



## Are there cultural differences in how we play? Examining cultural effects on playing social network games

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### ABSTRACT

Digital games embedded in social network sites are one of the driving forces behind the expansion of digital gamer populations. Previous studies have observed different usage patterns between users in different ethnic groups and countries, suggesting that culture orientations may affect how people play and interact through social network games. This study examined how people's culture orientations affect usage patterns with measures of vertical and horizontal individualism–collectivism. The findings indicate that culture does not directly affect usage patterns. Instead, the effects on usage patterns are mediated by people's expected outcomes of playing social network games. Vertical culture orientations predicted social expected outcomes. Individualism predicted status expected outcomes, but in different directions on the dimensions of vertical or horizontalness. Vertical collectivism was the only culture orientation that indirectly predicted buying in-game products with real money. Implications for game designers and markers are discussed.

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### 1. Introduction

The stereotypical image of video gamers as adolescent boys playing in solidarity no longer reflects reality. Today, the term “gamers” represent a diverse population of people across different age, gender, and ethnicity groups. In the United States, 72% of American households play video games ([Entertainment Software Association, 2011](#)). The average age of American gamers is 37 years old, and 42% of gamers are women. In fact, there are more adult women gamers (37%) than young male gamers aged 17 or younger (13%).

A significant part of this growing gamer population can be attributed to the popularity of social network games (SNGs) such as *Farmville* or *Cityville*. Social network games are games embedded within social network sites such as *Facebook*. SNGs allow players to interact within the game and on their embedded social network sites (Wohn, Lampe, Vitak, Ellison, & Wash, 2011). Currently, 58% of Facebook users play SNGs ([Lightspeed Research, 2010](#)). In other words, there are more than 464 million SNG players worldwide on Facebook alone. The market for SNGs in the United States is estimated to surpass 1.14 billion US dollars in 2011 and in Asia, the market value for SNG is estimated to be around 1.63 billion US dollars ([Superdata, 2011](#)).

As the SNG market continues to grow, little is known about why and how SNG players are using these games, particularly how

different culture orientations may affect player motivations (expected outcomes) and behaviors. From a theoretical perspective, examining why and how people are interacting via SNGs can provide clues to understanding how new forms of computer mediated communication (CMC) are shaping personal relationships. From a practical perspective, with the major changes in player populations, it is likely that the behavioral predictors identified by previous studies need to be reexamined. Without an understanding of what predicts different expected outcomes and usage patterns among SNG's diverse players, SNG designers and marketer are more likely to make mistakes by targeting certain populations while alienating others. The main goal of this study is to examine the effects of cultural orientations on SNG expected outcomes and usage patterns.

Studies of social network sites and more general online games found indications of cultural difference in usage behaviors (e.g., [Griffiths, Davies, & Chappell, 2003](#); [Steinkuehler, 2006](#); [Williams, Yee, & Caplan, 2008](#)). For example, [Colwell and Kato \(2003\)](#) compared between adolescents in Japan and UK and found that Japanese did not think playing games could substitute real friendships, and they preferred less violent games than adolescents in the UK. Another study compared Korean and American college students' use of social network sites and found that students in both countries used social network sites to seek friends, gain social support, entertainment, information, and convenience. However, the weight placed on the motives for using SNSs was significantly different. Korean students emphasized seeking social support from existing networks, while American students emphasized entertainment

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(Kim, Sohn, & Choi, 2011). In the context of SNGs, Wohn and Lee (2011) found distinct differences in expected outcomes and usage patterns between Asian and Caucasian respondents in their survey of Facebook game players. Asians were more likely to report social expected outcomes than Caucasians, and were more likely to engage in avatar customization activities than Caucasians, suggesting that cultural differences may affect expected outcomes and usage patterns of SNGs.

The main limitation across all of these studies is that none of these studies directly measured culture orientations among players. Instead, cultural orientations were inferred from the different countries or ethnic groups. Although these studies are useful in suggesting that there are cultural differences in a broad sense, they are difficult to generalize because it is uncertain whether the differences are caused by culture or other variables such as market structure. Moreover, many countries such as the United States are becoming increasingly heterogeneous in terms of ethnic cultures. Therefore comparisons of gamers between different countries creates a conceptual confound of ethnicity, nationality, and geography.

The goals of this study are to identify the expected outcomes and usage patterns of SNG players and examine how cultural orientations could shape those expected outcomes and usage patterns. Specifically, we use the four dimensions of collectivism and individualism proposed by Triandis and his colleagues (see Triandis & Gelfand, 1998; Triandis & Suh, 2002) to predict expected outcomes of SNG and usage patterns.

From an academic perspective, this study expands knowledge of how cultural differences contribute to different patterns of media use and human interactions, particularly around digital gaming and social network sites. This study also has practical implications for SNG design and advertisement related to SNGs. Identifying how different cultural predictors affect different expected outcomes and usage patterns could provide insights into player psychology, which can be used to optimize game design and increase advertisement effects.

## 2. Social network games

Social network games (SNGs) refer to game applications that are embedded within social network sites such as *Facebook* or *MySpace*. The game industry generally refers to SNGs as “social games,” but this term is misleading because any game can be social. Even single-player games can be shared and discussed among friends as a medium for social interaction. SNGs consist of many different genres with different game mechanics. Some examples of popular SNGs are simulation games such as *Farmville* and *Pet Society* that focus on customization and resource management; others include arcade games such as *Bejeweled Blitz* and card games like *Texas hold'em* poker. Most SNGs are considered casual games, characterized by easy learning curves and requiring less continuous time and effort (Jүүл, 2009). But casual does not mean less time devotion: 68% of SNG players in the US play more than once per day, with 28% playing more than 6 h per week (Information Solution Group, 2010).

What distinguishes SNGs from other digital games is not their content, but that they are played with people within one's existing networks via social network sites. Because SNGs are embedded in social network sites, interactions between players occur both within the games and on the social network sites (Wohn et al., 2011). The majority of SNG players are playing with people in their existing friendship networks, such as friends, family, and co-workers. This distinguishes SNGs from massively multiplayer online games (MMOs) which are mostly played with online friends outside of the players' offline networks (Taylor, 2006; Yee, 2006a).

Playing within existing networks results in less anonymity between players, therefore involves more considerations about identity management. Traditional CMC studies have found that people tend to disclose more personal information and perceive the interactions more positively when communicating anonymously (Walther, 1996). In contrast, being identifiable restricts the freedom of self presentation and reduces satisfaction with CMC (Tanis & Postmes, 2007). These findings suggest that SNG players may have the desire for self presentation through SNG, but only to the degree that it does not diverge too far from their self image among their off-line networks. Being embedded in social network sites makes the dynamics of player interaction around SNGs unique from other online games.

### 2.1. SNG motivations and uses

Few studies have examined why and how people use SNGs. One of the most common approaches is the uses and gratification approach. Uses and gratification has been applied extensively to studying different internet uses because internet use is considered more interactive than traditional media uses (Papacharissi, 2002; Ruggiero, 2000). Shin and Shin (2010) argued that because SNGs are hedonic systems for entertainment, perceived enjoyment and ease of use were both significant predictors of intention to use SNG, but not attitudes towards using SNG. Hou (2011) surveyed *Happy Farm* players in China and found that expected outcomes of diversion and social interactions predicted SNG frequency and engagement, while age and social interaction predicted duration of play.

Wohn and Lee (2011) administered a survey and identified four general outcome expectations for why people use SNGs: To build common ground with existing networks, to reciprocate favors, to cope with daily stress, and to pass time. They also identified seven general ways of how people used SNGs: avatar customization, space customization, advancement, mechanics, spending real money, gifting, and publishing. They found that people who seek common ground are more likely to customize their avatar and in-game space, and are more inclined to spend real money. People who have reciprocal expectations are more likely to customize their in-game space, publish their game status, and send gifts to other players. People who seek coping outcomes were more likely to publish their game status, and people who play to pass time are more likely to focus on advancement.

These studies provide us with a general idea of why and how people are playing SNGs. However, as noted by the authors themselves (Hou, 2011; Wohn & Lee, 2011), the studies have limited generalizability because they used snowball sampling and did not distinguish between different SNGs. Snowball sampling is a non-probability sampling method that is ideal for exploring hard-to-reach populations, but difficult to generalize because of its lack of a clear sampling frame. Another limitation with these two studies is that Hou (2011) only examined one SNG (*Happy Farm* in China), whereas Wohn and Lee (2011) did not distinguish between different genres of SNGs and examined popular Facebook games all together. Previous uses and gratification studies of online games have shown that people choose to play different games to meet different needs (e.g., Sherry & Lucas, 2003; Yee, 2006b). Since different SNGs have different design and mechanics, it is possible that people have different expected outcomes for playing different types of games. Therefore this study will focus on simulation-type games such as *Farmville* and *Café World* – the most popular genre of games on Facebook. Focusing on one genre can reduce the number of confounding factors that may influence expected outcomes and usage patterns. The first research question for this study is:

RQ1: What are the expected outcomes and usage patterns of simulation-type SNGs?

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