Article



# Companion Versus Companion: Examining Seeking Social Companionship or Social Companison as Characteristics That Differentiate Happy and Unhappy People

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Jinhyung Kim<sup>1</sup>, Emily K. Hong<sup>2</sup>, Incheol Choi<sup>3</sup>, and Joshua A. Hicks<sup>1</sup>

#### **Abstract**

Which friend do you want to spend time with—a happy friend who performs better than you or an unhappy friend who performs worse than you? The present research demonstrates that in such conflicting situations, when the desires for companionship and comparison are pitted against each other, one's level of happiness plays an important role in one's choice. Using hypothetical scenarios, we found that compared with unhappy people, happy people expected that spending time with a happy, superior friend would be more pleasant than spending time with an unhappy, inferior friend (Studies IB through 2) and were more willing to socialize with a happy, superior friend than with an unhappy, inferior friend (Studies IB through 2). Moreover, this pattern was not explained by self-esteem (Study 2) or the similarity-attraction hypothesis (Study 3). The present findings suggest that happy people place more value on companionship than on comparison.

#### **Keywords**

social companionship, social comparison, happy individuals, hedonic judgment

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Whoever is happy will make others happy too.

-Mark Twain

Comparison is the thief of joy.

-Theodore Roosevelt

Humans are one of the most social of animals. Compared with many other species, humans' particularly high ratio of brain to body weight reflects the complexity of our social lives. Indeed, we live in social groups that vary in size and type, ranging from dyadic interactions to colonies comprising millions of individuals. To properly cope with these socially demanding circumstances, humans have evolved a social brain—the complex network of brain regions that are primarily involved in social interaction (Brothers, 1990; Dunbar & Shultz, 2007). Given the social nature of human psychology, it is not surprising that we are constantly and considerably influenced by those with whom we interact (Christakis & Fowler, 2009). Our happiness is not exempt from being susceptible to social influences. As Mark Twain and Theodore Roosevelt attest, two of the primary mechanisms that affect our happiness are social companionship and social comparison. For instance, others can make us happy by offering social companionship or unhappy by offering (upward) social comparisons. The present research aimed to examine the traits of individuals who value companions over comparisons, and vice versa. Specifically, we argue that seeking companionship over comparison is a characteristic of happy individuals, whereas the opposite is a characteristic of unhappy individuals.

## **Companion Versus Comparison**

Others serve the function of social companion by providing psychological resources such as social support and relatedness. Receiving these resources delivers a range of positive consequences for recipients' well-being, including reduced

#### **Corresponding Author:**

Jinhyung Kim, Department of Psychology, Texas A&M University, College Station, TX 77843, USA.
Email: jhkim82@tamu.edu

<sup>&</sup>lt;sup>1</sup>Texas A&M University, College Station, USA

<sup>&</sup>lt;sup>2</sup>Queen's University, Kingston, Ontario, Canada

<sup>&</sup>lt;sup>3</sup>Seoul National University, South Korea

stress (Cohen & Wills, 1985; Kennedy, Kiecolt-Glaser, & Glaser, 1990), better adjustment to adverse life events (Thoits, 1986; Wethington & Kessler, 1986), enhanced physical health (Broadhead et al., 1983; Seeman, 1996; see Wallston, Alagna, DeVellis, & DeVellis, 1983, for a review), and a lower mortality rate (Berkman & Syme, 1979; Blazer, 1982; Mazzella et al., 2010). In addition, people are most likely to feel happy when companionship is provided through various social relations (Baldassare, Rosenfield, & Rook, 1984) and activities (Killingsworth & Gilbert, 2010). Thus, socializing with others can enrich our well-being through social companionship.

However, social interactions may not always increase our happiness, particularly when others function as sources of upward social comparison. Generally, associating with others who are superior to us is an unpleasant experience. Prior research has demonstrated that upward social comparisons lead to negative self-evaluation (Brickman & Janoff-Bulman, 1977; Wheeler & Miyake, 1992) and to negative emotions such as anger (Crosby, 1976; Folger, 1987) and depression (Ahrens & Alloy, 1997; Swallow & Kuiper, 1992). In contrast, social comparisons with those who are inferior to us often entail positive feelings. When downward social comparisons are engaged, people experience self-enhancement (Brickman & Janoff-Bulman, 1977; Gibbons & Gerrard, 1989; Wills, 1981) and positive emotions, such as pride (Major, Testa, & Bylsma, 1991; Tesser, 1991) and pleasure (Brigham, Kelso, Jackson, & Smith, 1997). Thus, social comparison can make us happy or miserable, depending on its direction (Diener, 1984; Gibbons, 1986; Tesser, Millar, & Moore, 1988).

In short, the presence of others can critically affect our happiness by providing either social companionship or social comparison. Hence, people must be strategically wise so that they use companionship or comparison in the best possible way to maintain or boost their happiness. For instance, most people prefer to be around others who provide social companionship and favorable social comparison rather than those who lack social companionship and offer unfavorable social comparison. However, what happens if social companionship and social comparison are pitted against each other? That is, how would you react to someone who provides great social support but is more competent than you, as opposed to someone who is not socially resourceful yet is relatively less talented and therefore no threat to your ego? Would you prefer enjoying a sense of companionship at the risk of feeling inferior or a sense of superiority at the risk of feeling little or no companionship?

We believe it is important to address the above question for at least two reasons. First, although the question is hypothetical, it is common to encounter situations in which social companionship and social comparison are in opposition. According to research examining how happiness influences daily functioning and success, happy individuals are likely to perform better at work than their less happy peers (Lyubomirsky, King, & Diener, 2005). This positive correlation between happiness and performance suggests that we are disproportionately likely to interact with a happy but superior friend or with an unhappy but inferior friend. Therefore, it is very likely that an individual will face a situation in which social companionship and social comparison conflict with each other.

Second, companionship and comparison are theoretical parallel to the warmth and competence dimensions that universally appear in social perception (Fiske, Cuddy, & Glick, 2007). Companionship is associated with a sense of warmth, whereas comparison is associated with an evaluation of competence. As the combination of warmth and competence elicits various types of both emotions and behaviors (Cuddy, Fiske, & Glick, 2007), the combination of companionship and comparison may evoke distinct emotions and behaviors.

# Happy People Seek Companionship, But Unhappy People Seek Comparison

The purpose of the current research was to explore whether happiness plays a role in the search for social companionship versus social comparison. Specifically, we hypothesized that potential companionship is a more attractive possibility for happy people than for unhappy people, whereas the reverse may be true for favorable comparison. Previous research provides reasons to believe why this might be the case. For example, happy people are known to possess sociable characteristics and to enjoy healthy social relationships (Diener & Seligman, 2002; Myers, 2000). In addition, after experiencing negative events, happy people prefer having positive social events rather than positive financial events (Sul, Kim, & Choi, 2013) or favorable social comparison opportunities (Lyubomirsky & Ross, 1997). This evidence suggests that happy people are sensitive to whether others provide social companionship whereas less concerned about social comparison. In contrast, unhappy people are characterized by their frequent use of and heavy reliance on social comparison in self-evaluation (Lyubomirsky & Ross, 1997). For example, Lyubomirsky and Ross (1997) demonstrated that unhappy people felt better about their poor performance when their peer performed much worse, whereas this was not the case for happy people. This finding suggests that unfavorable social comparison may thwart unhappy people from approaching beneficial social companions.

A host of studies have identified various characteristics of happy and unhappy people (e.g., Abbe, Tkach, & Lyubomirsky, 2003), but relatively few studies have explored how happy and unhappy people exhibit different characteristics in social decisions, particularly the problem of having to choose between companionship and comparison. By examining whether seeking companionship or comparison is a key characteristic of happy and unhappy people, respectively, the current research may improve our understanding of the cognitive and motivational processes by which happy people

maintain and enhance their optimal levels of happiness compared with their unhappy counterparts (Lyubomirsky, 2001).

## **Present Research**

In the present research, we conducted five studies to test our hypothesis that seeking companionship versus comparison is a characteristic that distinguishes happy from unhappy people. We operationalized seeking companionship or comparison as whether a participant displayed a positive affective forecast about (Studies 1A through 2) and behavioral intention to socialize with (Studies 1B through 2) a friend who provides either social companionship but unfavorable social comparison or little social companionship but favorable social comparison. Using this operationalization, we primarily examined whether an individual's level of happiness differently predicted affective judgment and behavioral intention as a function of companionship and comparison. By doing so, we tested the hypothesis that happy people would show interest in social companionship at the risk of unfavorable social comparison, whereas this pattern would be attenuated for unhappy people. Studies 1A through 2 directly examined this hypothesis, and Study 3 tested a possible alternative explanation.

# Study I

In Studies 1A through 1C, participants were placed in a hypothetical social situation requiring them to place greater value on either companionship or comparison. That is, the social interaction could be either beneficial in terms of companionship but threatening in terms of social comparison, or vice versa. Participants were then asked to anticipate their mood after the interaction (Studies 1A through 1C) and display their willingness to socialize (Studies 1B and 1C). We predicted that happy people would expect to be in a more positive mood and/or show a stronger intention to socialize when the provision of social companionship was guaranteed, whereas unhappy people would anticipate a more positive affective state and/or express more interests in socializing when the downward social comparison was present.

## Study IA

Method. Seventy-five undergraduates (42 females) from Seoul National University (in Korea) participated in this study.<sup>2</sup> They received course credit in exchange for their participation.

Participants read a hypothetical scenario in which they took a foreign language test required for an international exchange program application. In this scenario, all participants were told that their score was mediocre (60% percent out of 100%). They then received a text message from a friend who took the same test asking them to "hang out." In the *happy but superior friend* condition, the friend performed

better on that test (90%) and was described as a very happy and socially resourceful person (e.g., "Friend K has cheerful and optimistic personalities. So, people enjoy being around with friend K."). In the *unhappy but inferior friend* condition, the friend obtained a worse score (40%) than the participant and was described as a quite unhappy and socially less resourceful person (e.g., "Friend L is occasionally depressed and often cynical. So, people don't enjoy being around with friend L.").

After reading the scenario, participants rated their predicted mood after spending time with the friend by answering three questions ("How would spending time with your friend influence your mood?"; "How would your mood change while meeting with your friend?"; "How would your mood change after meeting with your friend?") on a scale ranging from 1 (*very negatively*) to 9 (*very positively*). We averaged three responses to construct an index of participants' anticipated mood (M = 4.65, SD = 1.61,  $\alpha = .84$ ).

One month prior to the laboratory study, participants' subjective well-being (SWB) was measured as an indicator of their happiness level. SWB consists of affective balance (difference between positive affect and negative affect) and cognitive satisfaction with life (Diener, 1984). For measuring affective balance, participants completed the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) where they rated the extent to which they experienced 10 positive emotions (e.g., joyful) and 10 negative emotions (e.g., nervous) at this moment on a 7-point scale ( $1 = not \ at \ all, 7 = very \ much$ ). Ratings for the positive and negative emotions were averaged to compute composite scores of positive affect (PA, M = 4.40, SD = 0.77,  $\alpha = .78$ ) and negative affect (NA, M = 3.13, SD = 0.90,  $\alpha = .83$ ), respectively. Life satisfaction was assessed using the satisfaction with life scale (SWLS, Diener, Emmons, Larsen, & Griffin, 1985), in which participants rated their agreement with five life satisfaction items (e.g., "In most ways my life is close to ideal") on a 7-point scale (1 = strongly disagree, 7= strongly agree). Their responses to the five items of the SWLS were averaged to calculate a composite score of life satisfaction (M = 4.17, SD = 1.08,  $\alpha = .83$ ). As in previous studies (e.g., Busseri & Sadava, 2011; Linley, Maltby, Wood, Osborne, & Hurling, 2009; Thrash, Elliot, Maruskin, & Cassidy, 2010), a total SWB variable was created by subtracting the standardized NA score from the sum of the standardized PA and SWLS scores (M = 0.00, SD = 2.13).

Results and brief discussion. We conducted a hierarchical linear regression to examine whether happy and unhappy people differently anticipated their moods depending on the type of friend. The mean-centered SWB score and the dummy-coded friend condition (0 = unhappy but inferior, 1 = happy but superior) were entered in the first step to represent main effects. In the second step, the product of these two terms was entered to serve as the SWB × Type of Friend interaction effect in predicting anticipated mood (Aiken & West, 1991).

Results revealed that neither main effects were significant ( $\beta = -.14$ , p = .44 for SWB;  $\beta = -.18$ , p = .43 for type of friend). Moreover, the expected interaction effect did not reach the significance level although the general pattern was in the expected direction ( $R^2$  change = .03,  $\beta$  = .34, p = .15, 95% confidence interval [CI] = [-.13, .82]).

Unfortunately, Study 1A did not find supporting evidence for our hypothesis. In Study 1B, we attempted to improve the study design by addressing a couple of issues that may have affected the findings of Study 1A. First, in the hypothetical scenario, spending a year abroad as an exchange student is an extraordinary feat for Korean students. Then, it might have been the case that social comparison information was particularly strong, weakening the proposed effect of happiness. Thus, a more mundane situation seems warranted. Study 1B used a more mundane yet important event: receiving a grade in a class. Second, it might have been a simple power issue. Thus, we recruited more participants (N = 305) in Study 1B. Finally, we also measured willingness to socialize with a friend to examine whether happy and unhappy people's seeking companionship versus comparison also differs in their behavioral intention as well as affective judgment.

# Study 1B

Method. Three hundred five Seoul National University undergraduates (157 females) participated in Study 1B. Participants received either course credit or a small payment for their participation. There was no difference found between them.

Participants were given a hypothetical scenario in which they took a final exam for a required subject and were informed that they received a grade of B. Then, they received a text message from a friend asking them to hang out. Participants in the happy but superior friend condition read that the friend received an A in the course. Those in the unhappy but inferior friend condition read that their friend's grade was a C. Descriptions of social companionship information was equal to those in Study 1A (e.g., "Friend K has cheerful and optimistic personalities."). On the completion of reading the scenario, participants rated how positive or negative they would feel if they met the friend by answering the same questions as those in Study 1A on a 7-point scale (1) = very negative, 7 = very positive). A composite score of the responses to these questions was computed to serve their anticipated mood after meeting with the friend (M = 4.38, SD= 1.26,  $\alpha$  = .87). They were also asked to rate how much they would be interested in actually socializing with the friend by answering three questions ("How much are you willing to hang out with your friend?"; "How much do you want to hang out with your friend?"; "How likely are you to go meet with your friend?") on a 7-point scale  $(1 = not \ at \ all, 7 = very)$ *much*). A composite score of these responses was produced to indicate their willingness to hang out with the friend (M =4.71, SD = 1.33,  $\alpha = .89$ ).

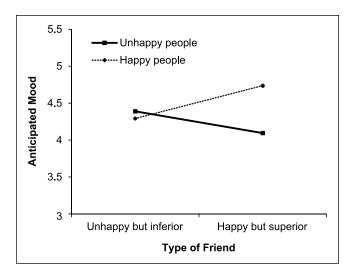


Figure 1. Happy and unhappy people's anticipated moods after hanging out with the happy but superior or the unhappy but inferior friend (Study 1B).

We then measured the happiness level of participants through the Subjective Happiness Scale (SHS, Lyubomirsky & Lepper, 1999) instead of SWB. In answering SHS, participants were given four statements and indicated their happiness (e.g., "In general, I consider myself":  $1 = not \ a \ very \ happy \ person$ ,  $7 = a \ very \ happy \ person$ ). A composite score of four responses was computed and used to indicate each participant's happiness level (M = 4.99, SD = 1.06,  $\alpha = .84$ ).

Results and brief discussion. First, we conducted a hierarchical linear regression predicting the anticipated mood. This was the identical regression to one used in Study 1A except that SWB was replaced with SHS. The analysis revealed that the main effects were not significant ( $R^2$  change = .012, p = .16) with both SHS ( $\beta = -.04$ , p = .63) and type of friend ( $\beta = .06$ , p = .60) being non-significant predictors. Importantly, the SHS × Type of Friend interaction significantly predicted the anticipated mood ( $R^2$  change = .02,  $\beta$  = .29, p = .01, 95% CI = [.07, .52]). As shown in Figure 1, the interaction pattern demonstrated that self-rated happy people (+1 SD from the mean on the SHS) reported that their mood would be more positive with a happy but superior friend than with an unhappy but inferior friend ( $\beta = .35$ , p = .03, 95% CI = [.04, .67]). However, somewhat unexpectedly, self-rated unhappy people (-1 SD from the mean on the SHS) did not show the significant difference in the anticipated mood between the two types of friends ( $\beta = -.23$ , p = .15, 95% CI = [-.55, .08]). This indicates that the unhappy participants did not expect a more positive mood with the unhappy but inferior friend than with the happy but superior friend.

Next, we ran the same regression analysis predicting the willingness to socialize with the friend to examine whether the proposed effect would hold for behavioral intention as well as affective judgment. Results found that there was a

significant main effect of type of friend ( $\beta = -.32$ , p = .005, 95% CI = [-.55, -.10]), suggesting that participants were less willing to socialize with a happy but superior friend than an unhappy but inferior friend. However, SHS ( $\beta = -.08$ , p = .31) and the interaction ( $\beta = .14$ , p = .21, 95% CI = [-.08, .37]) did not significantly predict the willingness to hang out.

Study 1B provides initial evidence that social companionship and social comparison are differently valued between happy and unhappy people. In the anticipated mood, happy people were less sensitive to the relative standing of their grade. Instead, they were largely affected by whether the friend was emotionally resourceful as a desirable social companion. However, unhappy people showed no difference in their anticipated mood regardless of the types of friends they were to socialize, suggesting that unhappy people's affective judgment may have been similarly affected by both social comparison and social companionship.

In regard to the behavioral intention, we did not find supporting evidence for our hypothesis that happy and unhappy people would differently seek social companionship and comparison. This is somewhat puzzling because happy and unhappy people expected emotional benefits from two types of friends in a different manner. One possibility for this finding is that people, regardless of their happiness levels, find it difficult to decline socializing offers, especially when they are the first to be contacted. If this was the case, we would expect to find supporting evidence for our hypothesis regarding behavioral intention when people have a choice to ask socializing first. In Study 1C, willingness to actively ask for socializing, rather than passively accept an offer, was measured as a behavioral intention to address this possibility.

## Study IC

Method. Ninety-three undergraduates (48 females) from Seoul National University participated in this study. They received financial compensation for their participation.

Participants read an adapted version of a foreign language test scenario that was used in Study 1A. In this scenario, they finished taking the test and thought about spending time with a friend who took the same test. They then received a text message from that friend whom they just thought about. The friend informed them that the score had been posted, and they found out that their score was 60 out of 100. In the happy but superior friend condition, the friend performed better on that test (90). In the unhappy but inferior friend condition, the friend attained a worse score (40) than the participant's. Social companionship information was described in the same manner as in Studies 1A and 1B (e.g., "Friend L is occasionally depressed and often cynical.").

After reading the scenario, participants answered the same three questions (e.g., "How would spending time with the friend influence your mood?") used in the previous studies using a 7-point scale (1 = very negatively, 7 = very positively). We averaged the three responses to construct an

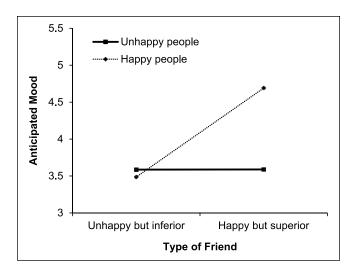


Figure 2. Happy and unhappy people's anticipated moods after hanging out with the happy but superior or the unhappy but inferior friend (Study IC).

index of the participants' anticipated mood (M = 3.84, SD = 1.47,  $\alpha = .89$ ). Participants also rated how likely they would be to ask the friend to hang out by answering three questions ("How much are you willing to ask to hang out with your friend?" "How much do you want to ask your friend to hang out?" "How likely are you to ask your friend to hang out?" on a 7-point scale ( $1 = not \ at \ all$ ,  $7 = very \ much$ ). Their responses to these questions were averaged to indicate their willingness to ask for socializing (M = 4.13, SD = 1.63,  $\alpha = .90$ ).

Prior to their reading the scenario, the participants' happiness levels were measured through the SHS (Lyubomirsky & Lepper, 1999). A composite score of their responses was used to indicate each participant's happiness level (M = 4.77, SD = 1.07,  $\alpha = .85$ ).

Results and brief discussion. We first ran the identical hierarchical linear regression analysis predicting the anticipated mood that was conducted in Study 1B. We found that the main effects were significant ( $R^2$  change = .065, p = .05), with type of friend significantly predicting anticipated mood  $(\beta = .41, p = .043, 95\% \text{ CI} = [.01, .81])$ , whereas the SHS was not a significant predictor ( $\beta = -.03$ , p = .80). This finding indicates that participants generally expected to be in a more positive mood with the happy but superior friend than with the unhappy but inferior one. However, this main effect was qualified by the significant interaction effect ( $R^2$  change = .04,  $\beta = .41$ , p = .05, 95% CI = [.00, .82]). As presented in Figure 2, the interaction pattern replicated the findings of Study 1B: Self-rated happy participants (+1 SD from the mean on the SHS) anticipated a more positive mood when spending time with the happy but superior friend than with the unhappy but inferior friend ( $\beta = .82$ , p = .005, 95% CI = [.26, 1.39]). However, for self-rated unhappy participants

(-1 SD from the mean on the SHS), their anticipated mood with the two types of friends were not significantly different ( $\beta = .002$ , p = .99). As in Study 1B, we again found that unhappy people did not differ in their anticipated mood between the two types of friends.

Next, we turned to the issue of whether the proposed effect would also hold for intention to initiate socializing with the friend. The same hierarchical linear regression analysis predicting the willingness to ask to hang out with the friend found that there were not significant main effects ( $R^2$  change = .005, p = .78), with both the SHS ( $\beta$  = -.08, p = .56) and type of friend ( $\beta$  = .04, p = .84) being non-significant predictors. Importantly, the interaction effect was marginally significant ( $R^2$  change = .03,  $\beta$  = .37, p = .086, 95% CI = [-.05, .80]), and the interaction pattern was generally consistent with the proposed hypothesis.

Study 1C replicated the findings in Study 1B with the foreign language test scenario re-adopted. Happy people expected to be in a significantly better mood after spending time with the happy but superior friend than the unhappy but inferior one. Interestingly, the previous pattern that unhappy people reported their anticipated mood to a similar degree was also replicated in Study 1C. Regarding the intention to socialize with the friend, the predicted interaction effect became stronger compared with that in Study 1B, presumably because the intention to socialize was assessed through their interests in initiating socialization rather than their willingness to accept a socializing offer. However, this pattern was still marginally significant. Moreover, there were other non-significant findings in Studies 1A and 1B. Study 1A did not show that the proposed interaction effect significantly predicted the anticipated mood, and Studies 1B did not find the significant interaction effect on willingness to hang out with the friend. Nevertheless, the overall pattern across the three studies seems to be in support with our hypothesis. To better demonstrate the overall effect, we ran a meta-analysis.

## Meta-Analysis

We conducted a random-effects meta-analysis to examine whether there was the overall pattern across Studies 1A through 1C that happy people sought social companionship over social comparison whereas it was not the case for unhappy people. We performed two analyses with each focusing on either anticipated mood (Studies 1A through 1C) or intention to socialize (Studies 1B and 1C) using the *R* statistical package metafor (Viechtbauer, 2010). Adopting the random-effects models, we examined whether the friend type condition moderated the correlation coefficients between individual's level of happiness and anticipated mood/intention to socialize (see Table 1).

For anticipated mood, the test for residual heterogeneity was not significant,  $\tau^2 = .001$  (SE = .01),  $Q_E(4) = .67$ , p = .96. Importantly, the test of moderation revealed a significant effect,  $Q_M(1) = 10.71$ , p = .001, such that the correlation

**Table 1.** Correlation Coefficients Between Individual's Level of Happiness and Anticipated Mood/Intention to Socialize Across Two Types of Friend Condition (Study I: Meta-Analysis).

Friend type	Individual's level of happiness		
	Study IA	Study IB	Study IC
Anticipated mood			
Happy but superior	.21 (n = 35)	.23** (n = 154)	.33* (n = 43)
Unhappy but inferior	14 (n = 40)	04 (n = 151)	04 (n = 50)
Intention to socialize	, ,	, ,	, ,
Happy but superior		.06 (n = 154)	.25 (n = 43)
Unhappy but inferior		09(n = 151)	09(n = 50)

<sup>\*</sup>p < .05. \*\*p < .01.

coefficient in the happy but superior friend condition was significant (r = .298, 95% CI = [.122, .455]), whereas the correlation coefficient in the unhappy but inferior friend condition was not significant (r = -.057, 95% CI = [-.184, .072]). This suggests that there was the overall pattern that happy people expected to be in a good mood with the friend providing social companionship (but not pleasant social comparison) than the one offering pleasant social comparison (but not social companionship), whereas unhappy people did not show the difference in their anticipated mood between the two types of friends.

A similar analysis was performed on intention to socialize. The test for residual heterogeneity was not significant,  $\tau^2 = .001$  (SE = .01),  $Q_E(2) = 1.24$ , p = .54. We also found a marginally significant interaction effect,  $Q_M(1) = 3.51$ , p = .061. Consistent with the anticipated mood results, the correlation coefficient in the happy but superior friend condition was significant (r = .188, 95% CI = [-.009, .372]), whereas the correlation coefficient in the unhappy but inferior friend condition was not significant (r = -.093, 95% CI = [-.229, .047]). This meta-analysis further supports our hypothesis by demonstrating that happy people displayed more interests in socializing with the friend providing social companionship than the one offering pleasant social comparison whereas unhappy people's behavioral intentions were not different regardless of the friend type.

### Discussion

Overall, Studies 1A through 1C provide converging evidence that social companionship and social comparison are differently sought and weighted depending on an individual's level of happiness. In hypothetical situations, happy people anticipated affective benefits to a greater extent when desirable social companionship was provided than when pleasurable social comparison was guaranteed. This supports our hypothesis that happy people would value social companionship over social comparison particularly when they are pitted against each other. In contrast, unhappy people expected an equal degree of affective benefits from having better companionship and a favorable comparison. This finding supports

the notion that unhappy people are affected by social comparison more than happy people are (e.g., Lyubomirsky & Ross, 1997), but also suggests that unhappy people are affected by social companionship to a similar extent. It may be the case that unhappy people do know emotional advantages of having social companionship and therefore expect to be in a neutral or slightly good mood even social companionship is presented along with an unpleasant social comparison.

We also held a similar prediction about behavioral intention to socialize with the friend such that happy people would more likely display willingness to hang out with a friend providing desirable social companionship rather than pleasant social comparison whereas unhappy people would show the opposite pattern. Although Studies 1B and 1C did not find statistically significant evidence for this prediction, the meta-analysis revealed that there was the overall pattern supporting our hypothesis. However, given the fact that the effect for intention to socialize was weaker than that for anticipated mood, it seems important to explore further supporting evidence for our hypothesis. Study 2 was designed to achieve this goal.

# Study 2

In Study 2, we aimed to replicate the findings while addressing several issues. First, we initially expected that happy people would favor companionship over comparison, whereas unhappy people would prefer the opposite. Our findings about happy people, but not those about unhappy people, were consistent with this prediction. The tendency to value companionship over comparison was reduced, but not reversed, for unhappy people. Determining whether this pattern is reproducible appears to be warranted. Second, Studies 1A through 1C recruited participants from South Korea, where the global level of well-being is relatively lower than in Western cultures (Diener & Suh, 1999). It is important to examine whether the findings of Studies 1A through 1C are replicated in a more individualistic and happier culture. For this purpose, we recruited an American sample in Study 2. Third, we attempted to find supporting evidence for our hypothesis in happy and unhappy people's anticipated mood as well as intention to socialize. Lastly, it is possible that seeking social companionship versus social comparison reflects the level of self-esteem rather than the degree of happiness. Abundant research demonstrates that happy people often have high self-esteem, whereas unhappy people have low self-esteem (e.g., Diener & Diener, 1995). Thus, our hypothesis would be further strengthened by results demonstrating that seeking social companionship versus social comparison is not explained by self-esteem.

#### Method

Participants. A total of 122 American college students (84 males, 37 females, 1 unreported) were recruited from Amazon's Mechanical Turk platform and received US\$0.50 in

exchange for their participation. Their ages ranged from 18 to 45 years (M = 25.13, SD = 5.19). Regarding their ethnic backgrounds, participants were predominantly White (75%) and non-Asian (91%).

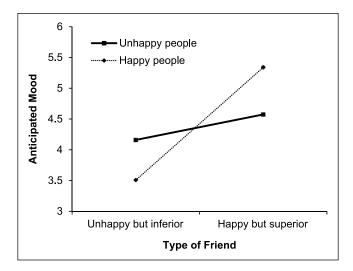
Materials and procedure. Participants were presented with a hypothetical scenario in which they took a final exam for a required subject and were informed that they received a grade of B. Then, they received a text message from a friend asking them to hang out. Participants in the happy but superior friend condition read that the friend had received an A in the course. Those in the unhappy but inferior friend condition read that the friend's grade was a C. The social companionship description was equal to that in Study 1A. Upon reading the scenario, participants rated their anticipated mood after meeting with the friend by answering the same questions as those in Study 1A  $(M = 4.38, SD = 1.33, \alpha = .91)$ on a 7-point scale (1 = very negative; 7 = very positive). They were also asked to rate their willingness to ask to hang out with the friend by answering three questions ("How much are you willing to ask to hang out with your friend?" "How much do you want to ask your friend to hang out?" and "How likely are you to ask your friend to hang out?"; M = 4.63, SD= 1.56,  $\alpha$  = .94) on a 7-point scale (1 = not at all; 7 = very much).

In Study 2, we measured participants' happiness levels based on SWB (Diener, 1984). For assessing affective balance, participants rated the extent to which they experienced six positive emotions (e.g., happy) and six negative emotions (e.g., afraid) at this moment on a 7-point scale ( $1 = not \ at \ all$ ,  $7 = very \ much$ ). Ratings for the positive and negative emotions were averaged to compute composite scores of PA ( $M = 4.26, SD = 1.21, \alpha = .88$ ) and NA ( $M = 2.21, SD = 1.23, \alpha = .89$ ), respectively. Life satisfaction was assessed through the SWLS (Diener et al., 1985), and the responses to the SWLS were averaged to form a composite score of life satisfaction ( $M = 4.51, SD = 1.39, \alpha = .91$ ). As in Study 1A, a total SWB variable was created by subtracting the standardized NA score form the sum of the standardized PA and SWLS scores (M = 0.00, SD = 2.23).

Self-esteem was assessed through the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Participants rated their agreement with the ten self-esteem items (e.g., "I feel that I have a number of good qualities") on a 4-point scale (1 = strongly disagree, 4 = strongly agree), and their responses were averaged to compute a composite score of self-esteem (M = 2.99, SD = 0.59,  $\alpha = .91$ ). In accordance with previous research, SWB and self-esteem were found to be highly correlated (r = .63, p < .001).

## Results and Discussion

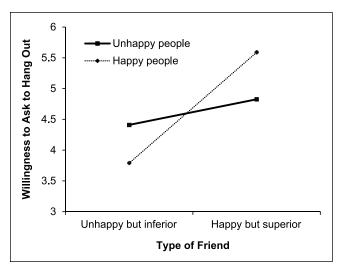
First, we performed a hierarchical linear regression to examine whether happy people anticipated a more positive mood with a happy but superior friend than with an unhappy but



**Figure 3.** Happy and unhappy people's anticipated moods after hanging out with the happy but superior or the unhappy but inferior friend (Study 2).

inferior one. The mean-centered SWB score and the dummycoded friend condition (0 = unhappy but inferior, 1 = happybut superior) were entered in the first step as main effect terms, and their product term was entered in the second step to represent the interaction effect that would predict anticipated mood. We found that the main effects were significant  $(R^2 \text{ change} = .180, p < .001)$ , with the type of friend ( $\beta = .85$ , p < .001, 95% CI = [.53, 1.16]) and SWB ( $\beta = -.25, p = .03,$ 95% CI = [-.47, -.03]) significantly predicting anticipated mood. These results indicate that participants expected to be in a better mood with the happy but superior friend than with the other friend, and, somewhat unexpectedly, the less happy participants generally anticipated a better mood than the happier participants. This tendency, however, was qualified by a significant interaction effect ( $R^2$  change = .071,  $\beta$  = .54, p = .001, 95% CI = [.22, .85]). As expected, the interaction pattern showed that the happy participants (+1 SD from the mean on SWB) expected more positive moods from the happy but superior friend than from the unhappy but inferior friend ( $\beta = 1.38$ , p < .001, 95% CI = [.94, 1.83]); however, this pattern was much attenuated for the unhappy participants  $(\beta = .31, p = .17, 95\% \text{ CI} = [-.13, .76]; -1 SD \text{ from }$ the mean on SWB; see Figure 3).

As stated earlier, one of the aims in this study concerned the alternative possibility that self-esteem, not happiness, might be an actual driving factor for the proposed effect. To test this possibility, we ran a similar hierarchical linear regression where self-esteem was additionally accounted for. Specifically, we included the mean-centered self-esteem and the product term between the mean-centered self-esteem and the dummy-coded condition as covariates in the regression equation, as suggested by Hull, Tedlie, and Lehn (1992) and Yzerbyt, Muller, and Judd (2004). We found that self-esteem and its interaction term with the condition were not significant



**Figure 4.** Happy and unhappy people's willingness to ask to hang out with the happy but superior or the unhappy but inferior friend (Study 2).

(β = .23, p = .17; β = -.26, p = .23, respectively), and more importantly, the interaction effect between SWB and the condition remained significant ( $R^2$  change = .073, β = .72, p = .001, 95% CI = [.30, 1.14]).

Next, the same hierarchical regression equation was submitted to the willingness to socialize. Similar to the results for anticipated mood, the main effects were significant ( $R^2$ change = .130, p < .001), with type of friend significantly ( $\beta$ = .72, p < .001, 95% CI = [.39, 1.05]) and SWB marginally  $(\beta = -.21, p = .078, 95\% \text{ CI} = [-.44, .02])$  predicting willingness to ask to hang out. Similarly to the anticipated mood results, participants were generally more willing to ask the happy but superior friend to hang out compared with the unhappy but inferior friend. Importantly, this tendency differed between happy and unhappy people. A significant interaction effect ( $R^2$  change = .051,  $\beta$  = .45, p = .008, 95% CI = [.12, .78]) revealed that happy people (+1 SD from the mean on SWB) demonstrated a greater intention to socialize with the happy but superior friend than with the unhappy but inferior friend ( $\beta = 1.17$ , p < .001, 95% CI = [.70, 1.64]), whereas unhappy people (-1 SD from the mean on SWB) didnot favor one over another ( $\beta = .27, p = .26, 95\%$  CI = [-.20, .73]; see Figure 4).

As for the anticipated mood, we ran the same regression analysis predicting the willingness to ask to hang out while self-esteem was controlled for. We found that self-esteem was marginally significant ( $\beta = .30$ , p = .08, 95% CI = [-.03, .64]), and its interaction with the condition was not significant ( $\beta = -.11$ , p = .61). More importantly, the interaction effect between SWB and the condition was still significant ( $R^2$  change = .050,  $\beta = .60$ , p = .008, 95% CI = [.16, 1.03]).

Study 2 successfully replicated the findings of Studies 1A through 1C and extended the results in four aspects. First, we found a consistent pattern that valuing companionship over

comparison was more pronounced for happy people than for unhappy people. However, consistent with Studies 1A through 1C, it was not the case that unhappy people were more influenced by comparison than by companionship. Second, by replicating the previous findings with an American sample, Study 2 ruled out the possibility that the proposed tendencies of happy and unhappy people are limited to Korean culture. Third, we also showed that happy and unhappy people differently weighted companionship and comparison not only in their affective forecasting but also in their socializing intention. Finally, Study 2 ruled out the alternative possibility that self-esteem, not happiness, is the actual mechanism behind our findings. In short, Studies 1A through 2 together suggest that seeking social companionship over social comparison is a distinctive characteristic of happy people.

# Study 3

Previous four studies provided consistent evidence that happy people demonstrated more hedonic expectations and socializing intentions toward the happy friend despite the friend's superior performance, but unhappy people did not. Although we believe that these results reflect happy and unhappy people's differential sensitivity toward social companionship and social comparison, an alternative explanation is possible. That is, one might question whether happy and unhappy people simply preferred those with similar dispositions. In other words, happy people favored the happy friend and unhappy people favored the unhappy friend simply because they were more attracted to the person who was similar to themselves in terms of happiness, as similarityattraction theory assumes (Byrne, 1971; Montoya & Horton, 2004). In Study 3, we tested this similarity-attraction hypothesis by placing participants in a situation in which they could socialize with a happy *and* inferior friend or with an unhappy and superior friend. If the similarity-attraction process is the actual underlying mechanism, happy people would prefer the happy friend, whereas unhappy people would prefer the unhappy friend. There would be no difference between our hypothesis and the alternative view concerning happy people because our hypothesis also predicts that happy people would choose a happy and inferior friend. However, a critical test would be an unhappy and superior friend. Our hypothesis predicts that unhappy participants would not socialize with this person because the target is superior (social comparison), whereas the alternative view predicts the opposite because the target person is similar to them (i.e., they are both unhappy). Overall, our view predicts only the main effect of target, such that happy and unhappy participants would all favor the happy and inferior friend over the unhappy and superior friend, whereas the alternative view predicts an interaction effect, such that happy participants would favor the happy and inferior friend but unhappy participants would favor the unhappy and superior friend.

### Method

*Participants.* Seventy-five Seoul National University undergraduate students participated in the study (32 females). They obtained course credit in exchange for their participation.

Materials and procedure. Participants were presented the same foreign language test scenario used in Study 1A: They imagined that their test score was 60 out of 100. Depending on their randomly assigned condition, they then received one of two text messages from a friend who had taken the same test asking them to hang out. In the happy and inferior friend condition, the friend obtained a worse score (40) on the test and was described as a happy and socially resourceful person, as depicted in previous studies. In the unhappy and superior friend condition, the friend obtained a better score (90) on the test and was described as an unhappy and less socially resourceful person, as depicted in the previous studies. On reading the scenario, participants rated their anticipated mood after the interaction with the friend by answering the three questions (M = 5.00, SD = 2.24,  $\alpha = .94$ ) used in the previous studies on a 9-point scale (1 = very negatively, 9 = very positively). They also reported their willingness to hang out with the friend by answering a single question (i.e., "How much would you like to hang out with the friend?") on a 9-point scale  $(1 = not \ at \ all, 9 = extremely; M = 5.13, SD = 2.27)$ .

Approximately 1 month prior to participating in the laboratory study, participants reported their affective balance (i.e., positive affect and negative affect) through the PANAS (Watson et al., 1988) and life satisfaction through the SWLS (Diener et al., 1985). Composite scores of PA (M=4.55, SD=0.83,  $\alpha=.84$ ), NA (M=3.18, SD=0.96,  $\alpha=.85$ ), and SWLS (M=4.37, SD=1.10,  $\alpha=.84$ ) were computed, and a total SWB score was calculated in the identical way to Study 2 (M=0.00, SD=2.28).

## Results and Discussion

We performed a hierarchical linear regression in which SWB, the friend condition, and their product term predicted anticipated mood. The mean-centered SWB score and the dummy-coded friend condition (0 = unhappy and superior, 1 = happy and inferior) were entered in the first step as the main effects, and their product term was entered in the second step as the interaction effect. There was a significant main effect ( $R^2$  change = .727, p < .001), with type of friend predicting anticipated mood ( $\beta = 1.68$ , p < .001, 95% CI = [1.44, 1.93]), but the interaction effect was not significant ( $R^2$  change = .002,  $\beta = -.08$ , p = .50). This result indicates that the happy and unhappy participants expected to be in a better mood with the happy and inferior friend than with the unhappy and superior one.

When the same hierarchical regression was submitted to willingness to hang out, the results were identical to the anticipated mood: Only the main effect of type of friend was significant ( $\beta = 1.47$ , p < .001, 95% CI = [1.16, 1.78]). The interaction effect was not significant ( $\beta = -.02$ , p = .88). This finding demonstrates that participants, regardless of their SWB, were much more willing to socialize with the happy and inferior friend than with the unhappy and superior one.

The findings of Study 3 diverge from the predictions of the similarity-attraction hypothesis. Inconsistent with this alternative explanation, when the happy friend performed worse on the test and the unhappy friend performed better on the test, the happy and unhappy participants all favored the happy friend over the unhappy one. This pattern indicates that the similarity-attraction link is not likely the underlying mechanism because the unhappy people were not attracted to the unhappy friend. Thus, the results of Study 3 ruled out the alternative possibility that happy and unhappy people merely prefer similar people without considering social companionship and social comparison.

## **General Discussion**

Psychological research continues to provide evidence that social relationships are one of the most important sources of affective well-being. In the present study, we focused on two interpersonal functions of social relationships—companionship and comparison—and examined whether each aspect is differently weighted by happy and unhappy people. Using samples of college students from two different cultural backgrounds, we found that happy people valued social companionship more than social comparison; this pattern was not obtained for unhappy people. For happy people, the availability of social companionship led to greater anticipation of a positive mood (Studies 1B through 2) and a greater willingness to make a socializing offer (meta-analysis of Studies 1A through 1C and Study 2) despite the upward social comparison. This result is consistent with our hypothesis that happy people would be particularly motivated to seek companionship and would be less concerned about comparison.

Conversely, for unhappy individuals, it seems that social comparison and social companionship were similarly weighted in their responses. Studies 1A through 2 demonstrated that unhappy people did not show a preference for either social companionship or social comparison in their affective judgment (Studies 1B through 2) and socializing decisions (meta-analysis of Studies 1A through 1C and Study 2). Although we initially predicted that unhappy people would favor comparison over companionship, the absence of a difference indicates that unhappy people may not be entirely indifferent to companionship; instead, they may actually consider both social companionship and social comparison (or neither) when these two dimensions are in opposition. This finding is interesting, given the previous research demonstrating that happy and unhappy people are sharply distinguished by their sensitivity toward social comparison (Lyubomirsky & Ross, 1997). One possibility may be that unhappy people's motivation to seek comparison declines

particularly when companionship is present simultaneously. Future research should explore the possible dynamics between companionship and comparison on unhappy people's hedonic judgment.

The present study also implies that seeking social companionship represents an important route for happy individuals to maintain and enhance their optimal level of well-being (Lyubomirsky, 2001). Given that recent network analyses have documented that residing close to happy neighbors increases our own happiness (Crossley & Langdridge, 2005; Fowler & Christakis, 2008), happy people's proclivity toward social companionship may lead to their having emotionally enriched and cognitively satisfying lives. Hence, the present research appears to suggest that happy people are hedonically wise and understand the benefits of staying connected to socially resourceful companions. They simply know better whom they should spend time with than unhappy people.

The current research also suggests that seeking social companionship versus social comparison is uniquely and importantly associated with an individual's level of happiness. Study 2 demonstrated that interests in social companionship and social comparison were differently predicted by the individual's level of happiness while self-esteem was controlled for. This finding ruled out the alternative possibility that seeking social companionship versus social comparison was not the characteristics of happy and unhappy people but of people high and low in self-esteem. In addition, Study 3 showed that the happy and unhappy participants all favored the happy friend over the unhappy people. This finding refuted the alternative account that happy and unhappy people were simply attracted to an individual similar to their own characteristics not necessarily seeking social companionship and social comparison differently. These results indicate that individual's level of happiness plays a pivotal role in seeking social companionship versus social comparison, particularly when these are pitted against each other.

It should be noted, however, that our research has multiple limitations. First, because the present studies were all correlational, it is necessary to investigate whether a causal relationship exists between happiness and seeking companionship versus comparison. For example, it would be worthwhile to conduct longitudinal studies examining whether engaging with a social companion versus social comparison at an earlier time predicts later happiness levels. Second, an empirical question remains regarding whether happy people are actually aware of the contagion effects of happiness and intentionally use social interactions as a means to manage and boost their well-being. It would be interesting to examine whether happy people consciously use such strategies to regulate their moods. Finally, we focused on chronic happiness level as a key factor in seeking companionship versus comparison. Would temporary mood states also lead to differential choices of companionship or comparison? A number of studies have demonstrated the effects of happy mood

on enacting social behaviors to maintain a positive emotional state (e.g., Carlson, Charlin, & Miller, 1988; Wegener & Petty, 1994), suggesting a possibility that experimentally induced mood may influence sensitivity toward companionship versus comparison.<sup>6</sup> Future research should address these questions to advance our understanding of how happiness is associated with the problem of companionship and comparison.

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#### **Notes**

- 1. Another analytic approach for testing our hypothesis is to examine whether the preference for a social companionship over social comparison differently predicted an individual's level of happiness. That is, would people who prefer a better social companion over a favorable social comparison report a higher level of happiness than those who show the opposite preference? We, however, used the current analytic approach because predicting a *momentary* choice between companionship and comparison from a *chronic* level of happiness appears to be logically more convincing than the reverse direction. Nevertheless, when we analyzed our data in this alternative way, the results also supported our hypothesis. On request, more details regarding these findings can be provided by the first author.
- 2. Gender did not affect the results in any of the three studies, and thus, it will not be discussed further.
- Visual stimuli of the text messages were used in all studies except for Study 1C. All the study materials including visual stimuli of the text messages and data are available on request or online at https://osf.io/d9j46/.
- 4. Although we measured the willingness to accept a socializing offer in Study 1B and willingness to make a socializing offer in Study 1B, they were treated as a similar concept reflecting the intention to socialize.
- 5. We thank an anonymous reviewer for addressing this issue.
- 6. We thank Duane Wegener for addressing this issue.

#### Supplemental Material

The online supplemental material is available at http://pspb.sage-pub.com/supplemental.

## References

- Abbe, A., Tkach, C., & Lyubomirsky, S. (2003). The art of living by dispositionally happy people. *Journal of Happiness Studies*, *4*, 385-404.
- Ahrens, A. H., & Alloy, L. B. (1997). Social comparison processes in depression. In B. P. Buunk & F. X. Gibbons (Eds.), *Health, coping, and well-being* (pp. 389-410). Mahwah, NJ: Lawrence Erlbaum.

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.

- Baldassare, M., Rosenfield, S., & Rook, K. S. (1984). The types of social relations predicting elderly well-being. *Research on Aging*, 6, 549-559.
- Berkman, L. E., & Syme, S. L. (1979). Social networks, host resistance, and mortality: A nine-year follow-up study of Alameda County residents. *American Journal of Epidemiology*, 109, 186-204
- Blazer, D. G. (1982). Social support and mortality in an elderly community population. *American Journal of Epidemiology*, 115, 684-694.
- Brickman, P., & Janoff-Bulman, R. J. (1977). Pleasure and pain in social comparison. In J. M. Suls & R. L. Miller (Eds.), Social comparison process: Theoretical and empirical perspectives (pp. 149-186). Washington, DC: Hemisphere.
- Brigham, N. L., Kelso, K. A., Jackson, M. A., & Smith, R. H. (1997). The roles of invidious comparisons and deservingness in sympathy and schadenfreude. *Basic and Applied Social Psychology*, 19, 363-380.
- Broadhead, W. E., Kaplan, B. H., James, S. A., Wagner, E. H., Schoenbach, V. J., Crimson, R., . . . Gehlbach, S. H. (1983). The epidemiologic evidence for a relationship between social support and health. *American Journal of Epidemiology*, 117, 521-537.
- Brothers, L. (1990). The social brain: A project for integrating primate behavior and neurophysiology in a new domain. *Concepts in Neuroscience*, *1*, 27-51.
- Busseri, M. A., & Sadava, S. W. (2011). A review of the tripartite structure of subjective well-being: Implications for conceptualization, operationalization, analysis, and synthesis. *Personality* and Social Psychology Review, 15, 290-314.
- Byrne, D. (1971). *The attraction paradigm*. New York, NY: Academic Press.
- Carlson, M., Charlin, V., & Miller, N. (1988). Positive mood and helping behavior: A test of six hypotheses. *Journal of Personality and Social Psychology*, 55, 211-229.
- Christakis, N. A., & Fowler, J. H. (2009). Connected: The surprising power of our social networks and how they shape our lives. New York, NY: Little, Brown.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*, 310-357.
- Crosby, F. (1976). A model of egoistical relative deprivation. *Psychological Review*, 83, 85-113.
- Crossley, A., & Langdridge, D. (2005). Perceived sources of happiness: A network analysis. *Journal of Happiness Studies*, 6, 107-135.
- Cuddy, A. J. C., Fiske, S. T., & Glick, P. (2007). The BIAS map: Behaviors from intergroup affect and stereotypes. *Journal of Personality and Social Psychology*, *92*, 631-648.
- Diener, E. (1984). Subjective well-being. Psychological Bulletin, 95, 542-575.
- Diener, E., & Diener, M. (1995). Cross-cultural correlates of life satisfaction and self-esteem. *Journal of Personality and Social Psychology*, 68, 653-663.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71-75.
- Diener, E., & Seligman, M. E. P. (2002). Very happy people. Psychological Science, 13, 81-84.

- Diener, E., & Suh, E. M. (1999). National differences in subjective well-being. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), Well-being: The foundations of hedonic psychology (pp. 434-450). New York, NY: Russell Sage.
- Dunbar, R., & Shultz, S. (2007). Evolution in the social brain. *Science*, 317, 1344-1347.
- Fiske, S. T., Cuddy, A. J. C., & Glick, P. (2007). Universal dimensions of social cognition: Warmth and competence. *Trends in Cognitive Sciences*, 11, 77-83.
- Folger, R. (1987). Reformulating the preconditions of resentment: A referent cognitions model. In J. C. Masters & W. P. Smith (Eds.), Social comparison, social justice, and relative deprivation: Theoretical, empirical, and policy perspectives (pp. 183-215). Hillsdale, NJ: Lawrence Erlbaum.
- Fowler, J. H., & Christakis, N. A. (2008). Dynamic spread of happiness in a large social network: Longitudinal analysis over 20 years in the Framingham Heart Study. *British Medical Journal*, 338, 1-13.
- Gibbons, F. X. (1986). Social comparison and depression: Company's effect on misery. *Journal of Personality and Social Psychology*, 51, 140-148.
- Gibbons, F. X., & Gerrard, M. (1989). Effects of upward and downward social comparison on mood states. *Journal of Social & Clinical Psychology*, 8, 14-31.
- Hull, J. G., Tedlie, J. C., & Lehn, D. A. (1992). Moderator variables in personality research: The problem of controlling for plausible alternatives. *Personality and Social Psychology Bulletin*, 18, 115-117.
- Kennedy, S., Kiecolt-Glaser, J. K., & Glaser, R. (1990). Social support, stress, and the immune system. Wiley series on personality processes. In B. R. Sarason, I. G. Sarason, & G. R. Pierce (Eds.), Social support: An interactional view (pp. 253-266). Oxford, UK: John Wiley.
- Killingsworth, M. A., & Gilbert, D. T. (2010). A wandering mind is an unhappy mind. Science, 330, 932.
- Linley, P. A., Maltby, J., Wood, A. M., Osborne, G., & Hurling, R. (2009). Measuring happiness: The higher order factor structure of subjective and psychological well-being measures. *Personality and Individual Differences*, 47, 878-884.
- Lyubomirsky, S. (2001). Why are some people happier than others? The role of cognitive and motivational processes in well-being. *American Psychologist*, *56*, 239-249.
- Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*, 131, 803-855.
- Lyubomirsky, S., & Lepper, H. S. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. Social Indicators Research, 46, 137-155.
- Lyubomirsky, S., & Ross, L. (1997). Hedonic consequences of social comparison: A contrast of happy and unhappy people. *Journal of Personality and Social Psychology*, 73, 1141-1157.
- Major, B., Testa, M., & Bylsma, W. H. (1991). Responses to upward and downward social comparisons: The impact of esteem-relevance and perceived control. In J. M. Suls & T. A. Wills (Eds.), *Social comparison: Contemporary theory and research* (pp. 237-260). Hillsdale, NJ: Lawrence Erlbaum.

- Mazzella, F., Cacciatore, F., Galizia, G., Della-Morte, D., Rossetti, M., Abbruzzese, R., . . . Abete, P. (2010). Social support and long-term mortality in the elderly: Role of comorbidity. *Archives of Gerontology and Geriatrics*, 51, 323-328.
- Montoya, R. M., & Horton, R. S. (2004). On the importance of cognitive evaluation as a determinant of interpersonal attraction. *Journal of Personality and Social Psychology*, 86, 696-712.
- Myers, D. G. (2000). The funds, friends, and faith of happy people. *American Psychologist*, 55, 56-67.
- Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press.
- Seeman, T. E. (1996). Social ties and health: The benefits of social integration. *Annals of Epidemiology*, 6, 442-451.
- Sul, S., Kim, J., & Choi, I. (2013). Subjective well-being and hedonic editing: How happy people maximize joint outcomes of loss and gain. *Journal of Happiness Studies*, 14, 1409-1430.
- Swallow, S. R., & Kuiper, N. A. (1992). Mild depression and frequency of social comparison behavior. *Journal of Social & Clinical Psychology*, 11, 167-180.
- Tesser, A. (1991). Emotion in social comparison and reflection processes. In J. M. Suls & T. A. Wills (Eds.), Social comparison: Contemporary theory and research (pp. 115-145). Hillsdale, NJ: Lawrence Erlbaum.
- Tesser, A., Millar, M., & Moore, J. (1988). Some affective consequences of social comparison and reflection processes: The pain and pleasure of being close. *Journal of Personality and Social Psychology*, 54, 49-61.
- Thoits, P. A. (1986). Social support as coping assistance. *Journal of Consulting and Clinical Psychology*, *54*, 416-423.
- Thrash, T. M., Elliot, A. J., Maruskin, L. A., & Cassidy, S. E. (2010). Inspiration and the promotion of well-being: Tests of causality and mediation. *Journal of Personality and Social Psychology*, 98, 488-506.
- Viechtbauer, W. (2010). Conducting meta-analyses in R with the metafor package. *Journal of Statistical Software*, 36, 1-48.
- Wallston, B. S., Alagna, S. W., DeVellis, B. M., & DeVellis, R. F. (1983). Social support and physical health. *Health Psychology*, 2, 367-391.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070.
- Wegener, D. T., & Petty, R. E. (1994). Mood management across affective states: The hedonic contingency hypothesis. *Journal of Personality and Social Psychology*, 66, 1034-1048.
- Wethington, E., & Kessler, R. C. (1986). Perceived support, received support, and adjustment to stressful life events. *Journal of Health and Social Behavior*, 27, 78-89.
- Wheeler, L., & Miyake, K. (1992). Social comparison in everyday life. *Journal of Personality and Social Psychology*, 62, 760-773.
- Wills, T. A. (1981). Downward comparison principles in social psychology. *Psychological Bulletin*, 90, 245-271.
- Yzerbyt, V. Y., Muller, D., & Judd, C. M. (2004). Adjusting researchers' approach to adjustment: On the use of covariates when testing interactions. *Journal of Experimental Social Psychology*, 40, 424-431.