products.\textsuperscript{27}

Localization is further supported by the following assumptions:\textsuperscript{28}
• The perception of products, advertisement, and also of web sites, forms part of and is influenced by a network of socio-cultural variables.
• The existence of different cultural meanings impedes a successful standardization.
• As an instrument of communication, the internet transports meaning.
• Communication between a sender and a receiver will not work smoothly, or will be affected negatively when they belong to different cultures, as they rely on different sets of values and meanings.

\textsuperscript{27} see Travis, http://www.webword.com/moving/global0001.html
\textsuperscript{28} see Müller, pp. 3-7
Various examples of misunderstandings in standardised international advertising are taken to prove this argumentation, like the deodorant “Mist Stick” that suggested to Germans that they might be putting manure under their armpits.

No matter if supporter or opponent, features which are indigenous to a certain country originate from cultural differences. Many determinants of consumers’ behaviour are influenced by culture, like consumption patterns, life styles and needs. Perception is also influenced by culture. Patterns of communication are deeply rooted in culture. Things, situations, behaviour, signs etc. familiar to a person are perceived much more smoothly, with less difficulty, than those not indigenous to their culture. People, whether consciously aware of it or not, are “cultural beings in the search of familiar signposts”.

Like international advertising, web sites too, directly influence the customer and need to be matched with the user’s needs. A lack of consideration for the characteristics of the target users – potentially caused by standardization – can negatively influence efficiency. When planning to offer multi-lingual web sites the conflict between standardization and localization has to be solved.

2.1.3 Today’s practice on the web

When connecting to the internet the ideologies mentioned above can be easily identified. The majority of the sites which offer pages in different languages has decided for a strategy lying somewhere in between the extremes of standardization and creating a completely new home page for every country they want to address.

Solutions to global user interface design consist of partially universal and partially local solutions to the design (of metaphors, mental models, navigation, appearance, and interaction).

A very common practice is to internationalize the original site or initiate with an international base design. Within this base design local

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33 Marcus (2001), p. 47
versions might be provided. *Internationalization* (I18N)\(^\text{35}\) is the process of designing, constructing, and implementing a product in such a way that it can easily be adapted to different target cultures, being as culturally and technically “neutral” as possible. Therefore culture-related elements have to be identified.\(^\text{36}\)

*Localization* in the following will be employed as denoting the adaptation to a target culture. This means modifying the actual content, design and style of delivery of a specific product – in this case the home page – to address culture- and locale-specific market requirements\(^\text{37}\). Localization requires both cultural awareness for the instructional design and accurate local input, so that it respects language, culture, customs and the specific characteristics of the corresponding target market. The result should be a product which gives the user a feeling of it having been especially developed for them.

The fact that it has been adapted from a different language version can not be perceived.\(^\text{38}\)

Tony Fernandes has made a very useful distinction between three different types of localization. He distinguishes between technical, national and cultural localization: \(^\text{39}\) **Technical localization** refers to the technical aspects of adapting a product to a foreign market such as double-byte conversion, operating system support, etc. **National localization** is a set of product behaviours/designs etc. that make it appropriate for a national setting. These designs enable the product to fully support all written language, punctuation, and formats as well as to solve the problems specific of a given nation. Fernandes points out that “national localization is not merely translating the user interface to another language.”\(^\text{40}\) **Cultural localization** considers that beyond the notion of providing the correct functionality and the correct language,

\(\text{35}\) I18N is used as an abbreviation for Internationalization, as there are 18 letters between the I and the n in English.


\(\text{37}\) A locale is a region which is defined by a number of characteristics, such as language, culture, cultural conventions, and all types of regional standards such as character set, currency, default page sizes, address formats, custom calendars, date/time formats, and others. For example, a language is French, a locale is the region in Canada where French is spoken.

\(\text{38}\) L10N is used as abbreviation of localization, as there are ten letters between the I and the n. The term localization has numerous connotations and a certain lack of conceptual clarity. It has been used for a variety of different meanings in literature in the last couple of years. In some cases it is only understood as translation and adaptation of number formats, and maybe offering some content only relevant to that specific country, whereas in other cases it would also include changes of the internationalized part of the web site.

\(\text{39}\) for the following section see Tony Fernandes, *Global interface design*, Boston: Academic Press 1995, p. 2

\(\text{40}\) Fernandes, p. 2
the issues of appeal, correctness, quality, and taste need to be dealt with as well. This is true not only to ensure that the product is viewed as “attractive” but also that it does not communicate undesired messages. Cultural localization is the process of producing designs that are appropriate for a target culture’s values, tastes, and history.

Take Cisco Systems and Yahoo as examples. Both have internationalized sites which subsequently have been localized. George Simons qualifies Cisco Systems as an “intercultural gem”[41]. The site is available in over 12 languages and has been culturally analysed for each of the target countries. Yahoo, however, has implemented technical and national localization, Cisco technical, national and cultural localization.

Yahoo[42] opted for a strategy which puts a strong emphasis on the user being able to recognise their page in every country and in every language they offer. The formal design of the “.com”-version has been maintained for every other version. Links, buttons, products, structure and colour are maintained consistently. Yahoo wants its products – mail, auctions, chat, etc. – to be and to look the same all around the world. However, contents offered in different countries vary. Thus, in every country users can be addressed according to their culture and offers interesting for the respective country can be provided. Examples would be a “Wiesn special” only offered on www.yahoo.de during the Octoberfest-period or features on national sport events.

2.2 Technical information concerning web design

In order to identify culture-related home page elements, factors which are not influenced by culture or are subject to technology and therefore allow only limited design options have to be considered. Some general features related to technical, structural and design issues are fairly universal for all web sites.

2.2.1 Average user equipment

The user’s equipment to access the internet certainly varies in different countries. These differences have to be considered when building web sites, as e.g. web pages designed on larger monitors might look awkward on smaller ones. Still, it can generally be assumed that the most common monitor sizes today are between 14-21 inches according to...

[41] see http://www.diversophy.com, George Simons is a psychologist working as an intercultural consultant.
[42] Yahoo works in 14 languages; Europe accounts for 7 of these.
to Petra Vogt\textsuperscript{43}, the average being probably 17 inches for countries like the USA, UK, Germany and Spain. For Hungary they tend to have smaller average, being rather 15 inches. Monitors are often set to display a 800 x 600 pixel screen and there is a trend towards a higher resolution of 1034 x 768.\textsuperscript{44}

Web page graphics which exceed the width dimension of the used monitors will cause inconvenience with many of the readers because they will have to scroll both horizontally and vertically to see the full page layout. In general pages are either designed in such a way that the reader does not have to scroll, or has to scroll from top to bottom only. To access the World Wide Web the user needs a browser, the most widely used being Microsoft Internet Explorer and Netscape Navigator.

In America more than 90 percent of the user usually access the internet from home. About 80 percent of the Hungarians access from work or school.\textsuperscript{45} In Spain about half of the internet users have access from home.\textsuperscript{46} The location from where users access the internet influences the time spent online and the frequency with which the net is accessed. Countries with a higher percentage of home access usually report a higher frequency of access, for example.\textsuperscript{47}

\subsection*{2.2.2 Home page elements}

The address of a web site is the URL (Uniform Resource Locator), which is displayed in a window-box on the browser. The home page or navigation page might not be accessed directly but be preceded by a site cover as mentioned above.

“A common place for the branding is in a page's upper left-hand corner.”\textsuperscript{48} The logo is one of the basic elements a document should include; the others are: what, when and where. The Yale Web Style Guide recommends accounting for these basics on a web site as well. Taking up that idea, web sites usually display the logo of the company, institution, etc. at the top of the page and a line with a site and a page

\begin{itemize}
\item[\textsuperscript{43}] see Petra Vogt, \textit{Erfolgreiche Präsenz im Internet}, Kilchberg 2000, p. 127
\item[\textsuperscript{44}] see Vogt, p. 127
\item[\textsuperscript{45}] Academic users make up more than half of the users and the Hungarian user is generally between 20-25 years old. In Spain 63 percent of the users are less than 35 years of age.
\item[\textsuperscript{46}] see NetValue, \url{http://www.netvalue.com/corp/presse/index_frame.htm?fichier=cp0016.htm}, (02/2001); \url{http://www.acnielsen.com}, (03/2001)
\item[\textsuperscript{47}] see \url{http://de.mmxeurope.com/press/releases/2001213.jsp}
\item[\textsuperscript{48}] see NetValue, \url{http://hotwired.lycos.com/webmonkey/98/07/index1a_page2.html?tw=design}, (03/2001)
\end{itemize}
title indicating where the user is in the web sites (this is called the *breadcrumb navigation technique*).\textsuperscript{49}

With many larger web sites the user can enter a number of submenu pages from the general category listing on the home page. Each major submenu becomes a mini-homepage for that section of the Web site. Every home page usually contains several basic elements which might have a different appearance, but are normally to be found on all web pages.\textsuperscript{50} Usually the home page carries navigation aids, which might take the form of a bar or buttons. The main menu offers various categories and can be placed at the left, top, right or bottom of the page – or combinations of these. It may be completed by submenus which allow a navigation within the selected category. Once past the home page one might also find paging buttons located at the top or bottom of the pages, as well as buttons to go back to the home page. When scrolling is necessary a jump-to-top-link might be provided on the bottom of a page.

Hyperlinks do not only connect the various pages of a site with each other (local context links) but also establish connections to other sites or pages. The standard hyperlink colours are blue for non-visited hyperlinks, purple for visited hyperlinks, and red for active hyperlinks; a different colour for active hyperlinks can only sometimes be found.\textsuperscript{51}

On many pages scanning columns can be distinguished from text and graphics columns. The former ones mainly provides links and fast access to the content of a page, the latter provides the content itself. Pages “longer” than one screen usually have a page footer which includes optional information on the author of a page, copyright, a mail-link, the date when the page was updated, the URL or the home page, privacy statements and navigation elements. On content pages common home page contents might also be provided. These are items from the home page presented as links just before or below the footer menu. Options to be selected on web pages can be given with drop-down-menus which “unfold” when clicked, radio-buttons – which allow only one choice – or checkboxes where various boxes can be ticked at the same time.

\textsuperscript{49} for a discussion see Jakob Nielsen, *Erfolg des Einfachen. München* 2000

\textsuperscript{50} see Chris Forsythe, Eric Grose, Julie Ratner (eds.), *Human Factors in Web Development*, Mahwah, New Jersey: Lawrence Erlbaum 1998, p. 133

\textsuperscript{51} see Michael Bernard, “Criteria for optimal web design: designing for usability”, 2000, [http://wsapsy.psy.twsu.edu/optimalweb/](http://wsapsy.psy.twsu.edu/optimalweb/); Although these colours and underlining are considered to be standard for links, on the web a variety of link-designs can be observed.
2.2.3 Technology behind the interface

The technology behind the web site puts limits to some design options and thus might impede accounting for cultural preferences, e.g. concerning fonts.

HTML stands for HyperText Markup Language, a descriptive language which generally builds the basis for web pages. HTML can be completed by, for example, tables, frames, Java Applets or Cascading Style Sheets (CSS). The HTML orders, called tags, define the inner structure of the text but have only limited influence on the look; what a HTML document finally looks like is determined by the Web browser, not the document itself.52

Tables constitute a very important means for designing HTML in order to achieve the page-layout desired. Cascading Style Sheets are an authoring-tool that facilitates the separation of content and form; style sheets contain data on the format of the text (e.g. fonts, etc.) and allow the standardization of document formatting.53 Frames allow the page to be broken down into various segments and display multiple HTML documents on a single page. However, various difficulties can arise when navigating, linking, bookmarking or printing the sites. Frames have been a trend, but have been found to be not all that usable and are not used conventionally for web pages.

Different character sets for different languages need to be considered for encoding. Western languages, such as English, French and German use fewer than 256 characters and can be represented by a single-byte code. Asian languages require double-byte encoding as e.g. Chinese or Japanese have thousands of characters.54 Unicode is an emerging standard for the exchange and display of all the world’s languages by computers55 which has helped to overcome problems caused by different encoding.

The typeface can generally be taken to depend on the user’s designated browser preferences. A common typeface can be specified with a tag called <Font face> which will override the user preferences. Fonts for the Latin alphabet are usually available with Windows or Macintosh and can be displayed on the screen; if the typeface specified is not

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52 See IEEE Student Branch Passau, Web Workshop 2000, Conference proceedings, Passau 2000
available, the browser will switch to the default font. The most commonly specified fonts are the serif font, Times New Roman and the sans serif font, Arial, according to M. Bernard and M. Mills.\textsuperscript{56} A study by Boyarski, Neuwirth, Forlizzi, and Regli found significantly higher levels of comprehension for a serif font similar to TNR, Georgia, over a sans serif font similar to Arial, Verdana, on computer screens in North America.\textsuperscript{57} Although it is technically possible to have fonts displayed on the user’s screen which do not form part of the standard Windows/Macintosh fonts, this is not commonly employed today. A 12-point type of font is recommended for readability.

2.3 Perception and information decoding

Psychology and human brain studies can give explanations for the perception and decoding of information. This section will present general results and relate them to web design.

\textsuperscript{56} see M. Bernard. M. Mills, “So, what size of type and fonts should I use on my web site?”, Software Usability Research Lab Wichita State University, \url{http://wsupsy.psy.wusu.edu/surl/usabilitynews/28/Ezprint.htm}, (03/2001)


2.3.1 Neurological and cognitive science

Human brain studies can give some indications for how to present information because they explain how information and stimuli are perceived and processed. In brief, our brain consists of two hemispheres, left and right. The right hemisphere is responsible for spatial orientation, images and relations, and is connected with the left hand and the left field of vision. The left hemisphere hosts the “language centre” and is responsible for text, language, coding and decoding of information. It is connected with the right hand and the right field of vision.\textsuperscript{58}

What does this imply for web pages?

Information addressing the spatial orientation of the user is best positioned on the left side of the visual field, as for example images or pictures related to the text or the navigation bar. Thereby the information is being transmitted to the right side of the brain by the optic nerve. Images or pictures placed on the right directly reach the

\textsuperscript{58} This is the case with most people. However, language seems to be located in the right half with a tiny percentage of left-handed people. See Ned Herrmann, \textit{Kreativität und Kompetenz: Das einmalige Gehirn}, Fulda 1991, p. 15-16; Robert W. Proctor, Janet D. Proctor, “Sensation and Perception”, in: Gavriel Salvendy (ed.). \textit{Handbook of Human Factors and Ergonomics}, New York: John Wiley \& 1997, pp. 43-88
left hemisphere. As they can not be processed there they have to be “sent” to the right hemisphere. Recognising and processing takes longer and is made more difficult. The same is true for textual information positioned on the left. According to Klaus Hofer and *die argonauten*, studies prove that navigation bars positioned at the top or left of the screen are better accepted. Only then would they be recognised immediately by the user.59

The human brain can only take in a certain amount of information at a time. Several memory systems within the brain “handle” incoming information:

Everything we perceive is passed on to the sensory memory first which has a memory-capacity of one to one and a half seconds. Forgetting starts as soon as the visual signal stops. When reading text on a screen, the sensory memory helps to find the beginning of the next line. Problems occur when reading a line takes longer than one and a half seconds.

Only a small stake of the information is passed on from the sensory memory to the short-term memory. Information can be memorised for approximately one minute in this part of the memory. After that, information is either being “saved” (retained) or “lost” (forgotten). Miller found the capacity for processing information to be seven plus or minus two chunks. A chunk is a unit of information which combines several elements to one single meaning.60 A menu topic would be a chunk for example.

For web site design this implies that all the information should be organised according to the capacity of the short-term memory. This can be achieved, for example, by structuring the web site, providing menu topics, subdivisions, and paragraphs limited to few sentences only. This would also imply that menu topics should not exceed seven, or even better, remain below. Wirth takes seven to be a maximum for the internet and considers three to five units as the capacity for processing information to be more realistic in this context.61

Information available in the short-term memory can be passed into the long-term memory in order to be retained there. This process only

59 They conducted an experiment in Canada in order to find out whether the position of the navigation bar would influence the ability to navigate. The following positions of the bar were tested: top, right-side, bottom, left-side. When returning to surfing the provided web site after an interruption of 30 seconds, participants were found to require less time of resumption when the navigation bar was situated on the left. The top position came second, bottom third and the position on the right-side was found to take longest. See Klaus Hofer, Hansjörg Zimmermann, *Good webrations 2.0.*, München 2000, p. 98

60 see [http://www.kommdesign.de/texte/gedaechtnisspanne.htm](http://www.kommdesign.de/texte/gedaechtnisspanne.htm), (12/2000)
61 see [http://www.kommdesign.de/texte/gedaechtnisspanne.htm](http://www.kommdesign.de/texte/gedaechtnisspanne.htm)
works for information which relates to or has coherence with information “saved” earlier. Thus, some sort of association is necessary for saving information in the long-term memory. Or in other words: information can only be retained when one can link or associate things already known to it.

The intensity with which information is progressed is related to what a user memorises. The more operations being executed with the content, the more intense the progression and the better the memory effect. Motivation and involvement as well as contradictions, ambiguity and unusual things lead to an increased depth of progressing.62

2.3.2 What attracts attention?

The attraction of attention follows certain rules, all of which have a psychological, social or biological origin. Some of these principles are of relevance to web design and will be described briefly.

One rule states that the more intense something is, the more interesting and attractive it appears to humans. For example, highly saturated colours are more efficient than colours with little saturation; pure colours more efficient than mixed ones. Stimuli that are different, the exceptions to the rule, obtain highest attention. When expectations or hypotheses are not fulfilled we are surprised. Things that are unusual, amazing, extreme, exotic receive high attention. Typical examples for eye-catcher are movement – which has the highest priority, eyes, faces, colours – like the alarming effect of highly saturated red or colours used for warning, the scheme of childlike characteristics and sexual stimuli.63 For this reason animations have been found to disturb and irritate readers.64 As they display motion, they distract the reader.

62 Advertisement in newspaper is more effective regarding memory than television spots, according to Wirth. In the first case, the reader is much more involved, he/she chooses the content themselves and progress these contents actively. With television a passive consuming attitude is prevalent. Internet functions more like print media in this regard: content is approached and chosen by the user and actively progressed. See [link](http://www.kommdesign.de/texte/verarbeitungstiefe.htm)

63 see [link](http://www.kommdesign.de/texte/aufmerksamk4.htm)

64 see [link](http://www.kommdesign.de/texte/animation.htm); Jared M. Spool et al., *Web Site Usability: A Designer's Guide*, San Francisco: Morgan Kaufmann Publishers 1999, p. 89
2.3.3 Colour makes a difference

First impressions are lasting impressions.

All human beings make a subconscious judgement about a person, environment, or item within 90 seconds of initial viewing, and between 62% and 90% is based on color alone, is stated by the Institute for Color Research. Factors involved in efficiently using colour in web design are the colour mix, gender preferences, the influence of the individual colour perception, emotional responses to colours and how culture can affect those responses. Colour affects legibility, the number of colours used has to be considered as well as the fact that the colours displayed on the screen are affected by the browser, the monitor and the colour options selected by the user. For example, Netscape and Microsoft Explorer allow the user to change link colours and to make choices about the polarity, that is to say choose the colour of the text and the background. Different browsers might display the same colour differently.

Colours can be grouped into primary (red, yellow, blue), secondary (a mix of primary colours: orange, green, purple) and tertiary colours (a mix of primary and secondary colours: yellow-orange, red-orange, yellow-green, blue-green, blue-purple and red-purple). The different colours correspond to light waves of different length. Colours can also be distinguished according to chromatic dimensions of hue, saturation (or chroma) and their brightness (or value). Hue refers to greenness, blueness and so forth, and varies with any change in the dominant wavelength. Saturation denominates the extent to which the dominant wavelength in fact dominates the light. An increase in light of a particular composition increases the brightness.


One way of depicting the colours is the colour wheel. The colours located on the right half are considered to be cold (like blue or purple), the ones on the left are thought of as warm colours (like red, orange, or yellow). The former tend to move away from you whereas the latter tend to move towards you.

Figure 2: The colour wheel for choosing hue in HSV (Hue-Saturation-Value)

According to Natalia Khouw, women show a clear preference for cool colours and tend to prefer tints of shades, that is soft colours. Men on the contrary prefer colours with stronger hue and saturation, brighter colours, and are generally more tolerant of black, white and grey.

The colours on the screen result from mixing the three primary colours red, green and blue (RGB). These colours consist of light shining onto the retina. The more mixing, the lighter the colour and the more the retina is strained. Primary colours all have the same wavelength – a reason for not using them all at the same time. One primary colour stands out, two equal out.

Web design experts demand the number of colours to be limited. The maximum number of colours recommended is four for an alphanumerical display (one colour for each of the following:

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69 The apparent movement of colours towards, and away from, the viewer probably occurs because the lens of the eye is made of a single material and so is subject to ‘chromatic aberration’; light of different wavelengths is bent, as by a prism or a raindrop, to different extent. When the muscles which control the shape of the lens focus green light on the retina, the red light is focused a little behind it and the blue a little in front. To see a red object clearly, the lens must be the same shape as we need to see a green object which is slightly nearer; and to see a blue object, it must be adjusted in the opposite way. So reds seem to advance and blues to recede. See Rosotti, pp. 130-132; Maura Yost, “Communicate with Color”, http://www.webreference.com/new/color.html, (12/2000)


71 White light is the most strenuous, and warm colours are more straining than cold ones. Colours are bent to a different extent, due to the different wavelengths of the light. Only the colours with neighbour hues to yellow-green are focused more or less exactly on the retina. The muscles of the eye have to focus the image depending on the colour. See Hofer, Zimmermann, p. 49

72 see Hofer, Zimmermann, p. 50
background, text, links and visited links) and seven for the entire sequence of displays.\textsuperscript{73}

As far as legibility is concerned, colour deficits need to be considered.\textsuperscript{74}
As a consequence, a high contrast in both chroma and brightness is recommended. Red, green, brown or purple look the same to many colour deficit users if they have the same contrast.\textsuperscript{75} Best legibility results from combinations of the two brightest colours, white and yellow, contrasted with the two darkest colours, black and blue.\textsuperscript{76}

Black and white backgrounds offer most options for text colour.\textsuperscript{77} Whether to use negative copy or not seems to be a question of taste, however, there are authors who recommend avoiding it with large text components.\textsuperscript{78} Background colour also affects the user’s emotion: simple backgrounds provide stability, strength and confidence, complex backgrounds counter with impulse, risk and excitement.\textsuperscript{79}

Marc Green suggests the optimal background to be a very light, desaturated blue.\textsuperscript{80}

According to Jacobson and Bender, experimental evidence suggests that these relationships are, in many respects, universal, and thus relatively free from individual and cultural influences.\textsuperscript{81} Therefore it can be assumed that the colour wheel as reproduced above and the given dimensions are universally accepted. However, the aesthetic or emotional connotation of colour can change with the culture. And even within a single culture it is possible that one viewer’s perception of colour may be very different from another’s (due to personal and subjective judgement, and the consideration of what is pleasing). An overview of the different cultural meanings of colour in various countries is provided in Appendix A.

\begin{footnotesize}
\begin{itemize}
    \item \textsuperscript{73} see Ben Shneiderman, \textit{Designing the user interface: strategies for effective human-computer interaction}, Reading, Massachusetts: Addison-Wesley \textsuperscript{2}1992, p. 208
    \item \textsuperscript{74} Approximately 8 percent of males and little less than 0.5 percent of females have a colour deficit of some kind according to GVU’s WWW User Survey 1998 [On-line] \url{http://www.gvu.gatech.edu/user_surveys/}
    \item \textsuperscript{75} see Bernard, \url{http://wsupsy.psy.twsu.edu/optimalweb/}
    \item \textsuperscript{76} It is considered to be more strenuous to read large sections of blue coloured text than e.g. of black coloured one. See Nielsen (2000), p. 64
    \item \textsuperscript{77} see Marc Green, “Basic Color & Design SBFAQ”, in: \textit{ERGO/GERO Human Factors Science}, \url{http://www.ergogero.com/FAQ/Part3/12Cultures.html}, (01/2001)
    \item \textsuperscript{78} see Hofer, Zimmermann, p. 103
    \item \textsuperscript{79} Mary Morris, Randy J. Hinrichs, \textit{Web Page Design: A different multimedia}, Mount View: Sun Soft Press 1996, p. 92
    \item \textsuperscript{80} The light background produces high brightness contrast against dark letters. By toning down the white, the screen is less likely to act as a glare source. Finally, the use of some blue will produce aerial perspective and provide a bit of foreground-background separation. See Green, \url{http://www.ergogero.com/FAQ/Part3/12Cultures.html}
    \item \textsuperscript{81} see N. Jacobson, W. Bender, “Color as a determined communication”, in: \textit{IBM Systems Journal}, VOL 35, NOS 3&4, 1996, pp. 526-538
\end{itemize}
\end{footnotesize}
2.3.4 Usability

The most dissatisfying web experiences are looking for specific information and not being able to find it, using web sites that are confusing, and web sites with long download time. Some of the challenges concerning usability seem not to be influenced by culture but are of a more general nature.

Problems of disorientation can be reduced by bearing in mind that the users think according to different mental models. They can also be reduced by using bread crumb navigation technique and/or sitemaps, which are designed to visually show the navigational structure of a site.

Links need to be clearly indicated as such, so that users do not get confused which elements are clickable and which are not. Visual cues that a link has already been traversed, that is the link changes colour after the user clicks it, have been found to have a positive correlation with user success.

Reading on the screen is more tiring and about 25-30 percent slower compared to paper reading. Upper and lower case letters increase legibility. At the same time, they are considered to be more polite, as all upper-case text on the web usually is associated with shouting.

Only 10 percent of the readers scroll down a page. It is assumed that users only scan or skim texts for information that is of direct interest to them. However, whether scanning or not depends on the target of the user when surfing the web. Be it for scanning or for reasons of limited capacity of processing information, several authors recommend the text within web sites to be very succinct, with only one key idea per paragraph, as well as using highlighted keywords or key phrases and bulleted lists.

Short paragraphs are perceived as pictorial notions. The eye can concentrate more easily on one “picture” after the other, and thus

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82 see 10th GVU survey, 1998, [http://www.gvu.gatech.edu/user_surveys/](http://www.gvu.gatech.edu/user_surveys/)
83 see for this section Michael Bernard, “Constructing User-Centered Websites: Design Implications for Content Organization”. [http://wsupsy.psy.twsu.edu/usr/usabilitynews/28/ezprint.htm](http://wsupsy.psy.twsu.edu/usr/usabilitynews/28/ezprint.htm), (03/2001); [http://www.kommdesign.de](http://www.kommdesign.de)
84 Wirth also recommends specifying what is behind a link, e.g. not just using “click here”.
85 see Spool, et al., p. 42-43
86 see Vogt, p. 109
87 see Hofer, Zimmermann, p. 98
88 see Vogt, p. 109; [http://www.commdesign.de/fakten/index.html](http://www.commdesign.de/fakten/index.html); Bernard, [http://wsupsy.psy.twsu.edu/optimalweb/](http://wsupsy.psy.twsu.edu/optimalweb/)
89 see [http://www.kommdesign.de/fakten/index.html](http://www.kommdesign.de/fakten/index.html); Bernard, [http://wsupsy.psy.twsu.edu/optimalweb/](http://wsupsy.psy.twsu.edu/optimalweb/)
understanding of content is being facilitated.\textsuperscript{90} Short lines with 60 to 80 signs per line are considered to support perception.\textsuperscript{91}

Images and pictures can function as effective tools of emotional communication, create a pleasant atmosphere and a positive feeling, help resolve ergonomic problems by easing orientation, facilitate learning, and create remaining impressions because the memory for images is much more efficient than for text. However, the results from the Stanford-Poynter Project, an eye-tracking study in which the eye movements on news sites were investigated, show the following: users characteristically look first at headlines, then at article summaries, and then captions. They also found that users were twice as likely to fixate on the text rather than on the images in their initial visit to a site.\textsuperscript{92}

The directionality of a language does not only affect layout considerations but also has an influence on the perception of images. International advertising provides examples for this: a Middle Eastern marketing campaign for detergent showed dirty laundry on the left, clean laundry on the right and a box of detergent in the middle of the two piles of clothing. Reading from right to left, Arab viewers were confused about the marketing message.\textsuperscript{93}

Alphabetic sorting formats and ordering sequences can vary in different languages and scripts. Different languages may even place the same letter in different locations, for example $Å$ comes after $A$ in French but after $Z$ in Finnish.\textsuperscript{94} In Spanish $ll$ (a double character) is treated as a separate single character and is ordered after $l$ and before $m$.\textsuperscript{95} Words in languages that use ideographic script, like Chinese and Japanese, consist of one or more symbols rather than collections of letters, and so collation methods are considerably different from those of phonetic scripts.\textsuperscript{96} One of Yahoo!'s online products – an address book – sorts names alphabetically in English. In Asian countries, however, the names are sorted according to the number of keystrokes.

\textsuperscript{90} see Hofer, Zimmermann, p. 104
\textsuperscript{91} see Hofer, Zimmermann, p. 104; Vogt, p. 165
\textsuperscript{92} The Merian-Project at the University of Göttingen found similar results using the same method. So results can be assumed to have general validity. See http://www.marketing.uni-goettingen.de/forschung/aktuelles/merian_erste Ergebnisse.htm; Stanford-Poynter Project, http://www.poynter.org/eyetrack2000/index.htm
\textsuperscript{93} see George Simons, “Mind the Gap”, http://www.diversophy.com, (01/2001)
\textsuperscript{94} see Aaron Marcus, “Globalizing of User-Interface Design for the Web.”, http://zing.ncsl.nist.gov/hfweb/proceedings/marcus/, (01/2001)
\textsuperscript{95} see Uren E., et al., Software Internationalization and Localization: An Introduction, New York: Van Nostrand Reinhold 1993, p. 15
\textsuperscript{96} Commonly used sorting schemes include stroke count (ideographs consist of varying numbers of strokes; they rank from two or three strokes to 20 or more), radical groups (ideographic characters are composed in part of a small number of basic building blocks called radicals; characters that contain the same radicals are grouped together in this sorting scheme) and pronunciation.
3 Cultural differences – applying cross-cultural theory to web design

When localizing web sites, numerous factors have to be accounted for. These can be categorised into two groups: overt and covert factors. The overt factors are tangible, straightforward and publicly observable elements. The covert factors can all be grouped under the category cultural conventions and deal with elements that are intangible and depend on culture or “special knowledge”. Usually they have the same meaning to members of a particular culture and thus misinterpretation is less likely. Cultural localization accounts for these covert factors.

Overt factors include the translation of software, applications and content. Layout issues are for example the expansion of text, character sets, directionality or orientation, collating order sequence, spelling, hyphenation, punctuation, paper and envelope size. Furthermore number formatting (decimal separator), monetary formatting (currency), date and time formats, calendars, the beginning of the week, measurement scales, address formats, telephone numbers, variations of a single language, e.g. American vs. British English, have to be considered.

The cultural conventions include mental models, functionality, navigation system, layout, imagery – metaphors, images, pictures, symbols, icons, body language, hand signals, depicting parts of the human body, number of images, relation between images and text, graphics, typeface, colour schemes, music and sounds, ordering sequences, general aesthetics.

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\[97\] see Alvin Yeo, “World-Wide CHI: Cultural User Interfaces, A Silver Lining in Cultural Diversity”, http://www.acm.org/sigchi/bulletin/1996.3/international.html, (02/2001)


The aim of this chapter is to elaborate hypotheses for website design for the four countries selected. The focus lies on covert factors. Therefore the countries will be characterised according to intercultural theory. User behaviour, user statistics and international advertising will be taken into consideration. From these characterisations inferences about communication preferences and website design will be drawn. General information on user statistics is provided in Appendix B.

3.1 Models for the comparison of cultures

Several models have been developed for the comparison of cultures. For the purpose of localizing and designing websites for specific cultures, the most useful ones are those that distinguish dimensions of culture. They can be used as an instrument to compare cultures. Theories by Geert Hofstede, Edward Hall and Fons Trompenaars will be considered, as well as their implications for communication and international advertising as they are the models most cited.  

Edward Hall, for some 40 years, has studied dimensions of culture. He focuses on the communication patterns found within cultures. He has defined the four dimensions of context (low vs. high context), space, time (monochronic vs. polychronic) and information flow. His context and time concepts will be used in the following sections.

Geert Hofstede conducted research with IBM workers in 72 countries, conducting a first survey between 1967 and 1973, to which later

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For further reading see: Gerhard Apfelthaler, Interkulturelles Management: Die Bewältigung kultureller Differenzen in der internationalen Unternehmertätigkeit, Wien:
additional surveys by himself and other authors were added. He distinguishes five dimensions of culture: power-distance, individualism, masculinity, uncertainty-avoidance and long-term orientation.

The interpretation of Hofstede’s results for web design draws on ideas and findings of Marieke de Mooij, who has applied the Hofstede-model to international advertising, and Aaron Marcus, who has given some indications from the model for user-interface design.101 Fons Trompenaars’ research – later in co-operation with Charles Hampden-Turner – is concerned with managers, and he groups cultures in terms of their responses to case questions. He found seven dimensions in which cultures differ: universalism vs. particularism, emotional neutrality vs. emotional affectivity, individualism vs. communitarianism, specificity vs. diffusion, achieved status vs. ascribed status, inner direction vs. outer direction, sequential time vs. synchronous time.

Robert Levine’s studies about time are used to indicate speed and tempo of the USA, UK, Hungary and Germany. His book A Geography of Time102 provides the results of experiments conducted in 31 countries. He measured the average walking speed of a specific type of pedestrian over a distance of 60 feet primarily during the morning rush hour on main downtown streets, speed in the workplace by measuring the time needed to buy a common stamp with a bill and clock time focusing on the accuracy of bank clocks in downtown areas of each city. Combining these three factors the countries are ranked starting with the fastest. Germany comes 3rd, Great Britain 6th, USA 16th, and Hungary 19th. There is no data available on Spain. Results might give indications for the speed of a web site. For example, North Americans tolerate 20 second delays in page loading times, but would not tolerate 30 or 60 seconds.103 Delay tolerance might be similar for the other cultures, Britons maybe being annoyed faster and Hungarians and Spaniards a little more patient.

Meaning and implications of cultural dimensions which might influence web design will be briefly described in the following.


102 see Robert Levine, Eine Landkarte der Zeit: Wie Kulturen mit Zeit umgehen, München 1997, pp. 177-205

3.1.1 Hall’s cultural dimensions

Hall distinguishes between high and low context communication. He defines context as the information that surrounds an event.

In low context communication the mass of information is carried in the explicit code. Typically a clear, precise, and direct language style and a lot of explicit information can be found. Communication works mostly without the interpretation of the environment. Information is highly focused, compartmentalised and controlled. Low-context cultures tend to take a sequential approach in communication, and define intermediate aims within processes. Information networks are not as predominant as in high-context cultures, making a great deal of information from other sources necessary.\(^\text{104}\) The USA is a typical representative of such a culture. A fact which might serve as an explanation why the internet originated in the USA and has developed fastest there.\(^\text{105}\)

In high context cultures the information is in the visuals, symbols and associations attached to them. In advertising this is reflected by low-context cultures using more copy\(^\text{106}\), argumentation, facts and data, and high-context cultures using more symbols and indirect verbal expression and less copy.\(^\text{107}\)

In high context cultures most of the information forms part of the context or is internalised in the person. Implicit communication prevails. Characteristically, strong social networks exist within the family, with friends, colleagues or clients. Due to a continuous exchange of information within these networks, being very explicit in communication is superfluous. There is no need to communicate background information— many things are known anyway. Hall found information to move rapidly, “as if it had a life of its own”.\(^\text{108}\)

Monochronic societies divide time into segments, schedule it and do “one thing at a time”.\(^\text{109}\) Its members usually concentrate on the job and are committed to it. Promptness is emphasised and there is a need for information. Monochronic cultures are usually also low-context cultures, and polychronic cultures are usually high-context cultures. Simultaneous occurrence of many things is typical of polychronic

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\(^{104}\) see de Mooij, p. 157

\(^{105}\) see Apfelthaler, pp. 46-47

\(^{106}\) Copy in advertising refers to the text or the textual elements in an advertisement.

\(^{107}\) see de Mooij, pp. 66, 157

\(^{108}\) see Hall, p. 23

\(^{109}\) see Hall, p. 15
societies. A great involvement with people is shown, promptness is based on relationship. Its members are highly distractible, subject to interruptions, and change plans often and easily.

Time is perceived as a line of sequential events in all the four countries examined, as opposed to a cyclical and repetitive perception attributed to Asian cultures.

3.1.2 Hofstede’s cultural dimensions

Hofstede’s long-term dimension concerns orientation and search for underlying concepts: the orientation to practice and search for virtuous behaviour on the one hand (long-term) and the orientation to belief and search for truth on the other (short-term). The former can mainly be found in Asian countries, the latter in Western countries. Thus, no differences resulting from this dimension are expected for the selected countries.

Power-distance measures the extent to which less powerful members of a society accept and expect unequal power distribution. Large power-distance can be seen in respect for the old age, for example. A need for status can be found. De Mooij notes that appeals used by advertisers of successful car brands in societies with large power distances frequently include the style and the design of automobiles. The need for distinctive design fits the need for status. Small power-distance would be represented by “judge for yourself”-attitudes or companies stressing their role as a facilitator as opposed to imposing ideas.

Individualism-collectivism describes the relations between the individual and his/her fellows. Individualism can be matched with a low-context communication style; the public is addressed in a direct and personalised way, and the use of you, me, I and imperatives is frequent. Data and facts are important and product merit appeals and rhetoric are frequently used. Privacy is cherished and the individual, as opposed to a group, is emphasized. Powerwords are, for example, “worldwide” and “world”. Members of such cultures give priority to the task. Collectivistic cultures favour high-context communication.

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110 see for this section Richard Mead, *International Management: Cross-cultural dimensions*, Malden, Massachusetts: Blackwell 1998, p. 34; de Mooij, pp. 42-234

111 see de Mooij, p. 146

112 see de Mooij, p. 186

113 People looking after themselves and their immediate family only, versus people belonging to in-groups that look after them in exchange for loyalty.
The use of symbols and entertainment plays a strong role in advertising. Priority is given to the relationship with people. Groups or extended families are preferred to individuals as people do not like being alone or eating alone in collectivistic cultures. Being alone means having no friends, no identity. Direct approaches alienate the individual from the group and therefore are disliked.\textsuperscript{114}

\textbf{Masculinity-femininity} is concerned with the division of roles and values in society. For example, performance, achievement, success and “winning” are characteristic of \textit{masculine} cultures. In particular the combination of individualism and masculinity – the configuration of the Anglo-German world – leads to the strong need to be successful and show it, along with the wish to dominate, e.g. in the USA – be the first/best. There is a desire to get most of life; dreams of great expectations and a world without limits represent mastery. Status is important for demonstrating success. Masculinity can also manifest in an aggressive typology and layout.\textsuperscript{115} In \textit{feminine} cultures the dominant values are caring for others and quality of life. You are not supposed to talk about power in public, you just have it. Confrontations are avoided, important details are communicated indirectly and modesty and harmony are emphasised.\textsuperscript{116}

\textbf{Uncertainty avoidance} refers to more or less need to avoid uncertainty and ambiguity about the future. In societies with \textbf{strong uncertainty avoidance} there is a need for rules and formality to structure life, communication is more formal, conflict and competition are perceived as threatening. There is a high regard for technology and design. Other aspects of strong uncertainty avoidance cultures are being well groomed and showing emotions. Presenters are often experts, the competent professional or the competent boss, like the professor or physician type typical for Germany. Spain is another example for a high ranking uncertainty avoidance culture and is more art and fashion oriented. Societies with \textbf{weak uncertainty avoidance} tend not to show emotions – typical representative being the British “stiff upper lip”. They feel that there should be as few rules as possible and believe more in generalists and common sense. Conflict and competition are not considered to be threatening.

\textsuperscript{114} see de Mooij, pp. 188-193
\textsuperscript{115} see de Mooij, pp. 193-199
\textsuperscript{116} see de Mooij, p. 198
3.1.3 Trompenaar’s cultural dimensions

Universalism vs. particularism is basically concerned with whether a country prefers impersonal rules, codes, laws and generalisations or personal relations, exceptions, special circumstances.

Emotional neutrality vs. emotional affectivity deals with the different contexts and ways that cultures choose to express emotions. Expressing emotions openly is more neutral in emotional cultures, emotions should be held in check so as not to cloud issues or give the appearance of being out of control in neutral cultures.

Individualism vs. communitarianism is familiar to Hofstede’s dimension described above.

Specificity vs. diffusion is concerned with the degree of involvement individuals are comfortable with when dealing with other people. Specificity is characterised as atomistic, reductive, analytic and objective, whereas diffusion can be described as holistic, elaborative, synthetic and relational.

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Achieved vs. ascribed status refers to the determination of status and power in a society: what you’ve done, your track record vs. who you are, your potential connections.

Inner direction describes conscience and convictions located inside vs. outer direction referring to examples and influences located outside.

Sequential time perceives time as a race along a set course, whereas for synchronous time, time is thought to be “a dance of fine coordinations”.

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117 see Hampden-Turner, Trompenaars (2000); Hampden-Turner, Trompenaars (1996), pp. 275-306

118 Hampden-Turner, Trompenaars (2000), p. 11
3.2 Culture-specific preferences in the USA, UK, Spain and Hungary

The four countries selected will be characterised according to the intercultural theories explained above. This allows to draw conclusions for communication and preferences in web design.

3.2.1 USA

According to the cultural dimensions mentioned, the USA can be characterised as monochronic, low-context, time and consciousness fixed in the present, time as a sequence, high on masculinity, high on individualism, below average on power distance, weak in uncertainty avoidance, universal, emotionally neutral, specific, inner-directed, status by achievement.119

Treatment in the US is rather informal, using a direct communication style which also includes exaggerations and overstatements. Americans can be considered as being rather emotional and have a tendency to maximise the “public self”. This means Americans expose more of themselves than many other cultures do. Structures are compartmentalised.

Individualistic societies are also universalistic societies,120 that means people tend to believe that there are universal values that should be shared by all; North Americans believe democracy to be such a value. Freedom and independence are given a special importance. The weak uncertainty avoidance in combination with masculinity appears to be indicative of creativity and innovation according to de Mooij.121 She found appeals working for successful automobile advertising to be big and powerful.122 Hyperbole, persuasiveness, comparative advertising and size are typical for the US.

In Levine’s time ranking the USA came 16th out of 31,123 thus being positioned rather in the middle with a tendency towards the “slower” countries. However, he also measured times within the United States and found the north-east to be faster and the west to be more relaxed in speed.

119 see Apfelthaler, p. 43-93; de Mooij, pp. 79, 85; Hall, pp. 35-125; Hampden-Turner, Trompenaars (1996), pp. 275-305; Hoeklin, pp. 27-47; Hofstede, pp. 147-165; Marcus, [link]

120 see de Mooij, p. 79
121 see de Mooij, p. 85
122 see de Mooij, p. 146
123 ranks in the experiments: walking speed: 6/work place: 23/clock time: 20; see Levine, p. 180
Consequences for web design include the need for fast access. Mental models require a shallow hierarchy, however, web sites can be fairly complex with a rather huge amount of data/content and choices (freedom to choose); the data and information given needs to be rather explicit, clear, precise, direct and highly focused. Language should be orientated on the rhetorical style which is controversial, includes argumentative speech and tolerance or encouragement of extreme claims. Prominence is being given to the customer – on web sites, too.

Navigation should be oriented to exploration and control by the user and thus be less controlled by designers in advance. Therefore links may open new windows leading away from the original location, and wandering and risk are accepted; there is a stigma on over-protection. Though mental models and help systems need to be rather focused on reducing “user errors”, they should be based on understanding underlying concepts rather than narrow tasks. Few barriers to access will be found as transparency, integration, and an implicit freedom to roam are valued. A rather aggressive layout is accepted and may be used depending on the content; coding of colour, typography, and sound should be used to maximise information (multiple links without redundant cueing); work tasks, roles and mastery with quick results for limited tasks have to be possible; graphics and sound, and animation are used for utilitarian purposes.

Although there is a focus on traditional gender, family, and age distinctions, the use of social roles to organise information is infrequent (like an obvious manager’s section sealed of from the rest). So is the emphasising of social and moral order and its symbols. Expertise, authority, experts, certificates, official stamps, and logos are of little importance and would only obtain a weak focus. Motivation is based on the fact that personal achievement is maximised; it is the extra-ordinary that is expected. Materialism-consumerism can convey the image of success. As opposed to groups, the individual or products by themselves are important and need to be emphasised on a page. A willingness to provide personal information can be found. Prominence should be given to youth and action; change and what is new and unique should be emphasised.
Resulting from this characterisation, the following hypotheses – which should be taken up in web design – can be formulated for the USA:

- **Prevailing motto:** *maximise*
- New trends/techniques are frequently used: recent technology like flash, negative copy, animation is accepted and may form part of a site.
- **Maximise information and options:** a large amount of information/content is provided; multiple links are presented – the user has the freedom to choose (that means structure is minimalistic/very little structure).
- Navigation offers an abundance of options to the user.
- Colours: black and white prevail, but multiple colours are used to maximise information (not redundantly), especially highly saturated ones.
- Images: pages are mainly text based and only few images are required. When images are used, the intention is more to fulfil a utilitarian purpose and they will rather depict individuals than groups. Icons might be found regularly.
- The option to contact the authors of the site is important.
- Music and sound are only used where they are perceived as “cool” or “hype” (or where they form part of the service).

### 3.2.2 UK

**The United Kingdom** can be classified as: low context, monochronic, past-oriented, time as a sequence, very low on power-distance, very individualistic, very high on masculinity, low on uncertainty avoidance, universal, emotionally neutral, specific, inner-directed, status by achievement.\(^{124}\)

Though individualism is connected with being low-context, British advertising shows high-context communication.\(^{125}\) According to Indrei Ratik there is a link between the use of symbols and the degree of homogeneity of cultures. Homogenous cultures count with a more unified cultural heritage, and their members can thus rely more on shared symbols than members of heterogeneous cultures can. “The relatively high use of symbols by the English might be explained by Britain being an island”\(^{126}\) and a nation with a long history.


\(^{125}\) see de Mooij, p. 159

\(^{126}\) Indrei Ratik cited in de Mooij, p. 67
As in the US, the UK uses a direct communication style, characterised by being informal. Emotions are not shown but the well-known humour is a way to reduce tension. The Britons display a relatively reserved behaviour, emphasise individual autonomy, personal development, liberalism and show a law-abiding honesty. Britain is also characterised by “conservatism under the rule of law, traditional class structures and a low power distance in a finely layered society”\textsuperscript{127}

The weak uncertainty avoidance in combination with masculinity appears to be indicative of creativity and innovation according to de Mooij\textsuperscript{128}. The UK and the US both belong to this group, however, the US ranks higher on uncertainty avoidance. In the UK showing success is also important, but often done “tongue in cheek”. The British advertising style is more subtle, and more entertainment based using trend-setting images, “long copy, puns and word games, intelligent humour, understatement, daring”\textsuperscript{129}. Appeals working for successful automobile advertising are big and powerful. Individualism, personal success and “standing out from the crowd” are emphasised in advertising, the focus is on youth. Levine ranked the United Kingdom 6\textsuperscript{th} out of 31\textsuperscript{130} – so high speed and being fast are very important in this monochronic country, and so are fast loading times.

For web design this means: fast access, clear navigation and clear categorisation are important. Highly focused information and a clear, precise, direct, and explicit style of communication, with a lot of direct address of the public should be used. Although creating complexity with a maximum of content and choices a shallow hierarchy in mental models should build the basis. Mental models and help systems need to focus on understanding underlying concepts rather than narrow tasks. Wandering and risk are accepted, which can be seen in less control of navigation. As in the USA links might open new windows leading away from the original location. On the one hand, colour coding, typography and sound need to maximise information. On the other hand, work tasks, roles, and mastery, with quick results for limited tasks are required. So multiple types of interface controls may form part of the interface as well as hidden content which has to be displayed by scrolling; navigation should therefore be oriented to exploration and control. Little importance is given to security and restrictions or barriers to access; integration, transparency and an implicit freedom to

\textsuperscript{127} Arruda, Hickson, p. 184
\textsuperscript{128} see de Mooij, p. 85
\textsuperscript{129} de Mooij, p. 274
\textsuperscript{130} ranking positions: walking speed: 4/work place: 9/clock time: 13; see Levine, p. 180
roam are preferred and should be accounted for. Games and competition might be used to gain attention. Prominence should be given to the customer; individuals and products by themselves should obtain importance, as motivation based on personal achievement is maximised (the extra-ordinary is expected). Images of success can be demonstrated through materialism-consumerism. There is a focus on traditional gender, family, and age distinctions and class distinctions might be of some importance as well. This might be reflected on web sites. Traditional as well as young, modern and daring tendencies can be found. Youth and action, change, what is new and unique are – and need to be – emphasised.

Hypotheses which should be considered in British web sites:

- An overall dichotomy of conservative versus daring is typical for the British. As a consequence both types of web sites can be found: conservative and daring. When designing sites, it should be opted for one of the two types.

- Providing informative content is important in any case.

- Conservative type of web site: large number of items addressed; very little colour is used (conservative colours as dark blue, dark red prevail); new technologies or trends are not implemented until they have become established; structure is complex, rather text based and uses few images. Navigation is fairly complex and offers a variety of options to the user.

- The daring type of web site can be found more frequently: the entertaining aspect is emphasised; numerous images and symbols are displayed; navigation provides a complexity of choices with multiple types of interface controls; several colours are used (not too many) and cold colours are preferred; the approach is fairly structured and aimed at achieving goals quickly but having fun at the same time; music or sounds may be used.
3.2.3 Spain

Spain is a high-context culture, polychronic, rather synchronous time, past-oriented, rather collectivist, feminine, strong on uncertainty avoidance, medium-high on power distance, particularistic, diffuse, emotionally affective, status by ascription.\footnote{see Apfelthaler, p. 43-93, de Mooij, pp. 146-167, 172-198, Hampden-Turner, Trompenaars (1996), pp. 275-305, Hoecklin, pp. 27-47, Hofstede, pp. 147-165, Marcus, \url{http://www.amanda.com/resources/hfweb2000/hfweb00.marcus.html}}

Resulting from the combination of high uncertainty avoidance and collectivism, a need to structure reality evolves, which is fulfilled via implicit rules rooted in tradition. Professionalism and real experts are influential or, if not available, detailed description is required. Buyers will seek more social information which can be provided by the social networks. There is a higher degree of brand loyalty.

Confrontations are avoided, modesty and harmony emphasised.\footnote{see de Mooij, p. 198} A more indirect, non-verbal communication style prevails for which the use of symbols is very characteristic.\footnote{see de Mooij, pp. 162-164} The Spanish way of life is reflected in advertising as warm, caring about others, different and original, however, full of unpredictable factors. This reflects the typical

Spanish paradox between stability and originality: the modern and innovative versus stability, as coping with ambiguity is difficult.\footnote{see de Mooij, p. 185} In Spain associative thinking is strong due to the country being high-context in combination with strong uncertainty avoidance and large power-distance. Design, style, and fashion are appealing factors working well for successful automobile advertising.\footnote{see de Mooij, pp. 146-167, 172-198, Hampden-Turner, Trompenaars (1996), pp. 275-305, Hoecklin, pp. 27-47, Hofstede, pp. 147-165, Marcus, \url{http://www.amanda.com/resources/hfweb2000/hfweb00.marcus.html}}

For web design these observations imply the following:

Mental models should be based on a tall hierarchy. The hierarchical idea can be reflected in prominence given to leaders and a strong focus on expertise, authority, experts, certifications, official stamps, logos. The social and moral order and its symbols may be emphasised and social roles might be used to organise information. The prominence given to aged, experienced, wise leaders and states of being on the one hand might seem to contradict the emphasis on youth and action on the other. But this does reflect the stability versus innovation dilemma mentioned earlier.

There needs to be the attempt to reveal or forecast the results or implications of actions before users act and navigation should be
designed accordingly. A simple page with clear metaphors, limited choices, and restricted amount of data is favoured. Cues should be used redundantly (colour, typography, sound, etc.) in order to reduce ambiguity. Importance is given to security and restrictions or barriers to access: they should be enforced, made explicit and restrictions of users can be found more frequently.

The rhetorical style is orientated towards official slogans and hyperbole and controversy will be subdued. Motivation based on personal achievement is usually underplayed in favour of group achievement. Success can be depicted through the achievement of socio-political agendas. However, materialism-consumerism might serve as an image of success, as well. The underlying sense of social morality is the emphasis on relationships. Thus, importance should rather be given to individuals/products in groups than by themselves. Mutual cooperation, exchange and support rank higher than mastery and winning.\textsuperscript{136} This goes hand in hand with a blurring of gender roles. Although history and tradition are emphasised there is always the drive towards the innovative, and unique. In Spain, attention is gained very much through poetry, visual aesthetics, and appeals to unifying values.

Hypotheses concerning Spanish web sites are:

- An overall dichotomy between stability and originality exists.
- Web pages should represent the original, innovative component in what refers to design.
- Importance is given to design, style and fashion. There is a strong need for an individual style of a page; round forms are preferred and everything “hip” is liked.
- Colours are selected carefully and used redundantly. Warm colours are preferred.
- Metaphors, symbols and images are frequently used, the latter rather depicting groups than individuals.
- The amount of links offered is restricted, and information is offered bit by bit. This does not imply that the total amount of data on a web site would be less than in other countries. It is rather not presented “all at once”, but distributed on a deeper hierarchy.
- An entertainment component may well form part of Spanish web sites. So music and sound might be used.
- Navigation is fairly controlled, providing the user with information about where he or she is, for example with bread crumb trails.

\textsuperscript{135} see de Mooij, p. 146
\textsuperscript{136} This might explain the extensive use of chat by the Spaniards.
3.2.4 Hungary

Hungary can be characterised as individualistic, high on uncertainty avoidance, low on power distance, ascriptive, particularist.\textsuperscript{137}

Research on cultural dimensions in ex-communist countries is fairly recent and results are available for a few dimensions only. Hofstede assumes that a certain level of wealth is necessary for a country to develop individualistic characteristics. The Eastern European countries are considered to have rather collectivistic features – not only in what concerns their political past, but also in their “mental programming”. According to Hofstede Hungary is a relatively well-to-do Eastern European country and “a certain measure of capitalism has the best chances, but it should be capitalism European style, say, German style not American or British style”.\textsuperscript{138} This would indicate that Hungary is on the threshold from collectivistic to individualistic. Smith, Dugan and Trompenaars already found Hungary to be individualistic, as well as ascriptive and particularist.\textsuperscript{139} István Bibó – a Hungarian political philosopher – on “national materialism”:

one of the most characteristic features of the soul that has been tortured by fear and feelings of insecurity and major historical traumata and injuries is, that it does not want to make a living out of its own existence but it takes the position that it has a lot to demand from life, from history and from others. In this state of mind the individual loses his sense of moral obligations and responsibilities towards the community. He uses every moral rule to prove his own demands.\textsuperscript{140}

This is reflected in Hungary’s extremely high scores on uncertainty avoidance, and extremely low power distance score. Hungary’s high uncertainty avoidance implies that parents raise their children with the message that life is threatening and dangerous; whereas low power distance causes children to become independent at an early age, and they have to structure reality for themselves. Such a combination is apt to cause frustration.

As a result of Hungary’s history, the country still lacks self-confidence and looks for Western solutions. There is an underlying fear of lacking behind which causes Hungary to strive for modernity and results in very modern, well informed and up-to-date processes and people. In

\textsuperscript{138} Hofstede, p. 160
\textsuperscript{139} see Smith, Dugan, Trompenaars, p. 260
\textsuperscript{140} Bibó (1986) cited in Hofstede, p. 161
the time-study of Levine, Hungary came number 19 of 31,\textsuperscript{141} so it ranks among the slower countries, but has rather a just-off average pace.

Conclusions for web design:
Simplicity with clear metaphors, limited choices, restricted amount of navigational elements may be the result. A shallow hierarchy in mental models should be used. The navigation schemes should be intended to prevent users from getting lost. Accordingly mental models and help systems need to focus on reducing user errors and the attempt to reveal or forecast the results or implications of actions before users act should be made. Ambiguity should be reduced by redundant cues (colour, typography, sound, etc.). Prominence should be given to the customers who should be allowed an implicit freedom to roam. To the social and moral order minor emphasis is given and allusions to it should be infrequent. The same is true for the use of social rules to organise information. The focus on expertise, authority, experts, certifications, official stamps or logos can be taken as rather weak.

Hungary seems to have jumped from a “decades-back”-country directly into a very up to date position in Internet questions. They are afraid of being backward and so take up newest movements in this sector. As in Spain there is a dichotomy between the innovative and stability.

Hypotheses for Hungary:
• The amount of information presented is average to high, scrolling is accepted.
• Site structure tends to be very broad with a small hierarchy.
• The use and recognition of trends/new technology is ambivalent: either with a lag of time, or with the tendency to be up to date.
• The use of bright colours is scarce, soft and warm colours are preferred.
• Images and symbols are used rather frequently.
• Navigation is intended to give security to the user, e.g. with site maps or bread crumb trails, but providing at the same time a variety of options.

\textsuperscript{141} ranking positions: walking speed: 19/work place: 19/clock time: 18; see Levine, p. 180
4 User preferences

Having derived cultural preferences from intercultural theory, the question how these preferences manifest themselves in practice has to be answered. User preferences were observed using two approaches: web sites of the four countries and Germany were observed by the author and used in a questionnaire which was conducted in the four countries.

How can a questionnaire on user preferences be designed to be representative?

As a basic concept, the evaluation of home pages by users from the four countries was chosen. Providing participants with a mixed set of sites, including home pages from their country of origin and German pages, would allow a variety of inferences. A set of German pages was taken as a constant element in the questionnaire for each country in order to have a common point of reference for the comparison of page evaluations. In a next step representative home pages had to be selected. Equally accepted and well-known but characteristic sites needed to be found for each country. The solution was in web site rankings: web sites are ranked according to the number of unique visitors (every visitor to a page is only counted once) or clickrates (every click leading to the page counts). This assures that pages are commonly accepted, assume a similar position in their respective country and are fairly well known. To assure the sites were characteristic for the country, pages not originating in the respective countries were excluded. “International” pages – mostly search engines – like Yahoo, msn or Lycos, which rank among the top-sites in all the countries selected, were not taken into consideration, as they usually provide one base design, which is considered to be international and only marginally differs for different countries. Rankings for the United States, the United Kingdom, Germany and Spain were available from the following sources: Media Matrix, Nielsen NetRatings, Net Value, IVW, PC Data Online and hot 100142. The rankings for November 2000, December 2000 and January 2001 were considered.

Seven web sites were selected for each country. Attention was also paid to the type of page, so that not only portals providing general interest content would form part of the observation. For Germany the described procedure was done for six pages from the top-site rankings to which the home page of the ICUnet.AG was added. The company

provides an example along which the design models (presented in Chapter 5) for the four countries could be developed. Although the Gesellschaft für Konsumforschung Austria is providing some data on Hungary, no rankings were publicly available. Thus, web page recommendations from Hungarians were considered, paying attention to include web sites with different content.

The web sites selected formed part of a questionnaire which was conducted between 15. February 2001 and 30. April 2001. The questionnaire was sent by e-mail to university students from the USA, the UK, Spain and Hungary. This group was chosen because university students were chosen as target participants as they are considered to be fairly familiar with the medium of the internet and up-to-date with recent developments. The decision was further supported by the fact that the majority of web users is fairly young, especially in countries like Hungary or Spain. In Hungary academics make up more than 50% of the internet user. The questionnaires for each county are provided in Appendix C.

4.1 Observing web pages from the USA, UK, Spain and Hungary

Which shape can covert factors take on the web? A list of criteria was developed on the basis of this question, limiting the scope to “shapes” observable on home pages. The result was the following list of criteria according to which the selected pages were observed:

- Name of the page
- Who is behind the page? Does it form part of a network?
- What type of page is it?
- Structure: Is flash or animation used? Does the page fit on one screen or is it necessary to scroll?
- How many colours and which hues are used? (except for images and logo)
- Where is the logo positioned?
- Where is/are the navigation bar/s?
- What type of imagery (images, pictures, icons, symbols, etc.) is being used? How many images, icons, etc. are included on the home page? Where are the images positioned regarding related text?
4.1.1 North American sites

The selected web pages are presented below and a brief description of the pages and observations by the author will be provided.

**About.com** is a portal which provides a network of over 700 Guide sites organised into 36 channels. According to about.com they cover more than 50,000 subjects, topics ranging from pregnancy to cars, palm pilots to painting, weight loss to video game strategies. The home page is a navigation page entered directly and needs to be scrolled; neither animation nor flash are used.

**Go.com** forms part of the Walt Disney Internet Group (WDIG). It acts as a portal to other Walt Disney pages (which include family and kids sites, sports, entertainment and news properties, broadcast network site, and various online commerce sites) and seems to consist of the home page – providing a table of contents, or better links – only. The page is entered directly and needs to be scrolled. No animation or flash is used.

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143 like family.com; espn.com, nfl.com, soccernet.com, abc.com, abcnews.com, movies.com, disneystore.com, disneyvacations.com, disneyauctions.com;
**Cnet.com** is a portal, a source of technology and commerce-related information, services directed to people and business. Cnet has established web sites in 25 countries and 16 languages and claims to serve millions of users each day. Their network includes various other pages and services, like zdnnet, mysimon or news.com. The home page is directly accessed, needs to be scrolled and is designed as a sort of table of contents; animation and flash are not used.

![Figure 5: Cnet.com, 19/03/01](image)

**Ebay.com** is the world’s largest online trading community. Goods and services are sold by individuals and small businesses. 18.9 million users are registered with ebay today. The home page is accessed directly, provides the contents (navigation page) and needs to be scrolled. Neither animation nor flash are used.

![Figure 6: ebay.com, 19/03/01](image)
Geocities.com forms part of the Yahoo network. Yahoo GeoCities is a publishing community where users can set-up their own web sites for free and are provided with the necessary information and tools. The page is a navigation page, needs to be scrolled and animation is not used.

Nbc.com forms part of NBC Internet (NBCi), a leading Internet media company that helps users access Internet resources. The range provided by NBCi.com includes search and directory, information, shopping, direct e-commerce, entertainment, personal home pages, communications and community services, etc. The page layout is presented in negative copy, needs to be scrolled and uses animation in advertisements.
Euniverse.com is a fun, games and entertainment net-work. Their network includes sites like JustSayWow, Flow-go, FunOne, Big Fat Baby, etc. and is used by over 19 million people each month. The page serves as a portal providing numerous links, it needs to be scrolled and uses animation in various occasions. Euniverse seems to be the only site using colour coding / redundant cueing.

So what are similar features of American pages?

With all American pages, the logo is positioned in the top left corner of the home page. The number of colours used, excluding the logo, ads and images ranks from six to eight. The “ebay-colours” seem to be quite popular, especially blue, yellow, and red. Colour was rather used to maximise information than to structure it. Except for nbc.com all the pages use mainly white background. The navigation bar is usually found at the top. Link columns might be provided as well. Only few images are used, icons are employed more frequently. The average number of icons was six, whereas Germany reached an average of three, and Hungary, Spain and Britain two.
4.1.2 British sites

**Bt.co.uk** is the home page of British Telecommunications plc, one of the world’s leading providers of telecommunication services. The page forms part of the bt.com-site network. Scrolling is not necessary. Animation is used in ads for the own company, or their products. The background colours are turquoise and blue, and rather round shapes are used.

![Figure 11: bt.co.uk, 19/03/01](image1)

**Askjeeves.co.uk** is a search engine which allows complete questions (question-answering system). Their page fits on one screen and animation is used in advertisements.

![Figure 12: askjeeves.co.uk, 19/03/01](image2)
Freeserve.com offers a mass market, subscription-free internet access service. The content available from the portal is organised into speciality channels covering popular interest areas. MMXI (media matrix) counted over 3.8 million unique users, and the number of active accounts is approximately 2.1 million. The page is entered directly, needs to be scrolled and uses animation.

Bbc.co.uk is the home page of the British Broadcasting Corporation, which can be considered as serving as a portal and is organised in popular content. The page uses animation and needs to be scrolled.
Thetimes.co.uk is the online presentation of the newspaper *The Times*. The home page offers headings and captions to the different articles, needs to be scrolled and uses animation in advertisements for different sections of The Times at the very top and bottom.

Thetrainline.com provides information on train times and tickets on mainland UK routes. The user can make travel plans, ticket choices and purchase the ticket online. Registration is necessary to use their services. The page does not need to be scrolled and animation is used in advertisements only.
**Figure 17: egg.com, 19/03/01**

**Egg.com** is an e-commerce company created by Prudential, a UK-based financial services company. They claim to have over 1 million customers and offer services from banking, investment, insurance to online shopping. The page needs to be scrolled and does not use animation.

What about common aspects on British sites?
With the British pages the number of different colours used ranks from five to nine. There is a clear preference for cool colours, especially blue but also different hues of green. The logo is positioned in the top left corner with three of the pages, four, however, display their logo in the centre of the page or centred at the top. Navigation bars are usually found at the top, sometimes a combination of top and left side, right side, or bottom bar is given. On average the pages provide more images than US sites. They are located left or above the text.

<table>
<thead>
<tr>
<th>UK</th>
<th>no. of images</th>
<th>no. of icons</th>
<th>no. of colours</th>
</tr>
</thead>
<tbody>
<tr>
<td>bt.co.uk</td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>askjeeves.co.uk</td>
<td></td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>freeserve.com</td>
<td></td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>bbc.co.uk</td>
<td>10</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>thetimes.co.uk</td>
<td></td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>thetrainline.com</td>
<td></td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>egg.com</td>
<td>6</td>
<td>4</td>
<td>9</td>
</tr>
</tbody>
</table>

**Figure 18: GB – page observations**
4.1.3 Spanish sites

Terra.es is a portal for Spanish (and also Portuguese) speaking users, offering local as well as global content and services. Terra.es is part of Terra Lycos which was created in October 2000 by a merger between Terra and Lycos. It reaches about 36% of the active web population – which is about 2 million users. The home page needs to be scrolled, uses animation in advertisements, but does not use flash.

Eresmas.com is also a portal, offering various services and content. It reaches 15% of the active Spanish online users, i.e. about 848,000 unique users. The layout of the home page changed during the research period (in April 2001). The page also needs to be scrolled, flash is not used, animation only in ads.
Arrakis.es is one of the leading Internet providers in the Spanish market and belongs to the British Telecommunications group (BT). This explains the use of the Genie-logo on the arrakis-site. Genie is BT’s internet portal. The site functions as access to the services and as portal. It is used by 9% of the active users and reaches 524,000 users. Flash is not used, the home page is accessed directly, the page needs to be scrolled and animation is used in ads.

Elpais.es is the online version of one of Spain’s leading newspapers. They changed their layout in February 2001. They claim to be the online-newspaper most visited by Spanish users in the first trimester of 2001\(^{144}\), with about 4,420,000 readers in February 2001. Elpais.es forms part of Grupo Prisa, one of Spain’s largest media groups. The page needs to be scrolled and uses animation only in advertisements which are for different sections of the online version.

\(^{144}\) according to the study *Estudio general de Medios*, for further reading see http://www.elpais.es
Navegalia.com is a portal owned by Airtel Móvil S.A., providing content and services. It is visited by about 662,000 users, 12% of the active Spanish internet users. The page is directly accessed, no flash is used, animation only in ads and scrolling is necessary.

Bsch.es is the online presentation of Banco Santander Central Hispano. It is the only Spanish site in this sample which uses frames. The entrance page is animated and displays a welcome-greeting and the navigation frame. Scrolling is not necessary.
What could be observed on Spanish home pages?

The number of colours used is five to ten, with the majority employing around seven different ones. Turquoise seems very popular and is often combined with warm colours. These seem to be preferred to cold colours. The logo is usually displayed in the top left corner, apart from bsch.es where the logo is positioned in the top right corner. The navigation bar is on the top, with a link column on the left for almost all the pages. Underlining is rarely used to indicate links. Colour, bullets, and linking large parts of text – like sentences – seems to be preferred. On the Spanish pages more images and icons are used, which usually function as links. The positioning of the images in relation to the text varies from page to page and often also within the home page itself; however, they rather seem to be situated above of the text. In the examined set of pages objects are displayed rather than people. No indication that groups are displayed more often than individuals could be found. E-mail options for contacting the “authors” of a web site are very limited or even missing.

_Telefonica.es_ is a portal provided by Telefónica S.A., a the leading telecommunication company in the Spanish and Portuguese speaking world. The page underwent slight changes in layout in April. The page uses animation in advertisements and needs to be scrolled.
4.1.4 Hungarian sites

**mti.hu** is a news service providing continuously the most important domestic, foreign, international economic and sports news. The page does not use flash, however animation is used when loading the page. Scrolling is necessary.

**Freemail.hu** is an affiliate of MATÁV, Hungary’s largest telecommunication company, represented on the net by Matávnet and its portal origo. The first page of the mail service is a login page, which can but does not have to be scrolled to log in. Animation is used in advertisements on the page. The page is built with frames.
Index.hu is one of the most popular portals in Hungary offering content and services. It is privately owned. The page uses animation in advertisements and needs to be scrolled.

Netpincer.hu is an internet food retailer, where the user can choose the restaurant, and dishes from the menu. The page needs to be scrolled and uses animation only in ads.
**Manecs.hu** is an online newspaper using animation in ads and which needs to be scrolled.

**Pestiest.hu** is a magazine of Budapest’s night life and city scene. The page is entered directly, flash is not used, animation in advertisements and scrolling is necessary.
Budapest.hu is the official home page of Budapest, presenting information and news from the city, and links to events or tourist information. Neither flash nor animation are used. The page is built with frames and needs to be scrolled.

What about Hungarian pages?
Two of the Hungarian sample pages use frames. Different colours used rank from four to nine, with several pages using only few colours. A preference for warm or cold colours could not be found, red, orange and brown tones seem to be popular along with the combination of blue and yellow. The position of the logo is the top left corner in all the pages. The navigation bar was mainly to be found on the top, combined with the left side in one case, another using the left side exclusively, and freemail’s login page only providing buttons. The number of images differs, either being between none and two or ranking rather high (12-16). No clear statements can be made on the position of the images, but they appear rather often on the right side of the text.

<table>
<thead>
<tr>
<th>Hungary</th>
<th>no. of images</th>
<th>no. of icons</th>
<th>no. of colours</th>
</tr>
</thead>
<tbody>
<tr>
<td>mti.hu</td>
<td>13</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>freemail.hu/fm/login</td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>index.hu</td>
<td>16</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>netpicer.hu</td>
<td>9</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>mancs.hu</td>
<td>2</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>pestiest.hu</td>
<td></td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>budapest.hu</td>
<td>6</td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

Figure 34: Hungary – page observations
4.1.5 German sites

*t-online.de* is the portal of the Deutsche Telekom AG. The page is entered directly, needs to be scrolled and does not use animation. It is designed with frames.

*Web.de* is an internet-portal with about 5.4 million users, that is almost a third of German Internet users, offering content and services. The page does not use flash, needs to be scrolled, and animation is only used in ads when loading.
Icunet.de is an intercultural network concerned with global communication. A flash introduction accompanied by music leads to the home page. The home page fits on one screen and does not use animation.

Rtl.de/rtlworld.html is a quite successful German web page offering content and services. RTL WORLD is produced by RTL Newmedia, a fully owned RTL company. The page is entered directly, needs to be scrolled and uses animation in ads. The layout is designed with frames, yellow is used as the background colour.
Spiegelonline.de is a news journal with about 2.77 million users online. The page does not use flash, animation is used in ads, and scrolling is necessary.

Handelsblatt.de offers an information platform for economy and finance, providing news and tools for analysis and research. It is provided by Economy.one AG, a daughter of the Handelsblatt Verlagsgruppe. No flash is used and animation is used when loading the page and in ads. The page needs to be scrolled.
Deutschebank24.de is a finance portal of Deutsche Bank 24. Neither flash nor animation are used. Scrolling is necessary and the layout is done with frames.

And what about German home pages? The logo is positioned in the top left corner with the majority of pages and is presented on the right with the bank (this is also the case for the Spanish bank). Colours rank from four to thirteen, and the redundant use of colour for cues and coding categories can be found. Warm colours are often used along with blue. The navigation bar is with two pages on the top only, it is on the left with the majority – some of them providing further navigation options on the top. The number of images was either found to be rather high (10-14) or only one to four. The German pages observed are leading in what concerns the use of frames: three of seven apply this technique.
The position of the navigation bar, the logo and the average number of images per country are presented in the following table to provide an overview and to facilitate comparison of the country results.

<table>
<thead>
<tr>
<th>Position</th>
<th>USA</th>
<th>UK</th>
<th>Spain</th>
<th>Hungary</th>
<th>Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nav bar</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>top</td>
<td>100%</td>
<td>71.43%</td>
<td>71.43%</td>
<td>57.14%</td>
<td>28.57%</td>
</tr>
<tr>
<td>left</td>
<td></td>
<td>28.57%</td>
<td>14.29%</td>
<td>42.86%</td>
<td></td>
</tr>
<tr>
<td>top and left</td>
<td></td>
<td></td>
<td>14.29%</td>
<td>28.57%</td>
<td></td>
</tr>
<tr>
<td>top and bottom</td>
<td>14.29%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>buttons</td>
<td>14.29%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Logo</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>top left</td>
<td>100%</td>
<td>42.86%</td>
<td>71.43%</td>
<td>100%</td>
<td>85.71%</td>
</tr>
<tr>
<td>centre</td>
<td></td>
<td>57.14%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>top right</td>
<td></td>
<td>28.57%</td>
<td></td>
<td></td>
<td>14.29%</td>
</tr>
<tr>
<td><strong>Av. no. of images</strong></td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

Figure 43: Overview observation results

4.2 How American, British, Spanish and Hungarian users perceive page design

Participants were questioned about their favourite web site, their preferred colour combinations and the preferred position of the navigation bar in the questionnaire. They were asked to evaluate the web pages of their home country as well as the German pages described in appearance and structure on a scale from 1 to 6. For structure, 1 was defined as “well-organised, information easy to find, text easy to read”; 6 meaning “badly organised, difficult navigation, reading text is strenuous”. For appearance, 1 was described as “very good layout, background is not too prominent, pleasant colours”; 6 as “poor layout, background hinders reading, unpleasant colours”.

Participants were also requested to evaluate 22 suggestions on what they would like to find on a home page on a scale from 1 to 6; 1 meaning the participant fully agreed with the statement, 6 equalling complete disagreement.¹⁴⁵

¹⁴⁵ A similar question was used in a study conducted in Germany. See Dieter Reigber, “Web Nutzungsmotiv-studie: Heavy-user geben Auskunft”, [http://www.asv.de](http://www.asv.de)(02/2001)
Hungarians were provided a German version of the questionnaire, the three other countries received versions in their mother tongue.

The number of participants was 33 in total, with 5 participants from the US, 8 from the UK, 9 from Spain and 14 from Hungary. The gender distribution for the four countries was the following:

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>UK</th>
<th>Spain</th>
<th>Hungary</th>
</tr>
</thead>
<tbody>
<tr>
<td>male</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>female</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>11</td>
</tr>
</tbody>
</table>

Figure 44: Participants' distribution on sexes

The average age of the participants is 22.2 for the US, 20.25 for the UK, 26.88 for Spain and 20.79 for Hungary.

The intention of asking for favourite web sites was to see whether sites would be mentioned more than once. This was neither the case for the US, nor Spain; Britons mentioned bbc.co.uk four times and yahoo.com was mentioned twice. Hungarians coincided in various pages: rtlklub.hu (4 times), mti.hu (3), danubius.hu (3), korridor.hu (2), germany-tourism.de (2).

Most colour preferences stated by Americans included blue and a need for readability was expressed. UK participants preferred a white background, black text combined with blue as well; the wish for the use of only few colours was expressed. Spaniards mentioned white, blue, red and yellow as their favourites. Blue in combination with yellow or white and pastel colours in general were mentioned by the Hungarians. Both, Hungarians and Spaniards, seemed to be quite concerned with colour. Surprisingly, all countries showed a preference for blue. This might either be explained by a current trend, or by the colour being very pleasant on screen (see Chapter 2.3.3).

For the question on home page-expectations, 1 and 2 marks on the scale were added for each suggestion, the result indicating preferences and how strong these are. Answers marked 5 and 6 were taken together to check on strong dislike.

Similar suggestions are considered important in all countries: up-to-date information ranked first, concise navigation ranked first or second everywhere, a search function, to have everything at a glance and general, easy to understand language were among the four options considered most important. The same is true for the options to contact the author and to
have a factual and functional page, except for Hungary (“only” 50% want a contact option and only 29% factual design). Spain and Hungary show similar preferences for various suggestions (which Americans and Britons do not emphasise that strongly or would rather not like to have on a home page): colour images (Spain 78%/Hungary 64%) and individual appearance of a page (Spain: 67%/Hungary: 57%) are considered to be very important, the votes for a chat-option are higher than in the other countries (Spain 22%/Hungary 36%) and music and sound are desired by a third of the Spaniards and 36% of the Hungarians (in the UK 50% strongly disagree, in the USA the percentage is even 60).

Spaniards also highly value a link to an online travel agency (67%) and are the only ones in favour of contents being designed as in a magazine (56%). A link to a ticket-service and animation are favoured by 44% - and disliked in all other countries. Only Hungarians like the idea to state their interests in order to be informed about news on these topics (64%). The rankings for each country are provided in Appendix D.

Americans and Britons expressed their dislike for elements not desired to be on the homepage more clearly. Participants from all countries agree in their dislike for banner ads, online shops and online games on the home page. Further “don’ts” for US home pages are: links to a ticket service and classified ads page, animation, chat-option as well as music and sound.

For UK pages these include: animation (disliked by 88%), links to a classified ads page, an online bookshop or a chat-option.

For the position of the navigation, each country showed individual preferences: in the USA left only and top only-bars are favoured (40% each), Britons prefer left-side position (38%, astonishingly 25% favoured a bottom-position), 44% of the Spaniards want the navigation bar to be on the top and 46% of the Hungarians prefer a combination of top and left.

Concerning the evaluation of web sites, structure and appearance were marked. Average marks for the two variables were calculated for each page. An average page mark consisting of both variables was determined. The average of all the page marks for a country (country average) was used for a comparison with Germany (the average German pages achieved in the corresponding foreign country). For each country the top three positions concerning appearance and the top three positions concerning the whole page were determined from the country’s and Germany’s web sites. Pages with the same average mark were considered to have the same rank.
In all the countries, except for Hungary, the pages originating in the respective country are preferred to the German ones. These findings confirm the pro-localization perspective underlying the paper. It is not surprising to find Hungarians marking the pages from their own country not quite as good as German pages. As mentioned in chapter 3, due to the history of the country, there is a feeling and a fear of being backward and for years German/Western technology, for example, was considered to be of high quality and superior. Slowly, this attitude is changing and self-confidence is growing stronger. However, change takes time and thus Hungarians might still consider “Western” solutions to be “better” solutions – and Western web sites to be “better” web sites; although they are up front.

One page of the German set always ranked among the first three in appearance and also among the top three regarding the total page mark: Deutsche Bank 24. The design is very clear, showing the navigation bar on the top as well as link options marked with colour coding. Results from human brain, perception and usability studies are implemented in the design. The result is a page of a very high quality, which is extremely user-friendly. Quality and user-friendliness are valued across all countries and thus might explain the ranking-results. No other German pages coincided on the top positions.

The pages ranked highest in each country are provided below. Common aspects in design and similar features have been analysed. In Appendix E the complete rankings are provided.
4.2.1 **American page ranking**

For **design** three pages share the best mark: *euniverse.com*, *web.de* and *deutschebank24.de*. *Ebay.com* and *t-online.de* came second, *icunet.de* third.

Ranking the **page** marks *web.de* comes first, *ebay.com* second and *deutschebank24.de*, *t-online.de* and *icunet.de* third.

Comparing all of these pages, similarities can be found: the navigation aid takes the form of a bar and is located at the top, the logo is mostly in the top left corner, except for *deutschebank24.de* – where it is in the top right corner, dark blue prevails, icons are used rather than images, the pages are densely filled and boxes are often used to group elements.

4.2.2 **British page ranking**

The best **design** was attributed to *bbc.co.uk*, *egg.com* and *deutschebank24.de*. Second came *thetimes.co.uk*, *thetrainline.com* and *icunet.de*. The third place is shared by *askjeeves.co.uk*, *web.de* and *spiegel.de*.

*BBC.co.uk* also got the best **page** mark, followed by *thetrainline.com*, and *deutschebank24.de* sharing the third place with *askjeeves.co.uk*.

Tendencies which can be observed on these pages are: an “airier” design than other pages, a navigation bar (not bulky) on the top which might be accompanied by a link bar on the left or on the right, the logo tends to be in the middle, blue and green colours (maybe combined with red or yellow accents), many images and a limited amount of text.

4.2.3 **Spanish page ranking**

With respect to **design** *telefonica.es* comes first and *Deutschebank24.de* second. *Navegalia.es* was ranked third.

The best **total** was attributed to *elpais.es* and *deutschebank24.de*, *telefonica.es* came second and third were *eresmas.es* and *bsch.es*.

Common or similar features of these pages are: a navigation bar located at the top, a link bar on the left-hand side, the logo positioned in the top left corner, a colour-range from green over turquoise to blue or ochre and red, many or big colour images with an average amount of text.
4.2.4 Hungarian page ranking

Mti.hu has the appearance most liked, spiegelonline.de follows and deutschebank24.de netpincer.hu and handelsblatt.de rank third.

For the entire page mti.hu received the best marks as well, spiegelonline.de was second best and web.de is on rank three.

The following observations can be made on these sites, which mostly share the same scheme: the layout basically consists of three columns, the middle one twice the width as the others; the left column usually is a link column and coloured, there is a navigation bar (coloured) at the top, the logo is positioned in the top left corner (with most of the pages), colours are either blue in combination with yellow or red, colour images are combined with a lot of text.
5 *Localize your interface – design models for the ICUnet.AG*

In this chapter the conclusions from intercultural theory, the preferences stated in the questionnaire and the common characteristics observed on the favourite home pages are combined in order to provide design models for the ICUnet.AG.

One model will be provided for each country. The logo of the ICUnet.AG will be used, as well as some of their navigation-bar elements; all other elements are provided in the form of substitutes and in English.
5.1 American design model

Figure 45: Design model for the US
The majority of hypotheses formed in chapter three can be confirmed for the USA. For US pages the motto “maximise” has found to be true. New trends and techniques are frequently used, but seem to be less accepted than assumed. There is a strong dislike for animation, for example. The option to contact the author was found to be important, but not as “exclusively” for the US as expected. Music and sound were considered much more negatively according to the questionnaire. However, this might be due to the small number of American participants. A use of multiple colours to maximise information, as expected from theory, could be observed with the American sites selected. The questionnaire gives no indications concerning these considerations. On the basis of the statements white background, black and various hues of blue have been chosen. The hypothesis assuming a large amount of information and multiple links has been confirmed. The hypothesis about a multiple-options navigation bar has been confirmed as well. In the model the navigation bar is positioned on the top, as this is the case with the majority of high-ranking pages and corresponds with the taste of 40% of the participating Americans. No images, but icons only are suggested as they prevailed on the sample pages. Boxes were chosen to separate different categories – a preference observable on the top-ranking pages. Numerous link options need to be and have been provided in the model page.
5.2 British design model

Figure 46: Design model for the UK
Hypotheses claimed for the UK were confirmed by observations and questionnaire. The dichotomy between conservative and daring is reflected in page preferences, e.g. among the highest ranking in design: thetimes.co.uk representing the more conservative type and egg.com the more daring. The daring type was selected as the basis for the British design model because it can better reflect the identity of ICUnet.AG. The use of numerous images has been confirmed and is accounted for in the design model. In spite of the majority of high-ranking web sites providing the navigation bar on the top, the main navigation bar is positioned on the left in accordance with the participants claims. Three link-options have been positioned on the top and a search-option on the right to offer a variety of interface controls as claimed in the hypotheses. The only colour favoured explicitly was blue, black and white were specified for text and background; this confirms the preference for cold colours assumed earlier. Red and yellow were added in the model as a similar trend was observed on top-ranked sites. A fairly spacious and airy design using a lost of white space was selected which was also observed on pages favoured by the participants.
5.3 Spanish design model

Figure 47: Design model for Spain
Hypotheses for Spain were confirmed, with the exception of a preference for warm colours and round forms. As far as high-ranking web sites are concerned, mainly cold colours dominate – with the exception of navegalia.es; from the statements no clear preference became obvious. So it was opted for cool colours in the model. That colours should be selected carefully was confirmed in the questionnaire. As assumed, Spanish web sites do represent the original and innovative. Individual design and appearance proved important in the questionnaire. In the model the navigation bar is positioned on the top, as favoured by the participants and observed on the sites marked best. Colour coding has been provided in the navigation bar and a bread crumb trail is included. A coloured link column should be provided on the left. The hypothesis for less links on Spanish sites could not be confirmed. The wish for a link to a travel agency was expressed and might be included on the home page. Numerous colour images are displayed as assumed and claimed by the participants. Music should form part of the web site, but a turn-off option needs to be provided.
5.4 Hungarian design model

Figure 48: Design model for Hungary
All hypotheses assumed for Hungary were confirmed. The amount of information presented on home pages was very high in the observed set. The arrangement on Hungarian pages usually requires scrolling. Colour preferences assumed have been confirmed in the questionnaire. Preferences explicitly stated by participants correspond with colours used on the “top”-pages. The combination of blue and light yellow has been chosen for the model. In accordance with the preferences and observations on top-pages the navigation bar extends on the left and the top. A bread crumb trail gives security to the user. Several colour images form part of the page as a result of the participants preferences which corresponded with the hypothesis assumed. As on the Spanish page music or sounds should be included. A link offering the option to state your interests in order to be informed about related news is indicated in the model.
5.5 Logout

One language does not serve all and translating the content of a page is not enough. From theory as well as from user opinions cultural differences in web site perception could be clearly proven. An abundance of culture-related elements including overt and covert factors was identified. Overt factors obviously do have an influence on perception and acceptance of home pages. Covert factors were confirmed to have an influence on perception and acceptance in the questionnaire. Examples are the colours used, the position of the logo and the navigation bar, the number and type of images and the preferences and needs for different options on the home page. Elements attracting attention but distracting from content are disliked in all countries selected and usability has to be assured with every web site. Furthermore, intercultural theory has been found to provide a valuable basis allowing fairly reliable inferences for web design. However, these inferences need to be confirmed by and combined with user preferences to meet the current taste of a culture. Cultural localization can combine these demands.

Think again about your favourite web site. How might the culturally localized relaunch be understood in New York, London, Barcelona, Budapest or Berlin?
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Index, http://www.index.hu/, (05/2001)


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Telefonica, http://www.telefonica.es/, (05/2001)


The Times, http://www.thetimes.co.uk/, (05/2001)
The Trainline, http://www.thetrainline.com, (05/2001)

T-online, http://www.t-online.de, (05/2001)


Webmonkey,
http://hotwired.lycos.com/webmonkey/98/07/index1a_page2.html?tw=design, (03/2001)


100 Hot, http://www.100hot.com, (04/2001)
Appendix

APPENDIX A: Cultural Associations Of Colour

APPENDIX B: User Statistics

APPENDIX C: Questionnaire

APPENDIX D: What Users Require From A Home Page

APPENDIX E: Results Page Evaluation
## Appendix A: Cultural Associations of Colour

<table>
<thead>
<tr>
<th>Colour</th>
<th>USA</th>
<th>France</th>
<th>Egypt</th>
<th>India</th>
<th>Japan</th>
<th>China</th>
<th>Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>danger, dominant, aggressive, screams for attention, urgency, passion, heat, love, blood, excitement, strength, sex, passion, speed</td>
<td>aristocracy, anger, heat, leisure, shyness</td>
<td>death</td>
<td>life, creativity</td>
<td>anger, danger</td>
<td>happiness, celebration, prosperity, good fortune</td>
<td>love, passion, vitality, energy, rage, brutality</td>
</tr>
<tr>
<td>Blue</td>
<td>masculinity, soothe, pacify, truth, dignity, power, coolness, melancholy, heaviness, trust, reliability, belonging</td>
<td>freedom, peace, anger, fear</td>
<td>virtue, faith, truth</td>
<td>villainy</td>
<td>heavens, clouds</td>
<td>calmness, beauty, melancholy, trust, dutiful,</td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>safety, nature, health, cheerfulness, environment, money, vegetation, nature, fresh, cool, growth, abundance, jealousy</td>
<td>criminality, fear, youth</td>
<td>fertility, strength</td>
<td>prosperity, fertility</td>
<td>future, youth, energy</td>
<td>Ming dynasty, heavens, clouds</td>
<td>safety, generosity, hope, envy, stagnation, indifference, fatigue</td>
</tr>
<tr>
<td>Yellow</td>
<td>cowardice, activity, caution, warmth, sunshine, cheer, happiness, brightness</td>
<td>temporary, jealousy, illness</td>
<td>happiness, prosperity</td>
<td>success</td>
<td>grace, nobility, happiness</td>
<td>birth, wealth, power, sacred, honour</td>
<td>light, happiness, knowledge, wisdom, reason, logic, pessimism, egoism, envy, miserliness</td>
</tr>
<tr>
<td>White</td>
<td>purity, wedding, cleanliness, lightness, emptiness, pure, virginal, clean, youthful, mild</td>
<td>neutrality, purity, young</td>
<td>joy</td>
<td>death, purity</td>
<td>death, mourning</td>
<td>death, mourning, purity</td>
<td>purity, solemnity, clarity, innocence, inaccessible, sentimentality,</td>
</tr>
<tr>
<td>Black</td>
<td>mourning, death, sophistication, elegant, seductive, mystery, rebellion, strength, evil</td>
<td>sorrow, drunkenness, jealousy, pessimism</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mourning, unfathomable, irreversibility, terrifying, dignity, reputation</td>
</tr>
<tr>
<td>Purple</td>
<td>wealth, royalty, sophistication, intelligence, royal, spirituality, dignity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>inspiration, music, art, magic, religiousness, repentance, readiness to sacrifice, arrogant, proud, immoral</td>
</tr>
<tr>
<td>Orange</td>
<td>playfulness, warmth, vibrant, warning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>optimism, 'joie de vivre', open-mindedness, sociability, youth, self confidence, easygoing, insistent</td>
</tr>
<tr>
<td>Pink/Magenta</td>
<td>soft, sweet, nurture, security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>idealism, thankfullness, sympathy, commitment, order, snobism, dominance</td>
</tr>
<tr>
<td>Grey</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>total neutrality, caution, reserve, boredom, uncertainty, angst</td>
</tr>
</tbody>
</table>
## Appendix A: Cultural Associations of Colour

<table>
<thead>
<tr>
<th>Colour</th>
<th>Arabic countries</th>
<th>Europe, western</th>
<th>African cultures</th>
<th>Malaysia</th>
<th>Ivory Coast</th>
<th>Ghana</th>
<th>Brasil</th>
<th>Austria</th>
<th>Denmark</th>
<th>Finnland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>danger</td>
<td>death</td>
<td>strength</td>
<td>mourning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(in many of them)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blue</td>
<td>virute, trust, truth</td>
<td>masculinity, sweet, quiet, authority</td>
<td>joy, happiness</td>
<td>calmness, cold, indifference</td>
<td>loyalty</td>
<td>quality</td>
<td>cold, without means, innocence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>strength, fertility</td>
<td>envy, safety, sour</td>
<td>hope, freedom, immaturity, illness</td>
<td>hope</td>
<td>hope, health, boredom</td>
<td>hope, envy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yellow</td>
<td>fortune, wealth</td>
<td>caution, cowardice</td>
<td>royalty</td>
<td>happiness, sun, luck, envy, illness</td>
<td>jealousy</td>
<td>danger, nastiness, envy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>fertility, strength</td>
<td>purity, virtue</td>
<td></td>
<td>peace, purity, cleanliness</td>
<td>innocence</td>
<td>innocence, purity</td>
<td>innocence, cleanliness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>white</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>black</td>
<td>death, mourning</td>
<td></td>
<td></td>
<td>death, mourning, mystery</td>
<td>mourning</td>
<td>mourning, sorrow</td>
<td>sorrow, jealousy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>purple</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>orange</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pink/magenta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>grey</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix A: Cultural Associations of Colour

<table>
<thead>
<tr>
<th>Colour</th>
<th>Italy</th>
<th>Pakistan</th>
<th>Portugal</th>
<th>Sweden</th>
<th>Switzerland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>anger, fire, danger</td>
<td>anger, promise or marriage (women)</td>
<td>war, blood, passion, fire</td>
<td>anger, rage, fire</td>
<td>anger, fire</td>
</tr>
<tr>
<td>Blue</td>
<td>fear</td>
<td>jealousy, difficulty, problems to solve</td>
<td>blueeyed, credulous, frozen, cold</td>
<td>rage, anger, romance</td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>envy, youth, shortage of money, depressive anger</td>
<td>luck, piousness, eternal life</td>
<td>hope, envy</td>
<td>envy, inexperienced, kindness</td>
<td>uneasy, immature</td>
</tr>
<tr>
<td>Yellow</td>
<td>anger</td>
<td>virginity, weakness, anger</td>
<td>desperation, plague</td>
<td>rage, anger, romance</td>
<td>envy</td>
</tr>
<tr>
<td>white</td>
<td>innocence, fear, unsuccessful, love affair</td>
<td>mourning, rationality, elegance</td>
<td>peace, innocence, purity</td>
<td>kindness</td>
<td>purity, innocence</td>
</tr>
<tr>
<td>black</td>
<td>depression</td>
<td>mourning, helplessness</td>
<td>mourning, sorrow, hunger</td>
<td>depression, sorrow</td>
<td>pessimism, illegal</td>
</tr>
<tr>
<td>purple</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>orange</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pink/magenta</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>grey</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sources**

- http://www.darmstadt.gmd.de/~crueger/farbe.html
- http://www.kommdesign.de
Appendix B: User statistics

User statistics for USA, UK, Spain, Hungary and Germany
Sources:
http://209.249.142.57/uk/web/NRpublicreports.usagmonthly

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of users in millions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>actively from at home</td>
</tr>
<tr>
<td>USA</td>
<td>162</td>
</tr>
<tr>
<td>Great Britain</td>
<td>12,5</td>
</tr>
<tr>
<td>Germany</td>
<td>11,3</td>
</tr>
<tr>
<td>Spain</td>
<td>4,5</td>
</tr>
<tr>
<td>Hungary</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

The figures indicate the number of users in the respective countries. It can be clearly seen that user-numbers for Spain and Hungary are much smaller, and that US-figures are a multiple of Europe's.

December 2000;
http://de.mmxieurope.com/press/releases/20001213.jsp
Households connected to the Internet (via their PC) in February 2001

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>50,9</td>
</tr>
<tr>
<td>UK</td>
<td>34,4</td>
</tr>
<tr>
<td>Spain</td>
<td>14,8</td>
</tr>
<tr>
<td>Germany</td>
<td>30,4</td>
</tr>
</tbody>
</table>

Household connections can give indications for the location from where user access the internet.

Internet-based activities

<table>
<thead>
<tr>
<th>Type of activity (in %)</th>
<th>France</th>
<th>Germany</th>
<th>UK</th>
<th>Spain</th>
<th>Denmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web</td>
<td>96,9</td>
<td>98,3</td>
<td>96,0</td>
<td>98,6</td>
<td>97,8</td>
</tr>
<tr>
<td>Mail ¹</td>
<td>66,3</td>
<td>51,2</td>
<td>60,6</td>
<td>64,3</td>
<td>71,8</td>
</tr>
<tr>
<td>Instant messaging</td>
<td>11,9</td>
<td>11,9</td>
<td>21,7</td>
<td>20,7</td>
<td>11,8</td>
</tr>
<tr>
<td>Audio-Video</td>
<td>20,3</td>
<td>51,2</td>
<td>23,1</td>
<td>29,0</td>
<td>14,5</td>
</tr>
<tr>
<td>Chat</td>
<td>11,1</td>
<td>5,8</td>
<td>9,3</td>
<td>35,5</td>
<td>3,7</td>
</tr>
<tr>
<td>News</td>
<td>7,4</td>
<td>7,0</td>
<td>10,5</td>
<td>12,1</td>
<td>6,8</td>
</tr>
</tbody>
</table>

¹ Figures related to e-mail concern POP and SMTP protocols (Internet standard in which messages are downloaded to the user's computer), and not Web mail (hotmail, AOL mail, and others).


Internet-based activities reflect the cultural communication habits and preferences. The Spanish preference for oral communication is, for example, reflected in high chat-rates.
The figure shows the percentage of men and women online for the first trimester of 2001. The rather high percentage of women online in Hungary is surprising, compared with the lower figures for Germany and Spain.
Appendix C: Questionnaire

Questionnaire on web design for the USA
(By Yvonne Husmann, University of Passau)

Hi,

my name is Yvonne, I am currently writing my thesis on Web design and I would like to find out how to design web pages for the USA. I would be very happy if you would help me by answering the following questions. Your help is, so to speak, "vital" for my work... so please, spend a little time to fill in the questionnaire. Would you mind sending a copy to one of your friends and ask them to do the questionnaire as well?

Please return the answered version to me (yvonnepassau@compuserve.de) as soon as possible.

Thanks

Yvonne

Just mark the corresponding boxes with an "x" or type your answer next to the question:

1. Age: 
2. Sex: male [ ] female [ ]
3. Country of origin:
4. Are you a student? Yes [ ] no [ ] (if not, please state your profession: )
5. Please name a few of your favorite web sites, referring to the design and layout of the home page.
6. Which are your favorite colors or color-combinations on a home page?
7. Where do you personally prefer the navigation aid to be? (please mark one of the following)
   - On the left [ ]
   - top [ ]
   - right [ ]
   - bottom [ ]
   - top and left [ ]
   - top and right [ ]
8. What do you think makes the design of a home page especially attractive for Americans?
9. What do you expect on a home page of a web site?
   Here are a number of statements I would like you to evaluate on a scale from 1 to 6; 1 meaning you fully agree with the statement, 6 meaning you completely disagree). Please mark with an "x".

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>I need to have everything at a glance on the starting page.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The navigation bar should contain a concise and short version of everything offered on the subpages.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical terminology of web language should not be used; the terms should be general and easy to understand for everybody.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A search function is important.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is important to have a button to contact to the &quot;authors&quot; of the page via e-mail.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The page should contain up-to-date information.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The page design should be factual and functional.
The page should be individual in its appearance.
The page should contain animation.
The page should contain color images.
I consider links to online-shops to be important.
I consider links to a ticket-service to be important.
The summary of the contents should be designed as in magazines.
I consider a link to a classified ads-page to be important.
I consider a link to an online-bookshop to be important.
I consider links to an online-travel agency to be important.
Web-specific language should be used on the page.
The page may contain banner ads.
I consider links to online-games to be important.
I would like there to be music and sound on the page.
I consider links to a chat room to be important.
I would like to be able to state my interests on the page in order to be informed of any related news by e-mail.

1. I would like you to evaluate the following web pages under the following criteria and give them a mark from 1 to 6. (Don't worry if the pages are not in English... it is just the structure and appearance that are relevant!)

**Structure:**
- 1 = well-organized, information easy to find, text easy to read
- 6 = badly organized, difficult navigation, reading text is strenuous

**Appearance:**
- 1 = very good layout, background is not too prominent, pleasant colors
- 6 = poor layout, background hinders reading, unpleasant colors

Please give reasons for your answers. (E.g. good color combinations, clear symbols/icons, too many images, etc.)

Here are the pages: (N.B.: When you send this mail as a reply you can type the marks directly in the corresponding places. The easiest way to visit the sites is to copy the address into the URL-address box of your browser.)
Questionnaire on web design for the UK
(By Yvonne Husmann, University of Passau)

Hello,
my name is Yvonne, I am currently writing my thesis on Web design and I would like

to find out how to design web pages for the UK. I would be very happy if you would
help me by answering the following questions. Your help is, so to speak, “vital” for

my work.... so please, spend a little time to fill in the questionnaire. Would you mind

sending a copy to one of your friends and ask them to do the questionnaire as well?
(You need a couple of participants to fulfil statistic requirements, you know....).
Please return the answered version to me (yvonnepassau@compuserve.de) as soon as
possible.

Thanks

Yvonne

Just mark the corresponding boxes with an ”x” or type your answer next to the
question:

1. Age:  
2. Sex: male [] female []  
3. Country of origin:  
4. Are you a student? Yes [] no [] (if not, please state your profession: )  
5. Please name a few of your favourite web sites, referring to the design and layout

   of the home page.  
6. Which are your favourite colours or colour-combinations on a home page?  
7. Where do you personally prefer the navigation aid to be? (please mark one of the

   following)
   On the left [] top [] right [] bottom [] top
   and left [] top and right []  
8. What do you think makes the design of a home page especially attractive for

   Britons?  
9. What do you expect on a home page of a web site?

   Here are a number of statements I would like you to evaluate on a scale from 1

to 6; 1 meaning you fully agree with the statement, 6 meaning you completely
disagree). Please mark with an ”x”.

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>I need to have everything at a glance on the starting page.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The navigation bar should contain a concise and short version of everything offered on the subpages.</td>
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<td></td>
<td></td>
<td></td>
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<td>Technical terminology of web language should not be used; the terms should be general and easy to understand for everybody.</td>
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<td></td>
<td></td>
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<td>A search function is important.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>It is important to have a button to contact to the ”authors” of the page via e-mail.</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The page should contain up-to-date information.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. I would like you to evaluate the following web pages under the following criteria and give them a mark from 1 to 6. (Don't worry if the pages are not in English... it is just the structure and appearance that are relevant!)

**Structure:**  
1 = well-organized, information easy to find, text easy to read  
6 = badly organized, difficult navigation, reading text is strenuous

**Appearance:**  
1 = very good layout, background is not too prominent, pleasant colours  
6 = poor layout, background hinders reading, unpleasant colours

Please give reasons for your answers. (E.g. good colour combinations, clear symbols/icons, too many images, etc.)

Here are the pages: (N.B.: When you send this mail as a reply you can type the marks directly in the corresponding places. The easiest way to visit the sites is to copy the address into the URL-address box of your browser.)
http://www.bt.co.uk
Structure:
Appearance:

http://www.askjeeves.co.uk/
Structure:
Appearance:

http://www.freeserve.com
Structure:
Appearance:

http://www.bbc.co.uk
Structure:
Appearance:

http://www.thetimes.co.uk/
Structure:
Appearance:

http://www.thetrainline.com
Structure:
Appearance:

http://www.egg.com
Structure:
Appearance:

http://www.t-online.de
Structure:
Appearance:

http://www.web.de
Structure:
Appearance:

http://www.icunet.de
Structure:
Appearance:

http://www.rtl.de/rtlworld.html
Structure:
Appearance:

http://www.spiegelonline.de/
Structure:
Appearance:

http://www.handelsblatt.de
Structure:
Appearance:

http://www.deutschebank24.de
Structure:
Appearance:

Thank you!
¡Hola!

Me llamo Yvonne. Estoy escribiendo mi tesis sobre el diseño de páginas web creado para España. Para saber mejor lo que les gusta a los españoles he diseñado un cuestionario...– y con eso necesito tu ayuda! Por favor, rellene el cuestionario siguiente y devuélvemelo lo más pronto posible (dirección: yvonnepassau@compuserve.de).

Si lo mandas a uno o a algunos de tus amigos, sería genial (ya sabes que por razones de estadísticas se necesita un montón de participantes)...)

Muchísimas gracias

Yvonne

Simplemente marca lo correspondiente con una "x" o escribe la respuesta detrás de la pregunta.

1. Cuántos años tienes?
2. Sexo:  varón [ ]  mujer [ ]
3. País de procedencia
4. ¿Eres estudiante?  Sí [ ]  no [ ] (si no, ¿cuál es tu profesión?)
5. ¿Cuáles son tus páginas web preferidas en cuanto al diseño, y a la maqueta de la home page?
6. ¿Cuáles son los colores o combinaciones de colores que te gustan más en una home page?

<table>
<thead>
<tr>
<th>Pregunta</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>En la home page quiero tener todo en un golpe de vista.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Me gusta si la barra de navegación ofrece una versión concisa de lo ofrecido en las páginas siguientes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Las expresiones utilizadas no deben ser términos técnicos o la lengua del web típica, sino fácil de entender para la gente común.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Es importante tener una opción de búsqueda.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Es importante tener la opción de contactar los &quot;autores&quot; de la página a través de correo electrónico.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>La página debe ofrecer informaciones actuales.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix C
La página debe tener un diseño funcional.
La página debe tener su propia estética.
Me gusta si la página incluye animaciones.
La página debe tener imágenes en colores.
Considero importante tener un link (una conexión) a tiendas virtuales.
Considero importante tener un link para comprar entradas (conciertos, etc.) en la red.
Me gusta que el índice de la página se parezca al de una revista.
Considero importante tener un link a un tablón de anuncios.
Considero importante tener un link a una librería online.
Considero importante tener un link a una agencia de viajes en la red.
En la página se deben utilizar las expresiones típicas de la red.
La página puede incluir publicidad.
Considero importante tener links a juegos online.
Considero importante que la página sea acompañada por música o sonidos.
Considero importante tener links a un chat.
Me gustaría poder expresar mis gustos en la página para luego ser informado/a sobre novedades a través de correo electrónico.

1. Por favor, mira las siguientes páginas web (solamente las home pages) y evalúalas en una escala de 1 á 6. (No te preocupes, si la página no es en español, ya que solamente importa como te gusta la apariencia y la estructura/).

**Estructura:**
1 = fácil de comprender, fácil de encontrar información, el texto se puede leer bien
6 = difícil de comprender, la navegación resulta difícil, uno se cansa mucho al leer

**Apariencia:**
1 = muy buen diseño, colores agradables, el fondo no molesta
6 = diseño escueto, el fondo molesta al leer, colores desagradables

¿Puedes dar la razón por tu opinión también? (por ejemplo: combinación de colores agradable, los símbolos son fácil de entender, demasiados imágenes, etc.).

Aquí tienes las páginas: (La manera más fácil de llegar a las páginas: copiar la dirección e insertarla en la línea correspondiente para la dirección de tu browser (la ventana a través del cual tienes acceso a la red)).

Appendix C
http://www.terra.es
Apariencia:
Estructura:

http://www.cresmas.com
Apariencia:
Estructura:

http://www.arrakis.es
Apariencia:
Estructura:

http://www.elpais.es
Apariencia:
Estructura:

http://www.navegalia.com
Apariencia:
Estructura:

http://www.bsch.es/
Apariencia:
Estructura:

http://www.telefonica.es/
Apariencia:
Estructura:

http://www.t-online.de
Apariencia:
Estructura:

http://www.web.de
Apariencia:
Estructura:

http://www.icunet.de
Apariencia:
Estructura:

http://www.rtl.de/rlworld.html
Apariencia:
Estructura:

http://www.spiegelonline.de/
Apariencia:
Estructura:

http://www.handelsblatt.de
Apariencia:
Estructura:

http://www.deutschebank24.de
Apariencia:
Estructura:

Muchas gracias!!!!!
Webdesign Umfrage für Ungarn  
(Yvonne Husmann, Universität Passau)

Hallo!

Vielen Dank
Yvonne

Yvonnepassau@compuserve.de (Yvonne Husmann)

Einfach in die zutreffenden Kästchen ein „x“ machen oder die Antwort hinter die Frage schreiben.

1. Wie alt bist Du?
2. Geschlecht: weiblich [] männlich []
3. Herkunftsland:
4. Bist Du Student? Ja [] Nein [] (falls kein Student, bitte Beruf angeben)
5. Kannst Du mir ein paar Websites nennen, die Dir am besten gefallen, und zwar was das Design, das Layout der Startseite betrifft?
6. Welche Farbkombination gefällt Dir auf Homepages am besten?
7. Wo sollte Deiner Meinung nach die Navigationsleiste sein? (bitte nur eine Möglichkeit ankreuzen)
   links [] rechts [] oben [] links und oben [] rechts und oben []
8. Was denkst Du wirkt bei Homepages in Ungarn besonders ansprechend?
9. Was erwartest Du auf einer Übersichtsseite, also der Startseite eines Online-Angebots?
   Hier sind einige Aussagen dazu. Bewerte sie mit einer Skala von 1 bis 6.
   (1 = die Aussage trifft voll und ganz zu
   6 = die Aussage trifft überhaupt nicht zu).

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auf der Startseite muss ich alles mit einem Überblick erfassen können.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In der Navigationshilfe möchte ich alles, was auf den Untereiten angeboten wird, kurz und prägnant vorfinden.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Die verwendeten Begriffe sollen allgemein gehalten und für jeden verständlich sein; es sollten also keine Fachbegriffe oder typische Web-Sprache verwendet werden.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eine Suchhilfe-Funktion finde ich wichtig.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eine E-mail-Funktion finde ich wichtig.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Die Seite soll aktuelle Infos enthalten.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appendix C
10. Ich bitte Dich die folgenden WWW-Seiten kurz nach folgenden Kriterien zu bewerten und Noten von 1 bis 6 zu vergeben. (Bitte die Sprache nicht beachten).

**Aufbau:**
- **1** = übersichtlich, Infos sind leicht zu finden, Texte angenehm zu lesen
- **6** = unübersichtlich, schwierige Navigation, beim Lesen ermüdet man schnell

**Optik:**
- **1** = sehr gute Gestaltung, Hintergrund ist nicht aufdringlich, angenehme Farben
- **6** = spartanische Aufmachung, Hintergrund stört beim Lesen, störende Farben

Bitte gib zu den getroffenen Entscheidungen auch eine Begründung an (z.B. gute Farbkombination, oder verständliche Symbole, zu viele Bilder, etc.)

Hier also die Seiten:

| Die Seite soll sachlich und nüchtern gestaltet sein. |  |  |  |  |  |  |
|----------------------------------------------------|---|---|---|---|---|
| Die Seite sollte ihre eigene Ästhetik haben. |  |  |  |  |  |  |
| Animationen sollen auf der Seite enthalten sein. |  |  |  |  |  |  |
| Die Seite soll farbige Bilder enthalten. |  |  |  |  |  |  |
| Links zu Shops finde ich wichtig. |  |  |  |  |  |  |
| Links zu einem Ticketservice finde ich wichtig. |  |  |  |  |  |  |
| Die Inhaltsübersicht sollte wie in Zeitschriften gestaltet sein. |  |  |  |  |  |  |
| Einen Link zu einem Kleinanzeigenmarkt finde ich wichtig. |  |  |  |  |  |  |
| Einen Link zu einem Online-Buch-Shop finde ich wichtig. |  |  |  |  |  |  |
| Einen Link zu einem Online-Reisebüro finde ich wichtig. |  |  |  |  |  |  |
| Auf der Seite sollen webtypische Begriffe verwendet werden. |  |  |  |  |  |  |
| Die Seite darf Werbebanner enthalten. |  |  |  |  |  |  |
| Links zu Online-Spielen finde ich wichtig. |  |  |  |  |  |  |
| Musik oder Geräusche finde ich wichtig. |  |  |  |  |  |  |
| Links zu einem Chat-room finde ich wichtig. |  |  |  |  |  |  |
| Ich möchte meine Interessen (in einem Profil) angeben können, um per E-mail über Neuigkeiten informiert zu werden. |  |  |  |  |  |  |
http://www.mti.hu/ Aufbau: Optik:

http://freemail.hu/fm/login Aufbau: Optik:

http://www.index.hu/ Aufbau: Optik:

http://www.netpincer.hu Aufbau: Optik:

http://www.mancs.hu/ Aufbau: Optik:

http://www.pestiest.hu/ Aufbau: Optik:

http://www.budapest.hu/ Aufbau: Optik:

http://www.t-online.de Aufbau: Optik:

http://www.web.de Aufbau: Optik:

http://www.icunet.de Aufbau: Optik:

http://www.rtl.de/rtlworld.html Aufbau: Optik:

http://www.spiegelonline.de/ Aufbau: Optik:

http://www.handelsblatt.de Aufbau: Optik:

http://www.deutschebank24.de Aufbau: Optik:

Vielen Dank!
Appendix D: What users require from a home page

USA - agreement (marked 1+2)

- factual and functional: 100.00%
- up-to-date info: 100.00%
- search function: 80.00%
- concise navigation: 80.00%
- contact author: 60.00%
- general, easy to understand terms: 60.00%
- everything at a glance: 60.00%
- colour images: 40.00%
- Chatroom: 20.00%
- Links to online-games: 20.00%
- Links to online-travel agency: 20.00%
- Links to online-book-shop: 20.00%
- Links to classified ads page: 20.00%
- content design: magazine: 20.00%
UK agreement (marked 1+2)

- up-to-date info: 87.50%
- concise navigation: 87.50%
- factual and functional: 62.50%
- contact author: 62.50%
- everything at a glance: 62.50%
- search function: 50.00%
- general, easy to understand terms: 50.00%
- banner ads: 25.00%
- colour images: 25.00%
- state interests for info: 12.50%
- musik and sound: 12.50%
- Links to ticketservice: 12.50%
- animation: 12.50%
Appendix E: Results page evaluation

In the questionnaire web pages had to be evaluated on a scale from 1 to 6 with respect to structure and appearance. The result for both categories and for the whole page is presented in average marks for each of the four countries in the following tables. The three highest ranked pages are highlighted.

Ranking USA

<table>
<thead>
<tr>
<th>Page</th>
<th>Structure</th>
<th>Appearance</th>
<th>Total page</th>
<th>Country average</th>
</tr>
</thead>
<tbody>
<tr>
<td>about.com</td>
<td>3,00</td>
<td>2,75</td>
<td>2,88</td>
<td></td>
</tr>
<tr>
<td>go.com</td>
<td>2,50</td>
<td>3,25</td>
<td>2,88</td>
<td></td>
</tr>
<tr>
<td>cnet.com</td>
<td>3,00</td>
<td>2,75</td>
<td>2,88</td>
<td></td>
</tr>
<tr>
<td>ebay.com</td>
<td>2,50</td>
<td>2,33</td>
<td>2,42</td>
<td></td>
</tr>
<tr>
<td>geocities.com</td>
<td>2,50</td>
<td>3,00</td>
<td>2,75</td>
<td></td>
</tr>
<tr>
<td>nbc.com</td>
<td>2,67</td>
<td>2,75</td>
<td>2,71</td>
<td></td>
</tr>
<tr>
<td>euniverse.com</td>
<td>3,00</td>
<td>2,25</td>
<td>2,63</td>
<td></td>
</tr>
<tr>
<td>t-online.de</td>
<td>2,67</td>
<td>2,33</td>
<td>2,50</td>
<td>USA 2,73</td>
</tr>
<tr>
<td>web.de</td>
<td>2,25</td>
<td>2,25</td>
<td>2,25</td>
<td></td>
</tr>
<tr>
<td>icunet.de</td>
<td>2,50</td>
<td>2,50</td>
<td>2,50</td>
<td></td>
</tr>
<tr>
<td>rtl.de</td>
<td>3,50</td>
<td>3,50</td>
<td>3,50</td>
<td></td>
</tr>
<tr>
<td>spiegelonline.de</td>
<td>2,75</td>
<td>3,00</td>
<td>2,88</td>
<td></td>
</tr>
<tr>
<td>handelsblatt.de</td>
<td>3,25</td>
<td>3,75</td>
<td>3,50</td>
<td></td>
</tr>
<tr>
<td>deutschebank24.de</td>
<td>2,75</td>
<td>2,25</td>
<td>2,50</td>
<td>Germany 2,80</td>
</tr>
</tbody>
</table>

first  second  third
## Results page evaluation

### Ranking UK

<table>
<thead>
<tr>
<th>Page</th>
<th>Structure</th>
<th>Appearance</th>
<th>Total page</th>
<th>Country average</th>
</tr>
</thead>
<tbody>
<tr>
<td>bt.co.uk</td>
<td>3,29</td>
<td>2,86</td>
<td>3,07</td>
<td></td>
</tr>
<tr>
<td>askjeeves.co.uk</td>
<td>1,57</td>
<td>2,71</td>
<td>2,14</td>
<td></td>
</tr>
<tr>
<td>freeserve.com</td>
<td>2,57</td>
<td>3,71</td>
<td>3,14</td>
<td></td>
</tr>
<tr>
<td>bbc.co.uk</td>
<td>1,29</td>
<td>2,14</td>
<td>1,71</td>
<td></td>
</tr>
<tr>
<td>thetimes.co.uk</td>
<td>2,14</td>
<td>2,29</td>
<td>2,21</td>
<td></td>
</tr>
<tr>
<td>thetrainline.com</td>
<td>1,71</td>
<td>2,29</td>
<td>2,00</td>
<td></td>
</tr>
<tr>
<td>egg.com</td>
<td>2,29</td>
<td>2,14</td>
<td>2,21</td>
<td></td>
</tr>
<tr>
<td>t-online.de</td>
<td>2,86</td>
<td>3,57</td>
<td>3,21</td>
<td>2.36</td>
</tr>
<tr>
<td>web.de</td>
<td>2,00</td>
<td>2,71</td>
<td>2,36</td>
<td></td>
</tr>
<tr>
<td>icunet.de</td>
<td>2,71</td>
<td>2,29</td>
<td>2,50</td>
<td></td>
</tr>
<tr>
<td>rtl.de</td>
<td>2,29</td>
<td>3,29</td>
<td>2,79</td>
<td></td>
</tr>
<tr>
<td>spiegelonline.de</td>
<td>2,43</td>
<td>2,71</td>
<td>2,57</td>
<td></td>
</tr>
<tr>
<td>handelsblatt.de</td>
<td>2,71</td>
<td>3,57</td>
<td>3,14</td>
<td></td>
</tr>
<tr>
<td>deutschebank24.de</td>
<td>2,14</td>
<td>2,14</td>
<td>2,14</td>
<td>2.14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Germany 2.67</td>
</tr>
</tbody>
</table>

---

Appendix E
**Results page evaluation**

<table>
<thead>
<tr>
<th>Page</th>
<th>Structure</th>
<th>Appearance</th>
<th>Total page</th>
<th>Country average</th>
</tr>
</thead>
<tbody>
<tr>
<td>terra.es/ structure</td>
<td>2,44</td>
<td>3,33</td>
<td>2,89</td>
<td></td>
</tr>
<tr>
<td>eresmas.es</td>
<td>2,78</td>
<td>2,89</td>
<td>2,83</td>
<td></td>
</tr>
<tr>
<td>arrakis.es</td>
<td>3,25</td>
<td>3,50</td>
<td>3,38</td>
<td></td>
</tr>
<tr>
<td>elpais.es</td>
<td>2,22</td>
<td>2,89</td>
<td>2,56</td>
<td></td>
</tr>
<tr>
<td>navegalia.es</td>
<td>3,44</td>
<td>2,67</td>
<td>3,06</td>
<td></td>
</tr>
<tr>
<td>bsch.es</td>
<td>2,56</td>
<td>3,11</td>
<td>2,83</td>
<td></td>
</tr>
<tr>
<td>telefonica.es</td>
<td>2,78</td>
<td>2,44</td>
<td>2,61</td>
<td>Spain 2,88</td>
</tr>
<tr>
<td>t-online.de</td>
<td>3,22</td>
<td>3,56</td>
<td>3,39</td>
<td></td>
</tr>
<tr>
<td>web.de</td>
<td>3,11</td>
<td>3,44</td>
<td>3,28</td>
<td></td>
</tr>
<tr>
<td>icunet.de</td>
<td>3,13</td>
<td>3,38</td>
<td>3,25</td>
<td></td>
</tr>
<tr>
<td>rtl.de</td>
<td>3,56</td>
<td>3,33</td>
<td>3,44</td>
<td></td>
</tr>
<tr>
<td>spiegelonline.de</td>
<td>3,38</td>
<td>3,50</td>
<td>3,44</td>
<td></td>
</tr>
<tr>
<td>handelsblatt.de</td>
<td>3,50</td>
<td>3,38</td>
<td>3,44</td>
<td></td>
</tr>
<tr>
<td>deutschebank24.de</td>
<td>2,63</td>
<td>2,50</td>
<td>2,56</td>
<td>Germany 3,26</td>
</tr>
</tbody>
</table>
## Results page evaluation

### Ranking Hungary

<table>
<thead>
<tr>
<th>Page</th>
<th>Structure</th>
<th>Appearance</th>
<th>Total page</th>
<th>Country average</th>
</tr>
</thead>
<tbody>
<tr>
<td>mti.hu</td>
<td>2,00</td>
<td>2,36</td>
<td>2,18</td>
<td></td>
</tr>
<tr>
<td>freemail.hu/fm/login</td>
<td>2,57</td>
<td>3,00</td>
<td>2,79</td>
<td></td>
</tr>
<tr>
<td>index.hu</td>
<td>3,29</td>
<td>3,14</td>
<td>3,21</td>
<td></td>
</tr>
<tr>
<td>netpicer.hu</td>
<td>2,92</td>
<td>2,54</td>
<td>2,73</td>
<td></td>
</tr>
<tr>
<td>mancs.hu</td>
<td>3,00</td>
<td>2,77</td>
<td>2,88</td>
<td></td>
</tr>
<tr>
<td>pestiest.hu</td>
<td>3,08</td>
<td>3,62</td>
<td>3,35</td>
<td></td>
</tr>
<tr>
<td>budapest.hu</td>
<td>2,38</td>
<td>2,69</td>
<td>2,54</td>
<td></td>
</tr>
<tr>
<td>t-online.de</td>
<td>2,46</td>
<td>2,85</td>
<td>2,65</td>
<td>Hungary 2,81</td>
</tr>
<tr>
<td>web.de</td>
<td>2,21</td>
<td>2,64</td>
<td>2,43</td>
<td></td>
</tr>
<tr>
<td>icunet.de</td>
<td>2,46</td>
<td>2,77</td>
<td>2,62</td>
<td></td>
</tr>
<tr>
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