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Publisher Citation

Grace-Farfaglia P, Dekkers A, Sundararajan B, Peters L, Park S-H. Multinational web uses and gratifications: Measuring the social impact of online community participation across national boundaries. *Electronic Commerce Research*. 2006;6(1):75-101. doi: 10.1007/s10660-006-5989-6.

Comments

This is the authors' accepted version of the article published in *Electronic Commerce Research*. The final publication is available at Springer via <http://dx.doi.org/10.1007/s10660-006-5989-6>

MULTINATIONAL WEB USES AND GRATIFICATIONS: Measuring the Social Impact of Online Community Participation Across National Boundaries

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***Acknowledgements**

We thank individuals that contributed to conceptual development or data, including James Watt, Junho Choi, Sjeff van den Berg, Priya Nambisan, and Michael Lynch. Elements of this research were reported at the annual meeting of the International Communication Association and Academy of Management Conference (2004).

Abstract

This paper describes the rationale and findings from a multinational study of online uses and gratifications conducted in the United States, Korea, and the Netherlands in spring 2003. Survey questions developed in three languages by native speaking researchers was presented to approximately 400 respondents in each country via the Web. Web uses and gratifications were analyzed cross-nationally in a comparative fashion focusing on involvement in different types of on-line communities. Findings indicate that demographic characteristics, cultural values, and Internet connection type emerged as critical factors that explain why the same technology is adopted differently.

Keywords: uses and gratifications, online communities, multinational, cross-cultural

Introduction

The World Wide Web has been credited with fostering societal changes such as the global digital economy, social isolation, child pornography and molestation, new subcultures, social capital, online gambling addictions, and making distance from home irrelevant to workplace location. Most of these studies focus on the negative aspects of web use and few of these assertions have hard scientific data to support them or exist in small samples and case studies. Where data does exist, most results cannot be generalized beyond a single culture [Lin, et al., 1, Lin, 2, Stafford, 3, Stafford, et al., 4, Tewksbury, et al., 5, Park, 6]. Very little attention has been given to user motivations for using the Web in general and why members participate in specific online communities. Online connections often supplement offline social networks [Matei, 7]. Recognizing that social relationships are formed and nurtured on both sides of the digital boundary, early researchers now believe that the technological distinction of virtual space is blurred and offline ties are frequently an extension of that community [Wellman, 8, Preece, et al., 9, Rheingold, 10].

Active participation in online communities suggest that users expect a positive social benefit from web use and may also reveal emergent values, gratifications, and cultural values. In order to gain insight into the social dynamics underpinning or arising from web use we examined the uses and gratifications of the Internet in three countries, US, Netherlands, and Korea. Our focus was to determine the user profile for demographics, skill, attitudes, self-efficacy, family composition, media satisfaction, cultural values, and sources of community involvement. Once the user motivations were identified, then we related Internet use to gratifications sought.

1. Theoretical Perspectives: The Uses and Gratifications Approach

The majority of survey research on Internet users has been devoted to describing who Internet users are and what they are doing online. The Pew Internet and the American Life reports highlight usage patterns for time spent in different activity categories [Horrigan, et al., 11, Madden, 12]. While usage data gives us more insight than the user demographics surveys, they do not give any indication for motivation for Internet use. The uses and gratifications approach assumes that the user has motives for using media and communication technology, and can expect to fulfill specific outcomes for that interaction [Blumler, et al., 13, Charney, et al., 14, Palmgreen, 15, Rubin, 16]. Media choice is affected by the user's social and psychological characteristics, access, skill, and experience [Torkzadeh, et al., 17, Anandarajan, et al., 18, Durndell, et al., 19, Ferguson, et al., 20]. As the Internet has become more fully integrated into many facets of everyday life, differences in how the user chooses to use the media will likely emerge.

Early studies have concluded that the Web functions as a supplement to other media, rather than a substitute for traditional media [Lin, et al., 1, Lin, 21;22]. Early in the diffusion of the Internet process, findings from one study did not support the view that web communication was equivalent to face-to-face communication [Flaherty, et al., 23]. Today the Internet is viewed as a functional substitute for face-to-face interaction [Papacharissi, et al., 24]. It has been suggested that online relationships are less valuable than offline ones. Their benefit depends upon whether they supplement or substitute for offline relationships [Papacharissi, et al., 24, Cummings, et al., 25].

Overtime, users embraced newer technologies and created communities with meaningful social interactions. The Internet has been useful in reducing the isolation felt by people with chronic illness [Wright, et al., 26], seeking community with people sharing the same sexual

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orientation [Yang, 27], and to fulfill interpersonal communication needs [Walther, 28]. In spite of predictions that the Internet would isolate users and contribute to loneliness and addiction, there is evidence exists to the contrary. One study identified two primary functions of Internet use, socio-affective regulation (SAR) and goods-and-information acquisition (GIA), and studied their impact on psychological well-being. The path analysis of data from an online survey of 487 psychology students indicates that GIA has a positive effect on social integration ($\beta = .26$), while SAR has a moderate negative effect ($\beta = -.27$) [Weiser, 29]. Social integration had a positive direct effect on psychological well being ($\beta = .66$). The author of this paper concluded that social uses of the Web might reduce social connectivity contributing to a reduction in psychological well-being. Although one of the measures was a community and social involvement index, the type of social interaction questions were general categories of Internet activities and did not directly address online community involvement. The Internet may be more beneficial to individuals to the extent they can leverage its opportunities to enhance their everyday lives. Those who are already effective in using social and informational capital in the world are likely to be well positioned to take advantage of a powerful new technology like the Internet [Kiesler, et al., 30].

With a sample drawn from the general population, Lin identified that the Internet fulfills one or more of the following needs: escape/interaction, information/learning, or entertainment [Lin, 31]. A study using a college student sample identified gratifications-obtained as interpersonal utility, pass time, information seeking, convenience and entertainment [Papacharissi, et al., 24]. In a large sample of adult AOL members, Stafford found that social gratification was the primary motivation for early Internet adopters, rather than the hypothesized surveillance gratification [Stafford, 3, Stafford, et al., 4]. In a study of 16-24 year olds living in

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Hong Kong, the investigator identified pleasure of control and fluidity of identity as properties that draw users to the Internet [Leung, 32]. The gratifications found in this study were surveillance, escape, affection, entertainment, social bonding, and social identity. Leung concluded that younger adults embrace the Web as a social technology.

If Internet users are constructing an overlapping social world, then we need to understand how user attributes predict gratifications. General themes emerge from previous research on Internet gratifications, that users seek information, social interaction, entertainment, escape, and economic gain. New technological tools enable people to communicate in many ways, and if so desired, break away from gender, origin, and culture. Internet communication results in different relationships, both individually and in groups. In organizational contexts, new relational contacts lead to other ways of working together or organizing knowledge transfer. This leads to a different, partly parallel society with different organizations, languages, personalities and forms of expression.

Wired and wireless broadband Internet changes the communicative power through reconfiguring the access. Broadband Internet enables people to engage strategically in an interwoven web of technology and people that reconfigures access to resources in ways that can shift the relative communicative power of the different actors involved. Broadband creates new ways of interacting, inter-creating, inter-discussing, inter-negotiating and stimulating other new forms of ICT service and content provision and use. These include young people creating their own video histories or music programs; Mom & Pop WISPs (wireless Internet Service Providers) becoming telecom providers, and individuals doing deals with a few neighbours to share WiFi (wireless fidelity) local access; Web sites offering news and related decision forums from a myriad of perspectives not seen in mass media; patients being empowered through

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discussions and information gathering by communicating with others with experience of the same ailment; citizens finding new forms of civic power through communication with other citizens; governments searching to revivify engagements with citizens; and villagers and governments in developing countries sharing experiences and information on how to address common problems [Dutton, et al., 33]. The effects of new technology on economic and political communication are being felt in the slow and steady growth of ecommerce and the changes in media choice for news and political commentary.

New forms of promoting trust are being developed on the Internet [Camp, 34]. For example, EBay buyers can learn about the real identity of the seller through a user profile and explore feedback from other customers to verify the level of risk involved in transacting with a seller [Mutz, 35]. Citizens' access to news has grown, but at the same time the boundaries between entertainment and news have eroded trust in media. Web users seek to voice their opinions through Internet news forums, online discussion groups, and special interest online communities. During the war in Iraq in 2003, Internet users triangulated traditional news outlets to multiple sources on the Web, both foreign and domestic. In an unpublished study of war news gathering, researchers at Rensselaer Polytechnic Institute report that respondents viewed the Internet as a more credible medium for war news than other media on all dimensions of credibility: believability, accuracy, trustworthiness, lack of bias, and completeness [Watt, et al., 36]. A secondary analysis of the 1999 DDB Life Style Study, a demographically balanced sample of over 500,000 subjects, looked at participation in civic and community activities, interpersonal trust, and media use activities. The use of the Internet for information exchange was positively associated with social capital, that is, engagement in civic activities ($\beta = .10, p < .001$) and interpersonal trust ($\beta = .11, p < .001$) [Shah, et al., 37].

The Internet is a global medium, with data traffic increasing outside the U.S. at a greater pace than within. But to date, most studies of Internet users have been done in the U.S.; with Asia and Western Europe a distant second, while developing regions have not received significant attention. The need for a cross-national study to compare societal patterns of Internet use and identify the national factors that impact on-line behavior prompted our study.

1. Cultural Dimensions and Values

There are no comparable measurements of user activities, motivations, and cultural values in different countries and societies. This information is basic to understanding why certain Internet services are adopted in some countries and not in others. Blumler and associates urged researchers to conduct cross-cultural studies to determine if media uses and gratifications were universals and if they serve different functions in different societies [Blumler, et al., 38]. Differential adoption patterns have important outcomes. Instant messaging was adopted early on by the Net-generation for interpersonal and entertainment purposes. In the US businesses are now using text messaging to improve their productivity [Bhattacharjee, 39]. National telecommunications policy makers, corporate planners, and international organizations need better cross-national user motivation data to make cost-effective decisions for telecommunication agendas, global marketing, and global information distribution.

Hofstede defined culture as “the collective programming of the mind which distinguishes the members of one group or category of people from another [Hofstede, 40].” Hofstede identified the dimensions of values for cross-cultural comparison as power distance (acceptance that power is distributed unequally), individualism, masculinity, and uncertainty avoidance, later termed long-term orientation [Hofstede, 41, Hofstede, et al., 42]. An experimental study of electronic negotiations conducted over a 3 week period with subjects from Austria, Ecuador,

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Finland and Switzerland having no prior acquaintance found that cultural differences in negotiator expectations, time orientation, and information sharing influenced the process of the negotiations [Kersten, et al., 43]. It is interesting to speculate whether these differences would dissolve over-time in through online interaction where community members develop working relationships. Wenger and Snyder define communities of practice as “groups of people who share a concern or a passion for something they do and who interact regularly to learn how to do it better [Wenger, et al., 44, Wenger, 45].” Cross-cultural interactions in virtual communities may result in a blending of cultural values and information sharing norms through shared organizational goals.

The World Values Surveys provide extensive measurements of cultural values in more than sixty countries [World-Value-Study-Group, 46]. The variables include sets of questions about the values of family, friends, leisure time, politics, work, and religious affiliations. Inglehart, the principal investigator of the survey, included a new value dimension of post-materialism versus materialism [Inglehart, 47]. Post-materialistic values are characterized by self-expression, de-emphasis of authority, and a quest for quality of life. Materialistic values are exemplified by achievement motivation, security need for resources, and authority. The dimensions of materialist and post-materialist values provide a conceptual basis for linking social values to new media use [Danowski, et al., 48, Zhu, et al., 49].

Media promotes cultural values through news framing, programming choices, and the targeting of marketing messages. In a study of Indian students attending graduate school in the United States, the need to acculturate to their new society was identified as the motivation for viewing American television for news and cultural learning [Reece, et al., 50]. Use of the Internet, on the other hand, functioned for interpersonal communication with other Indian

students through discussion groups and to gather news from online Indian sources. A content analysis study of 463 ads examined the cultural values-modernity, tradition, individualism, and collectivism messages in Chinese advertising [Zhang, et al., 51]. The authors analyzed messages from magazines targeting young adults, and found that they promoted the values of modernity and individualism. Television that targeted a mass market in China promoted collectivism and traditional values. The authors concluded that advertising to the younger generation may have an effect on the degree of individualistic values held. These investigators did not review Internet advertising, but one could hypothesize from these results that exposure to commercial, political, and the personal values of others on the Web may alter the values held by individual users. It is also reasonable to think that cultural groups that place different values on individualistic and group activities will develop alternate forms of on-line communities that serve to satisfy different gratifications.

2. Conceptual Model

This review of the uses and gratifications literature just touches upon the reasons to study Internet users' uses and motivations. Knowledge of how Internet users seek to satisfy these gratifications is helpful for commercial forecasting purposes and government policy decision making [Charney, et al., 14]. The explanatory effects of uses and gratifications can be generalized to an abstract conceptual model in Figure 1. This model was the guide for the research questions and measurement instruments. When exploring the relationship between Internet uses and gratifications, we sought to address the following research questions:

***RQ₁**: What cross-cultural differences exist for uses and gratifications of online community participation?*

***RQ₂**: Do cultural values differ by online community type?*

RQ₃: How do national differences in Internet uses moderate the gratifications obtained from on-line community participation?

[PLACE FIG.1 HERE]

3. Methods

The survey questionnaire included questions concerning key areas identified in a two day April 2002 conference by researchers from the Social and Behavioral Research Lab at Rensselaer Polytechnic Institute; Department of Communication at Fontys University, Eindhoven, Netherlands; the Department of Communication and Information at Ewha Women's University, Seoul, Republic of Korea; the Department of Communication Processes at the University of Connecticut, and the Mass Communication Research Institute at Fudan University, Shanghai, China. Research agendas were discussed and a draft of the Web-based survey was written addressing the most relevant issues that emerged from the conference. The key concepts and operational measures are listed below. Standardized and validated scales for each of these areas were used whenever possible, but some areas required development of new measurement items and instruments. The typology of internet sites was based on previous literature [Hagel, et al., 52], with some additional insight into current community orientations by project contributors [Nambisan, et al., 53].

3.1 Criterion Variables

Motivations and Gratifications refers to the information seeking, entertainment, surveillance, personal relationship, identity, and acquisition that have been published in the literature [Charney, et al., 14, Papacharissi, et al., 24, LaRose, et al., 54, Lin, 55, Stafford, et al., 56].

Changes in other media use (Satisfaction) are identified as the perceived satisfaction with television, cable, satellite, TV, radio, wired telephone, mobile phone, newspapers and magazines due to Internet participation [Lin, 21].

3.2 Use Variables

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Use was measured by the amount of time and frequency of use on weekend and weekdays, and connection type.

Type of use (Activities) was selected from email, discussion groups, instant message, WWW, online education, online banking, e-commerce, dating, and political (non-governmental organizations, government sites, and political party) uses.

Online Community Participation refers to the frequency of online participation in professional organizations, ethical/cultural, political, local, consumer, hobby/sports, religion/beliefs, social support groups, game, and health/medical communities. Plant defines online community as a “collective group of entities, individuals, organizations that come together either temporarily or permanently through an electronic medium to interact in a common problem or interest space” [Plant, 57]. Because communities emerge within the real-world and the virtual space, we specified that the meaning of community was “any kind of group in which you have a shared interest with other members, with whom you communicate regularly.” Questions were designed to identify offline and online affiliations separately.

3.3 Determinants

Community involvement is a four item measure that asks about the strength of involvement of the participant in off-line and online communities modified from the Community and Social Involvement Index [Weiser, 29].

Community activity is the average of how active the participant was for the communities the user claimed membership. Activity was for none, one or two communities.

Attitudes toward the Internet are defined as the evaluation of past experience, expectations, and self-efficacy. Separate indices were developed for *Internet satisfaction* and *self-efficacy*. Items for this measure were selected from a variety of published sources [Anandarajan, et al., 18, LaRose, et al., 54, Torkzadeh, et al., 58].

Cultural values and their dimensions: materialistic and post-materialistic values, individualism-collectivism, high-low power distance, and high context-low context cultures, provide the basis for linking Internet use with social values [World-Value-Study-Group, 46, Inglehart, 47, Danowski, et al., 48, Zhu, et al., 49, Hofstede, 59, Abramson, et al., 60, Hall, 61, Hofstede, 62].

Demographics: gender, age, principle language, secondary language, residence, education, country of origin, family composition, and income.

Connection is the type of access, such as telephone, DSL, Cable, satellite, and wireless.

3.4 Sample

A representative sample from each target country was developed from commercial survey sample firms. These firms have developed panels of representative users who have given

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permission to be contacted (“opt-in”). This permission is required in a number of countries. Responses were matched weighted by known Web user demographics whenever available for each country. Alternately, some web research firms recruit respondents directly from Web portal sites and “redirect” those that give permission to the Web survey. Respondent samples were obtained from a commercial agency for the U.S., the Netherlands, and S. Korea, and the web-based survey was programmed in December 2002. The final survey was presented to 1344 respondents from three countries in May-June 2003.

3.5 Analysis

This study analyzed the association between Internet use and gratifications and online community participation, cultural values, and demographics. First, a set of zero-order relationships between overall Internet use and motivations, attitudes, online community participation and cultural values were ascertained [SPSS, 63]. Second, a set of factor analyses to assess Internet the effect of amount of use, type of use, online community use and interpersonal communication use on gratifications obtained and traditional media use were performed. Factors were indexed and reliabilities were tested. Third, social support factor indices for uses and gratifications were analyzed by structural equation modeling using the maximum likelihood method in AMOS, 5.0 [Arbuckle, 64]. Finally, the study analyzes the predictive strength of demographics, country of origin, attitudes, and uses on social companionship gratifications.

4. Results

4.1 Internet Access

The majority of our survey participants had high speed Internet access, but for the users with a slower service connection, satisfaction with the Internet was significantly lower as seen in Table 1. Of the users who connected to the Internet with basic telephone service, the majority

(78.3%) were from the United States. DSL was associated with significantly greater Internet satisfaction than either basic telephone or cable access.

[PLACE TABLE 1 AND TABLE 2 HERE]

4.2 Community Involvement

Table 2 presents the frequency of online community participation in each country. As was expected in a society that values collective activities, South Koreans would be more likely to seek out and participate in online communities of interest and organizations within their own local communities [Deresky, 65]. The lack of contextual cues might inhibit Internet involvement and participation as predicted by theories of uncertainty reduction [Hall, 61, Gudykunst, 66]. In high-context collectivist cultures most of the information resides in the person and less is coded in the message. Direct knowledge of that person and interpretation of non-verbal communication is important. Alternately, low-context cultures communicate with a direct, explicit style, with most of the information coded within the message [Hall, 61]. One may expect for individuals from a high-context culture that a text-based medium would increase uncertainty for communication exchanges for relationship formation.

Countries were divided into low context (NL and US combined) and high context (South Korea) communication needs. Table 3 presents the results of an analysis of variance of community involvement for main and interaction effects for context and community type. The ANOVA resulted in a significant main effect for cultural context on community involvement for every community, except social support. The means for community involvement were significantly higher for the low context group (NL and US) in each community. A lack of environmental context within text messages may not convey enough social presence for South Koreans to have meaningful interactions. Social support communities may be more involving

regardless of context preference because members closely identify with a salient issue or need creating common ground between them that facilitates greater understanding. Low context members favor explicit messages, are flexible in joining or leaving groups, and are less committed to groups than high context users. These characteristics may contribute to their high assessment of community involvement, regardless of their true level of activity.

[PLACE TABLE 3 HERE]

4.3 Language and ‘Glocality’

Table 4 presents the percentage of time spent on websites hosted by the user’s own or other language. South Koreans mainly visit sites that are hosted by their own country (88.67%) and rarely in another language (2.5%). Users in the Netherlands visit US sites 22 % of the time, and websites in other countries less frequently (12%). For the US participants, 7.5% of Internet time is spent on sites hosted by another country and they are least likely to visit sites hosted in another language.

The Netherlands is a trading country with a small language area, but the population has multilingual skills. South Korea has a homogeneous population with a strong cultural identity [Savada, et al., 67]. The number of .KR domains increased dramatically during the year of this survey, from 515,200 to 551,028 ‘Hangul or Korean language domains [KRNIC, 68]. There is a very high wireless Internet penetration rate of 36.1% of mobile phone subscribers. The growth of the Internet and adoption of the convenience of wireless portability within South Korea may account for their preference for .KR sites. Internet dominance by English language sites may serve to guide user media choices. The experience of our user sample is more regional regarding online participation. Lin describes this aspect of communication technology as a “technical

global village,” because although there is convergence in the type of technology shared across national boundaries, a cultural convergence has yet to be realized [Lin, 55].

[PLACE TABLE 4 HERE]

4.4 Cultural and Online Activities

The frequency of online activities was categorized by low (NL and US) and high context (SK) groups in an analysis of variance, as shown in Table 5. Use of e-mail and online gaming was not significantly different between the two levels of context. Online dating and instant messaging had greater participation in the high context preference group. This might be explained by face-negotiation theory because choice of media is a form of preventive facework that conceals one’s true self-image on the Internet during the initial phases of getting to know others [Ting-Toomey, et al., 69]. Facework is a communication behavior that also builds a relationship foundation for subsequent revealing one’s true self. The low context group was more likely to seek consumer product information, look for products, purchase goods online, download video or music, get financial information, and engage in chat room discussions. The low context group sought information prior to buying online more than the high context group.

Because chat rooms are more anonymous than personal web communication applications, such as email and instant message, it is no surprise that individualistic, low context group used these applications more frequently. Our data gives support to cultural communication theories that were developed from traditional media and face-to-face communication studies. Walther argues that when communication can be achieved without facial expression, self-presentation is solely the result of one’s message [Walther, et al., 70]. Walther’s study of on-line social support communities found that social distance, the use of Internet for social avoidance of face-to-face interactions, was the primary factor [Walther, et al., 70]. Passive participation, like lurking in

chat discussion groups, allows the web user to manage their identity without revealing their ideas and vulnerabilities until such time that they are ready to become more active. This highlights that the strength of weak ties in social support communities, members may be seeking assistance rather than seeking to build relationships. Unfettered by the obligation to reveal one's identity, the social support community member can learn and communicate about intimate issues that he or she would be too embarrassed to discuss with close friends or family.

[PLACE TABLE 5 HERE]

4.5 Media Satisfaction

The uses and gratifications framework hypothesizes that there is a feedback between gratifications found and subsequent Internet and traditional media uses. Therefore, we asked the participants of our study about their satisfaction with traditional media as seen in Table 6. South Koreans were more satisfied with traditional media than the NL or US participants for all items ($p < .000$). Dutch and American users had similar traditional media evaluations, but US participants were more satisfied with older media for political advocacy ("expressing personal views and opinions on public affairs," $p < .05$) and building relationships ("enhancing personal relations," $p < .000$). Americans also embraced newer communication technologies for political expression, as US users had higher membership rates for political and non-profit online communities than the Dutch (table2).

[PLACE TABLE 6 HERE]

4.6 Gratifications

The survey contained a branched question, first asking the participant to identify their top two online communities, then displaying questions about their level of participation for each community. A principle components factor analysis with varimax rotation of gratifications

yielded a different pattern of factor structure for each country, as summarized in Table 7. The structure for the combined sample consists of 7 factors with eigenvalues greater than one: social companionship, economic gain, self-improvement, entertainment, escape, fame & aesthetic, and respect. These factors accounted for 61.8% of the variance for Internet gratifications. Loadings and Cohen's Kappa alpha reliabilities are reported for each factor. Because "gaining respect from people" was a one item factor with low reliability, it was dropped.

[PLACE TABLE 7]

Of the top two factors in our study, social companionship was the primary factor for the NL and SK users. Economic gain was the strongest factor for US online participation, with social companionship the second most important motivation. Social companionship was selected as a factor that could be tested across all three cultures for the measurement model.

4.7 Measurement Model

In order to test the conceptual model of uses and gratifications, items values and attitudes were developed into unweighted summed indices. The reliabilities for each of the indices are as follows: postmaterial values (5 items, $\alpha=.84$). materialistic values (economy and security, Cohen's Kappa $\alpha=.73$), evaluation (positive, $\alpha=.73$ and negative, $\alpha=.54$), expectations (4 items, $\alpha=.67$), community involvement (4 items, $\alpha=.79$), conventional media satisfaction (6 items, $\alpha=.78$), and Internet satisfaction (6 items, $\alpha=.78$). A zero order correlation matrix of factors and indices is presented in Table 8. The measurement model for social support gratification was estimated using the maximum likelihood method using AMOS 5.0 [Arbuckle, 64]. All three models had good fit with the data and were recursive.

The model for the Netherlands (Fig.2) illustrates the effect of gender on the level of Internet activity with males being more active and seeking social support more than the women

participants. Older users in the Netherlands are less satisfied with the Internet and obtain less social support through this medium. In the case of the Netherlands, uses (activities) and attitudes toward the Internet predict finding social support gratification.

The US social companionship model shown in Figure 3 illustrates a different pattern from the Dutch model. Because social companionship gratification was the second factor loading for the US sample, it accounted for only 14.6% of the variance. The materialist world view attenuated ($\beta = -.60$) post-material values, resulting in a small positive ($\beta = .07$) effect on promoting online activity participation to obtain social companionship. The US experience with the web for social interactions is indirectly related to time spent using the web and skills acquisition, and directly to an indexed measure of Internet activities. Finding the time for social communication may be limited by the use of the Internet to search for material rewards.

In figure 4, the model demonstrates that for the South Korean Internet activities are associated with online community activity level which directly and positively influenced finding social companionship ($\beta = .21$). With a collectivist orientation, user values are aligned with other community members and this facilitates meeting their companionship needs. Satisfaction with the Internet increased user satisfaction with conventional media ($\beta = .27$) and this was directly related to achieving social gratifications ($\beta = .19$). Older Koreans have not been embraced new media technology for social support as rapidly as in the younger generation. They may meet these needs through local community participation, or may adopt the technology when their peers become active users. South Koreans are satisfied with conventional media because of their satisfaction with the Internet. Rather than replace traditional media, new media technology positively affects the user's attitude toward older forms of information technology.

[PLACE FIG. 2, FIG. 3, AND FIG. 4 HERE]

5.7 Community Value Orientation

Finally, we explored whether cultural values differ between the online communities. In Table 9, the means of post-material and materialistic values are reported by community. An analysis of variance between each community and all non-members was performed. Post-material values were significantly higher in religious, social support, and health communities. These community members are seeking a less impersonal and more humane society. Within the hobby and sports communities there is a “mixed values” orientation. Both freedom of expression and economic security are valued by individuals drawn to these communities. Membership in sports communities may promote more material values through competitive goal-setting or on-line gambling. As expected, online multiplayer community had a significantly greater mean for material values and this may be due to the emphasis on achievement and competition. For business and consumer communities the means for both cultural social goals dimensions were not significantly different from other communities. Participation in business communities may function as an alternative outlet for professional expression apart from the structure and competition in the workplace.

[PLACE TABLE 9 HERE]

5. Discussion

Jones made a distinction between virtual communities that are based on impersonal relationships, *Gesellschaft*, and those based on more committed social connections, *Gemeinschaft* [Jones, 71]. Online communities are like organic systems because they grow under dynamic conditions, especially when faced with new challenges [Burns, et al., 72]. Each member is free to contribute their special knowledge to common problems and is not hampered by behavioral restrictions that would be found in a more structured or role-based mechanistic

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environment. Members in organic organizations share beliefs about their values, and the community overtime promotes a set of core values. Our evidence suggests that *Gemeinschaft* communities are an outgrowth of the South Korean societal norms. In the United States and the Netherlands, *Gesellschaft* or organic online groups, offer fellowship and stability through common values, language, and social identity for civic, professional, and leisure pursuits.

For commercial organizations that want to build social networks by improving communications with their shareholders, employees, customers, subscribers, suppliers, or others that are part of the firm's "community," well-designed message boards, chat rooms, and instant messaging systems can prove valuable in helping people find expertise in real-time.

Multinational corporations should be aware how culture influences the use of the medium in each country represented in their community. Although English is internationally used for business communication, language remains a barrier to greater participation between cultures on the web. Corporate and non-profit sites serving a global audience should design their sites to reduce cultural impediments to participation by choosing content that facilitates transnational understanding, strategically using graphics to help with textual concepts, and publishing direct-dial telephone and fax numbers for international visitors.

Motives for online participation are unique to each national culture and subculture online community. The media use and cultural values reported by country and online community supports the hypothesis of a technological convergence between societies, not a cultural global village. The American respondents evaluated the Internet more negatively than the other nationalities in our sample. This may be due to web access with slower connection speeds. It may also be due to the proliferation of pay-for-access sites and the commercial nature of the American online experience. Their search for economic gain through online search reduces

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gratifications that are concerned with quality of life, such as companionship. The development of “walled garden” communities for commercial or organizational purposes will likely split user participation between those sites and Internet collectives that offer unrestricted social communication opportunities. Wireless connection networks widely available in urban areas should be expanded into suburban and rural areas where broadband is less available. The experience of South Korea, where broadband and wireless was the first-wave technology, spurred rapid adoption and satisfaction with the medium. Our data shows that ease of access will directly impact Internet customer satisfaction and participation.

South Koreans are satisfied with traditional and new media, and have high participation rates for online communities. Closer inspection of the data revealed a generational digital divide between individuals over 30 and younger adults for some Internet uses. Overall, older Koreans believe their Internet skills are adequate and use e-mail at the same rate as younger adults, yet spend less time online. They feel that they are an important part of their real-world community, and are more likely to participate in local community websites. Older individuals also are less likely to participate in online-dating, multiplayer-gaming, and hobby/sports communities. Koreans over 30 were more likely to have children under 18 living with them, and as a result the competition for home computing access could slow adopting new media uses. Media planners should identify whether this digital divide is due to barriers to Internet access, preference for traditional media, or lack of appropriate website content. Anonymous Internet activities may have less appeal to older Koreans who value being part of a community and prefer a rich media environment that offers more contextual cues. Broadband access has greater penetration in South Korea compared to the other countries, and wireless technologies are being rapidly adopted. Different patterns of technology attitudes and use may emerge as the Internet becomes

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increasingly mobile. In the case of South Korea, combining voice with text communication will likely close the context divide, and may result in greater online community participation.

Demographics play an important role in understanding Dutch Internet use and media satisfaction. Men are more likely than women to seek social companionship on the web. This is not consistent with a US study that reported that women primarily communicate with friends, and men are more likely to search for information on the Net [Jackson, et al., 73]. Our results are consistent with Hofstede's finding that gendered differences are less traditionally defined in the Netherlands. There is also an age-related difference for satisfaction with media, with older respondents having more negative attitudes toward both old and new media technology. Older Dutch users spent the same amount of time online per week and used e-mail as frequently as those under 30. Synchronous web applications like instant messaging or chat discussions are more popular with younger users. Younger adults in the Netherlands are more likely to use multiplayer game sites, but there is no difference in age group participation for the other online community types.

The digital divide in the Netherlands has been explained by social, cognitive, and material differences in adoption [de Haan, et al., 74]. Within our group of adopters there are age-related differences. Dutch researchers have reported that new and old media choices can also be predicted from information need characteristics, such as topicality and context [Bouwman, et al., 75]. Local, regional, and international programming is available for Dutch audiences through cable, digital, and print media. The current media marketplace and media consolidation may have unintended consequences for the Dutch television market, where it has been hypothesized that the effect of high levels of competition may result in excessive sameness [van der Wurff, et

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al., 76]. Digital and traditional media content preferences may explain the media use and adoption gap.

6. Study Limitations

With the goal of achieving a high participation rate some good questions were eliminated during the development of our survey. This reduced our ability to interpret some findings and refine our models. Some of the online community types had very small samples. Therefore, the diversity in culture, attitudes, expectations, and evaluations within each online community remains unknown. The results of this study cannot be generalized to other Western, European, or Asian countries as the rate of technology adoption, language, and freedom of speech varies greatly between societies.

7. Future Research

Research is needed to develop a clearer understanding of how people are balancing their real world activities with online community interactions. Future research should investigate influence as a separate motivation to join online civic, political, and career communities. The popularity of work and professional networks in our sample suggests that gaining greater influence on the job through community participation may be a contributing factor.

Online community types emerge from newer forms of web applications. The Internet has spawned new social networks of bloggers who function as alternatives to mainstream media for news and social commentary. Internet enabled phones have generated new forms of collective social action, known as ‘swarming.’ Text-messaging allows people to gather together for an ad hoc political rally or cultural event— almost instantaneously.

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A longitudinal study of the dimensions of the digital divide: access, skills, attitudes, motivations, and uses should be undertaken. Studies using a wider sample of cultures would enable targeted interventions and policies in developing countries, and cross-cultural web development strategies that will make a difference in fostering digital inclusion.

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Table 1. Internet Satisfaction by Connection Type

Connection	N	Mean Satisfaction with Internet	Std. Deviation	Std. Error
1 Telephone (NL=61, US=242, SK=6)	309	30.699	6.574	0.374
2 DSL (NL=113, US=89, SK=256)	458	32.729 ^a	6.581	0.308
3 Cable Modem (NL=225, US=166, SK=166)	557	31.467 ^b	6.948	0.294
4 Satellite (NL=0, US=2, SK=3)	5	36.400	2.510	1.122
5 Wireless (NL=2, US=3, SK=9)	14	32.929	8.014	2.142
Total	1343	31.754	6.784	0.185

^a Satisfaction with Internet with DSL connection was significantly higher than Telephone at the .000 level.

^b Satisfaction with Internet with Cable connection was significantly lower than DSL at the .05 level.

Table 2. Active Community Participation

Community	The Netherlands		United States		South Korea	
a. Work-related	193	47.9%	231	46.0%	228	51.8%
b. Hobby/Sports	254	63.0%	240	47.8%	308	70.0%
c. Ethnic/Cultural	13	3.2%	48	9.6%	136	30.9%
d. Religious/Beliefs	33	8.2%	183	36.5%	62	14.1%
e. Political	30	7.4%	69	13.7%	27	6.1%
f. Social Support	40	9.9%	81	16.1%	48	10.9%
g. Local	71	17.6%	97	19.3%	53	12.0%
h. Consumer	81	20.1%	69	13.7%	37	8.4%
i. Health & Medical	51	12.7%	59	11.8%	35	8.0%
j. Multiplayer Game	73	18.1%	76	15.1%	131	29.8%

Table 3. Community Involvement (CI) Index in Online Communities by Context
 US and NL = Low Context, SK = High Context

Online Community	Context	Mean Community Involvement	Std. Dev	Significance
Work (n=162) (n=179)	Low	20.84	4.71	Main Effect Context p<.000 Work p<.000 Interaction p<.000
	High	17.12	4.49	
Ethnic (n=16) (n=49)	Low	22.06	5.35	Main Effect Context p<.000 Ethnic p<.007 Interaction p<.021
	High	17.51	5.04	
Consumer (n=33) (n=14)	Low	18.36	5.29	Main Effect Context p<.037
	High	15.92	6.19	
Social Support (n=35) (n=11)	Low	20.71	4.59	Main Effect Social Support p<.003
	High	20.09	4.67	
Political (n=31) (n=8)	Low	21.45	4.49	Main Effect Political p<.002 Context p<.004 Interaction p<.000
	High	18.87	3.22	
Local Community (n=52) (n=16)	Low	22.86	4.38	Main Effect Context p<.016 LocalComm p<.006 Interaction p<.009
	High	16.81	4.70	
Online Multiplayer (n=54) (n=89)	Low	19.31	4.23	Main Effect Context p<.000
	High	16.78	4.83	
Hobby or Sports (n=190) (n=260)	Low	20.41	4.51	Main Effect Context p<.000 Hobby p<.000
	High	17.72	4.81	

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				Interaction p<.025
Religious (n=94)	Low	22.36	3.99	Main Effect
(n=38)	High	17.60	3.83	Context p<.000 Religious p<.000 Interaction p<.000
Health (n=29)	Low	19.20	5.19	Main Effect
(n=7)	High	14.57	3.20	Context p<.000

Table 4. Multiple Country Comparisons for Percent of Time Spent on Websites Hosted by Own or Other Countries and Language

Percent Time Spent Visiting:	Country/ Sample (A)	Means	Std. Dev	Comparison Countries (B)	Mean Difference (A- B)	Significance of Mean Difference	F
Websites hosted by own country	NL (403)	65.836	25.311	SK	-22.81	0.000	3967.531
	US (0)						
	SK (440)	88.64	13.713	NL	22.81	0.000	
Websites hosted by US	NL (403)	21.998	19.902	US	-70.15	0.000	4119.091
				SK	14.15	0.000	
	US (502)	92.147	14.816	NL	70.15	0.000	
				SK	84.3	0.000	
	SK (440)	7.843	10.215	NL	-14.15	0.000	
				US	-84.3	0.000	
Websites hosted in other countries	NL (403)	11.993	12.660	US	4.54	0.000	56.336
				SK	8.48	0.000	
	US (502)	7.454	13627	NL	-4.54	0.000	
				SK	3.94	0.000	
	SK (440)	3.514	7.189	NL	-8.48	0.000	
				US	-3.94	0.000	
Websites hosted in your own language	NL (403)	65.687	12.072	US	54.44	0.000	11773.267
				SK	-22.99	0.000	
	US (502)	11.247	29.709	NL	-54.44	0.000	
				SK	-77.43	0.000	
	SK (440)	88.673	18.008	NL	22.99	0.000	
				US	77.43	0.000	
Websites hosted in English language	NL (403)	31.069	24.805	US	-56.72	0.000	1316.042
				SK	22.24	0.000	
	US (502)	87.793	30.096	NL	56.72	0.000	
				SK	78.96	0.000	
	SK (440)	8.832	15.162	NL	-22.24	0.000	
				US	-78.96	0.000	
Websites hosted in other language	NL (403)	3.367	6.992	US	2.62	0.000	20.208
				SK	0.87	0.047	
	US (502)	0.751	3.390	NL	-2.62	0.000	
				SK	-1.74	0.000	
	SK (440)	2.495	8.085	NL	-0.87	0.047	
				US	1.74	0.000	

Table 5. Analysis of Variance Comparison of Online Application Use between Low and High Context Cultures

Online Activity	Context	Sample Size	Mean	Std. Deviation	Std. Error	Significance
Sent or received email	Low	905	4.781	0.610	0.020	.234
	High	440	4.736	0.720	0.034	
	Total	1345	4.767	.648	0.018	
Got news	Low	904	3.616	1.351	0.045	.000
	High	440	4.014	1.282	0.061	
	Total	1344	3.746	1.341	0.037	
Got info on travel	Low	904	2.165	0.814	0.027	.000
	High	440	2.491	1.097	0.052	
	Total	1344	2.272	0.929	0.025	
Research for school or training	Low	904	1.872	1.050	0.035	.000
	High	440	3.230	1.155	0.055	
	Total	1344	2.316	1.258	0.034	
Looked for health or medical information	Low	904	2.029	0.854	0.028	.000
	High	440	2.232	1.011	0.048	
	Total	1344	2.095	0.913	0.025	
Did work or research online for job	Low	904	2.580	1.513	0.050	.000
	High	440	3.611	1.304	0.062	
	Total	1344	2.917	1.526	0.042	
Looked for books or movies	Low	905	2.414	1.032	0.034	.000
	High	440	3.320	1.073	0.051	
	Total	1345	2.711	1.129	0.031	
Looked for a product	Low	905	3.041	1.083	0.036	.000
	High	440	3.580	1.143	0.054	
	Total	1345	3.217	1.131	0.031	
Bought a product	Low	905	2.033	0.728	0.024	.000
	High	440	2.211	0.975	0.046	
	Total	1345	2.091	0.821	0.022	
Sent instant messages	Low	904	2.936	1.571	0.052	.001
	High	440	3.239	1.670	0.80	

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	Total	1344	3.035	1.610	0.044	
Chat room or online discussions	Low	903	2.045	1.244	0.041	.003
	High	440	2.261	1.255	0.060	
	Total	1343	2.116	1.251	0.034	
Online games	Low	904	2.490	1.393	0.046	.618
	High	440	2.532	1.533	0.073	
	Total	1344	2.504	1.440	0.039	
Financial or investment information	Low	903	1.796	1.047	0.035	.000
	High	440	2.114	1.105	0.053	
	Total	1343	1.900	1.076	0.029	
Investment or banking transactions	Low	904	2.624	1.339	0.045	.030
	High	440	2.455	1.336	0.064	
	Total	1344	2.568	1.340	0.037	
Engaged in online dating	Low	903	1.178	0.577	0.019	.000
	High	440	1.475	0.887	0.042	
	Total	1343	1.276	0.708	0.019	
Downloaded music or video	Low	904	2.363	0.042	0.042	.000
	High	440	3.411	0.060	0.060	
	Total	1344	2.706	0.037	0.037	
Created a personal homepage	Low	903	1.583	1.045	0.035	.000
	High	440	1.818	1.327	0.063	
	Total	1343	1.660	1.150	0.031	

Table 6. Traditional Media Satisfaction by Country, ANOVA with post hoc comparisons

Conventional media satisfaction:	Country/ Sample (A)	Means	Std. Dev	Comparison Countries (B)	Mean Difference (A-B)	Sign.of Mean Difference	F
Learning about domestic and international news events	NL (402)	4.95	1.70	US SK	-.08 -.75	0.443 0.000	30.775
	US (501)	5.03	1.59	NL SK	.08 -.67	0.443 0.000	
	SK (440)	5.70	1.34	NL US	-.15 -.99	0.000 0.000	
Getting information for personal needs	NL (402)	4.51	1.69	US SK	.15 -.84	0.146 0.000	49.300
	US (501)	4.67	1.59	NL SK	.15 -.84	0.146 0.000	
	SK (440)	5.50	1.47	NL US	.99 .84	0.000 0.000	
Getting information for work or education	NL (402)	4.14	1.75	US SK	-.03 -.84	0.797 0.000	34.804
	US (501)	4.17	1.75	NL SK	.03 -.81	0.797 0.000	
	SK (440)	4.99	1.61	NL US	.81 .84	0.000 0.000	
Providing entertainment or ways to pass time	NL (402)	4.76	1.71	US SK	-.15 .82	0.151 0.000	32.211
	US (501)	4.92	1.58	NL SK	.15 -.67	0.151 0.000	
	SK (440)	5.59	1.53	NL US	.82 .67	0.000 0.000	
Expressing personal views and opinions on public affairs	NL (402)	3.26	1.98	US SK	-.26 -1.13	0.035 0.000	46.080
	US (501)	3.51	1.92	NL	.26	0.035	

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				SK	-.87	0.000	
	SK (440)	4.39	1.49	NL	1.13	0.000	
				US	.87	0.000	
Enhancing personal relations	NL (402)	3.74	2.08	US	.53	0.000	72.527
				SK	-.97	0.000	
	US (501)	3.21	2.01	NL	-.53	0.000	
				SK	-1.50	0.000	
	SK (440)	4.71	1.66	NL	.97	0.000	
				US	1.50	0.000	

Table 7. Summary Table: Factor Analysis of Internet Gratifications

Scale/Items	Factors	Loading	Combined	NL	US	SK	Variance/ α
Find people like me	Social Companionship	.887	1	1	2	1	25.9% .92
Find companionship		.858	1	1	2	1	
Feel like I belong to a group		.843	1	1	2	1	
Meet new people		.831	1	1	2	1	
Feel less lonely		.764	1	1	2	1	
Feel important		.628	1	1	2	2	
Save money		Economic Gain	.746	2	7	1	
Save time	.725		2	7	1	7	
Learn how to do things	.678		2	5	1	8	
Make purchase decisions without sales pressure	.657		2	5	1	8	
Find information that isn't available elsewhere	.617		2	6	1	4	
Get up-to-date information	.610		2	6	1	4	
Solve a problem	.604		2	5	1	4	
Conveniently find information about products or services	.590		2	5	1	8	
Stay informed about what is going on	.553		2	6	1	4	
Not falling behind in the future	Self- Improvement	.750	3	2	4	3	5.8% .84
Learning things to improve yourself		.741	3	2	4	3	
Developing interest in new things		.730	3	2	4	3	
Continually learning		.726	3	2	4	3	
Relax	Entertainment	.747	4	3	3	5	4.8% .78
Have fun		.733	4	3	3	5	
Pass the time		.687	4	3	3	5	
Find excitement		.570	4	3	3	5	
Find interesting things		.545	4	5	1	5	
Escaping from the real world	Escape	.708	5	4	5	2	4.2% .65
Experiencing things you can't in the real world		.654	5	4	5	2	
Trying out new identities		.632	5	1	5	2	
Looking for visually interesting graphics and excerpts	Fame & Aesthetics	.762	6	4	6	6	3.6% .78
Enjoying sights and sounds		.707	6	4	6	6	
Publishing your own ideas		.567	6	4	6	2	
Letting people know who you are		.561	6	4	6	2	
Gaining respect from people		.661	7	2	4	2	3.3% .49

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^a Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

^b Rotation converged in 41 iterations.

Table 8. Correlations among Uses, Gratifications, Attitudes and Values, NL, US, & SK samples combined

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Activities	1.000															
2. Expectation	0.290	1.000														
3. Postmaterial Values	-0.040	0.181	1.000													
4. Materialist Values	0.036	-0.174	-0.585	1.000												
5. Positive Evaluations	0.153	0.511	0.306	-0.266	1.000											
6. Negative Evaluations	-0.044	-0.057	-0.166	0.117	-0.233	1.000										
7. Community Involvement	0.139	0.178	0.077	-0.043	0.146	0.104	1.000									
8. Satisfaction Media	0.224	0.131	0.090	-0.082	0.090	-0.080	0.103	1.000								
9. Satisfaction Internet	0.312	0.355	0.262	-0.198	0.264	-0.103	0.148	0.516	1.000							
10. Economic Gain	0.171	0.394	0.389	-0.352	0.432	-0.123	0.135	0.137	0.432	1.000						
11. Social Companionship	0.269	0.119	0.048	0.011	-0.002	-0.092	0.055	0.249	0.278	0.173	1.000					
12. Self-Improvement	0.114	0.280	0.361	-0.320	0.340	-0.105	0.153	0.178	0.355	0.604	0.117	1.000				
13. Entertainment	0.083	0.242	0.187	-0.190	0.184	-0.072	-0.009	0.126	0.265	0.366	0.384	0.268	1.000			
14. Escape	0.209	0.137	0.099	-0.022	0.043	-0.111	0.034	0.178	0.243	0.250	0.587	0.275	0.404	1.000		
15. Fame & Aesthetics	0.141	0.182	0.178	-0.111	0.131	-0.040	0.134	0.149	0.239	0.393	0.519	0.390	0.481	0.595	1.000	
16. Respect	-0.022	0.080	0.144	-0.125	0.099	0.024	0.143	0.004	0.109	0.311	0.371	0.321	0.342	0.386	0.717	1.000

The samples vary between 1337 and 1343. When $r=0.055$ in absolute value, $p<0.05$; when $r=0.77$ in absolute value, $p<0.01$.

Table 9. Means and Standard Deviations of Cultural Values of Online Community Members

Community	Post Material Values (5 items)	Std. dev	Material Values (2 items)	Std. dev
Work-related (n=339)	27.43	5.15	2.31	1.07
Hobby/Sports (n=447)	26.77 _b	5.27	2.41 _a	1.15
Ethnic/Cultural (n=65)	26.55	5.59	2.52	1.20
Religious/Spiritual Beliefs (n=132)	28.33 _a	4.99	2.13	1.12
Political/Nonprofit (n=39)	27.23	6.40	2.23	1.60
Social support (n=46)	28.82 _a	4.73	2.31	1.02
Local (n=67)	27.55	5.98	2.37	1.31
Consumer (n=47)	27.43	6.85	2.36	1.40
Health or Medical (n=36)	29.61 _a	4.88	2.06	1.04
Online Multiplayer (n=141)	26.65	5.08	2.54 _a	1.18

_a Significantly different from other communities at the $p < .05$ level.

_b Significantly different from other communities at the $p < .01$ level.

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Figure 1. Conceptual Model of Uses and Gratifications of Online Communities

Figure 2. Model of Social Companionship Gratification – Netherlands

Figure 3. Model of Social Companionship Gratification – United States

Figure 4. Model of Social Companionship Gratification - South Korea

Fig 1

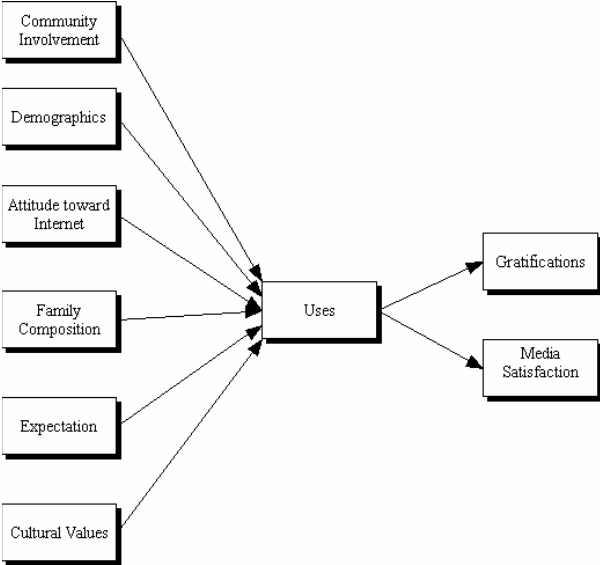
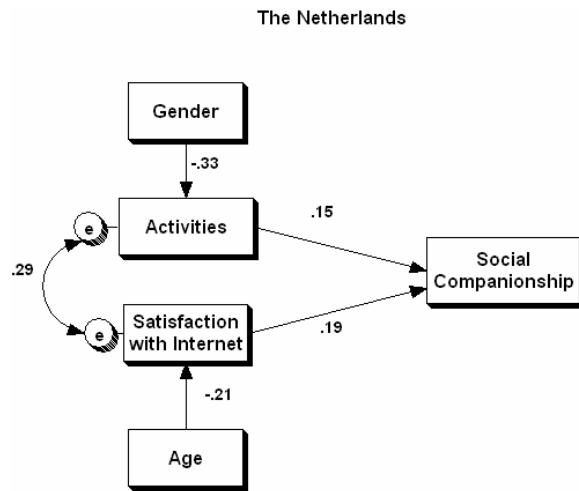
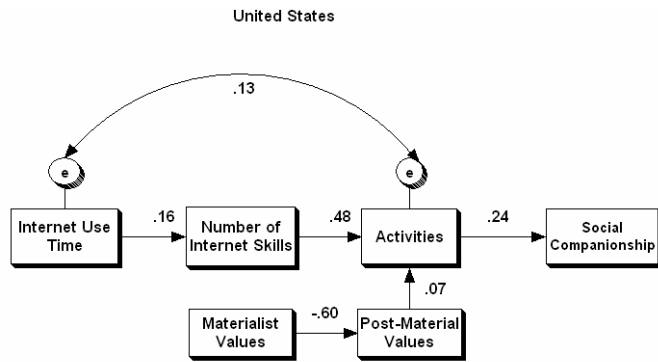


Fig 2



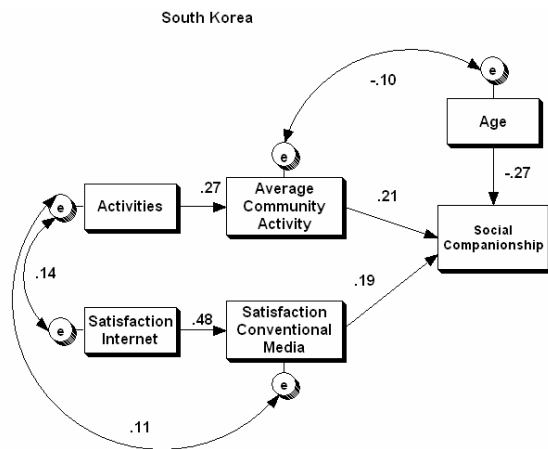
^a Path coefficients are standardized betas. The standardized path coefficients appear as single-headed straight arrows, while the covariance between variables is shown as double-headed, curved arrows. Sample size was 403, $\chi^2=9.2$, $df=5$, $NFI=.934$, $CFI=.966$ and $RMSEA = .046$.

Fig 3



a Path coefficients are standardized betas. The standardized path coefficients appear as single-headed straight arrows, while the covariance between variables is shown as double-headed, curved arrows. Sample size was 502, $\chi^2=13.4$, $df=9$, $NFI=.969$, $CFI=.989$, and $RMSEA = .031$.

Fig 4



a Path coefficients are standardized betas. The standardized path coefficients appear as single-headed straight arrows, while the covariance between variables is shown as double-headed, curved arrows. Sample size was 440, $\chi^2=13.09$, $df=7$, $NFI=.951$, $CFI=.976$ and $RMSEA = .044$.