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Optimal experience of flow enhanced by telepresence: Evidence from social media use

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ABSTRACT

Flow has been proposed as an essential component for understanding online behavior and defining the stimulating nature of online experiences. In this research, we examine the impact of flow specifically within the context of social media use. The findings indicate that telepresence positively affects the five dimensions of flow: enjoyment, concentration, challenge, control, and curiosity. These dimensions (except control) are positively related to overall flow, which enhances time distortion and frequency of social media use. In addition, we extend the nomological network on flow theory by developing a model to illustrate the complex relationship between flow, telepresence, time distortion, and frequency of social media use. This study highlights the idea that overall flow can uniquely affect social media users in a flow experience, and it presents interesting results about behavioral intentions during social media use. Theoretical and practical implications of these findings are discussed.

1. Introduction

Social media platforms such as Facebook, Twitter, Google+, or LinkedIn have become an important part of the social and professional lives of millions of people. They offer opportunities to network and experience marketing in new channels [1]. In September 2015, Facebook had 1007 million daily active users [2]. In Europe alone, there were 282 million active Facebook accounts [2]. On average, users in the United States accessed social media for approximately 2.7 h per day [3].

The competition to engage and excite social media users is fierce. Therefore, social media service providers must understand the factors that attract visitors to a site and the key behavioral outcomes of this compelling experience. The germane questions for social media service providers are as follows: (1) How can a competitive advantage be created? and (2) How can social networks most effectively manage members' perceptions? Flow – an intrinsically optimal state during which an individual is intensely engaged in an activity to the exclusion of all other thoughts – has been established as a critical determinant of online experiences such as web browsing and shopping [4]. Flow can occur while carrying out virtually any daily activity (e.g., reading, talking on the telephone, etc.) [5]. Millennials spend 17 h on average per day on social media. The Y and Z generations use mobile devices to comparison-shop, read product reviews, and purchase products [6]. This would lead us to believe that flow may be an essential aspect of web-based business models [7]. An investigation of the role of psychological states, such as the experience of flow [8,9], may provide answers to these questions.

The present research investigates the role of flow in social media usage. Our proposition is that social media use produces a compelling emotional and cognitive experience that people appreciate and attempt to replicate. Following Hoffman and Novak [4], we argue that the objective of social media providers should be to facilitate "flow opportunities" in which consumers are completely engaged during social media use.

Besides the flow concept, we analyze one of its key constructs, telepresence. Telepresence is a perceptual illusion of non-mediation [10]. It is a sense of "being there" in the phenomenal environment created by a medium [11]. In telepresence, the user considers the objects in the mediated environment as unmediated and reacts directly to the items as if they are physically present objects [12]. Telepresence is of interest in our context because of the inherent realistic nature of the social media environment that makes it unique from other environments.

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Therefore, the objective of this study is to determine whether the flow experience enhances behavioral outcomes associated with social media use and to analyze the role of telepresence in achieving a state of flow while browsing social media.

We build on a priori findings by practitioners and academics who have recognized telepresence and flow as key attributes of the user experience with new media [13–16]. This research involves the evaluation of the relationships among (1) telepresence, (2) flow experience, and (3) user behavior during social media use. A model that hypothesizes these relationships was tested with primary data collected through an online survey.

This research aids site developers and marketers in understanding users' perceptions of the social media experience. In addition, the results of this study can help social media managers develop strategies that engage users and enhance the total online experience. Outcomes may include extended time on the site, increased site visits, and increased site activity.

In this paper, we begin by describing the concepts of social media, flow, and telepresence. Next, we present our research model and provide supporting literature to specify a range of testable hypotheses involving the relationship of model constructs. We present the methodology, discuss the results, and provide theoretical/managerial implications. Finally, we conclude with a description of the research limitations and suggestions for future research.

2. Overview of conceptual framework

Social media has been defined as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content" [17,61][17,p. 61]. Social media includes networks (e.g., Facebook), wikis (e.g., Wikipedia), multimedia sharing sites (e.g., YouTube), bookmarking sites (e.g., Del.icio.us), virtual worlds (e.g., Second Life), and rating sites (e.g., Yelp) [18]. It is an important source of information as it gives users immediate and easy access to data. Beyond simply uploading pictures and posting statuses, social media gives users access to thought leaders (e.g., LinkedIn), employment opportunities (e.g., Viadeo), and fosters long-distance relationships (Facebook). Through technology and social media channels, users have constant access to communities and networks. Given its collaborative and communal characteristics, social media has the potential to create a sense of immersion, control, and instant feedback making it open to flow experiences [4,19].

According to Csikszentmihalyi [8], flow is a psychological state characterized as an intrinsically enjoyable optimal experience. It results in intense engagement, distorted sense of time, loss of self-consciousness, and heightened motivation. It is "a psychological state in which the person feels simultaneously cognitively efficient, motivated, and happy" [20,p. 277]. In this state, people are fully absorbed in what they are doing. Time may seem to stand still while one is engaged in a consumption event [21]. The user is intrinsically motivated to repeat an activity continually [8,9,22]. Flow is a continuous variable with different levels, ranging from an absence of flow to an intense state of flow [22].

Flow is experienced in a variety of activities such as playing sports, reading a book, or watching a movie. In activities within a computer-mediated environment, one can experience online flow. Hoffman and Novak [4] and Novak et al. [23] adapted Csikszentmihalyi's theory of flow to cover the use of computer-mediated environments. Hoffman and Novak [24] argue that online flow can be experienced when one is completely immersed in an online activity. Flow represents computer users' affective responses to computer usage, characterizing playfulness, and exploration as defining characteristics of human–computer interactions [25]. Flow has been proposed as the central process in a user's web navigation [23,26,27], online gaming [28], software use [25], and e-shopping [29]. The focus of the present study is on the assessment of flow as it relates to social media use.

Csikszentmihalyi [9,53][9,p. 53] outlines the main aspects of flow. Flow occurs when tasks involve a balanced amount of challenge and skill; we are able to concentrate on the task; the task undertaken has clear goals; and the task provides immediate feedback. This usually enhances our concentration on the task. When in flow, involvement in the activity is deep but effortless; enjoyable experiences allow people to exercise a sense of control over their actions; concern for the self disappears; and finally, the sense of the duration of time is distorted. The mixture of all these elements leads to a sense of deep enjoyment.

The dimensions, antecedents, and consequences of flow have been further theorized since Csikszentmihalyi's seminal work. However, most studies inconsistently assess these eight factors. Earlier studies in human–computer interaction have adopted overlapped conceptualizations of major constructs related to flow experience often with different terminology. The literature review of Siekpe [30], Hoffman and Novak [24], and more recently Mahnke et al. [31] reveal that the concept is still in "conceptual identity crisis" due to the multifaceted and broad set of related constructs. For example, Trevino and Webster [32] propose a causal model using four dimensions to describe flow: control, attention focus, curiosity, and intrinsic interest. Webster et al. [33] empirically distinguished intrinsic interest and curiosity. They also recommended a third dimension representing a combination of intrinsic interest and curiosity. Ghani and Deshpande [34] argue that the two key characteristics of flow are total concentration in an activity and the enjoyment one derives from an activity. Agarwal and Karahanna [35] measure flow with five constructs: curiosity, control, temporal dissociation, focused immersion, and heightened enjoyment. Koufaris [29] conceptualizes flow as comprised of intrinsic enjoyment, perceived control, and concentration/attention focus.

In this research, the flow concept is operationalized with five dimensions: concentration, enjoyment, control, challenge, and curiosity. We estimate that these dimensions are directly related to social media and sufficiently parsimonious to capture the entire experience of flow in this context. These dimensions are commonly examined in computer–human interaction research as key components of flow and have received consistent support in the information systems (IS) literature [31,30]. These five factors also represent the absorption and fluency dimensions advocated by Mahnke et al. [31]. Concentration and perceived challenges depict the absorption dimension. Perceived control illustrates the fluency dimension.

To be in flow, an individual's attention must focus on the activity. Concentration can be defined as the extent to which the individual's attention is completely absorbed in the activity to the degree that nothing else matters [9]. Concentration has been a significant component of flow [29]. Moneta and Csikszentmihalyi [20] found that an imbalance between challenge and skill can affect concentration in certain contexts. Pfister's [36] research supports the claim that when individual skill exceeds task challenge, positive affect and concentration occur. Users of social media, such as Facebook, often view a dashboard where interactive indicators provide a myriad of information. That information can include notification of who is online, posts made by the user, comments by others on the user's posts, and likes/dislikes. This variety of activity, sometimes on a screen as small as 640 pixels (which is the average smartphone's screen resolution) requires deep concentration. The user experiences enjoyment and disappointment as a result. Flow should facilitate social media