



# Cross-Cultural Dimensions of Internet Portals

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## INTRODUCTION

Culture can be defined as the manifestation of “learned behavior consisting of thoughts, feelings and actions” (Hoft, 1996) formed under the influences of social, biological, psychological, economic and ecological environments over an extended period of time. But, as Hoft notes, culture is a complex subject encompassing many diverse concepts. By 1952, Kroeber and Kluckhohn (1963) had already identified 164 definitions of culture, ranging from “learned behaviour” to “ideas in the mind,” “a logical construct,” “a statistical fiction,” and “a psychic defense mechanism” and claimed that over 300 existed (p.291). Culture is a product of learning (Hoebel, 1971; Murdock 1965), changing over time and from place to place. Such changes are accelerated by various social exchanges, direct or indirect, among peoples. Creative processes or innovations diffuse through culture, so that times of rapid technological innovation are likely to see rapid cultural changes.

Recently, the Internet has brought about a revolution in information technology, affecting many aspects of the personal, professional and social lives of those connected through it. The Internet is changing the way we do business, learn and get education, gather information, bank and invest, pay bills, listen to music, see movies, buy and sell things, exchange greetings and communicate with others, express views, participate in debates and are entertained. These changes are affecting our cultures. But are all cultures being affected in similar ways? Are different cultural groups adopting this particular information technology in different ways consistent with their culture? Or is the Internet likely to lead to greater cultural homogeneity?

To address these questions, this study examines web portals in countries around the world. Portals are “gateways” to the Internet, web sites that provide some basic information and services themselves and, more importantly, provide access to selected sites in the Internet through links and to most other sites through search engines. The results at this relatively early stage of Internet usage are mixed. While portals show considerable similarity, a closer examination reveals some important differences that do reflect local cultures.

## BACKGROUND AND LITERATURE REVIEW

As the world becomes more connected through technology, two competing hypotheses have emerged regarding the effect of globalization on culture (Webber (1969), Yang (1986), and Ronen (1986)). One hypothesis, convergence, suggests that new technologies, such as the Internet, are a force for cultural homogeneity. The other hypothesis, divergence, suggests that cultures tend to resist assimilation and adapt technologies in culturally distinct ways.

Most research on global or international information systems takes a divergence perspective, pointing out the problems that can occur when cultural differences are ignored. For example, Fernandes (1995) and Del Galdo and Nielsen (1996) provide guidance on user interface design. But when Ein-Dor et al. (1993) investigated the effect of culture on international information system construction, they found considerable consistency and thus support for the convergence view. Ito and Nakakoji (1996) provide an interesting example of convergence, showing how Japanese word processors follow a Western typewriter model. Thus, information technology can be a force for cultural homogeneity.

However, web pages are much less expensive to build than information systems and so provide a much better opportunity for cultural customization. Marcus and Gould (2000) reviewed selected web pages

from various cultures, basing their analysis on the work of Hofstede (1980, 1991) who found that culture may be differentiated via five major dimensions. These dimensions are described in Table I (adapted from Hunter and Beck, 1997). Marcus and Gould conclude that culture, as expressed by Hofstede’s dimensions, does affect the design of web pages. Thus, we can also see examples of divergence as cultures adapt new technology in different ways to suit their own needs.

Table 1: Hofstede’s cultural dimensions

Dimension	Description
Individualism Collectivism	Individualistic cultures expect their members to be independent and look after themselves. Collectivist cultures have a tightly knit framework of mutual dependencies and obligations.
Power Distance	High Power Distance cultures accept unequal distribution of power within its society. Low Power Distance cultures strive for equalization and participation.
Uncertainty Avoidance	Strong Uncertainty Avoidance cultures attempt to control uncertainty by strict rules and codes of behavior. Weak Uncertainty Avoidance cultures are not as strictly controlled and deviation is more acceptable.
Masculinity Femininity	Masculine cultures emphasize achievement, success, and assertiveness. Feminine cultures emphasize caring, close relationships, and harmony.
Long-Term Orientation Short-Term	Long-term oriented cultures promote the family, respect for older people, and virtuous behaviour such as hard work and frugality. Short-term oriented cultures develop equal relationships, emphasize the individual, and promote creativity and self-actualization.

Web Portals are Internet sites intended to be the starting point (i.e., a virtual launch-pad) to locate information and services on the Web. Yahoo, which began as a search engine in 1994, is perhaps the best-known example. Full-service portals are designed to appeal to a wide audience within a country or culture, typically offering a search engine, directories of links on a set of selected topics, news items (including weather, sports, entertainment, and stock market results), advertisements and shopping, and other services such as free e-mail services and Web pages.

Portals are well suited for this research since they exist in most cultures, are aimed at a wide and general audience, must be responsive to the culture of their intended audiences to be successful, and are unlikely to disappear. Portals are now poised to become the major link to entertainment and informational video (as the Internet and television converge), telecommunications (offering video phone calls), financial transactions, and other key services. Therefore, portals have the potential to become a major public policy issue. Of particular interest are portals in Europe and Asia that are not in English. About half of Web content is expected to be non-English by 2003, up from about 20% in 1999 (Burke, 1999).

Some limitations of using portals to reflect culture should also be noted. In some countries only a small percentage of the population has access to the Internet. They are likely to be younger, wealthier and better educated than the average citizen. Some will have gone outside their countries, often to Europe or the United States, for their educa-

tion and are thus more familiar with these cultures. Some portals may even target expatriates. Thus, until access to the Internet greatly increases, an argument can be made that portals are directed at a small segment of some cultures.

## RESEARCH METHODOLOGY

To include as many national Portals as possible, we started with search engines, posted a request to the ISWorld list requesting help and added suitable entries from Microwho (an existing directory of portals and related sites). Using WebZip (available at [www.spidersoft.com](http://www.spidersoft.com)), a complete copy of the initial page of each of the 256 sites identified was archived. We narrowed the list down by focusing on 26 countries, including those analyzed by Marcus and Gould (2000). Next, a program was written in Visual Basic to count the number of links from the html code for each Portal. For each country with more than one portal, the one with the most links was selected.

Table 2: Common portal features

Directories	Display Items/Links	Other Features
Arts	Advertising	Customizable interface
Community	Auction	Chat
Education	Games	Discussion Groups
Health	Horoscope	Download options
Media & Newspaper	Job listings	Free e-mail
Music & Entertainment	News stories	Free Home Page
Personals	Shopping	Arts
Politics	Sports News	Community
Religion	Stock quotes	Education
Science & technology	TV Listing	Health
Tourism & travel	Weather	
Women Issues		

Table II lists the common features present in most portals, including Yahoo! which will taken as a standard in our research. Almost all of the portals have layouts similar to Yahoo! (i.e., Multicolumn Directory/Subdirectory with links, occasional frames and animated objects) except in few cases where the layout is unique (e.g., go-jamaica which is apparently aimed partly at tourists).

As shown in Table III, color combinations, contents and level of details vary. Religion and politics are not profiled in all of the national Portals. Women's issues do not receive much attention, either. However, in many countries, immigration to the west is a very significant process of social mobility and this is reflected in their portals. Such countries have large expatriate communities. For example, Indian communities abroad can keep in touch with the latest gossip from the movie industry in Bombay (Bollywood) and about other celebrities. Arranged marriage is common in India and thus, as expected, matrimonial advertisements are clearly featured in their Portals. (In other cultures, the focus can be on dating rather than marriage.) Obtaining stock quotes is a common feature in many countries, while others do not have this option. The reason may be partially technical; obtaining real-time quotes may be difficult in less developed countries. Many countries have key national sports (e.g., cricket in India, soccer in Europe and Latin America etc.) highlighted. Access to erotica and sex-related entertainment varies greatly from country to country. Central and Eastern Europe are more open, while even Yahoo! has avoided this area. The Internet has emerged as a great equalizer in respect of global information access, access to global markets and gender equality (Hoffman, 1998).

## ANALYSIS OF OBSERVATIONS

Hofstede (1991) provides a table showing the respective dimension values for many countries. The following discussion, using those rankings and scores, will focus on those Internet portals that are either most similar or most disparate according to each of Hofstede's (1980) dimensions. A fifth dimension, long-term versus short-term orienta-

tion added in 1991, has not been included here because of the lack of available data for cultures reviewed in our study.

### Power Distance

Power Distance relates to a culture's willingness to accept a difference in power over other members of the culture. Thus, high Power Distance cultures (e.g., Philippines) tend to be willing to accept differences in the distribution of power across cultural members. However, low Power Distance cultures (e.g., Costa Rica) will strive for an equal distribution of power.

	Rank	Score
Philippines	4	94
Costa Rica	42/44	35

Evidence of this is found on The Philippines' portal, which provides shopping links for Filipinos working abroad. Many Filipinos work outside of The Philippines and gain economic power through salaries that are significantly higher than those paid within The Philippines. Indeed, it is not uncommon for university trained Filipinos to work as domestic helpers throughout Asia.

Costa Rica, however, is a low Power Distance culture on Hofstede's dimension, and members will strive for an equal distribution of power within the culture. Once again, evidence of this is found in the Extra Features section of the Costa Rica portal. Links are provided to information about Costa Rican culture and history. These links represent evidence of the country's willingness to equally share information about itself.

### Individualism – Collectivism

Hofstede suggests that members of Individualistic cultures will tend to be independent and will feel responsible for looking after themselves. Collectivist cultures, however, maintain closer interpersonal relations and feel a social obligation to do so. These relationships and obligations are most often manifest in extended families. Australia and Indonesia represent interesting examples from our data:

	Rank	Score
Australia	2	90
Indonesia	47/48	14

As an Individualistic culture, Australians would tend to act more independently. As evidence of this, items such as Women's Issues, Religion, and Personals are absent from the Australian portal. These items, in general, represent ways of bringing people together. Thus, Australians do not consider it necessary to provide these group oriented services on their national portal.

Indonesia is considered a Collectivist culture where members will attempt to maintain strong family ties. As noted in the Extra Features section of our data, a link is provided for Children's Stories. This represents evidence of an attempt to provide, via the portal, a family oriented activity.

### Masculine – Feminine

This dimension, Hofstede suggests, relates to the quality, rather than quantity, of life. Thus, Masculine cultures emphasize assertiveness and achievement, while Feminine cultures emphasize harmony and caring. Examples from our data include the following:

	Rank	Score
Japan	1	95
Sweden	53	5

An example from our data is discussed below.

### Uncertainty Avoidance

Hofstede suggests that cultures will vary according to the members' willingness to deal with uncertainty. Thus, strong Uncertainty

Table 3: Content diversities and variations in visual effects in the national portals

Portal Name URL No. of Links	Country/ Language	Missing Items	Extra Interesting Features	No. of Colors	Dominant Color
Ahijuna www.ahijuna.com.ar 171	Argentina/ Spanish	Women's issues, religion, TV, Auction, Free Home Page, Stock Quotes, Discussion	Economy, humor, erotic (Diosas)	9	Gold
Matilda matilda.aaa.com.au 250	Australia/ English	Email, free home page, women's issues, religion, personals, auction, stock quotes, horoscope	Economy, humor	4	Light yellow
Web Watch www.webwatch.be 90	Belgium/ French	Health, women's issues, religion, politics, free email, free home page, TV, auction, games, sports, stock quotes	Personal pages – sex sites	4	Gold
Terra www.terra.com.br 179	Brazil/ Portuguese	Arts, science, personals, music, religion, politics, free email, free home page, weather	Personal finance	6	Orange
Sympatico www1.sympatico.ca 197	Canada/ English	Arts, science, education, media, religion	Kids & teens, business, personal finance	5	White
Sina www.sina.com.cn 293	China/ Chinese Simp.	Media, religion, auction, free home page, horoscope	Business, military	4	Gold
Costa Rica www.info.co.cr 108	Costa Rica/ Spanish	Community, women's issues, personals, religion, free email, free home page, TV, weather, auction, shopping, jobs, stock quotes, discussion, downloads, horoscope, news, games, chart	Business, culture, history	5	Light blue
Egypt Search www.egyptsearch.com 96	Egypt	Women's issues, personals, free email, TV, weather, auction, stock quotes, horoscope, downloads, games, chart	Egyptian culture	3	White
Canoe www.canoe.fr 173	France/ French	Education, health, community, personals, religion, free e-mail, free home page, auction, jobs, discussion, chat downloads	Pull down menus	9	Very dark blue
Ins-Netz www.ins-netz.de 195	Germany/ German	Arts, education, media, community, women's issues, personals, religion, politics, free email, free homepage, TV, auction, jobs, horoscope	Erotica, business, hobbies, real estate	6	Dark blue
Ghana Forum www.ghanaforum .com 34	Ghana/ English	Science, media, community, women's issues, music, religion, free e-mail, free home page, TV, weather, auction, shopping, job, stock quotes, discussion groups, horoscope, news, games	Business Main page has very little – need to use subsidiary pages	5	Light brown
123India www.123india.com 219	India/ English	TV, free home page, jobs, discussion groups, downloads	Emigration, dating, matrimonial, Bollywood	5	Light yellow
Catcha www.catcha.co.id 156	Indonesia	Community, free home page, TV, auction, shopping, stock quotes, sports	Children's stories, business	5	White
Achla achla.co.il 238	Israel/ Hebrew				
Kataweb www.kataweb.it 279	Italy/ Italian	Science, women's issues, personals, religion, politics, auction, free home page, stock quotes	Business	5	White

Table 3: Continued

Isize www.isize.com 239	Japan/ Japanese	Arts, science, media, health, women's issues, personals, music, religion, politics, free email, free home page, TV, auction, discussion, games, chat	Personal finance, real estate, marriage planning	12	White
Malaysia Directory www.malaysia directory.com.my 184	Malaysia/ English	Customizability, Horoscope Download options, Top news stories, Women issues, religion,	Martial arts as sports, Koi Fish forum as hobby	9	Yellowish
El Sitio www.elsitio.com/ elsitio/mexico 100	Mexico/ Spanish	Science, Politics	Entertainment including erotic entertainment is explicitly profiled	14	Bluish Yellowish
Menara www.casenet.net.ma 134	Morocco/ French	Religion, Games, Health in general, Politics, Education, Stock quotes are absent but financial news are covered, Auction	Soccer as sports is highly profiled, although an Islamic country, Islamic reference is non-existent implying a more secular trend in Moroccan society, woman's issues are well presented	7	Grey
Zoek www.zoek.nl 191	Netherland s/ Dutch	Auction, Free Web page,	Sex related matters and links are prominently profiled. Soccer as sports is noted.	11	Deep bluish
Pinoy Central www.pinoycentral .com 121	Philippines / English	Horoscope	Extensive links for immigration, Shopping site for remittance by the Philippines working abroad	13	Blueish
Onet www.onet.pl 210	Poland		Indirect links to erotic sites and adult contents. Polish beauty pageants related displays are prominently displayed	11	Yellowish
Aport www.aport.ru 291	Russia/ Russian	Stock quotes, Free Web page, Auction	Science coverage is substantial, erotic entertainments are explicitly linked, family is focused widely, Soccer and ice- hockey as sports are profiled	10	Bluish
Genie www.arrakis.com 209	Spain/ Spanish	Politics, Jobs	Spanish cooking is well profiled, Soccer-mania is mentioned	9	Greenish
Spray www.spray.se 162	Sweden/ Swedish	Auction, Science,		9	Greenish
Mirago www.mirago.co.uk 113	UK/ English	Stock Quotes, Chat, Customizability, Free Web page, E- mail, Religion, Science, Auction		10	Yellowish

Avoidance cultures will adopt strict rules and codes of behavior in order to reduce the uncertainty encountered in daily activities. However, weak Uncertainty Avoidance cultures will adopt a less controlled approach. Examples from our data, as above, include both Japan and Sweden:

	Rank	Score
Japan	7	92
Sweden	49/50	29

Japan has been rated as Masculine and strong Uncertainty Avoidance. Thus, according to Hofstede, the Japanese culture would tend to emphasize achievement within relatively strict codes of behavior. Evidence of this is found in the Extra Features section of our data, where the Japanese portal provides links for Personal Finance, Real Estate, and Marriage Planning. The portal is suggesting a common approach to what could be considered the most important activities individuals will engage in throughout their lives.

Another perspective that can be employed to analyze the data is by topic. This results in the emergence of two topic themes relating to Sports and Erotica. Portals with Sports links include Malaysia, Netherlands, and Spain. These cultures when viewed using Hofstede's dimensions all score quite highly masculine on the Masculine – Feminine dimension. In general, sports are associated with more masculine activities. Portals containing erotica links include Argentina, Belgium, Germany, and The Netherlands, cultures that are ranked relatively high (in comparison to the other dimensions) on Hofstede's Power – Distance dimension.

## CONCLUSIONS

This document has reviewed the content of national portals in an attempt to better understand the cultural variations of portals and to comment on their design. We reviewed the contents of 26 portals and

mapped our findings unto the dimensions of cultural variability as presented by Hofstede. The detailed results have been discussed above. Both convergence and divergence forces were clearly apparent. The portals all look very much like Yahoo! and often offer remarkably similar directory headings and other links. Now that these formats have been established, it may be difficult for newer forms to emerge even if they are more culturally appropriate. But we also find evidence of divergence, where portals are customized to fit at least some cultural characteristics.

Web portals, and indeed the Internet itself, are relatively recent phenomena. By collecting data at this point and building an archive of portals, we can continually monitor developments both longitudinally within cultures as well as the convergence and divergence that work across cultures.

## REFERENCES

- Burke, B. (1999), "Whither To Portals?," NUA Analysis, March/April, Available [http://www.nua.ie/surveys/analysis/bimonthly/archives/1999/mar\\_april.html](http://www.nua.ie/surveys/analysis/bimonthly/archives/1999/mar_april.html)
- Coughlin, R.M. (2000), "Convergence Theories," in Borgatta, E.F. and Montgomery, R.J.V. (Eds), *Encyclopedia of Sociology*, 2<sup>nd</sup> ed., Macmillan, New York, 422-431.
- Del Galdo, E.M. and Nielsen, J. (1996), *International User Interfaces*, New York, Wiley.
- Ein-Dor, P., Segev, E. and Orgad, M. (1993), "The effect of national culture on IS: Implications for international information systems," *Journal of Global Information Management*, Vol-1 No 1, pp.33-44.
- Fernandes, T. (1995), *Global Interface Design*, Academic Press. Boston.
- Hoebel, E.A. (1971), "The Nature of Culture," in Shapiro, H. L. (Ed.), *Man, Culture and Society*, Oxford University Press, London, pp.208-222.
- Hoffman, K.E. (1998), "Internet as Gender-Equalizer?," *Internet World*, Nov. 9, p.32.
- Hofstede, G. (1980), *Culture's Consequences: International Differences in Work-Related Values*, Sage Publications, Beverly Hills, CA.
- Hofstede, G. (1991), *Cultures and Organizations: Software of the Mind: Intercultural Cooperation and its Importance for Survival*, McGraw-Hill, New York.
- Hofst, H. (1996), "Culture and Design," in Del Galdo, E.M. and Nielsen, J. (Eds.), *International User Interfaces*, Wiley, New York, pp.41-73.
- Hunter, M.G. and Beck, J. (1997), "A Cross-Cultural Comparison of "Excellent" Systems Analysts," *Information Systems Journal*, Vol 6 No 4, pp.261-281.
- Ito, M. and Nakakoji, K. (1996), "Impact of Culture on User Interface Design," in Del Galdo, E.M. and Nielsen, J. (Eds.), *International User Interfaces*, Wiley, New York, pp.105-126.
- Kroeber, A.L. and Kluckhohn, C. (1963), *Culture: A Critical Review of Concepts and Definitions*, Vintage Books, New York. (Originally published in 1952 as Vol. 47, No. 1 of the Papers of the Peabody Museum of American Archaeology and Ethnology)
- Marcus, A. and Gould, E.W. (2000), "Crosscurrents - Cultural Dimensions and Global User-Interface Design" *Interactions*, Vol 7 No 4, pp.32-46.
- Murdock, G.P. (1965), *Culture and Society*, University of Pittsburgh Press, Pittsburgh, PA.
- NUA (1999), "U.S. Brands Dominate the European Net," October 22, 1999. Available [http://www.nua.ie/surveys/?f=VS&art\\_id=905355360&rel=tru](http://www.nua.ie/surveys/?f=VS&art_id=905355360&rel=tru)
- Ronen, S. (1986), *Comparative and Multinational Management*, John Wiley, New York.
- Webber, R.H. (1969), "Convergence and Divergence," *Columbia Journal of World Business*, Vol 4 No 3, pp.75-83.
- Yang, K.S. (1986), "Will Societal Modernization Eventually Eliminate Cross-Cultural Psychological Differences", in Bond, M.H. (Ed.), *The Cross-Cultural Challenges to Social Psychology*, Newbury Park, Sage Publications.

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