How do people compare themselves with others on social network sites?: The case of Facebook

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ABSTRACT

The social comparison theory and its subsequent studies say that comparing with others can influence an individual in several ways (e.g., evaluation of oneself, influence on self-esteem/self-confidence, and efficient decision making) and people compare with others when they are confronted with information of others. With the popularity of social network sites, many people acquire or are exposed to information of others on social network sites, which implies that people are likely to frequently engage in social comparison behavior on social network sites. The present paper examines social comparison behavior on social network sites (especially on Facebook) using a college students sample. We find that an individual's personality characteristics (i.e., social comparison orientation, self-esteem, self-uncertainty, and self-consciousness) influence the person's social comparison frequency on Facebook. A positive relationship between Facebook use intensity and social comparison frequency on Facebook is found. In addition, we find a positive association between social comparison frequency on Facebook and the frequency of having a negative feeling from comparison. Other findings are also reported in the paper.

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1. Introduction

People often compare themselves with others (e.g., friends, parents, teachers, celebrities, and so on). Comparing with others can influence an individual in several ways. According to the social comparison theory (Festinger, 1954) and its subsequent studies, through comparison with others (i.e., social comparison), people evaluate their opinions and abilities (Festinger, 1954), emotions (Schachter, 1959), and personality traits (Thornton & Arrowood, 1966); and people also try to enhance their self-esteem and self-concept by comparing with others (Gibbons & Buunk, 1999). Furthermore, people can feel positively or negatively about themselves through comparison with others. How a person feels about herself through social comparison varies depending on several factors, such as the person's personal traits and who the person compares with (Buunk, Collins, Taylor, VanYperen, & Dakof, 1990; Buunk & Gibbons, 2006).

People compare with others when they acquire information of others (Mussweiler, Ruter, & Epstude, 2006). In this regard, Mussweiler et al. (2006) mentioned, "Whenever people are confronted with information about how others are, what others can and cannot do, or what others have achieved and have failed to achieve, people relate this information to themselves." This implies that

social comparison takes place in our everyday lives almost all the time, because people are easily exposed to or can effortlessly obtain information of others through various routes; e.g., by directly interacting with others and by consuming media.

These days, one of the most commonly used means for interacting with others and acquiring information of others is the Internet. The Internet provides diverse sources from which people can obtain information of others such as email, instant message, and blogs. As people spend more time online and have been able to access the Internet ubiquitously, people likely engage in social comparison behavior more frequently on the Web than before.

On the Internet, social network sites (e.g., Facebook and Twitter) are one of the places where many people visit to interact with others and to see what and how others do. Thus, it is likely that people frequently compare themselves with others on social network sites, which also indicates that social network sites are an important venue where people can evaluate themselves (e.g., opinions, abilities, and emotions), develop their own identities, and where people also can feel happy/unhappy or satisfied/dissatisfied with themselves from comparison with others.

Even though many people likely engage in social comparison behavior on social network sites and the influence of social comparison on an individual can be significant, little research has examined social comparison behavior on social network sites. Accordingly, in this study, we examine social comparison behavior on social network sites, especially Facebook, based on the social

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comparison theory (Festinger, 1954) and its subsequent studies. Specifically, we examine the effects of an individual's psychological characteristics (i.e., social comparison inclination – the extent to which individuals pay attention to and base their own behavior on the way others behave, self-esteem, private/public-consciousness, and self-uncertainty) and Facebook use (i.e., Facebook use intensity and number of friends) on how often the person compares herself with others on Facebook and how the person feels from the comparison.

For this, we use a college student sample. A sample of college students has been chosen because students tend to more frequently engage in social comparison behavior than adults (Stipek & Tannatt, 1984), students are susceptible to peer influence (Garnier & Stein, 2002; Maxwell, 2002), and Facebook use among college students is pervasive and conspicuous (Ellison, Steinfield, & Lampe, 2007), which makes it easy to examine their behavior on Facebook.

This paper is organized as follows. In Section 2, prior literature on Facebook and social comparison is reviewed and hypotheses are developed. Section 3 explains methods and measurements. In Section 4, the results are reported. Section 5 discusses the results and concludes the paper.

2. Literature review

2.1. Prior studies about Facebook use

Facebook is one of the most popular online social network sites among college students. According to survey data in 2008, approximately 90% of undergraduates use Facebook (Steinfield, Ellison, & Lampe, 2008). Accordingly, Facebook is an important place for social life among college students (boyd, 2007). Most college students use Facebook everyday to interact with their friends and have a large number of friends on Facebook. According to a study by Pempek, Yermolayeva, and Calvert (2009), the average number of friends that a college student has on Facebook is 358. But their activities on Facebook are somewhat passive. That is, most of college students on Facebook spend more time observing (or reading) what others think and do rather than creating content (Pempek et al., 2009). As mentioned before, people tend to compare with others when they are confronted with information about how others are and what others have done. Thus, the frequent Facebook use among college students implies that they are likely to frequently engage in social comparison on Facebook.

Despite the possible frequent social comparison behavior of college students on Facebook, little research has investigated social comparison behavior of college students on Facebook. Instead, most studies about Facebook use have focused on other topics – e.g., social capital (Ellison et al., 2007; Steinfield et al., 2008), social well-being (Burke, Marlow, & Lento, 2010), identity (Zhao, Grasmuck, & Martin, 2008), self-presentation (Mehdizadeh, 2010; Strano, 2008), privacy issues (Tufekci, 2008), and the relationship between personality and Facebook use (Ross et al., 2009, Correa et al., 2010).

As will be reviewed in the following section in details, previous studies found that an individual's psychological characteristics (e.g., self-esteem, depression, and self-consciousness) exert an important influence on the person's social comparison behavior. Thus, if the general psychological characteristics of Facebook users were known, then it would be possible to infer the direction of the relationship between an individual's psychological characteristics and her Facebook use. However, little research has examined the relationship between a person's psychological characteristics (e.g., self-esteem, depression, and self-consciousness) and her Facebook use. There are some studies that have examined the

relationship between a person's personality, measured by the Five Factor Model,[1] and the person's Facebook use (e.g., Amichai-Hamburger & Vinitzky, 2010; Bachrach, Kosinski, Graepel, Kohli, & Stillwell, 2012; Ross et al., 2009), but they did not consider other psychological traits such as self-esteem and depression. Even though Ellison et al. (2007) and Steinfield et al. (2008) used the construct of self-esteem in their studies, they did not explicitly examined the relationship between self-esteem and Facebook use, rather they focused on self-esteem as a moderator between Facebook use and social capital.

Because few prior studies have examined the relationship between Facebook use and social comparison behavior, and the relationship between Facebook use and psychological traits (e.g., self-esteem, depression, and self-consciousness), we do not propose a specific hypothesis, rather we develop the following research question:

RQ1: How does a person's Facebook use relate to the person's social comparison frequency on Facebook?
More specifically, we ask:
RQ1-1: How does a person's Facebook use intensity relate to the person's social comparison frequency on Facebook?
RQ1-2: How does the number of Facebook friends of a person relate to the person's social comparison frequency on Facebook?

2.2. Social comparison theory

Despite the pervasive comparison behavior of human beings, the term 'social comparison' has been used only after Festinger's work in 1954. Festinger posited that a person engages in social comparison behavior (i.e., behavior of comparing with others) due to her desire to evaluate her opinions and abilities, especially when there exist no objective standards for self-evaluation. The Festinger's social comparison theory has evolved into several different directions.

One strand of social comparison behavior research on which scholars have focused is about why people compare themselves with others. According to the studies in this strand, people compare themselves with others to evaluate their emotions (Schachter, 1959) and their personality traits (Thornton & Arrowood, 1966) as well as their opinions and abilities. People also compare themselves with others to enhance their self-esteem and self-concept (Gibbons & Buunk, 1999). In addition, people often engage in comparison behavior to make judgments and decisions more efficiently (Mussweiler et al., 2006).

Another branch of the social comparison research is about individual differences that correlate to different social comparison behaviors. Previous studies have identified several important individual differences that induce different social comparison behaviors. One important individual difference is the level of inclination to compare with others. Gibbons and Buunk (1999) developed a scale to assess social comparison orientation (SCO), which measures an individual's inclination to social comparison. In their study, SCO is defined as the extent to which individuals pay attention to and base their own behavior on the way others behave. According to the authors, an individual who has a high SCO score tends to be more inclined toward social comparison than an individual with a low SCO score. The positive relationship between a person's SCO level and the person's social comparison frequency has been confirmed by several studies (e.g., Buunk, Zurriaga, Gonzalez-Roma, & Subirats, 2003; Buunk, Zurriaga,

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[1] The Five-Factor Model (FFM) separates the human personality into five different traits – neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. See Costa and MacCrae (1992) for more details.