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Is the social use of media for seeking connectedness or for avoiding social isolation? Mechanisms underlying media use and subjective well-being

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ABSTRACT

This study provides a resolution for two contrasting hypotheses around media use, the augmentation and the displacement hypotheses. To do this, we conducted an online survey of 300 Korean adults examining the relationships among the social use of media, face-to-face communication, social isolation, connectedness, and subjective well-being. The results indicate that connectedness, not avoiding social isolation, mediates the effects of the social use of media on subjective well-being. On the other hand, both connectedness and avoiding social isolation mediate the effects of face-to-face communication on subjective well-being. These results suggest that the social use of media is limited to seeking connectedness to others, whereas face-to-face communication can facilitate avoiding social isolation as well as seeking connectedness, which can explain why the two contrasting hypothesis, the augmentation and the displacement hypotheses, can be right. In the domain of seeking connectedness, media can augment face-to-face communication. On the other hand, in the domain of avoiding social isolation, media may displace face-to-face communication.

1. Introduction

Given the saturated media environment, media use has become an important part of people's everyday lives. In the domain of media-mediated communication, such as connecting other individuals via media asynchronously (e.g., email, or social networking sites) or synchronously (chatting, texting, or talking on the phone), people make constant use of media to be connected to others, and it is clear that increased connections through media have played a critical role in improving the overall efficiency of diverse societies worldwide. The augmentation hypothesis posits that individuals often use media to develop social relations despite the limited bandwidth of media (Walther, 1996), and media use stimulates users' existing social relations to be enhanced (Valkenburg & Peter, 2007, 2009).

In the domain of media–human interaction, people tend to respond to fictional figures in media like television or films in a way similar to that for responding to real humans (Horton & Wohl, 1956; Klimmt, Hartmann, & Schramm, 2006). When a medium such as a computer provides a social feedback even without anthropomorphic figures, users are likely treat the medium as if it is a social actor (Reeves & Nass, 1996). Using media that embed social cues such as television provides the actual sense of belonging so that consuming media can serve as surrogacy of having social relations (Derrick, Gabriel, & Hugenberg, 2009).

Despite the positive functions of media, however, the social use of media does not always benefit individual users. Lonely individuals who find media to mitigate social isolation often end up aggravating their social isolation (Kim, LaRose, & Peng, 2009). From the perspective of the displacement hypothesis, media use may consume a substantial amount of time sacrificing other valuable activities such as face-to-face communication without providing appropriate functions for facilitating social relations, thereby limiting actual social relations (Kraut et al., 1998; Nie, 2001; Putnam, 1995). Such displacement often leads users to have negative sense of subjective well-being (Stepanikova, Nie, & He, 2010).

Reflecting these contrasting perspectives of the augmentation and the displacement hypotheses, meta-analyses of media use and its effects on well-being support neither the displacement hypothesis nor the augmentation hypothesis. Huang (2010) reported very small correlation ($r = -0.04$) between various Internet use and well-being from 43 independent correlations. Similarly, Shklovski, Kiesler, and Kraut (2006) provided a meta-analysis that Internet use can either facilitate or hinder interactions with friends. Thus, both contrasting hypotheses, augmentation and displacement, have been neither confirmed nor disconfirmed.

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The purpose of this study is to provide possible underlying mechanisms for how media use can both augments and displaces valuable social activities such as face-to-face communication, and can both enhances and reduces well-being. To this end, this study will distinguish affect system and human relations into two distinctive systems (approaching rewards versus avoiding threats), and then will argue and provide evidence that media-mediated communication and interaction with media can function mainly for approaching rewards but not for avoiding threats, whereas face-to-face communication can function for both approaching rewards and avoiding threats. In terms of approaching rewards, media use can augment face-to-face communication improving well-being, whereas, in terms of avoiding threats, media use can displace face-to-face communication decreasing well-being.

2. Theoretical background

2.1. Well-being and media

Humans live. Living is not toward mere existence but toward a well-lived life (Keyes & Haidt, 2003). In other words, lives of humans are not just for being but for well-being. Well-being, often referred to as happiness, is not merely some hedonism that seeks short-term pleasure but a superordinate concept that captures both short- and long-term pleasure. Therefore, well-being consists of the cognitive assessment of overall life satisfaction and the affective reflection of happiness represented by frequent experiences with positive affect and infrequent experiences with negative affect (Diener, Suh, Lucas, & Smith, 1999). Because the threefold structure of well-being (i.e., life satisfaction, positive affect, and negative affect) represents an individual's subjective evaluation of his or her life, well-being has been referred to as subjective well-being.

Many studies have examined the factors that contribute to subjective well-being, including personality traits and cultures (Diener, Oishi, & Lucas, 2003), and found that the core contributor is meaning in life (Diener, Sapyta, & Suh, 1998), which refers to positive functions for actualizing human potential in the domain of private and social lives and can be fulfilled by gratifying fundamental human needs such as autonomy, competence, and relatedness (Deci & Ryan, 2000). Although there is an ongoing debate over whether subjective well-being and meaning in life are distinct constructs (Ryan & Deci, 2001), a reasonable approach to addressing this disagreement is that the latter can be understood as the formulation of well-being or objective means toward well-being, whereas the former is a global indicator of well-being as a function of meaning in life (Diener et al., 1998; Ryan & Deci, 2001).

There is no consensus on what constitutes the core contributors for well-being. Deci and Ryan (2000) proposed three fundamental human needs (i.e., autonomy, competence, and relatedness), and Ryff and Keyes (1995) suggested six components of well-being: autonomy, environmental mastery, personal growth, positive relatedness to others, a sense of purpose in life, and self-acceptance. Among various components of well-being, the present study focuses on relatedness because the purpose of this study is to examine the social aspects of media use. In this regard, we propose the following research question:

Research Question 1 (RQ1): How is media use related to subjective well-being?

2.2. Two distinctive systems of affect and motivation

Subjective well-being composed of not a unitary, but two separate feelings: positive and negative affect (Diener & Emmons, 1984), although, often, positivity is considered as the antithesis of negativity; pleasure is thought to be as a lack of pain, reward is treated as an opposite of punishment, and approach motivation is presumed to the reversal of avoidance motivation. However, deeper understanding human behaviors at the psychological and neural levels suggests that positivity and negativity are not placed along a single bipolar continuum. Positivity and negativity are based on separate biological systems, and constitute distinguishable affective, cognitive, and motivational/behavioral systems.

Biologically, positivity and negativity are the functions of two distinctive neural systems. Evaluating rewarding stimuli is involved in the mesolimbic dopamine pathway projecting from the ventral tegmental area to the nucleus accumbens (Berridge & Robinson, 2003). On the other hand, regulating negativity in involved in the serotonergic system projecting from raphe nuclei to all divisions of the brain including the limbic system (Hornung, 2003). Indeed, increasing dopamine, a neurotransmitter that promote positivity, in the brain by administering dopamine receptor agonist such as Bromocriptine induced positivity but did not influence negativity (Depue, Luciana, Arbisi, Collins, & Leon, 1994). Conversely, increasing serotonin, a neurotransmitter that regulates negativity, in the brain by administering selective serotonin re-uptake inhibitor (SSRI) was related to reduction in negativity without changing positivity (Knutson et al., 1998).

From an evolutionary perspective, humans have to take suitable actions or means to solve problems that they have to deal with repeatedly. Through solving recurrent problems in different domains, humans have evolved discrete behavioral mechanisms (Tooby & Cosmides, 2005). Evolutionary psychologists proposed several key mechanisms such as alliance formation, self-protection, enhancing status, finding mates, maintaining long-term mating bonds, and offspring/kin care (Kenrick & Shiota, 2008). In each of these domain of social life, there are both things to approach (i.e., opportunities) and things to avoid (i.e., threats). For example, in the domain of self-protection, shelters are opportunity to approach and predators are threats to avoid. In the domain of finding mates, high-fitness potential mates are opportunity to approach and same-sex competitors are threats to avoid (Kenrick & Shiota, 2008).

The evaluative space model (ESM) provides integrative accounts for two distinctive systems. The evaluative space model, originally proposed in the domain of attitudes (Cacioppo & Berntson, 1994; Cacioppo, Gardner, & Berntson, 1997), has been developed into a general model of affect and motivation (Cacioppo, Gardner, & Berntson, 1999). The core of the ESM is that positivity and negativity are distinctive such that positivity and negativity do not fall along a single bipolar continuum but in a separate bivariate space. More specifically, the behavioral manifestation of approaching or avoiding is the output of evaluative processes combining two separate bivariate affective systems: one dealing with threatening or aversive (i.e., negative) information and the other, safe or appetitive (i.e., positive) information. The evaluation of either aversive or appetitive information can sometimes occur in parallel. Depending on circumstances, positive and negative affective processes are activated in the following three ways: reciprocally, nonreciprocally, or independently. As such, some antecedents can have differential effects on positive and negative evaluative processes, and the consequences of activating positivity and negativity are not always antithetical (Cacioppo & Berntson, 1994; Cacioppo et al., 1999).

More recently, Sheldon and Gunz (2009) found that the negatively and positively worded subscales of need satisfaction differentially related to the motivation. Only negatively worded subscales measured for the sense of disconnection, not positively worded subscales, predicted to the motivation to make new friends. Extending this finding, Sheldon, Abad, and Hinsch (2011) proposed the two-process view of media use that the sense of