How Envy Influences SNS Intentions to Use

Completed Research Paper

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Abstract

Social networking sites (SNS) have grown to be one of the most prevalent technologies, providing users a variety of benefits. However, SNS also provide user sufficient opportunities to access others’ positive information. This would elicit envy. In the current study, we develop a theoretical framework that elaborates the mechanism through which online envy is generated and influences SNS usage. We specify that online users experience two types of envy and each one could have distinct influences on continuance intention to use of SNS. Our findings provide valuable implications for both academic researchers and IS practitioners.

Keywords

Social networking sites, envy, continuance intention to use.

Introduction

Social networking sites (SNS) have grown to be one of the most prevalent technologies, providing users a variety of benefits, such as reinforcing friendships, supporting interaction, and searching information (Boyd and Ellison 2007). However, the usage might elicit social and esthetic concerns. The most popular types of information shared on SNS are the positive aspects about the users’ personal lives (Chou and Edge 2012). People enjoy showing evidence of their achievement and happiness online. They believe that they can present to other people a better image of themselves by doing so. However, other people see may spontaneously compare the evidences with their own situations when they see these postings. If they perceive themselves to be lacking in comparison, there would be a negative impact on their mood, and even causing some distress (CBSnews 2011). It is possible that these negative effects result from envy.

Envy can significantly influence human behaviors. However, extant studies on envy found inconsistent results. Vecchio (2000) concluded that envy harms the performance of employees in a workspace and may lead to employees quitting their jobs. Nevertheless, van de Ven et al. (2009) showed that envy makes students study longer and results in better academic performance. Envy has long been a subject of debate in multiple disciplines including philosophy, anthropology, social psychology, and business (Graf 2010). SNS provide sufficient conditions for people to compare themselves with others, and envy is also prevalent on SNS (Krasnova et al. 2013). However, it has not yet received much attention in the information system (IS) literature. We believe the importance of envy cannot be over-emphasized for both IS researchers and practitioners.

How does envy influence human behavior in the SNS context and whether it exerts a positive or negative impact? This research question has not been explored by any previous studies. In the current paper, we propose a model to address this gap. Our findings provide valuable implications for both research and practice.
The next section reviews the extant literature on envy and its extensions into other fields. The research model is then described and justified with hypotheses and arguments. We then provide the research method and present data analysis results. In the last section, we discuss our findings and implications.

**Literature Review**

**Defining Envy**

Envy can be a process, which occurs when a person lacks another's superior quality, achievement, or possession. The envier either desires this unattained characteristic or wishes that it would be denied to the others. It happens when this shortcoming exists in a self-relevant context (Parrott and Smith 1993; Salovey and Rodin 1984). Envy also can be a feeling, which is a blend of unpleasant and painful feelings characterized by inferiority, hostility, and resentment caused by a comparison with others who possess something one desires (Smith and Kim 2007). In summary, envy is a social scientific term, and it can be defined as a pattern of thoughts, emotions, and behaviors that result from the perceived loss of a social standing in response to other’s obtaining outcomes that are personally desired (Vecchio 2005).

**Upward Social Comparison with Envy**

Upward social comparison is a prerequisite of envy. Festinger (1954) stated that in real life, present situations are a mixture of ability and opinion evaluation. There exists a natural drive within human beings to evaluate themselves using objective and non-social means. Individuals naturally compare themselves with other people (Festinger 1954; Taylor and Lobel 1989). The difference between others and themselves is a discrepancy. There will be a tendency to change one’s own position so as to move closer to the position of the other. Social comparisons can be upward or downward. An upward comparison represents a positive outcome (advantage or superiority) for the other person, whereas a downward comparison represents a negative outcome (disadvantage or inferiority) for the other (Taylor and Lobel 1989). Previous research has explored the relation between negative affective reactions and upward comparison, as well as the relation between positive affective reactions and downward comparison. As it is concluded, envy is one of these unfavorable emotions resulting from upward comparisons (Smith 2000). Therefore, upward social comparison is one of the most important prerequisite of envy.

**Malicious Envy, Benign Envy and Their Antecedents**

According to literature, there are two types of envy: malicious envy and benign envy (van de Ven et al. 2009; van de Ven et al. 2011).

Malicious envy, is a destructive form aimed at derogating or pulling down the envied person (Smith and Kim 2007). It describes a situation that when people make an upward comparison with advantageous others, they experience a feeling of inferiority. Then they might generate malicious thoughts with the intention of wishing others to fail or even hurt the envied other. Benign envy, is a non-malicious form aimed at improving one’s own situation (van de Ven et al. 2009). This concept refers to the situation that when individuals realize their disadvantage or inferiority as compared to other people, they are inspired for self-development (Graf 2010). Malicious and benign envy are different in several aspects. In terms of motivation, malicious envy aims at holding back the superior other while benign envy aims at improving one’s own situation (van de Ven et al. 2012). In terms of feelings, malicious envy involves the unsavory emotions while benign envy does not (D’Arms 2009). In terms of actions, benign envy refers to constructive reactions of people who realize their inferiority in comparison to others and they develops the desire to improve their own position (Graf 2010); However, people who encounter malicious envy might prefer not to associate with the advantaged others (Schoeck 1969).

Extant research found two important influencers of envy: perceived control and perceived deservingness. Perceived control refers to the perceived ability to control or change the status of an event. Tesser (1991) suggests that envy with negative emotions would be raised when a person perceives little chance to eliminate the difference from the comparison. It describes the situation that envy could become hostile when people have no opportunity to act constructively. To be specific, malicious envy would be elicited by
people who feel they cannot improve their current situation. In conclusion, perceived control is a prerequisite of malicious envy since it always provides some negative implications.

Perceived deservingness involves individual’s perception regarding the fit between a situation and an outcome. If people perceive there to be a fit, then they will believe the outcome is deserved; otherwise, it is not (Feather 1999). This evaluation is critical in an envy context. It reasonably provides justification for the others’ success. It also helps one to re-justify and re-evaluate one’s own situation. Comparisons with those who deserve the advantage will elicit benign envy (van de Ven et al. 2012). Thus, we consider perceived deservingness as an antecedent of benign envy.

Consequences of Envy

Envy, especially malicious envy, has been associated with various negative outcomes, ranging from hostile and inferior feelings (Parrott and Smith 1993), depressed emotions of anxiety, anger, and resentment (Salovey and Rodin 1984), to a series of antisocial behaviors, such as reducing group cohesiveness and satisfaction (Duffy and Shaw 2000), feeling dissatisfied with life (Krasnova et al. 2013) and so on. Schaubroeck and Lam (2004) stated that, when people experience promotion envy toward others at work, they are more likely to generate unsatisfactory feelings. More specifically, the more malicious envy one experiences after comparing with others, the more pain and intensity one would feel inside and the more one is thrown back on oneself in self-pity (Schoeck 1969). Some studies also explored the behavioral responses. Brigham et al. (1997) found that participants’ envy enhanced “schadenfreude” regardless of the deservingness of others’ misfortune. Sometimes, it even reduced sympathy towards others when one was in a lower situation in social comparison. Another study stated that envy diminished overall group effectiveness at work and it was associated with social loafing (Duffy and Shaw 2000). According to literature, malicious envy is associated with negative emotional and behavioral consequences.

Compared to malicious envy, the emotions associated with benign envy are more positive, motivating people to improve themselves (van de Ven et al. 2011). Benign envy leads to a moving-up motivation aimed at raising one’s own position (van de Ven et al. 2009). From another viewpoint, the perception that one is envious is moral, and the apprehension of moral quality of a context is complex (Silver and Sabini 1978a). Benign envy inspires people to engage in more moral behaviors (Polman and Ruttan 2012). Benign enviers realize their inferiority as compared to others are more likely develop the desire to reduce this discrepancy by improving their own position. For example, participants performed better after they recalled being benignly envious than after they recalled other emotional experiences (van de Ven et al., 2011).

In conclusion, the effects on the emotional goals and the actions resulting from malicious envy and benign envy are different. The literature provides the support for the current study.
Research Model

![Diagram of the research model showing the relationships between perceived control, malicious envy, benign envy, perceived enjoyment, and use intention.]

**Figure 1: Two-Type Envy SNS usage Model**

We propose a research model (Figure 1). The purpose of this model is to explain the relations between the two types of envy and the continuance intention to use of SNS. When people access their connections and learn of others’ positive information, they would conduct a form of social comparison between themselves and others. If the comparison is upward, malicious envy and/or benign envy would be elicited. Then, these two types of envy would impact users’ perceived enjoyment and perceived enhancement, which in turn influence intention to use. Specifically, we focus on continued usage intention of SNS. Detailed hypotheses with arguments are provided in the following section (See Appendix A1 for constructs and definitions).

**Hypotheses**

**Upward Social Comparison, Malicious Envy, and Benign Envy**

Upward social comparison is defined as the degree to which people believe that others are superior in an area they value (Smith and Kim 2007). Envy occurs when a person lacks another’s superior quality, achievement, or possession and it manifests when this shortcoming exists in a domain that is self-definitional (Salovey and Rodin 1984). In the context of SNS context, people have sufficient opportunities to access others’ information. If they learn of the others’ information related to positive aspects of the others’ lives, especially when they are struggling with their own lives, they are more likely to conduct an upward social comparison. This comparison helps people to identify the discrepancy between superior others and the inferior self. Logically, it would lead to some sort of negative feelings (Smith 2000). Thus, when people hold ill-will towards the superior others, malicious envy is generated. Thus, we hypothesize:

**Hypothesis 1:** (Upward) social comparison is positively related to malicious envy.
Since upward social comparison is a general antecedent of envy as mentioned in literature, it can also serve as an indicator of benign envy. In such a situation, one could just frankly acknowledge the difference from the comparison (Silver and Sabini 1978a). Sometimes, one recognizes something of value in the envied person. This recognition would inspire at least a modicum of admiring goodwill. This type of envy is benign. Benign envy brings about constructive, emulative actions rather than other possible destructive consequences (Smith and Kim 2007). It is reasonable to consider that when one's position is lowered by the success of another person, one doesn't have to be crushed or self-protective; rather, one could be motivated to work harder to improve one's own situation. Thus, we hypothesize:

**Hypothesis 2**: (Upward) social comparison is positively related to benign envy.

**Perceived Control**

The importance of perceived control relating to social comparison and malicious envy was emphasized in an empirical study (Smith and Kim 2007): participants were primed that they had done poorly on a task, while they were exposed to a superior performing comparison person. Half of the participants were told that they could improve their performance (high control) while the other half were told that they could not improve (low control). As a result, participants in the low-control condition showed hostile and depressed emotions, which were reported as (malicious) envy. The results suggested that low perceived control was especially associated with malicious envy. It was also claimed that people who felt malicious envy must have believed that the desired attribute was beyond their power to obtain (Smith et al. 1994; Vecchio 1995). When people notice their discrepancy with others, they evaluate their own abilities to capture this distinction. If the discrepancy cannot be changed, people feel miserable, along with self-pity and frustration. These negative feelings lead to malicious envy. SNS users might experience a similar situation. Thus, we hypothesize:

**Hypothesis 3**: Perceived control is negatively related to malicious envy.

**Perceived Deservingness**

Perceived deservingness is defined as whether the outcome for oneself or another is contingent on the situation; the outcome is deserved if there is a fit with the situation, otherwise, it is undeserved (Feather 1999; van de Ven et al. 2012). Envy arises when one's social standing is threatened by another person who is better in a domain (Tesser and Collins 1988). According to van de Ven et al.'s (2009) study, people are more likely to experience benign envy if the advantage of the other is deemed as deserved. For example, people might feel more comfortable when they learn that a hard-working co-worker has won a promotion. If that person had worked extra hours and accomplished a number of difficult tasks, others might believe that the job rewards fairly pay for her/his diligence and performance. The differences existing between benign and malicious envy are in affective appraisals, eliciting positive or negative emotions. Logically, the perceived deservingness of the situation matters. Although the upward social comparison discloses the discrepancy between the inferior self and the superior others, perceived deservingness provides rational justifications for the others' success. If one believes that the others’ good is deserved, one is more likely to benignly envy the others. Thus, we hypothesize:

**Hypothesis 4**: Perceived deservingness is positively related to benign envy.

**Perceived Enjoyment**

Malicious envy is one of the negative emotions that are caused by affective reactions from the advantage of others (Tesser and Collins 1988), involving ill-will and possibly leading to destructive consequences (Smith and Kim 2007). To be specific, malicious envy is associated with a series of negative but complex feelings of injustice, deprivation, frustration, and depression. It is possible that in an online context, people who maliciously envy others feel ashamed of themselves. The painful feelings tend to hinder them from enjoying their online activities and may lead to dissatisfaction towards the online experience. In a Facebook study, 29.6% of respondents mentioned that online envy made them feel frustrated and exhausted (Krasnova et al. 2013). However, Heider (1958) argued that people are usually educated to rejoice in other people's successes. In a sense, malicious envy violates this social rule that usually requires
supporting rather than degrading, begrudging or other reactions to another person’s success. In this vein, besides the painful feelings resulting from malicious envy itself, these emotional struggles in one’s mind could also reduce the perceived goodness of online social lives. On SNS, people learn about good news from their connections and make an upward comparison between themselves and others. This would lead to negative reactions, and they may experience resentment and low self-maintenance. Also, recognizing and acknowledging their malicious envy could be bitter and painful. They might feel guilty and ashamed to run counter to the universal moral code. As a result, the complex combination of negative feelings resulting from malicious envy reduces the perceived joyfulness. Thus, we hypothesize:

**Hypothesis 5**: Malicious envy is negatively related to perceive enjoyment.

Benign envy, a non-malicious form, aims at improving one’s own situation. When comparing malicious envy and benign envy, we see that they differ in terms of feelings, thoughts, action tendencies, motivational goals and emotional experiences (van de Ven et al. 2011). Benign envy fosters a motivational force for people to work harder to get what the superior others have (Foster et al. 1972). It is uplifting and positive—people who experience benign envy respect and admire others (Polman and Ruttan 2012). Although the upward comparison seems to be unfavorable because of a disclosure of one’s own inferiority and others’ superiority, benign enviers would quickly focus on the positive aspects, such as examining the values of others and evaluating space for self-improvement. All the positive thoughts become incentives and motivations to experience online social life with pleasure and comfort. The benign enviers would like to digest upward comparisons optimistically from a self-focusing viewpoint. They would like to sincerely admit the others’ achievement and would feel comfortable to learn about others’ positive information. In this vein, since benign enviers usually emulate others after witnessing others’ virtues, they are more likely to enjoy the online experience, and hold aspiring emotions to achieve a better life in future. Thus, we hypothesize:

**Hypothesis 6**: Benign envy is positively related to perceive enjoyment.

**Perceived Enhancement**

Perceived enhancement is defined as a motive that refers to people’s desire to enhance their self-positivity or decrease their self-negativity (Sedikides and Strube 1995). Given that people are naturally seen to have a strong and probably adaptive desire to maintain a positive self-evaluation (Silver and Sabini 1978b), any social comparisons undermining this goal and the resulting emotional stings may prompt a willingness to be against this attack. It is possible that after recognizing others’ superiorities and self-inferiorities from social comparisons, one is intuitively aroused to orient toward a bettering one’s condition. This reinforces the likelihood of one’s catching up the advantageous others and protecting one’s self-dignity and self-evaluation. Moreover, people are biased and they often harbor unrealistically positive views of themselves with subjective information in a self-serving manner (Taylor and Brown 1988). Hearing about an acquaintance winning an award maybe painful; however, this could inspire a sense of uplift, in turn, one is likely to make actions so as to improve self-abilities. A recent study found that experiencing benign envy led to an intention to invest more time to strengthen oneself in the immediate future. Participants performed better and worked harder after they recalled envying others in a benign manner (van de Ven et al. 2011). In the current context, people could also be motivated to be like their benign enviers. Thus, we hypothesize:

**Hypothesis 7**: Benign envy is positively related to perceived enhancement.

**Intention to Use**

In the current context, we consider SNS from both utilitarian and hedonic orientations. The original TAM and its derivatives were developed for and validated in the context of utilitarian systems in a professional environment. However, SNS are often used outside a work setting and could be experienced differently. Users might have a sense of entertainment when using SNS for leisure and recreation. Perceived enjoyment is considered to be one of the most salient factors of SNS usage intentions (Kim 2011; Leng et al. 2011; Zhou et al. 2010). Kim (2011) demonstrated that perceived enjoyment was positively related to continued intention to use SNS. In Leng et al.’s (2011) study, it is also found that compared to other
constructs in the classic technology acceptance models, perceived enjoyment was a more important factor of IS adoption in the context of SNS. Zhou et al.’s (2010) also stated that flow, including intrinsic enjoyment, positively affected SNS loyalty. Extant studies on SNS confirmed the influential role of perceived enjoyment on IS usage. It is generally acknowledged that SNS provides people a platform to have fun, such as looking for people who share a common hobby, tracking updated information of interested topics, communicating with offline friends, and updating self-profiles. In current study, as mentioned before, although two types of envy would impact perceived enjoyment differently; perceived enjoyment itself would be positively associated with intention to use. Therefore, we include enjoyment as mediator between two types of online envy and continued usage intention of SNS. Thus, we hypothesize:

**Hypothesis 8:** Perceived enjoyment is positively related to continued usage intention of SNS.

In the current context, SNS is the preferred media for people to interact online. Perceived benefits (usefulness and perceived enjoyment) are very influential for continued use of SNS (Lin and Lu 2011; Papadimitriou 2012). The positive information of others is observed via SNS, in terms of texts, pictures, videos, number of followers, etc. If individuals are likely to engage in self-enhancing illusions, they should orient themselves to minimize negative feedbacks and maximize positive feedbacks. For instance, people’s self-improvement interests may prompt them to get in touch with others who are superior. In order to keep up with others, they would like to continue to use SNS and access others’ information. In this vein, if SNS can further provide people with the information that they need and fulfill their self-improvement demands, they would regard it as a benefit. SNS are empowered with multiple services to augment user engagement and satisfaction. For example, Recommendation Technology is one of the more popular IT widgets and provides friend and information recommendation services (Lee 2010). These functions could facilitate one to look for more news about her/his friends as well as topic based knowledge to improve oneself. Therefore, individuals continue to SNS. Thus, we hypothesize:

**Hypothesis 9:** Perceived enhancement is positively related to continued usage intention of SNS.

**Research Method**

In this study, we use the structural equation modeling (SEM) to test our research model. We collected data through an online survey, in which we showed the participants a multi-media presentation of people’s positive postings about their personal lives on Twitter and Facebook. We asked the participants to recall their own experience and complete the survey. There are 386 usable observations (160 for Tweeter usage and 226 for Facebook usage). The model passed all validity and reliability tests.

**Results and Discussion**

We used partial linear square (PLS) to test the structural model separately in different settings. The standardized path coefficients are shown in Figure 2.
As a result (Table 3), H1 was supported in both settings while H2 was supported by Twitter data but not by Facebook data. H3 was supported for neither of them, while H4 was supported in both settings. In terms of the impacts of envy on perceived enjoyment and perceived enhancement, H5 did not hold for Twitter but it is marginally supported for Facebook. H6 and H7 were supported for both Twitter and Facebook. Finally, for continued SNS use intention, these results validated H8 for Twitter and Facebook. H9 was significant supported for Twitter, and was marginally supported for Facebook.

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<tr>
<th>Hypotheses</th>
<th>Twitter Setting</th>
<th>Facebook Setting</th>
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<tbody>
<tr>
<td>H1</td>
<td>supported (P &lt; 0.001)</td>
<td>supported (P &lt; 0.001)</td>
</tr>
<tr>
<td>H2</td>
<td>supported (P &lt; 0.001)</td>
<td>not supported</td>
</tr>
<tr>
<td>H3</td>
<td>not supported</td>
<td>not supported</td>
</tr>
<tr>
<td>H4</td>
<td>supported (P &lt; 0.001)</td>
<td>supported (P &lt; 0.001)</td>
</tr>
<tr>
<td>H5</td>
<td>not supported</td>
<td>marginally supported (P &lt; 0.1)</td>
</tr>
<tr>
<td>H6</td>
<td>supported (P &lt; 0.001)</td>
<td>supported (P &lt; 0.001)</td>
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<tr>
<td>H7</td>
<td>supported (P &lt; 0.001)</td>
<td>supported (P &lt; 0.001)</td>
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<td>H8</td>
<td>supported (P &lt; 0.001)</td>
<td>supported (P &lt; 0.001)</td>
</tr>
<tr>
<td>H9</td>
<td>supported (P &lt; 0.001)</td>
<td>marginally supported (P &lt; 0.1)</td>
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Table 3: Results in Twitter and Facebook settings
The results were similar for both settings, with some notable differences. First, social comparison had a significant impact on benign envy for Twitter but not for Facebook. This might have been due to the fact that Twitter is more information-seeking oriented, and Facebook is more friend-socializing driven. On Twitter, one is more involved in the information consumption, which would lead to benign envy. Second, perceived enhancement had a significant impact on continued usage intention for Twitter, but only exerted a marginal impact on Facebook. It might be because Facebook provides topic searching services and allows users to track trending topics and updated information. Compared with Facebook, people could use Twitter to enhance and improve themselves more. Third, the impact of benign envy on perceived enjoyment was significantly higher for Facebook (b = 0.664) than for Twitter (b = 0.389). It might be because Facebook appeals to social persons and is very addictive to people who have a greedy appetite to enjoy keeping in touch with others. However, According to Thornton (2009) report, people like Twitter because they can ask questions and get instantaneous replies from online peers. Moreover, people value Twitter as a source to get collective wisdom and intelligence. In this vein, Facebook is more enjoyable and Twitter is more useful. Fourth, benign envy is more powerful on perceived enhancement on Facebook (b = 0.709) than on Twitter (b = 0.501). This might because benign envy is more influential among people who have traits in common. On Facebook, people look to reconnect with old friends, family members, and new friends online with particular interests. They are more likely to share similar educational levels or other common backgrounds. Therefore, the effect of benign envy is more significant.

Contrary to our prediction, the findings showed that H3 and H5, which are related to malicious envy, did not significantly affect perceived enjoyment although H5 is marginally held for Facebook. There is a plausible explanation for this: malicious envy is a painful emotion and people might be reluctant to express their spiteful feelings to others (Smith and Kim 2007). Therefore, it is possible that subjects disguised their true malicious thoughts and skew their responses.

Additionally, we also tested the relationship between malicious envy and perceived enhancement. However, the results indicated that malicious envy was not related to perceived enhancement. It seems that perceived enhancement only results from benign envy. It also supports our research that two types of envy influence human behaviors through different routes.

**Implications**

As far as we know, our research was one of the first empirical studies that investigated how online envy was associated with continued usage intention of SNS. Our findings have several important implications for IS researchers. First, there is very limited research of online envy, especially exploring its influences on IS use. The proposed model delineates the process of online envy and provides a better understanding of SNS usage. Second, this study provides a rich theoretical framework to explain the mechanism through which viewing others’ positive life postings could generate two types of envy, and their subsequent impacts on IS behaviors. Third, benign envy is especially important with regard to the SNS usage, since it could elicit positive emotions.

This study also has several practical implications. First, the results indicate that online envy has the potential to influence online SNS usage through the following mechanism: the more users are exposed to other’s positive life information, the higher probability of online envy, and the more likely to facilitate or reduce IS usage depending on the type of envy encountered. Second, system designers might value our study. They might want to intentionally design certain website features to mitigate malicious envy and reinforce benign envy. For example, some applications could be designed to filter out envy-inducing pictures for some users. Also, recommendations and advertisement could be customized on SNS. If people are exposed to a posting with others’ travel pictures, then tourism related information, such as ticket discount and places of historic interest should be provided accordingly. People would regard this kind of information useful because it helps to control their own situation as well as to plan a better trip. As a result, it reduces malicious envy. Finally, our findings would also help to shape marketing persuasion strategies for advertisement producers and product retailers. It is common product retailers encourage people to show their purchasing online. They believe that doing this would help to promote their sales. However, our study indicates that if viewers maliciously envy the product owner, they might boycott the products. Even worse, they might broadcast some bad reviews online. Therefore, online marketing persuasion strategies might be modified in order to not arouse user’s malicious envy.
Conclusions, limitations, and Future Research

As mentioned above, online envy research is very limited. This study developed a theoretical framework that elaborates the mechanism through which online envy is generated and influences continued usage SNS intention. We specified that online users might experience two types of envy and each one could have distinct influences on IS use.

We acknowledge that this study has a few limitations. First, in the current paper, we include social comparison as a common antecedent of both malicious envy and benign envy. However, there might exist other influencers. According to our literature review, envy varies depending on economic, social, and cultural factors (Schoeck 1969). In one of our other working papers, we integrate Hofstede’s five national cultural dimensions in the envy model and investigate how different cultural values reshape envy and human behaviors in the IS context. We posit that some of culture dimensions are directly related to online envy and some other cultural values moderate the envy effects on human online behaviors. Second, according to the current results, perceived control doesn’t significantly influence malicious envy as expected. We consider that perceived control might exert a moderating effect on the relationships between upward social comparison and the both types of envy. Similarly, perceived deservingness might also serve as a moderator on the same relationships. We intend to test them in the future work.
REFERENCES


CBSnews. 2011. "Do You Have "Facebook Envy"?"


Thornton, S. 2009. "Twitter Versus Facebook: Should You Choose One?".
### Appendix:

#### Table A1 Constructs and definitions

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Definitions (Adapted from reference)</th>
<th>Reference</th>
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<tbody>
<tr>
<td>Upward social comparison</td>
<td>It is defined as the degree to which a person believes that the others are superior and possess advantages, in an area she/he values.</td>
<td>Smith &amp; Kim (2007)</td>
</tr>
<tr>
<td>Malicious envy</td>
<td>A type of envy that involves the unsavory motivation, aims at holding back the superior others.</td>
<td>van de Ven et al. (2012)</td>
</tr>
<tr>
<td>Benign envy</td>
<td>A type of envy free of ill-will or hostile feelings and aims at improving one’s own situation.</td>
<td>Rawls (1999); van de Ven et al. (2012)</td>
</tr>
<tr>
<td>Perceived control</td>
<td>The degree to which one person believes that her/his ability or performance can control or impact the event.</td>
<td>Ajzen (1991); van de Ven et al. (2012)</td>
</tr>
<tr>
<td>Perceived deservingness</td>
<td>It is defined as whether the outcome for oneself or another is contingent on the situation: if there is a fit between the situation and the outcome it is deserved, else it is undeserved</td>
<td>Feather (1999); van de Ven et al. (2012)</td>
</tr>
<tr>
<td>Perceived enjoyment</td>
<td>The extent to which the activity of using a technology is perceived to be enjoyable in its own right.</td>
<td>Venkatesh (2000)</td>
</tr>
<tr>
<td>Perceived enhancement</td>
<td>It is defined as motive that refers to people's desire to enhance their self-positivity or decrease their negativity.</td>
<td>Sedikides &amp; Strube (1995)</td>
</tr>
<tr>
<td>Intention to use</td>
<td>Intended use, it is an indication of an individual's readiness to perform a given behavior. It is assumed to be an immediate antecedent of behavior</td>
<td>Ajzen (2002)</td>
</tr>
</tbody>
</table>