Cross-cultural Differences in Online Self-Presentation: A Content Analysis of Personal Korean and US Home pages

The purpose of this study was to explore the cross-cultural differences in online presentation, by applying the concept of the independent and interdependent self-construal to the online context. Therefore, this study analyzed 98 Korean and US individual home pages to examine how cultural differences are displayed online, especially as they relate to manifestations of collectivism and individualism. The results of the study indicated that personal homepages can serve as a forum for the expression of cultural identity. Most notably, while the US virtual actors presented themselves in a direct and personal manner, the Korean virtual actors structured the online self by providing interlinks to special interests. Virtual actors in the US were more likely to present themselves with still pictures, while those in Korea were more likely to use manipulated graphics. These differences in online presentation were consistent with the individualistic and collectivistic orientations of these cultures.

Personal home pages have emerged in the past few years to offer yet another possibility for online self presentation. Web authoring is now a standard feature offered and supported by most Internet service providers and web portal sites. Many such providers, like AOL, Yahoo!, or MSN, create communities of web authors to attract additional subscribers and advertisers (Papacharissi, 2002). Yahoo!! Geocities provides web publishing services to five and a half million subscribers, or homesteaders (Wired, 2000). Fascination with online publishing as an avenue for self presentation is not contained solely within the US, much like other types of Internet uses. In Korea, the number of Internet users exceeds 21 millions and
10.7 per cent of them have their own homepages (Lee & Kim, 2001). The number has accelerated because major domestic portal sites, such as Netian Homebuilder, Lycos Korea Triford, and Yahoo!! Geocities Korea, provide web hosting services free of charge, which usually means in exchange for e-mail and other personal information (Chae, 2000). This study traces cross-cultural differences in online self presentation through US and Korean personal home pages.

A few studies have examined home pages as a medium for self-expression and have shown that individuals use online code to present themselves or manipulate aspects of their personal identity (Cheung, 2000; Dominick, 1999; Miller & Mather, 1998; Papacharissi, 2002; Stern, 1999; Walker, 2000). These studies have revealed that individuals adopt online self presentation strategies which emulate face-to-face interaction. Online features, like hyperlinks and animations are utilized to convey personal information that is communicated verbally and non-verbally in face-to-face interaction. Even though cultural conventions influence our daily face-to-face exchanges, there has been no discussion of how they translate to online self-presentation through personal home pages. Social psychologists have examined how individual perceptions differ across cultures (Triandis, 1989; Marsella, DeVos, & Hsu, 1985; Shweder & Bourne, 1984) and documented the influence of culture on self-image. Interpersonal communication scholars have compared communicative behaviours across cultural boundaries and found that cultural norms influence individual behaviour (Kim et al., 1996; Kim, 2000; Singelis, 1994). This study presents an exploratory look into how cultural background influences the use of personal home pages for online expression, resting on the interface of new media research and intercultural communication.

Culture and self-presentation

Culture is one of the major influences on self presentation and image (Shweder & Bourne, 1984; Triandis, 1989). Scholars often find it useful to use the contrast between independence and interdependence to understand how cross-cultural differences shape self-images. This dichotomous classification emphasizes the connectedness and collectiveness of relational groups found in non-Western cultures and the individualism and separatedness characterizing Western cultures. Hofstede (1980) argued that individualism in Western nations reflects a tendency to respect individual entities, rather than group entities,
while collectivism in non-Western nations reveals a tendency toward a group which each individual actor belongs to. The survival of societies in individualistic cultures depends to a large degree on the efficiency of individuals, whereas collectivist cultures rely more on the effective functioning of in-groups [Matsumoto, 1991]. Another important dimension of cultural variability, which is conceptually orthogonal to Individualism/Collectivism, is Power Distance (PD). This dimension captures the degree to which societies emphasize status, hierarchy and power differences among their members (Hofstede, 1980). Kim (2000), in synthesizing relevant research, argued that collectivism emphasizes the needs and goals of the in-group over those of the self, encourages cooperation among in-group members and fosters strong emotional affinity with the in-group. On the other hand, individualism is associated with greater self-reliance, low concern for in-groups and greater distance from in-groups [Kim, 2000].

Matsumoto (1991), traced the influence of individualism/collectivism on the expression of emotion, and argued that collectivist societies encourage the expression of emotion that facilitates group cohesion and cooperation, while individualist cultures emphasize the opposite. Similarly, high PD cultures encourage emotions that support status differences and low PD cultures support emotions that minimize them. Rhee et al. (1995) sought to link such cultural differences to self-description, and found that Euro-Americans presented their identity in a more autonomous and abstract manner, while Koreans presented a more social and specific self-description.

While these bipolarized concepts are helpful in capturing a snapshot of cross-cultural differences, they display weaknesses in explaining minor social phenomena, cultural transitions, and individual actor behaviour (Gudykunst et al., 1996; Kim et al., 1996; Singelis & Brown, 1995). In response to this criticism, the concept of the self construal attempts to link culture to individual behaviour and provide a more accurate way of examining cultural differences. The self-construal is a constellation of thoughts, feelings, and actions, concerning one’s relationship with others, and the self as distinct from others [Singelis, 1994]. Because this study focuses on the self, rather than collective identities, the concept of the self-construal should be useful in understanding online self-presentation across cultures.

Markus and Kitayama (1991) distinguish between two types of self-construal, independent and interdependent, thus seeking to reflect differences between more individual Western and more collectivist non-Western cultures respectively. The independent self-construal is
used to refer to an individual actor who construes him/herself as a unique, bounded entity "by reference to one’s own internal repertoire of thoughts, feelings, and action, rather than by reference to the thoughts, feelings, and actions of others" [Markus and Kitayama, 1991: 226]. The interdependent self-construal is assigned to an individual actor who construes him/herself as an interrelated and connected entity, and recognizes that his/her behaviour is "determined, contingent on, and, to a large extent organized by what the actor perceives to be the thoughts, feelings, and actions of others in the relationship" [Markus and Kitayama, 1991: 227].

Markus and Kitayama (1991) argued that the content and structure of the generalized other may differ by cultures. To this purpose, Singelis (1994) built on previous research to produce a survey measuring the self-construal concept, and found independent self-construals to be more prevalent in individualist cultures and interdependent self-construals more dominant in collectivist cultures. Singelis (1994), however, emphasized that it is possible for these two images of self to coexist in individuals, rendering the concept of the self-construal a more valid method of studying cultural differences. More recently, Kim et al. [2001] examined the effect of culture and self-construals on predisposition toward verbal communication and found that individualism was positively linked to independent self-construals and argumentativeness, and negatively to interdependent self-construals and communication apprehension. Interdependent self-construals were negatively linked to individualism and argumentativeness, but were not significantly linked to communication apprehension.

While literature on self-construals helps us understand the influence of culture on self-image, Hall's (1981) discussion of low- and high-context communication can help us link such cultural differences to communication and, specifically, identity expression. Low-context communication involves the use of explicit and direct messages, in which meanings are contained mainly in the transmitted messages, while high-context communication involves greater use of implicit and indirect messages in which messages are embedded in the person or the sociocultural context [Hall, 1981]. Research has shown that low-context communication is used predominantly in individualistic cultures and high-context in collectivist societies [Gudykunst et al., 1996]. Even though it is possible for an individual to use both high and low-context communication, Hall [1981] argued that one always dominates the other. Gudykunst et al. [1996] found that independent
self construals were negatively linked to use of indirect messages and positively linked to preciseness, openness and expression of feelings to define and structure the self. In contrast, the interdependent self-construal was positively linked to greater sensitivity toward others’ feelings, and negatively linked to positive attitudes toward silence. The authors confirmed that independent self-construals are related to low-context communication and interdependent self-construals are related to high-context communication across cultures.

This overview of relevant research reveals numerous ways in which intercultural theory can be applied to understand cross-cultural differences of personal home pages. The differences noted between individualist and collectivist cultures and corresponding self-construals suggest ways in which self-presentation differs across cultures. Based on cultural orientation, individuals show varying preference for direct/indirect communication, display certain communicative traits like apprehension and argumentativeness, engage in expression of personal information and feelings, and refer to themselves as independent entities or parts of a social group. The following section then, focuses on how these results can be applied to the study of personal home pages as medium for self presentation.

Self presentation, personal home pages and cross-cultural differences

Personal home pages can be understood as ‘real estate’ upon which virtual actors weave their stories online (Turkle, 1997). Web authors create and maintain personal home pages to present themselves online, to communicate with online and off-line friends and family, and to provide information and entertainment for the self and others (Papacharissi, 2002; Stempell, Hargrove, & Bernt, 2000; Walker, 2000). The relative anonymity of online interaction allows web authors to express or manipulate their identities more freely, often escaping traditional boundaries of social status and prejudice. For example, Stern (1999) found that female web authors use their home pages to present personal stories that may have seemed improper or risqué off-line. She argued that a homepage presented a safe virtual zone, from which virtual actors could express themselves more freely. Papacharissi (2002) added that personal home pages served as a functional alternative to face-to-face communication, used by web authors when other communication channels were not available, did not seem appropriate, or were not regarded as effective.
Personal home pages provide the opportunity to study audiences as producers, rather than as consumers of media content (Dominick, 1999; Papacharissi, 2002). Because they provide an individual forum for expression, home pages allow one-to-many communication from a single point in time with customized presentation (Esrock & Leichty, 1999). Personal home pages or websites usually include an index page, which contains a list of all contents or pages in a nonlinear order, a photo album, profiles, and hyperlinks to online and off-line friends, groups, special interests, and organizations. As producers of media content, web authors embark on virtual storytelling by employing elements of online design in various ways. Some authors select a combination of text and images to tell a story about themselves online, using short autobiographies, resumes, diaries, photos with family and friends, and other direct descriptions of the author’s personality. Several authors choose to produce online diaries, others use their pages to feature their favourite interests or hobbies, while many adopt a professional orientation. This study seeks to link such differences to cultural identity, and to understand how ethnic background influences such choices.

Based on the strategy of self-presentation web authors employ, researchers have found it helpful to identify categories of personal home pages. For example, Cheung (2000) identified the following categories of personal home pages: diary, journal, author’s personality, social, political, cultural issues, and places of living and working. Papacharissi (2002) classified individual home pages in the following categories: interests, family, personal, profession, combination, fan page, personal view, creative expression, support, diary, and other. Since different cultural members operate on different communication preferences, purposes, and contexts (Hall, 1981), it is possible that cultural orientation or identity could influence what type of personal homepage web authors decide to create. The independent self construal could be better expressed through more direct, low-context communication, like that found in a personal view or diary homepage. Conversely, the interdependent construal could be reflected through more indirect or high-context communication, perhaps pursued through a fan or interests page. Therefore, the first research question asks:

RQ1: Are there differences in personal homepage content categories across cultures?

Web authors also differ in terms of how much personal information they choose to disclose about themselves (Papacharissi,
2002). Some decide to take advantage of a more anonymous self-presentation online, making few, if any, references to their off-line personae. On the other hand, many authors use the web page to proudly display their off-line persona on a virtual forum, frequently including specific personal information about gender, age, family, geographic locale and other indicators. Tendency to reveal more personal information as a way of structuring the self has been linked to an independent self (Gudykunst et al., 1996). It is possible that the decision to share or withhold such personal information could be influenced by one's cultural orientation, which leads to the following research question:

RQ2: Are there any differences in revealing personal information on personal home pages across cultures?

Web authors also present themselves in a less direct manner, by using hyperlinks, animations, or associating themselves with certain online groups in order to introduce their relational spheres to an online public (Cheung, 2000). Hyperlinks present a fascinating tool for self presentation online, and are used regularly to convey personal likes and dislikes, interests, and the overall orientation of the individual online (Dominick, 1999; Papacharissi, 2002; Walker, 2000). Whereas non-verbal elements of communication, like tone, dress, and gesture reveal aspects of personal ideology off-line, hyperlinks (and animations, to a less-popular extent) are used to signify a person’s ideological makeup online. Moreover, hyperlinks present an indirect expression of social status, used regularly to supplement self-presentation online (Castells, 1996; Turkle, 1997). Similarly, hyperlinks could be used to clarify one’s ethnic identity, by pointing to institutions or interests that represent that particular culture.

We distinguished among intralinks, or links that point to other sections of the personal page or site, and interlinks, hyperlinks that connect other web pages. While intralinks are more introspective and used to describe the self in greater detail, interlinks are mostly used to present social status indirectly, by linking the individual to other web authors, groups or organizations. Intralinks could perhaps be more indicative of low-context communication, because they facilitate additional direct description of the self. Interlinks, on the other hand, present an indirect way of stating social status and links to groups, and could be understood as emblematic of high-context communication. Of course, there are a variety of reasons why web authors create intra and interlinks, including experience, expertise,
interests or occupation. We do find there is a distinction, however, between an author who employs a variety of intralinks, thus creating a multi-layered, multi-page web site, and an author who creates a single page web site with several links to other organizations, groups or sites. These two tendencies do reflect two different modes of self presentation, and could even be combined by some authors who use both interlinks and intralinks extensively or not at all. Even though additional research is necessary to further support this distinction, we explore how two cultures differ in their use of inter and intralinks. Independent and interdependent self-construals could be articulated differently, through the use of inter and intralinks. Therefore, the third research question is:

RQ3: How does the use of intralinks and interlinks on personal home pages differ across cultures?

In addition to hyperlinks, web authors enhance self presentation through a variety of audio-visual technologies. Visual and audio materials often accentuate self-presentation online (Walther, Slovacek, & Tidwell, 2001). Such elements are used to not only provide a glimpse into the author’s psyche, but also to perhaps show off technical competence to potential viewers (Turkle, 1997). While the Internet remains a two-dimensional and textual medium, audio-visual representations emerge as an alternative tool to increase media richness (Walther et al., 2001). To this point, in his study of online community, Rheingold (2000) discussed kansei, a paralanguage that makes conversation rich in its situational contexts, such as gesture, tone of voice, accent, and so on (pp. 202–203). He argued that kansei is an important variable to understand off-line communication as well as online communication in Japan. Those paratextual symbols online are required in lieu of off-line kansei, in non-Western cultures. Such symbolic elements, combined with the style of writing, are used to associate a particular tone or feeling with the page, and make up for the lack of non-verbal elements in online communication. The need to use such elements conveys differences in communicative traits, which could vary across cultural contexts. Therefore, the final research question is:

RQ4: What differences exist to present the virtual actors online in the US and in Korea, considering their cultural communication traits?
Methodology

Sample and procedures

A content analysis of 98 US and Korean home pages was undertaken to investigate the research questions. We focused on two cultures representative of individualist and collectivist orientation, although future research should expand and include additional cultures. Pages were selected at random on April 2001 from personal home pages sites residing on Yahoo! US,1 and Yahoo! Korea.2 The two branches of Yahoo! were used because both employ similar rules and procedures to sort individual home pages. Yahoo! Korea is representative of the population because it has the biggest number of patrons in Korea (Lee, 2001). Similarly, Yahoo! Geocities is widely regarded to be one of the more popular and populous homepage providers [Wired, 2000].

A random start and sampling interval is difficult to maintain when dealing with different providers that employ different methods of site organization, which is why using Yahoo! pages aided in obtaining a random sample. Nevertheless, some differences were apparent, in that home pages were organized using 14 categories for Yahoo! Korea and 26 categories for US Yahoo! home pages. Pages were chosen by using a random starting point [alternating between the top or bottom of the page] with every 50th interval until five home pages were obtained in each of the 14 Korean initial groups and two home pages were obtained for each of the 26 US initial groups. As a result, 98 individual home pages were obtained for this study, 49 each from US Yahoo! and Yahoo! Korea.

Most of the personal Korean home pages (n = 47) were designed in Korean; 4.1 per cent of personal home pages created in Korea had a bilingual web design, in Korean/English or Korean/Japanese. Some of them (n = 11) were partially designed in English in varying degrees and locations, including navigation bars, a few words in text, titles, and independent Flash files. However, it would be difficult for English speakers to navigate and understand those home pages because major proportions of contents were constructed in Korean. Also, some of the US personal home pages (n = 6) were bilingually

1. http://dir.yahoo.com/Society_and_Culture/People/Personal_Home_Pages/
2. http://kr.dir.yahoo.com/Society_and_Culture/People/Personal_Home_Pages/
constructed, in English/Korean, English/Arabic, English/German, English/French, and English/Chinese; the rest of them were wholly designed in English \(n=43\). Some of these pages used foreign letters constructed by Flash files.

Measurement

In response to RQ1, the coders were asked to select an appropriate category that fit the content of the individual homepage from the following list: interests (collections of host’s interests and links), family (introduction of family online), personal (brief direct description of self, few links), professional (presenting work and/or resume), combination, personal views (textual and about personal, mostly political, views), creative expression (dedicated to artistic pursuits), support (providing social support services), diary (presenting a detailed online diary), and other. These categories were obtained from previous studies which examined US home pages (Cheung, 2000; Papacharissi, 2002). This study showed that most websites in this study were categorized as personal (30.6 per cent), and general interest (27.6 per cent), followed by family (16.3 per cent), and professional pages (9.2 per cent).

Disclosure of personal information was measured by recording demographic information, such as gender, age, and occupation. Coders were discouraged from guesstimating such information, and simply recorded its presence or absence. The most frequent personal information online was the name of author (71.4 per cent) and family information (34.7 per cent), followed by occupation (28.6 per cent), role-status (22.4 per cent) and present residence (22.4 per cent), self-ascribed identity (20.4 per cent), and gender (17.3 per cent).

In response to RQ3, the number of hyper links, including inter and intralinks, was coded. Intralinks were considered reflective of independent self-construal, providing an extensive description of the self, and interlinks were assumed to be indicative of the interdependent self-construal, affirming connectedness to others. The mean score for the number of interlinks was 16.47 \(\text{SD} = 20.89\) and the number of intralinks was 9.47 \(\text{SD} = 8.50\) across the sample.

In the same context, it was also important to measure the number of graphics, including moving pictures, still photos, and cartoons present on home pages. This study distinguished between graphics
that had been manipulated by the web page creator and still photos of the author (with or without others) presented on the web pages. Manipulated graphics included animations and regular photographs that had been altered in some manner. Still pictures were usually photographs of the author and/or others which had been directly imported onto the page. Manipulating pictures online requires some degree of competency in web authoring. Thanks to widely used web publishing software (e.g. Photoshop), web authors edit their photos by altering colours, rotating elements, removing subjects in a given photo, or chroma key effects (mixture of two or more pictures). Alternatively, web authors simply copy graphic files from other sites, easily pasting them on their home pages. Preliminary browsing of personal home pages revealed that some authors manipulated still pictures presented on their websites, while others rarely altered their images.

We felt it was important to make this distinction because still pictures could present more direct and low-context communication, whereas manipulated pictures manifest high-context communication. Dominance of still pictures on a homepage could therefore be related to an independent self-construal, whereas manipulated graphics could reflect an interdependent self-construal. The mean score for the number of still pictures was 5.27 \( (SD = 11.4) \) per site for both Korea and the US. The mean score for the number of manipulated graphics was 2.02 \( (SD = 3.35) \) per site for both Korea and the US.

A 5-point Likert-type scale was used to measure communicative traits examined under RQ4, such as textuality, emotionality, personality, and formality. This was an attempt to evaluate more non-verbal elements of expression and determine whether they were present online. These items ranged from textual (1) to visual (5), from unemotional (1) to emotional (5), from personal (1) to impersonal (5), and from formal (1) to informal (5). The mean score for textuality was 2.79 \( (SD = 1.22) \), emotionality 2.72 \( (SD = 1.23) \), personality 2.59 \( (SD = 1.88) \), and formality 2.02 \( (SD = 3.35) \). Coders were asked to browse and read through the personal page in its entirety, and then make a judgment on these four factors. Because this research is of an exploratory nature, we have begun with these simple statements, out of which more detailed indices can be constructed in the future. Previous intercultural research has linked these elements to individualistic/collectivistic orientations and independent/inter-dependent self construals.
Intercoder reliability

Two graduate students, who had bilingual capability (English and Korean), were employed as coders. They were trained for two hours for two consecutive days in March 2001 to ensure their abilities of Internet surfing and technical competence. Intercoder reliability tests conducted on a subsample of 20 pages yielded the following results: In measuring homepage categories, the intercoder agreement was at 84 per cent for personal information, 88 per cent for the number of hyper links, 85 per cent for recording the number of pictures, 81 per cent for textuality, 83 per cent for emotionality, 85 per cent for personalness, and 83 per cent agreement for formality.

Statistical analysis

Cross-tabulation analysis was used to compare frequencies of personal information and content categories for the two countries, in response to the first two RQs. The last two questions were addressed by running one-way ANOVAs to identify significant differences among usage of hyperlinks (interlinks and intralinks), communicative traits, and use of graphics.

Results

The first research question addressed categorical differences between US and Korean personal homepages. The most frequent type of personal homepage was the interests page for the Korean sample (n = 22), and the personal homepage for the US sample (n = 22). Other categories across both countries were as follows—for Korea: family (n = 9), personal (n = 8), professional (n = 6), support (n = 2); for the US: family (n = 7), interest (n = 5), combination (n = 3), and professional (n = 3). The Chi-Square test indicated a significant difference ($X^2(10, N = 98) = 31.82, p < .000$), which confirmed that virtual actors in Korea were more likely to present themselves through interest pages, while those in the US were more likely to define themselves through direct and personal character descriptions.

The second research question surveyed differences in revealing personal information across the US and Korean samples. As shown in Table 1, a Chi-Square test showed significant cross-cultural differences for revealing self-ascribed identity ($X^2(1, N = 97) = 4.24, p < .034$), origin of virtual actor ($X^2(1, N = 98) = 12.00, p < .000$), and present residence of virtual actor ($X^2(1, N = 98) = 11.48, p < .001$). Thus,
virtual actors in Korea were less likely to reveal self-ascribed identity, origin, and present residence. The US actors were more likely to provide such personal information.

In response to RQ3, cross-cultural differences in the use of inter and intralinks were examined. A one-way ANOVA found no significant difference in the use of intralinks across countries. Differences in interlink use were statistically significant ($F_{[1, 95]} = 4.39, p < .039$), revealing that virtual actors in Korea used more interlinks than their US counterparts. Significant differences were also noted for the use of manipulated graphics ($F_{[1, 96]} = 6.14, p < .015$) and of still pictures ($F_{[1, 96]} = 6.48, p < .012$). These results indicated that, for this sample, virtual actors in the US were more likely to present themselves with still pictures, while those in Korea were more likely to use manipulated graphics. Therefore, cultural differences found a way to manifest themselves online, in a manner that frequently echoed that of off-line self presentation.

Differences in communicative traits were investigated in a similar manner, as shown in Table 2. One way ANOVAs revealed statistically significant cross-cultural differences for textuality ($F_{[1, 96]} = 8.96, p < .004$) and personality ($F_{[1, 96]} = 9.26, p < .003$). These results implied that, in this sample, Korean virtual actors preferred more visual ways of self presentation, whereas US web authors preferred a more textual mode of communication. Moreover, while Koreans were

<table>
<thead>
<tr>
<th>ITEM</th>
<th>Value</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>3.200</td>
<td>1</td>
<td>.580</td>
</tr>
<tr>
<td>Gender</td>
<td>.0710</td>
<td>1</td>
<td>.500</td>
</tr>
<tr>
<td>Role-status</td>
<td>.938</td>
<td>1</td>
<td>.333</td>
</tr>
<tr>
<td>Occupation</td>
<td>.000</td>
<td>1</td>
<td>.588</td>
</tr>
<tr>
<td>Family Information</td>
<td>.180</td>
<td>1</td>
<td>.671</td>
</tr>
<tr>
<td>Self-ascribed Identity</td>
<td>4.240</td>
<td>1</td>
<td>.034</td>
</tr>
<tr>
<td>Origin</td>
<td>12.000</td>
<td>1</td>
<td>.000</td>
</tr>
<tr>
<td>Religion</td>
<td>.710</td>
<td>1</td>
<td>.339</td>
</tr>
<tr>
<td>Resident Information</td>
<td>11.480</td>
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<td>.001</td>
</tr>
<tr>
<td>Physical description</td>
<td>.000</td>
<td>1</td>
<td>.630</td>
</tr>
</tbody>
</table>

Table 1
Cross tabulation analysis for personal information

\[ N = 98 \]
less likely to present personal stories and information, US authors preferred to structure their online identity by using such presentational strategies.

## Discussion

The purpose of this study was to examine how cultural background influences self presentation through personal home pages, and in doing so, we focused on Korean and US Yahoo! Geocities homepages. The results indicated that cross-cultural differences were somewhat manifested in self presentation online, although a larger and more diverse sample would help substantiate these findings in the future. Nevertheless, a look at the content categories more prominent in both populations revealed that US virtual actors presented the self through direct descriptions of personality, while virtual actors from Korea were more likely to create an online self by presenting their interests in their home pages. Specifically, US virtual actors engaged in a direct expression of the self, revealing self-ascribed identity, ethnicity, and residence, more frequently than the Korean virtual actors did.

### Table 2

Anova for communication trait online

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textuality</td>
<td>Between Groups</td>
<td>12.500</td>
<td>1</td>
<td>12.500</td>
<td>8.955</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>134,000</td>
<td>96</td>
<td>1.396</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>146,500</td>
<td>97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotionality</td>
<td>Between Groups</td>
<td>2.949</td>
<td>1</td>
<td>2.949</td>
<td>1.958</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>144,612</td>
<td>96</td>
<td>1.506</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>147,561</td>
<td>97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personality</td>
<td>Between Groups</td>
<td>16.327</td>
<td>1</td>
<td>16.327</td>
<td>9.255</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>169,347</td>
<td>96</td>
<td>1.764</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>185,673</td>
<td>97</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formality</td>
<td>Between Groups</td>
<td>2.296</td>
<td>1</td>
<td>2.296</td>
<td>1.941</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>113,551</td>
<td>96</td>
<td>1.183</td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>115,847</td>
<td>97</td>
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</table>
Consistent with this finding, Korean web authors tended to use more interlinks to express themselves indirectly, which supports previous research on collectivist cultures and the interdependent self construal. The interdependent self construal is usually reflected in high-context communication, which is represented through extensive use of interlinks. These interlinks serve the purpose of indirectly providing social status information, and linking the individual to certain societal groups and institutions, a communicative trait associated with the interdependent self construal in collectivism.

Specifically relating to cross-cultural differences and online communicative traits, this study noted significant differences in expressions of textuality and personalness. The US virtual actors were more likely to use text; the Korean virtual actors were more likely to use a visual format. The use of the more ambiguous visual format for self-presentation is indicative of high-context communication, associated with the interdependent self-construal. Similarly, the direct and explicit textual format of several US personal home pages revealed a tendency for low-context communication, usually associated with individualistic cultures and an independent self-construal. For example, one Korean author used her personal homepage to pay homage to her favourite actress in a manner that emphasized visual imagery over text. Rather than state her fondness for this actress, she created an elaborate frame-based page with pictures of her favourite actress. Even though she rarely comments verbally on the actress’ works and performances, her admiration is reflected through the overwhelming use of visual imagery. There is little personal information or visuals of the author herself. In contrast, a male US author used textual descriptions to declare likes, dislikes and general interests, including music, TV, and hobbies. The layout of the page is mostly textual and much less visual. The author directly states likes and dislikes, rather than implying them through the extensive use of visuals and perhaps links. We find this comparison to be emblematic of the general differences we noted in our browsing of Korean and US-authored web pages, although we recognize that several of these differences could also be explained by personality traits. A more detailed discourse analysis, paired with surveying of the authors could follow up our preliminary and descriptive research, so as to illuminate these differences further.

These results were further supported by the use of still and manipulated graphics. The US virtual actors used more personal-related and non-manipulated photos; however, the Korean virtual actors presented themselves by using photos of others, such as media
hero/heroine, cartoon, and their own manipulated graphics. This use of graphics implied that the Korean virtual actors were more likely to use agents to express themselves online. Considering off-line cultural features, these results are understandable. The interdependent self, which is prevalent in collectivism, is more likely to see the self within socio-cultural boundaries with other members. Therefore, virtual actors in Korea believe that agents, such as movie, sport stars, and cartoon characters, are able to signify their identity. Visual communication theory supports this distinction, in that photographic self-portraits are interpreted as a less arbitrary element of self presentation, whereas a painted portrait or a cartoon is seen as more arbitrary. The more arbitrary a sign is, the more important it is for us to understand the cultural conventions embedded in its making, so as to interpret its meanings (Fiske, 1990). The less arbitrary still picture could be associated with more direct, low-context communication, usually associated with the independent self-construal, as was indicated by the results of the study. Similarly, the findings of the study support the use of more arbitrary, high-context communication among authors of an inter-dependent self-construal orientation, and are aligned with previous research in the area. Nevertheless, expanding the sample of this study to include additional ethnic groups and incorporating survey results that measure web experience and expertise into the study of such cultural differences would help further validate these results, since cultural orientation is obviously not the single most significant determinant of self-presentation online.

This study revealed that virtual actors were influenced by cross-cultural differences when creating and structuring an online self through personal home pages. US virtual actors favoured direct expression, while Korean virtual actors used indirect self expression online employing interlinks and visual agents to create a self online. Still, this research was of an exploratory nature, and future research should seek to expand and validate these findings, first by employing a larger and more diverse sample. More pages from additional providers and other countries should be examined to further clarify the influence of culture on self-presentation online. In addition to sample size, the Internet is mostly used by white, educated, young people, who are exposed to a technical environment in the US (Flanagin & Metzer, 2000). The situation is similar to that of Korea-educated, young, and affluent individuals are more likely to use the Internet (Lee & Kim, 2001). Clearly, these results are not indicative of greater cultural differences across countries and are limited to individual home pages online.
The content analysis of home pages could be combined with survey instruments that measure the cultural orientation and communicative traits of respondents more accurately. Survey responses could then be compared to the content analysis findings, to determine how certain cultural and communicative traits are reflected online. The self-construal is a concept usually measured through survey research. Other communicative traits, like argumentativeness, unwillingness to communicate, and communication apprehension, also assessed with self-report measures could be used, and these results linked to cultural and online behavioural differences. The statements used to measure communicative traits through content analysis in this study should be expanded to a more extensive and valid measure, which probes additional communication characteristics. Future research could consider in-depth interviews with web authors to investigate the intention and motivation of message producer, that would give credible and consistent results for cross-cultural differences online. Moreover, a discourse analysis would provide an in-depth look into the language use and styles employed across cultures for online self-presentation.

We would also like to emphasize that despite the focus of this study on intercultural concepts and differences, not all differences among personal home pages can be explained by cultural factors. We did not seek to identify cultural orientation with a specific online presentation style, but rather investigate how cultural background was involved in specific online presentation choices. Differences in online presentation styles can be attributed to several factors extending beyond cultural orientation, including personality traits, experience and expertise with technology, motivation, orientation towards the medium, among many others. We focused on one of these factors, cultural orientation, in an exploratory look at how personal home pages might differ across countries. Nevertheless, it should be noted that tech-savvy web page authors across cultures might share more things in common than differences. In addition, personal home page design is frequently influenced by the templates that web page providers make available, thus resulting in design similarities across different personal pages (Papacharissi, 2002). Future research could further explore similarities and differences in personal home page design, in asserting not only cultural differences but cultural overlap and further illuminating how the role of the Internet in cultural globalization or tribalization.

This study opens up exciting opportunities for researchers who want to explore the interface between new media research and intercultural communication. As more people worldwide gain access to the Internet, it is important to document how cross-cultural
differences shape their use of Net-related technologies. Even though worldwide Internet diffusion is still at twelve percent (Global Reach, 2001), the Internet is becoming more multi-lingual, and perhaps, multi-cultural, with English dominating 43 per cent, other European non-English languages taking up 32 per cent, and Asian languages occupying 25 per cent of Net domains (Global Reach, 2001). Research that examines how cultural differences are manifested online draws important conceptual links between intercultural and computer-mediated communication and helps evaluate the cultural consequences of new media technologies.

References

