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# Cultural Dimensions of Website Design and Content

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ABSTRACT *The proposition that the technology of the Internet and Web offers a basis for culturally-neutral, computer-mediated communication was tested through a content analysis of 100 Mainland Chinese and American websites. It was found that the tools of the Internet and Web were neither fully neutral nor fully specific to the websites' 'home' cultures. Cultural hybridisation and diffusion of innovation are suggested as alternative explanations.*

Keywords: websites, website design, website content, China, United States, Internet.

## Introduction

Ess and Sudweeks find four general assumptions in the many predictions of a future world reshaped by the Internet.[1] Among these assumptions, one offers a promising starting point for the study of the cultural contours of sites on the Web. This assumption says that the technologies of the Internet and Web—'the computer codes, interfaces, etc.—are culturally neutral [tools], ones that allow transparent communication between all cultures'.[2] It implies that the characteristics of websites produced by a communicator's use of these tools could be culturally neutral too, in the sense of not reflecting the signature traits of any specific national or sub-national culture. Culturally non-specific website design and content presumably would help make Web-based communication universally understandable. Communication would be transparent because the technologies that make cyberspace possible also homogenise the design and content characteristics of websites.

However, few studies of Web-based communication have looked at the cultural dimensions of website design and content. Most presume culturally-specific website differences. This study approaches the topic from the opposite direction: it rests on the assumption of culturally-neutral website attributes. The validity of this assumption is explored through a comparative content analysis of websites from the United States and the People's Republic of China. If the assumption holds, the sites will not reflect the cultural distinctiveness of their home countries.

**Past Studies**

Evidence from the emerging body of literature on the cultural dimensions of website design and content attributes cuts both ways on the assumption of culturally-neutral, Web-based communication. Some have found design and content similarities between different countries' websites. Some have found design but not content differences. And some have gone the other way. The picture is, in a word, inconclusive. For example, Yoon and Cropp found that 20 South Korean and 20 American national-brand product websites did not differ significantly when compared on culture-based measures of advertising content.[3] The sites' design structures—their use of graphics, animated content and hyperlinks—differed in one way only. The South Korean sites typically offered a link to digitised video of the products' television commercials, a feature that none of the American sites offered. Likewise, Oh, Cho and Leckenby found a single, substantial difference between the 50 American and 50 South Korean brand-product websites they studied.[4] The advertisement content at the American sites was more informative, a quality the researchers defined as a signature American trait. But the sites were indistinguishable by country when compared by the creative strategies and appeals of their advertisement content, and their use of selected Web technologies. '[Our] study', Oh *et al.* concluded, 'overall suggests that the Internet is a global medium through which communication with people all over the world is possible, i.e., the Internet crosses different cultures and languages'.[5]

Ju-Pak also looked at brand-product advertisements at websites from the United States and South Korea, and included Web advertisements at sites based in the United Kingdom as an added point of comparison.[6] There was one country-specific design difference between the 310 advertisements Ju-Pak sampled. Web advertisements from South Korea were likely to carry more hyperlinks than advertisements at websites in the US and UK. But the persuasive appeal of the Web advertisements and their use of certain product and sales information cues varied substantially by home culture, as represented by the advertisements' countries of origin.

Something of the reverse was found by Sackmary and Scalia, who compared the websites of 46 US and Mexican companies.[7] The sites were designed differently. The American companies made greater use of such features as website search engines, online product catalogues and Web-enabled animation. However, the sites' content was equivalently neutral to their 'home culture'. That, for Sackmary and Scalia, was evidence of an 'emerging transnational Web [communication] style'[8] that avoids culture-specific language and images. On the other side of the ledger, Halavais found that when webmasters hyperlink their sites to other websites, 'national cultures continue to exert substantial influence on how these connections are made'.[9] Halavais looked at 4,000 websites based in more than 15 countries and followed the hyperlinks that would take the sites' visitors 'off site'. The off-site destinations typically were other websites in the referring sites' home countries.

National cultures also appear to influence the perceptions of Internet users for website design and content, according to an experiment by Fink and Laupase.[10] Sixty Malaysian and Australian subjects were exposed to eight actual retail and service-industry websites operating from Malaysia or Australia, or both. Differences attributable to culture were noted for four of the websites: the Australians tended to give higher ratings to the Australia-only sites and the Malaysians tended to do the same for the Malaysia-only sites. Fink and Laupase reported that their data support

as well as contradict the conventional wisdom that Australians are culturally oriented towards explicit and Malaysians towards implicit communication.

## Research Hypotheses

Studies of the cultural shadings of website attributes have to date focused mostly on brand-product advertising, but that is a small slice of Web-based communication. They have also focused mostly on comparing the United States and South Korea, but that affords only a narrow view of the cultural dimension of website design and content characteristics. Also, the United States, United Kingdom, South Korea and Mexico, and Australia and Malaysia, arguably are more alike than different on the broad economic and political dimensions of national culture.[11] Their national economies are based on free-market capitalism and their political systems are based on representative democracy, although that is debatable in some cases. It is probable that such cultural proximities, as well as geographic proximities between Australia and Malaysia and the United States and Mexico, bring confounding variables into cross-cultural studies of website design and content. One way to overcome this probability would be to compare the design and content characteristics of websites in countries that are more distant in cultural terms. The United States and the People's Republic of China are useful choices.

Hall notes that 'for anthropologists, culture has long stood for the way of life of a people, for the sum of their learned behaviour patterns, attitudes, and material things'.[12] He goes on to define 'culture' as the particular ways that individuals living collectively, as a society, go about organising their lives, thoughts and beliefs and expectations for family, the state, economic systems, interpersonal relationships and so on. Based on these definitions, China and America are culturally distant. They sit at opposing poles on the political spectrum. China is the world's largest communist country; it also is one of the few remaining communist countries: the United States is the world's leading democracy. China's efforts to open itself to world capitalism make it the world's largest developing economy. America, the bastion of free-market capitalism, is the world's largest developed economy: China's dominant national culture is seen as representing Eastern-Asian values, which are often contrasted starkly with Western-American social norms.[13]

At the governmental level, the two countries have different philosophical approaches to Web-based communication. Ostensibly, it is tightly controlled in China, but is largely free of governmental interference in the United States.[14] Moreover, the Internet is just now taking root in China, although it is growing rapidly despite barriers to its diffusion.[15] In contrast, the Internet was pioneered in the United States, and both it and the Web were popularised and commercialised there as well.[16] Nearly 60% of the American population but only about 3% of China's population are online, sending, receiving, uploading and downloading messages and information through the Internet and Web.[17] One-third of the world's estimated 147 million websites are based in the United States, but China is responsible for less than 1% of them.[18]

However, the assumption of culturally-neutral, Web-based communication would effectively erase these differences in American and Chinese national culture and Internet diffusion. Presumably, the design and content characteristics of websites based in America and China should be much the same. The assumption, with some support from past studies of the cultural contours of website design and content, suggests the following hypotheses:

- H1: There will be little to no cross-cultural difference in the design character-
  istics of American and Chinese websites.
- H2: The content characteristics of American and Chinese websites will not differ
  substantially by 'home culture'.

## Methodology

Data were collected from US-based and China-based websites judged to be the most
popular Web destinations in 2000 for Internet users in the two countries. The
Chinese sites were selected from a list that the China Internet Network Information
Center (CNNIC) produced from its survey of 245,680 Internet users in Mainland
China.[19] The US sites were selected from the 100Hot list produced from a survey
of 100,000 Internet users in the United States.[20] Both lists were culled of 'foreign'
websites, those that are not based exclusively in America or China. For example,
Yahoo.com and Download.com were listed by CNNIC as popular Web destinations
for Chinese Internet users. Both sites were excluded from analysis because neither
site is 'home ported' in China. This effort yielded a final sample of 100 websites: 50
Chinese and 50 American. With the exception of Microsoft in the United States,
the top 10 sites in each country were Internet companies. The rest of the top sites
included a strong presence of Internet, entertainment and technology
companies.

The unit of analysis was the homepage, defined as the first page or computer
screen of information that a viewer sees when accessing a website. Some sites open
with fairly sparse introductory pages that offer to hyperlink visitors 'inside' to
second, or main, information pages. In these cases, the second page was treated as
the site's homepage. Basic website content and design attributes were selected for
analysis, considering the exploratory nature of this study. They were also selected
for their fit with generalised differences between the dominant national cultures of
the United States and China. Giving a cultural dimension to the variables arguably
allows for a more convincing test of the assumption of culturally-neutral, Web-based
communication. In other words, to determine the absence of something, one first
must look for its presence.

### Content Measures

Three measures of website content characteristics were identified based on the
'individualism/collectivism' and 'time orientation' categories of Hofstede's typol-
ogy of national-culture traits.[21] One measure was labelled 'personalisation', this
being the presence or absence of homepage content that contained such
personalising words as 'I', 'my', 'you' and 'your'. The other two measures were
labelled 'organisational history' and 'organisational achievements'. A website could
be said to reflect a past-time orientation if it tells visitors about the history and
achievements of its organisational sponsor.

In general, collectivist cultures emphasise the needs, values and goals of the
group or collective and the reverse distinguishes individualistic cultures.[22] While
neither trait is exclusive to the United States or Mainland China, individualism
commonly is taken to be a defining characteristic of America's dominant national
culture and collectivism is typically seen as a signature trait of China's national
culture.[23] Also, Chinese culture commonly is taken to emphasise 'tradition, history,
[and] past accomplishments',[24] or a past-time orientation. American culture is

commonly taken to be future-oriented; it generally emphasises what could or will happen instead of what has already happened.[25]

*Design Measures*

Four of the six measures of the websites' design structure could be related to a presumed cultural predisposition for or against 'informativeness'. In their study of Web advertising, Oh *et al.* defined 'informativeness' as the quantity of information that a sender chooses to communicate to a receiver. They attached a cultural dimension to this through Hall's conception of high-context and low-context communication cultures.[26] Broadly, Americans are typically considered to be low-context communicators and Chinese high-context communicators.[27] Low-context communication is direct and explicit. Information and meaning are conveyed principally in the message. High-context communication is indirect and ambiguous. Information and meaning are conveyed principally in the context of the communication. Low-context communicators are presumably more likely to show a heightened sense of 'informativeness', the idea being that more messages—hence, a large quantity of information—makes for better communication.

Adapting information theory to the study of website design offers another way to measure 'informativeness'. This theory 'involves the quantitative study of signals sent from senders to receivers'.[28] On the Web, those signals are represented by the volume of information, measured in kilobytes, that is sent from a Web page to a visitor's Web browser. Moreover, website search engines, help functions and site maps provide visitors with venues for retrieving more information than any given Web page holds. They are tools for 'informativeness'. As such, their presence is more likely at websites produced from low-context communication cultures.

Low- and high-context communication can also be linked to the last two design-structure measures—animated content and floating banners, which are advertisements that literally float across the Web page in an attempt to attract the viewer's attention. Animated content and floating banners can be connected to low- and high-context communication through the concepts of monochronism and polychronism. In general, people who focus their time one task at a time are said to be monochronic, and people who focus on many tasks simultaneously are said to be polychronic.[29] Monochronics in a broad sense place importance on keeping to schedules, on not wasting time; polychronics typically do not show such an acute sense of the passage of time. Low-context cultures tend to be monochronic and high-context cultures tend towards the polychronic.[30] Floating banners and content that scrolls, changes colour, expands, contracts, winks or bounces would seem to confront website visitors with many cognitive tasks to process simultaneously. Polychronics could be attracted to this kind of augmented content, but monochronics could find it disorienting. As such, it is likely that animated content and floating banners would be more prevalent at websites originating in polychronic cultures.

*Coders*

Two of the authors, both bilingual, postgraduate marketing students and citizens of Mainland China, applied the study's coding protocols to the websites. They worked on the same days and started at about the same time of day. They accessed the sites through the Internet Explorer 4.0 Web browser and the same university Internet

connection. Each site was coded once on 10 May 2001. Krippendorff's alpha coefficient for dichotomous data was used to gauge intercoder agreement beyond chance.[31] The two coders coded 10% of the websites—five American and five Chinese—as a final check on their reliability. They were in perfect agreement on the organisational achievement content variable, and on all five design-structure variables. They agreed in 79% of their coding judgements for the personalisation content variable. Agreement dipped to 75% on the organisational history content variable. The widely accepted minimum for intercoder agreement is 80%,[32] although a somewhat lower threshold can be permitted for exploratory studies.[33]

## Results

Choice of language was one immediately apparent difference between the websites. The Chinese sites displayed their content using the Chinese ideogram character alphabet. Content at the American sites was in English. However, Sackmary and Scalia discount language as a noteworthy cultural difference between websites.[34] They note that even though Spanish was the language of choice for content at the Mexican sites they studied, most also provided English translations that were identical in intent and meaning. Cross-culturally, the American and Chinese websites differed to statistically significant degrees on three of the six design-structure measures and on all three of the content measures. These findings generally match those of Ju-Pak, who reported that US and South Korean Web advertisements tended to be similar in design, but vastly different in terms of content attributes.[35]

In this study, site search engines, site-map schematics and 'help' functions were present to equivalent degrees at the Chinese and American websites. However, the data show that these relatively simple Web tools were not widely provided. Most of the 50 Chinese and 50 American sites were equipped with a search engine, as Table 1 reports. Slightly over half in each country offered their visitors some sort of help in navigating or otherwise using the sites. Somewhat more than one-third offered a site map. Animated content and floating banners arguably represent more distracting or intriguing website design features. Their presence or absence separated the Chinese and American sites to statistically important degrees. Animated content was present at all 50 Chinese sites, but at fewer than half of the American sites ($\text{chi}^2 = 36.986$, df 1; $p < 0.0001$). Floating banners were observed at Chinese sites only ($\text{chi}^2 = 20.482$, df 1; $p < 0.0001$).

The file size of the websites' home pages was measured by the AtWeb evaluation software.[36] This effort found that the Chinese sites carried the larger home-page file size. Home pages at the American sites averaged 92 kilobytes in size, compared with 152 kilobytes for the Chinese website home pages. A one-way ANOVA showed this to be a statistically significant difference between the sites ($F[1,58] = 4.476$, $p < 0.039$). Support for H1 is mixed. The hypothesis predicted few to no design differences between the Chinese and American websites, and that was the case in terms of website search engines, site maps and help functions. But the websites also were convincingly distinct on the culture-based measures of animated content, floating banners and home-page file size. It is, in other words, a glass half full vs. a glass half empty proposition.

The data were more definitive for the second hypotheses. H2 predicted that content characteristics would not differ substantially across the two sets of

**Table 1.** Design-structure attributes present at websites (%)

| | US websites $N = 50$ | Chinese websites $N = 50$ | Chi$^2$ significance |
|---|---|---|---|
| Search engine | 68.0 | 82.0 | nsd |
| Site map | 32.0 | 36.0 | nsd |
| Help function | 52.0 | 58.0 | nsd |
| Animated content | 46.0 | 100.0 | $p < 0.0001$ |
| Floating banner | 0 | 34.0 | $p < 0.0001$ |

websites. This was not the case, as Table 2 shows. The culturally-neutral tools of the Web did not yield culturally-neutral content as it was assumed they would, at least judging by the content measures this study used. 'Personalisation' was a significantly more prevalent characteristic of American website content than of Chinese website content (chi$^2$ = 19.385, df 1; $p < 0.0001$). This finding is compatible with presumed national culture differences: broadly, American culture emphasises individualism and that translates as personalisation in communication. American culture is also less past-oriented, which could explain why the Chinese websites were more likely to provide organisational history content (chi$^2$ = 19.841, df 1; $p < 0.001$). None of the American sites offered 'organisational achievements' content (chi$^2$ = 8.696, df 1; $p = 0.003$). Only Chinese sites provided this sort of past-oriented content.

## Conclusions

The tools of the Web can be considered culturally neutral in and of themselves, but the communicators who wield them are not. Communication—whether it is mass mediated, interpersonal or nonverbal—is inseparable from culture: each shapes and is shaped by the other.[37] This implies that the Web's tools lose their cultural neutrality through the culture-bound 'who', 'how' and 'why' of their use. However, the findings of this study suggest, in an admittedly limited way, that Web-based communication is neither fully neutral nor specific to culture. Differences in design and content characteristics were found at the Chinese and American websites, although they were more pronounced for content. On the one hand, these differences in cyberspace could be plausibly explained by dissimilarities between the national cultures of the sites' home countries. The sites design similarities, on the other hand, could be seen as offering some support to the assumption of culturally non-specific Web-based communication.

**Table 2.** Content attributes present (%)

| | US websites $N = 50$ | Chinese websites $N = 50$ | Chi$^2$ significance |
|---|---|---|---|
| Personalisation | 86.0 | 44.0 | $p < 0.0001$ |
| Organisational history | 8.0 | 48.0 | $p < 0.0001$ |
| Organisational achievements | 0 | 16.0 | $p = 0.003$ |

An alternative explanation could be found in the literature on cultural hybridisation and glocalisation. Hybridisation is the result of local communities adapting to the forces of globalisation.[38] Similarly, glocalisation is defined as 'a global outlook adapted to local conditions'.[39] Both presume that local communities essentially co-opt the foreign values, the culturally alien ways of doing things, that globalisation brings to their doorsteps. Rather than resist or surrender to globalisation, local communities incorporate imported cultural values into their own way of doing things. They make them their own. Differences between the American and Chinese websites could be interpreted in terms of the concepts of hybridisation and glocalisation. In this light, they arise from local adaptations to the forces of globalised communication. Thus, the tools of the Web are used in culturally specific ways within the domestic cultures in which websites are created. Web-based communication is not neutral to culture, nor is it likely to be a progenitor of a cyber lingua franca, as Sackmary and Scalia argue.[40]

This exploratory study is limited in that it tested only a handful of culture-based variables on just the home page and looked at a relatively small sample of websites in two countries. Future research should consider using a fuller array of design and content variables, as well as a larger sample of sites spread over a larger number of countries and cultures. Moreover, the larger home-page file size of the Mainland Chinese websites seems at odds with the country's under-developed Internet infrastructure. Chinese Internet users typically use relatively low-speed modems,[41] and slow access speed—a modem and phone line issue—is a source of dissatisfaction among Chinese Internet users.[42] Large files would tend to exacerbate these difficulties by funneling many kilobytes into narrow pipes. Why this contradiction exists is an area worthy of future research and one that could be fruitfully guided by theories on the diffusion of innovation.[43]

Future research could also explore cultural differences in the number of banner advertisements, the information they convey and the forms in which they convey it. One example would be to test for cultural differences in high- and low-context communication features embedded into the banner advertisements, and the advertisements' use of visual imagery and colour. Web design companies and individuals—the people who design and maintain websites—would also make a useful subject for future research on the influence of domestic culture on website design and content characteristics. Such work could profit by using Feenberg's concept of technical codes,[44] which are defined as the 'assumptions or social and cultural [and economic] values that become manifest in technological design'.[45] A study of those designing the website could more precisely illuminate the forces—cultural or other—that are at play in the factors that determine the design and content of websites.

## Notes and References

1.  C. Ess and F. Sudweeks, 'Computer-mediated communication or culturally-mediated computing? Challenging assumptions of the electronic global village', *Electronic Journal of Communication/Revue Electronique de Communication*, 8, 1998, <http://www.cios.org/www/ejcmain.htm>.
2.  *Ibid.*
3.  D. Yoon and F. Cropp, 'Cultural differences in Internet advertising: a content analysis of Internet advertising between the United States and Korea', in M. S. Roberts (ed.), *Proceedings of the 1999 Conference of the American Academy of Advertising*, 1999, pp. 89–96.

4.   K.-W. Oh, C.-H. Cho and J. D. Leckenby, 'A comparative analysis of Korean and U.S. Web advertising', in M. S. Roberts (ed.), *Proceedings of the 1999 Conference of the American Academy of Advertising*, 1999, pp. 73–86.

5.   *Ibid.*, p. 77.

6.   K.-H. Ju-Pak, 'Content dimensions of Web advertising: a cross-national comparison', *International Journal of Advertising*, 18, 1999, pp. 207–31.

7.   B. Sackmary and L. M. Scalia, 'Cultural patterns of World Wide Web business sites: a comparison of Mexican and U.S. companies', paper presented to the *Seventh Cross-Cultural Consumer and Business Studies Research Conference*, Cancun, Mexico, 1999, < http://marketing.byu.edu/htmlpages/ccrs/proceedings99/sackmary.htm >.

8.   *Ibid.*

9.   A. Halavais, 'National borders on the World Wide Web', *New Media & Society*, 2, 2000, p. 22.

10.  D. Fink and R. Laupase, 'Perceptions of Web site design characteristics: a Malaysian/Australian comparison', *Internet Research: Electronic Networking Applications and Policy*, 10, 2000, pp. 44–55.

11.  We do not mean to argue that there are few or even no differences between the countries in terms of their dominant national cultures and sub-national minority cultures. Clearly differences exist. However, studies of the cultural dimensions of websites to date have not selected countries for comparison that are hugely different in their cultures.

12.  E. T. Hall, *The Silent Language*, Doubleday, New York, 1959, p. 20.

13.  G. Hofstede, *Culture's Consequences: International Differences in Work-related Values*, Sage, Beverley Hills, CA, 1980.

14.  See X. Hao, Z. Kewen and Y. Huang, 'The Internet and information control: the case of China', *Electronic Journal of Communication/Revue Electronique de Communication*, 6, 1996, < http://www.cios.org/www/ejcmain.htm >; W. Hanson, *Internet Marketing*, South Western College Publishing, Cincinnati, OH, 2000, Chapters 1 and 3; K. Hafner, 'The Internet's invisible hand', *New York Times*, 10 January 2002, < http://www.nytimes.com/2002/01/10/technology/circuits/10NETT.html >.

15.  J. Tong, E. Schmitt and H. Manning, 'China's Internet economy: ready, set, wait', *Forrester Research*, 2000, < http://www.forrester.com/ER/Research/Brief/0,1317,9658,FF.html >; X. Du, 'Internet diffusion and usage in China', *Prometheus*, 17, 1999, pp. 405–20; 'Semiannual Survey Report on the Development of China's Internet', China Internet Network Information Center, July 2002, < http://www.cnnic.net.cn/develst/repindex-e.shtml >.

16.  See Hanson, *op. cit.*; K. Hafner and M. Lyon, *Where Wizards Stay up Late. The Origins of the Internet*, Simon and Schuster, New York, 1996; 'A brief history of the Internet', Internet Society, < http://www.isoc.org/internet/history/brief.html >; 'A little history of the World Wide Web', World Wide Web Consortium, pp. http://www.w3.org/History.html. It should be noted that while the Internet was developed in the United States, the Web was pioneered in Europe, principally by Tim Berners-Lee. In 'Press FAQ', World Wide Web Consortium, < http://www.w3.org/People/Berners-Lee/FAQ.html >, Berners-Lee defines the Web as a virtual space for information made possible by the technologies that make the Internet a network of computer networks.

17.  These are January 2002 estimates, the most recent available. 'How many online', NUA, < www.nua.com/surveys/how_many_online/index.html >.

18.  'Distribution by top-level domain name by name: Jan 2002', Internet Software Consortium, < http://www.isc.org/ds/WWW–200201/dist-byname.html >.

19.  < www.cnnic.net.cn/develst/topten2000–7.shtml >.

20.  < www.100hot.com/directory/100hot >.

21.  Hofstede, *op. cit.*; G. Hofstede, *Culture and Organizations: Software of the Mind*, McGraw-Hill, London, 1991; G. Hofstede and M. H. Bond, 'The Confucius connection: from cultural roots to economic growth', *Organizational Dynamics*, 16, 1988, pp. 5–21.

22.  H. C. Triandis, *Individualism and Collectivism*, Westview, Boulder, CO, 1995; R. W. Belk and W. J. Bryce, 'Materialism and individualism in US and Japanese print and television advertising',

*Advances in Consumer Research*, 13, 1986, pp. 568–72; B. Mueller, 'Reflections of culture: an analysis of Japanese and American advertising appeals', *Journal of Advertising Research*, 27, 1987, pp. 51–9.

23. Triandis, *op. cit.*
24. B. Cho, U. Kwon, J. W. Gentry, S. Jun and F. Kropp, 'Cultural values reflected in theme and execution: a comparative study of US and Korean TV commercials', *Journal of Advertising*, 28, 1999, pp. 59–73.
25. *Ibid.*
26. E. T. Hall, *Beyond Culture*, Doubleday, New York, 1976.
27. E. T. Hall, 'Context and meaning', in L. A. Samovar and R. E. Porter (eds), *Intercultural Communication: A Reader*, Wadsworth, Belmont, CA, 1991, pp. 46–55.
28. S. W. Littlejohn, *Theories of Human Communication*, 5th edition, Wadsworth, Belmont, CA, 1996, p. 52.
29. Hall, *Beyond Culture, op. cit.*; E. T. Hall and M. R. Hall, *Understanding Cultural Differences*, Intercultural Press, Yarmouth, Maine, 1990; H. Fock, 'Cultural influences on marketing communication on the World Wide Web', paper presented to the *Multicultural Marketing Conference*, Academy of Marketing Science, Hong Kong, 2000.
30. Hall, 'Context and meaning', *op. cit.*
31. K. Krippendorff, *Content Analysis: An Introduction to Its Methodology*, Sage, Beverley Hills, CA, 1980.
32. D. Riffe, S. Lacy and F. G. Fico, *Analyzing Media Messages: Using Quantitative Content Analysis in Research*, Lawrence Erlbaum, Mahway, NJ, 1998, pp. 127–33.
33. *Ibid*, p. 131; L. Rourke, T. Anderson, D. R. Garrison and W. Archer, 'Methodological issues in the content analysis of computer conference transcripts', *International Journal of Artificial Intelligence in Education*, 12, 2001, pp. 8–22.
34. Sackmary and Scalia, *op. cit.*
35. Ju-Pak, *op. cit.*
36. Twenty-five Chinese and 35 American websites were successfully analysed by AtWeb, a Web-based utility that automatically evaluates website design. See 'Our history', *Netscape*, < http://dashboard.netscape.com/O = wsg/history.html >.
37. See Hall, *Silent Language, op. cit.*; M. Danesi and P. Perron, *Analyzing Cultures: An Introduction & Handbook*, Indiana University Press, Bloomington and Indianapolis, 1999; A. L. Kroeber and C. Kluckholn, *Culture: A Critical Review of Concepts and Definitions*, Vintage, New York, 1963.
38. See M. M. Kraidy, 'Hybridity in cultural globalization', *Communication Theory*, 12, 2002, pp. 316–39; M. M. Kraidy, 'The global, the local, and the hybrid: a native ethnography of glocalization', *Critical Studies in Mass Communication*, 16, 1999, pp. 456–76.
39. R. Robertson, 'Mapping the global condition: globalization as the central concept', in M. Featherstone (ed.), *Global Culture: Nationalism, Globalization and Modernity*, Sage, Newbury Park, CA, 1994, p. 36.
40. Sackmary and Scalia, *op. cit.*
41. S. J. Anderson, 'China's widening web', *China Business Review*, 27, March–April 2000, < http://www.chinabusinessreview.com/0003/anderson.html >.
42. China Internet Network Information Center, *op. cit.*
43. E. M. Rogers, *Diffusion of Innovations*, 4th edition, Free Press, NY, 1995.
44. A. Feenberg, *Alternative Modernity: The Technical Turn in Philosophy and Social Theory*, University of California Press, Berkeley, 1995; A. Feenberg, 'Subversive rationalization: technology, power, and democracy', in A. Feenberg and A. Hannay (eds), *Technology and the Politics of Knowledge*, Indiana University Press, Bloomington, pp. 3–22.
45. A. J. Flanagin, W. J. M. Farinola and M. J. Metzger, 'The technical code of the Internet/World Wide Web', *Critical Studies in Media Communication*, 17, 2000, pp. 409–28.