Computer Playfulness, Openness to Experience, and Computer Loafing

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Computer Playfulness, Openness to Experience, and Computer Loafing

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ABSTRACT

This research sought a deeper understanding of a frequently examined IT trait, i.e., computer playfulness, in two respects. First, complementing prior studies identifying its many favorable user outcomes related to technology adoption and use, this research demonstrates that it can also lead to adverse implications, such as nonwork-related technology use at work, or computer loafing, which has received little attention in IT research. Second, to ground playfulness in the larger individual trait literature, this study explores its conceptual foundation in the Big Five trait of openness to experience and demonstrates their empirical linkage. Implications of the findings are discussed.

Keywords  
Computer playfulness, individual trait, Big Five, loafing, computer loafing, technology adoption and use.

INTRODUCTION

Computer playfulness refers to the degree of cognitive spontaneity in microcomputer interactions (Webster and Martocchio, 1992). An frequently examined IT trait, it has been associated with a variety of positive user attitudes, beliefs and intentions related to technology adoption and use (e.g., Agarwal and Karahanna, 2000; Hess, Fuller and Mathew, 2006; Martocchio and Webster, 1992; Venkatesh, 2000; Webster and Ahuja, 2006). Despite these benefits, it has long been suspected that playfulness may also lead to certain undesirable outcomes, including nonproductive play, such as playing computer games at work (Webster and Martocchio, 1992). However, little IT research has empirically investigated such possibility. Thus, this research explores whether computer playfulness can lead to one’s nonwork-related technology use during work time, or, computer loafing, as initially posited by Webster and Martocchio (1992).

Perhaps as a result of the higher ability of specific traits to explain outcome variables (Webster and Martocchio, 1992), little IT research has sought to explore their linkages with proximate general traits, or examine them in relation to the broader individual trait framework. This study explores the conceptual linkages between playfulness and the general traits in the Five-Factor Model, which has been regarded as the most agreed upon personality framework (Costa and McCrae, 1992a/b; Goldberg, 1993; Viswesvaran and Ones, 2004; Zweig and Webster, 2004). Identifying their conceptual linkages can better ground this area of IT research in the broader trait literature as we strive for a cumulative tradition and avoid “private” IT theories (Keen, 1980).

PLAYFULNESS AND OPENNESS TO EXPERIENCE

As discussed earlier, to identify the conceptual linkages between computer playfulness and a broader trait framework, a good starting point is the Five-Factor Model, or the “Big Five,” including (1) conscientiousness, or the degree of organization, persistence, and motivation in goal-directed behavior; (2) extraversion, described by being sociable, gregarious, and ambitious; (3) neuroticism, characterized by insecurity, anxiousness, and hostility; (4) openness to experience, or openness, represented by flexibility of thought and tolerance of new ideas; and (5) agreeableness, represented by a compassionate interpersonal orientation (Deveraj et al., 2008).

Because individuals high in openness tend to seek intellectual stimulation, are better at grasping new ideas (Costa and McCrae, 1988; McCrae and Costa, 2003), and have more favorable attitudes toward learning (Barrick and Mount, 1991), it appears to be the most conceptually proximate to playfulness among the Big Five traits.

H1: Openness to experience is a general trait related to playfulness.
PLAYFULNESS AND COMPUTER LOAFING

Computer loafing refers to employee nonwork-related technology use during work time, such as browsing the Internet and playing games on a computer or an electronic device for personal reasons. Though much has been written in the popular press about the prevalence of this phenomenon (e.g., Conlin, 2000; Fox, 2010), it has not yet received wide attention in IT research. However, a few studies in the management literature have examined a set of situational factors related to computer loafing, such as employee perception of lack of fairness in the workplace (Lim, 2002). One study has also linked it with the Big Five traits (Jia et al., 2007).

These and other relevant IT studies suggest at least two mechanisms supporting the relationship between playfulness and computer loafing, as initially posited by Webster and Martocchio (1992). First, playful individuals are more likely to experience high cognitive absorption during technology use (Agarwal and Karahanna, 2000), and such over-involvement can prolong their nonproductive play. Second, Internet loafing has been linked to the Big Five trait of openness to experience (Jia et al., 2007). Thus, to the extent that computer playfulness reflects one’s cognitive openness to experience in the technological context (as hypothesized in H1), playful individuals will have higher intrinsic motivation to explore technologies and the Internet, and be more likely to be distracted by them.

H2: Playfulness is positively related to computer loafing.

METHOD

The hypotheses were examined using an online survey of working adults. The survey was facilitated by StudyResponse, a nonprofit online research facilitator at Syracuse University, which sent email invitations to participate in the study to 1,000 working adults randomly selected from the participant pool. Playfulness was measured by a scale from Webster and Martocchio (1992) as refined by Serenko and Turel (2007). Computer loafing was measured by items from Lim and Teo (2005) as refined by Jia et al. (2007). Openness was assessed by a scale from John and Srivastava (1999). Similar to prior IT trait research (e.g., Agarwal and Karahanna, 2000), Internet use was chosen as the technological context for the survey.

RESULTS

Useable responses were received from 184 working adults, including 86 males (47%) and 98 females (53%). The average respondent was 37 years old (range of 18 to 68) with 11 years of work experience and a bachelor’s degree. Approximately 84% of the respondents were employed full time. The Cronbach’s alpha for all three subjective measures exceeds 0.80 in this study, and the factor loading matrix supports the convergent and discriminant validity of the measures used.

The significant correlation between playfulness and openness to experience ($r = .361$, $p = .000$) provided evidence for H1 that openness is a broad trait corresponding to playfulness. Hierarchical regression results showed that controlling for age and gender (both $p = .000$ in Step 1), as well as openness (Step 2: $t = 1.320$, n.s.), playfulness is significantly related to computer loafing (Step 3: $t = 3.259$, $p = .001$). H2 is thus supported.

Before discussing the implications of these results in the next section, it is important to acknowledge limitations of the study, such as the possibility of self-selection bias due to the nature of the online survey, and the potential for common method bias.

CONCLUSIONS

This research contributes to a deeper understanding of the trait of computer playfulness in two respects. While much existing work has focused on its various favorable outcomes, this study empirically shows, based on data from a sample of working adults, that it can also lead to adverse implications, such as computer loafing, as initially posited by Webster and Martocchio (1992). This finding contributes to a more complete and nuanced view of this trait as well as our understanding of one’s intrinsic motivation to use technology.

This study also explores the relationship between playfulness, a IT-specific trait, and a broader individual trait framework, i.e., the Five-Factor Model, in order to better ground this area of IT research in the larger trait literature. The Big Five trait of openness to experience has been identified as a conceptually related broad trait. Survey data confirmed the significant correlation between the two, providing empirical support for their conceptual linkage. The finding that openness is not significantly related to computer loafing while playfulness is, affirms the superior exploratory power of domain-specific traits, such as computer playfulness, as traditionally emphasized in IT research (Webster and Martocchio, 1992).
REFERENCES


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