Analyzing Cultural Sensitivity of Websites

A Normative Framework

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ABSTRACT

The big question at this stage of global e-commerce evolution is can we afford to be insensitive to the global target markets and if adaptation of websites does make business sense, do we have tools, theories, and frameworks to make websites culturally adapted? The aim of this study is to propose a framework to enhance the cultural adaptability of the web sites. The proposed framework analyzes the cultural content of the web sites at perceptual, behavioral, and symbolic levels.

Introduction

According to Jupiter research, a well-known Internet research company, almost sixty percent of the Internet population will reside outside US by 2005, but only one third of the American online companies are targeting global segments (Internet.com, 2001). The e-commerce spending is expected to surge in Western Europe to almost $430 billion by 2003, and in Asia/Pacific to over $72 billion by 2003 (Internet.com, 1999). This rapid growth in global e-commerce will mean huge market expansion opportunities abroad, and delay in launching international websites could prove to be a fatal mistake (Alvarez, et al. 1998). Simon (1999) emphasis the need for culturally sensitive websites, as the web and the e-commerce expands into Asia, South America, and eventually in Africa. Recent studies by Barber and Badre (1998), Fock (2000), and Simon (1999) have shown the importance of culturally sensitivity of the websites on usability, interactivity, and communication perception. But still majority of the websites hardly pay

any attention to cultural markers (Barber and Badre, 1998), like colors, values, layout, symbols, and icons. Furthermore, a lot of International websites don't even display important information like international time zones, currency calculator, postal codes and telephone numbers.

Thus, the big question at this stage of global-e-commerce evolution is that can we afford to be insensitive to the global target markets and if adaptation of websites does make business sense, do we have tools, theories, and frameworks to make websites culturally sensitive. The purpose of this study is to provide a framework to analyze the cultural content of the websites, so that we can design culturally competent websites.

Need For a Holistic Framework To Analyze The Cultural Content of The Websites

To, date there is no consensus about a single definition of culture and it has been studied in various ways, depending on different epistemological assumptions (Goodenough, 1981). Culture has been described as a system of shared meanings (Geertz, 1973), Software of mind (Hofstede, 1980), subjective psychosocial response by man to experience (Triandis 1972), and material artifacts and symbols created by man (Belk, 1987; Hirschman 1988). Each of these relevant definitions and perspectives to study culture limit the explanation of culture to their own breadth and scope. However, there is

growing concern to find convergence between different ways of understanding culture (Triandis, 1992, 1992; Gundykunst, 1997), and use of multiple approaches to enhance cultural understanding (Triandis, 1994). Furthermore there seems to be a growing support to use etic and emic approaches to study cultural phenomenon (Berry et al, 1992; Gundykunst, 1997; and Triandis, 1992, 1994). While etic approaches by studying cultural universals can enhance cross-cultural comparisons, the emic approaches can help to define specific elements and get unique cultural understandings. Trompenaars (1994) has proposed a model of cultural understanding that includes three main layers; the outer observable layer of artifacts and symbols, the middle layer of norms and values, and the core made up of basic-implicit assumptions of a society. This model accounts for both the intrapersonal world of basic forms, propositions, norms, values, and the extrapersonal world of cultural symbols and artifacts. The question of interest in this study is how could we study intrapersoanl world of cultural values, norms, and cognitive structures, and the extrapersonal world of symbols and artifacts, using a combination of etic and emic approaches on the web.

To analyze the web as a cultural document, using multiple approaches, a three level framework of cultural analysis is proposed. The three level framework consists of perceptual, behavioral, and symbolic dimensions of cultural reality to study the web content. At the perceptual level this framework proposes to analyze the web content based on basic implicit assumptions of the society

(Trompenaars, 1994), at the behavioral level this framework proposes to study the beliefs and values of the society (Goodenough, 1981), and finally at the symbolic level, this framework will study the web content in terms of signs, and symbols of the society (Geertz, 1973).

The Conceptual Framework

The conceptual basis of the framework can be summed up in the definition of culture by Herkovits (1995), "that culture is the man-made part of the human environment." This definition in essence envelops every aspect of human interaction with the environment at the perceptual, behavioral and symbolic level. The rationale behind using perceptual, behavioral, and symbolic levels in this framework is to provide an holistic basis to analyze the cultural content of the websites using both the intrapersonal world of cognitive structures (D'Andrade, 1984), and the extrapersonal world of objects and symbols (Geertz, 1973). At the perceptual level the emphasis is on language use and color categories, and a combination of etic and emic approaches is recommended. At the behavioral level the emphasis is on cultural values and an etic mode of enquiry is recommended. Finally at the symbolic level the emphasis is on emic understanding of signs and symbols of the society.

Perceptual Level

Perception envelops a broad arena of human processes ranging from sensation to concept formation (Segal, 1966). Perception includes filtering of the stimuli

from the environment and processing the environmental stimuli. At perceptual filtering and perceptual processing stages cultural differences in the interaction with the environment plays an important role in processing information (Berry et al. 1992). The impact of culture on perception can be traced to the works of Rivers, Sapir, and whorf in early 1900's. Works by Segal et al. (1966), Deregowski (1990), and Detweiler (1978) lend further support to the thesis that culture impacts perception. It is well documented that ecological environment in particular regions conditions perceptual responses. For example the carpentered world hypothesis postulates that people living in environments shaped by carpenters (urban dwellings) interpret non-rectangular figures as representation of rectangular figures (Berry et al, 1992). Furthermore, at the perceptual processing stage people categorize the stimuli from the environment based on their cultural conditioning. For example Detweiler (1978) found that Turks form narrower categories for concepts than Americans. According to Sapir-Whorf hypothesis (theory of linguistic relativity), language provides conceptual categories that influence how people encode and store knowledge. Furthermore, language has profound influence on perception of color, memory of color, cognitive organization of color, and ease of communication about color (Toomey and Korzenny, 1989). Segal (1966) found that classification of colors in form of the spectrum VIBGYOR is culturally arbitrary, and people in different cultures divide the spectrum quite differently. Language also affects how people think, for example it was found that Chinese learn faster with visual inputs because of the pictographic nature of Chi-

nese script (Turnage and Mc Ginnies, 1973). Kaplan (1966) observed that English writing is correlated to linear thinking; Semitic writing facilitates parallel thinking, while oriental writing is marked by indirection or circular thinking.

In conclusion, language provides the fundamental categories or a set of forms that serve as a code for other complex cultural forms (Goodenough, 1981), and in doing so language creates a unique cognitive-cultural system through which people categorize, process, and interpret environmental stimuli.

When designing the websites language can have profound influence on the usability, perception, and performance of the website. From the above discussion it is clear that just translating the website to another language can lead to communication errors, because linguistic forms and categories vary cross-culturally. Multilingual software packages that are in vogue today are susceptible to various translation errors in form of vocabulary equivalence, idiomatic equivalence, conceptual equivalence etc. Thus a culturally sensitive website should pay close attention to not only translation but also how information is being perceived and interpreted. Thus at perceptual level of cultural analysis websites can be analyzed to study spatial orientation of the content, layout of the web pages, text length, navigational modes, translation equivalence, language dialects and color categories.

Spatial Orientation: - By spatial orientation it means how the web content is structured in the web space. According to Barber and Badre (1998) spatial orientation has di-

rect effect on website usability, because it effects the visual perception. For example most of the oriental scripts (Japanese, Korean, Chinese) are justified and read vertically, on the other hand Arabic is read from right to left, and English is read left to right. Thus for Arabic reader a left justified web page might not be visually appealing.

Web Page layout: - According to Rockwell (1998) special attention should be paid when translating roman-based alphabets (English, French, German) to non-roman based alphabets (Chinese, Japanese, Korean) as the rules of bolding, underlining, capitalizing, and font selection vary between these two sets of alphabets. For example if font size of nine is used for oriental alphabets they become less legible. Thus attention should be paid when selecting character sets, character fonts, collating sequences and word order.

Text Length: - Text length determines the web pages needed for the website in a particular country. For example when translating into the languages that use roman-based alphabets the size of the text is expected to go up by thirty percent (Rockwell, 1998). Furthermore, the text length has implications for graphic use, font size, line length, and scan order for the page.

Navigation Modes: - The variations in language readability (left to right, or right to left, or vertical) across cultures also impact how people browse the web pages. For example studies by Barber and Badre (1998) and Sheppard and Scholtz (1999) have shown that people in Arabic cultures who are used to reading from right to left prefer navigation bars in a similar sequence.

<u>Translation Equivalence</u>: - when translating the websites special attention is needed on how various concepts, words, and sentences are translated from one language to another. Literature is full of marketing blunders caused due to lack of translation equivalence. Thus special attention is needed on vocabulary equivalence, grammatical equivalence, conceptual equivalence, and idiomatic equivalence.

<u>Dialects:</u> - The language not only differs among cultures but also among various subcultures in form of different dialects. Even though United States and Britain are considered culturally less distant, the English usage differs significantly between these tow countries. Alvarez et al (1998) give an example of selecting between Castilian and Latin American dialect when targeting Spanish consumers.

<u>Color Categories</u>: - According to the study by Berlin and Kay (1969), black and white are the most readily distinguished colors across cultures, then is red, green, yellow, blue etc. These cross-cultural differences in categorizing color and color combinations arise because the cultural vocabulary limits the color discriminations people can make. Thus an emic approach is required to study unique color categories identified by particular cultures and use them in web page design.

Behavioral level

At behavioral level of cultural analysis it is important to understand what are the forces that make us behave and react the way we do. According to Trompenaars (1994), norms and values guide our actions and aspirations; in fact cultural values guide individual concerning preferable mode of conduct or end states of existence (Pollay, 1983). In the field of marketing cultural values have been recognized to have a significant impact on consumer motivations, product choices, and lifestyles (Cheng and Schewitzer, 1996; Tse, Belk, and Zhou, 1989).It also has been found that advertising that reflects local cultural values is more powerful and persuasive than culturally insensitive advertising (Gregory and Munich.., 1997; Mueller, 1987; Zandpour et al 1994). Thus in advertising cultural values have been extensively used to understand the cultural sensitivity of the advertisements and their persuasiveness (Miller and Gelb, 1997; Cheng and Schewitzer, 1996; Mueller, 1987; Pollay, 1983). The work by Rokeach (1973) on value analysis is considered the earliest attempt to categorize instrumental and terminal human values. More recently Schwartz (1992) has refined the 36 values by Rokeach and developed a list of Schwartz value system. Pollay (1983) developed an exhaustive list of 42 widely used cultural value appeals in advertising. Furthermore, in search of cultural universals, or a set of etic-cultural dimensions, various researchers have proposed cultural values categories which can be applied cross culturally to measure cultural values (Hall and Hall,1987; Hofstede, 1980; Kluckohn and Strodtbeck, 1961; Trompenaars, 1994). In the marketing and adver-

tising literature the most widely used etic-dimensions of cultural analysis are from Hofstede (1980), namely individualism-collectivism, uncertainty avoidance, power distance, and masculinity-feminity. However in most of the marketing and advertising studies the cultural values proposed by Hofstede (1980) have been used to study communication effectiveness on traditional print media and television. Only a handful of studies by Ju-Pak (1999), Fock (2000) and Simon (1999) have tried to extend the use of cultural values to study web content, even though web is a dynamic advertising document (Ju-Pak) and is appropriate for cultural analysis.

Thus, when designing web pages across cultures careful attention is needed as to how cultural values can be used to make the content culturally congruent. To analyze websites in terms of usage of cultural value appeals it is important to have a framework consisting of cultural value dimensions and their applicability on the web content. However to include numerous cultural dimensions in the framework from previous studies is be beyond the scope of this study. Thus we propose to incorporate the four widely used cultural dimensions proposed by Hofstede (1980) and the dimension of time orientation from Hall (1990). Previous studies by Fock (2000) and Simon (1998) provide evidence of using cultural values proposed by Hofstede and Hall to study communication on the web.

Individualism-Collectivism: - The individualism and collectivism dimension by Hofstede indicates how closely or loosely the society is knit. While in individualistic cultures, needs, values, and goals of an individual take precedence

over group goal, opposite is true for collectivistic cultures. Thus it is proposed that when designing websites for collectivistic cultures (Japan, China, Korea), content should be more respecting of family values and emphasize community features. Some operational measures of collectivism on the web can be the presence or absence of chat rooms, clubs, community newsletters, and family-oriented themes. In the case of individualistic culture (USA, UK, Germany) more emphasis would be needed on self-direction options, individual customization, and themes reflecting independence and materialism.

Uncertainty Avoidance: - People from countries high on uncertainty avoidance tend to have low tolerance for uncertainty and ambiguity, and to them, "what is different is dangerous." Countries like Japan, France, and Mexico fall in this group. Some operational elements that can reduce uncertainty on the website are, secure payment systems, visible secure payment signs, guided navigation, free trials and downloads, and product safety information.

Power Distance: - Societies high on power distance (Egypt, India, Nigeria) accept power and hierarchy in the society and are low on egalitarianism. People in high power distance cultures are more likely to expect clear directions as opposed to factual information. Thus websites in high power distance cultures should place emphasis on features related to power and prestige. Some examples could be, celebrity endorsements, rank or prestige of the company, testimonials, pictures of CEO's and important people.

Masculinity-Feminity: - Masculine cultures (Japan, India, Middle east) value assertiveness, ambition, material possessions and success, while feminine cultures (Denmark, Norway, Sweden) place more value on helping others, preserving environment, quality of life and nurturance. Thus websites in masculine cultures can emphasize on ambition, sportiness, and assertiveness themes, online games, explicit comparison of products with that of competitors, and hard sell approach. In the case of feminine cultures the websites need to be emphasize on environmental awareness, humane touch, developing cooperative relationships, unity with nature, and a soft sell approach.

Polychronic-Monochronic Cultures: - According to Hall (1990), cultures that are monochromic in time orientation pay attention to only one thing at a time and follow a linear approach. However people in polychronic cultures tend to do several operations at once. Thus websites in monochromic cultures should take a systems approach to designing the websites, making all navigational links clearly coordinated, while in case of polychronic cultures the websites should rely more on graphic maps and pictures. Some elements to enhance navigation in monochromic cultures could be site maps, navigation tools, sequential hyperlinks on each page (forward and backward) and a well-laid text.

Symbolic Level

At the symbolic level of cultural analysis, the aim is to study the material culture or the extrapersonal world of objects and symbols. According to Geertz (1973, p. 89) "….culture is historically transmitted pattern of meanings embodied in symbols, a system of inherited conception.." Thus symbols are the vehicles through which cultural information in form of tacit knowledge is passed from one generation to the other.

In marketing and advertising the study of symbols as means of understanding material culture has been gaining attention of consumer researchers. The earliest attempt was from levy in the article, "Symbols for Sale." More recently consumer researchers like David Mick, Elizabeth Hirschman, Grant Mc Cracken, Morris Holbrook, and Russel Belk have popularized semiotic or symbolic analysis of consumer culture. The argument presented for studying the symbols of the society is that consumers behave based on the meaning they ascribe to market place stimuli (Mick, 1986). For example advertising is seen as a medium through which meaning constantly pours from the culturally constituted world to consumer goods (Mc Cracken, 1986). Thus signs, symbols, icons, rituals, and myths are important part of the material culture, yet marketers have paid less attention to this tacit side of consumer knowledge. The result of not understanding the symbolic-material culture is the numerous marketing blunders marketers have made across the cultures. For example a cosmetic company marketing in Japan used the theme of Nero coming to life when he sees a girl wearing their brand of lipstick, but the theme was not well under-

stood in Japan, as the myth of Nero was not a part of Japanese culture (Ricks et al, 1974). Similarly, even tough Swastika is a sacred symbol for Hindus and vastly used in packaging in India, the use of Swastika in the western world would cause an enrage.

Semiotics is the study of signs and symbols. According to Mick (1986), semiotic analysis includes understanding the structures of meaning producing events at verbal and non-verbal level. Pierce (1931-1958) has categorized signs into icons, index and symbols. Icons bear a resemblance to its object, for example no smoking is an icon for not smoking cigarette; Index has a direct link between sign and the object it represents, for example smoke is an index of fire; Symbols are the most subtle and powerful representations of cultural thought and acquire meaning through convention and practice, for example for Hindus Swastika is a religious symbol while for Americans it is a symbol of Nazi oppression.

As the web is advertising and a cultural document, it is important to be sensitive as to how signs and symbols are used in the text and graphics. Barber and Badre (1998) use the term cultural markers to signify interface design elements and features that would be preferred and understood by a particular cultural group. Furthermore, Barber and Badre emphasize that cultural markers have the potential to improve the usability of the site for individuals from that particular culture. At this level of symbolic analysis it is important to understand that symbols are suffused with tacit knowledge and meaning in a socio-cultural context (Geertz, 1973), and etic approaches to measure them or develop scales for them may elude

specification (Mick, 1986). Thus emic inquiry by understanding symbols unique to a society is proposed. Cultural sensitivity of the websites at this level of symbolic analysis can be analyzed in terms of country-specific symbols, icons, and color symbolism.

Country-Specific symbols: - country-specific symbols include anything that portrays a way of life or culturally specific knowledge. For example in Arabic cultures use of pictures of men, women, animals is discouraged, while elaborate text in form of calligraphic style is acceptable and liked. Furthermore, use of visual metaphors (star, crescent, cross), animal figures, religious objects and signs, taboo words, graphics of hand gestures, aesthetic codes, forbidden food (beef n India), may need a detailed emic enquiry in the specific culture.

Icons: - Several icons are very specific to each country. When analyzing a website special attention is needed to know whether the icon is understood in a particular culture. For example the icons of yellow school bus, or red hexagonal sign, and American mailbox with a flag may not be well understood outside U.S. Thus when using icons on the web page country-specific understanding is needed.

Color Symbolism: - different colors mean different things to people in different cultures. For example, Ricks et al (1974) give an example of a company with packaging having green label was not well received by some Malaysians, because to them green symbolized the jungle with

its dangers and diseases. However, green is a color of fertility in Egypt, a color symbolizing safety in U.S and a color that indicates criminality in France (Barber and Badre, 1998). Similarly in western cultures white is the color for the bride's gown, while in India widows wear white. Thus use of specific colors on the websites has to be congruent with the needs and expectations of a specific country.

Implications and Directions for Future Research

The evolution of global e-commerce raises new issues about standardization or specialization of the web content. While some people speculate an emergence of a global Internet culture and a transnational web style (Sackmary and Scalia, 1999), there is a growing body of literature supporting a localized-specialized approach to web advertising and web content development (Barber and Badre, 1998; Fock, 2000; Ju-Pak, 1999; Simon, 1999). However both in the academic literature and the business press there seems to be a lack of guidance and lack of cross-cultural models and frameworks to support localization efforts on the web. Thus the main contribution of this study is to provide a basic framework for web cultural analysis that can enhance cultural understanding and help mangers and web designers to customize the web sites to specific cultures. This framework will be instrumental to get a holistic understanding of various facets of cultural reality (perceptual level, behavioral level, and symbolic level) and make the web content truly congruent to different cultural contexts. However the framework proposed in this study puts serious demands on the web

designers and marketers to be minutely study different cultures and then design the international websites. Thus to implement this framework not only should the web designers be able to identify and incorporate etic dimensions of culture (cultural values) but also study each culture to find specific elements (Symbols) which are so crucial in an emic enquiry. If applied, this framework cannot only make web sites culturally sensitive but it can also enhance the web site usability and increase the global competitiveness of online companies. The framework can also be successfully used to design culturally sensitive banner advertisements and streaming videos on the web.

The framework proposed in this study is only a starting point in terms of web site internationalization. Not only the websites need to be culturally sensitive but there are also a plethora of issues ranging from development to maintenance of International web sites. Future research is needed to determine, what type of content and at what level is appropriate for localization, and what type of technology can support such global interfaces. It is also important to gain further insight into the back stage of international web site maintenance. As global e-commerce is a new phenomenon we need models and applications that can enhance global customer service, manage multilingual customer enquires, track international visitors and their browsing behavior, and take car of global shipping, currency conversion and local taxes. Furthermore, the framework proposed in this study is only an initial attempt to provide a list of variables to analyze cultural sensitivity of the web sites; more research is needed to develop a more comprehensive framework with an exhaustive list

of cultural variables.

In conclusion, it is clear that just translating a website in a local language is not a solution for developing global web sites. Software's on the Internet offering automatic translation services can be prone to various cultural errors, and lack of cultural sensitivity could mean translating the past marketing blunders on the web. By providing a three level framework to analyze websites at perceptual, behavioral, and symbolic levels, this study hopes to help marketers and web designers to customize the web sites internationally.

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