

The Other Side of Sharing:
How Photo-taking Goals Impact Evaluations of Experiences

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Abstract

Millions of people share photos of their personal experiences every day. While prior work has looked exclusively at the effects of sharing information about an experience after it ends, sharing photos differs from other sharing methods by requiring people to take action during the experience itself, often with the intention to share already in mind. Accordingly, we investigate a distinct and novel aspect of this process: how this salient sharing goal affects enjoyment during the experience itself. Across three field and six laboratory studies, we find that relative to taking pictures for oneself (e.g., to preserve one's memories), taking pictures with the intention to share them with others (e.g., to post on Facebook) reduces enjoyment of experiences. This effect occurs because taking photos to share increases self-presentational concern during the experience, which can not only reduce enjoyment directly, but also indirectly by lowering engagement with the experience. We identify several factors that affect self-presentational concern and thus moderate the effect of photo-taking goals on enjoyment, such as the closeness of the intended audience, the salience of the ability to delete photos during the experience, and the amount of time before the photos will be shared or reviewed in the future.

Keywords: photo-taking, goals, sharing, self-presentation, experiences, enjoyment, memory

From vacations and holidays to funny moments with their children, people often share their experiences with others who were not originally there. This focus on sharing experiences is not surprising, as the experiences people accumulate over the course of their lives come to define them as individuals and dictate their life satisfaction (Van Boven and Gilovich 2003; Carter and Gilovich 2012). Moreover, sharing experiences with others has a variety of benefits, such as boosting people's mood and sense of meaning during the sharing process (e.g., Reis et al. 2010; Lambert et al. 2013).

Most of the work on sharing one's experiences with others has examined situations in which the sharing occurs only *after* the experience is over. But people often anticipate sharing an experience while it unfolds. The current research investigates this distinct and novel aspect of this process: how might consumers' intention to share an experience in the future affect enjoyment during that experience in the present?

The recent explosion in the prevalence of sharing photographs presents a unique opportunity to investigate this question, for three key reasons. First, compared to sharing an experience in many other ways (e.g., recounting it verbally), sharing photographs requires taking photos while the experience unfolds. Hence, sharing photos may be particularly likely to make the intention to share salient during the experience, even if the actual act of sharing comes later. Second, photos may be especially effective for sharing experiences, since they can provide others with vivid details that would otherwise be difficult or impossible to communicate verbally. While most research on sharing experiences has focused on verbal or written communication of that information, sharing via photos is not well understood.

Third, photo-taking and photo-sharing has become a ubiquitous and integral part of a growing range of consumption experiences. Indeed, as technology has advanced, photos have

become one of the most common ways to share experiences. People share hundreds of millions of photos daily through social media platforms such as Facebook, Instagram, and Twitter (Facebook 2013; Systrom 2014), and this trend is only increasing. However, little prior work has examined the psychological consequences of taking and sharing photographs on consumers' experiences.

In this paper, we investigate how taking photos with the intention to share them influences consumers' enjoyment of an experience. To do so, we contrast this sharing goal with another common goal in taking photos: preserving memories for oneself. In three field studies and six laboratory studies, we find that when the intention to share photos with others is salient, it decreases consumers' enjoyment of an experience relative to taking photos to preserve memories for the self. This is because taking photos to share involves the prospect of being evaluated or judged by others, increasing self-presentational concern and thereby decreasing enjoyment. We find that besides reducing enjoyment directly, self-presentational concern can also hurt enjoyment indirectly by lowering engagement with the experience. We identify boundary conditions and moderators that affect the degree of self-presentational concern, such as the closeness of the intended audience, the salience of the ability to select photos after taking them, and the timing of when the photo-taking goal will be completed. We close by outlining possible directions for future research.

Importantly, we isolate the effect of these two photo-taking goals on hedonic utility from the experience itself, rather than utility from other aspects of photo-taking (e.g., consuming photos of the experience at a later point, or others' reactions to the photos). In other words, even though sharing photos with others may bring additional separate utility at a later point when

photos are actually shared, we propose that pursuing this sharing goal, in and of itself, creates disutility and reduces enjoyment from the experience as it unfolds.

SHARING EXPERIENCES

Experiences are the building blocks of people's lives and are essential to their well-being. Indeed, people spend significant time and money engaging in experiences, both ordinary (e.g., movies) and extraordinary (e.g., vacations; Bhattacharjee and Mogilner 2014). Much of the work examining the importance of experiences has done so by comparing experiential purchases to material ones, showing that experiences lead to more happiness than material purchases (e.g., Van Boven and Gilovich 2003; Van Boven 2005; Carter and Gilovich 2012). For example, this work has demonstrated that with experiences, people are less likely to suffer from hedonic adaptation (Nicolao, Irwin, and Goodman, 2009), regret from their actions (Rosenzweig and Gilovich 2012), and unpleasant social comparisons (Carter and Gilovich 2010). Another reason that experiences provide more enduring satisfaction than material possessions is that they connect people to other individuals. Humans derive value and happiness from their social relationships (e.g., Leary and Baumeister 2000; Myers 2000; Diener and Seligman 2002), and experiences are more likely to be shared with others.

Sharing experiences can happen in one of two ways. First, people can participate in experiences jointly with others. For example, experiencing an event with another person (as opposed to alone) can heighten enjoyment of that experience by facilitating the human need to belong and feel connected (Raghunathan & Corfman, 2006; Ramanathan and McGill 2007;

McFerran and Argo 2014). Not surprisingly, social experiences are often preferred to solitary experiences (Caprariello and Reis 2013; Aknin, Dunn, Sandstrom, and Norton 2013).

Second, and the basis of this paper, people frequently seek to tell others who were not necessarily there with them about their experiences. That is, beyond the benefits of undergoing the same experiences with other people, experiences also promote social connection by stimulating people to share stories and converse with others about them, increasing satisfaction with the experience after it is over (Gilovich, Kumar, and Jampol 2015). Indeed, the majority of people's everyday speech focuses on themselves and their personal experiences (Emler 1990; Dunbar, Marriott, and Duncan 1997; Landis and Burtt 1924), and the internet has made it ever easier to share personal stories with audiences anywhere in a variety of ways, with over 80% of social media communications focused on users themselves and their experiences (Naaman, Boase, and Lai 2010). Telling others about one's experiences after they happen can have both personal and interpersonal benefits. For example, sharing experiences after the fact can boost people's positive affect and meaning (Langston 1994; Lambert et al. 2013) and can increase their feelings of closeness and trust with their audience (Reis et al. 2010).

Though sharing experiences with others can bring people additional utility *after* an experience has ended, to the best of our knowledge, no prior work has examined how the salience of the sharing goal *during* an experience might impact the enjoyment people gain from the experience itself. Hence, we examine this research question in the context of photo-taking: how might taking photos with the intention to share them later affect people's enjoyment during an experience?

PHOTO-TAKING AND CONSUMERS

Photo-taking is everywhere. While in the past photographs were reserved for special occasions, substantial shifts in technology and the widespread adoption of camera phones have made it easy for people to document their experiences almost anywhere they go, from extraordinary trips to ordinary weekday meals. In fact, in 2015, Americans alone are expected to take over 100 billion photos, more than double the number of photos they took just a decade earlier (National Geographic 2012).

Despite the increasing centrality of photo-taking in our daily lives, little work has studied the psychological effects of taking photos. Only recently have researchers begun to explore how taking photos during an experience can influence different aspects of consumer utility (Barasch, Diehl, and Zauberger 2015; Henkel 2014). So far, this prior work has exclusively investigated the effect of taking pictures *in general* (i.e., comparing photo-taking during an experience to not doing so). However, consumers often take photos with different specific goals in mind. Consistent with prior work on other types of goals (e.g., Fishbach and Ferguson 2007; Kruglanski et al. 2002), we define a photo-taking goal as the objective or intended usage that motivates a photo-taking action.

Why do people take photos?

To empirically probe the different goals people pursue when they take photos, we conducted an exploratory study at a university lab (N = 166, 56.6% female, 18 to 69 years, mean age = 24.9). Participants were asked to describe their primary goal when taking photos, and their open-ended responses were categorized by an independent coder who was blind to the research question. The coder was asked to create any number of categories and define them in any way that would best capture the data. Two separate coders (both different from the first coder) then

received these category descriptions and classified each response into the categories in whichever way they felt was most appropriate. The two coders exhibited high initial inter-rater reliability and resolved disagreements through subsequent discussion (average $\kappa = .82$). An overwhelming majority of respondents (86.7%) reported that they took photos for one of two goals: to capture memories for themselves (59.0%) or to share with others (e.g., to post on social media, 27.7%). The remaining responses described other photo-taking goals, such as aesthetic expression (7.8%), professional responsibilities (1.2%), or personal hobbies (1.8%). A small proportion of people said that they never take photos (2.4%).

To further assess the prevalence of different objectives across a range of people's photo-taking behavior, as well as to allow for the fact that some people might have more than one goal in mind when taking photographs, we asked a separate set of online respondents ($N = 100$, 51% female, 18 to 67 years, mean age = 36.4) to indicate the percentage of photos they took with each of the following pre-specified goals in mind: "For my own memory", "To share with others", "Another goal", and "No particular goal" (with the total percentage adding up to 100% for each participant). This constant-sum method also revealed that the majority of respondents' photos (89.9%) were taken for themselves (57.7%) or to share with others (32.2%), with only a small proportion of the time being for another goal (4.5%). Moreover, few photos (5.6%) were reportedly taken without a goal in mind, suggesting that people usually have an explicit purpose for taking photos during an experience, rather than deciding what to do with their photos only after the fact.

Consistent with the value people derive from telling others about their experiences, this initial evidence supports the prevalence of taking photographs with the specific intention of sharing them with others. Several widely-used products have emerged to facilitate this sharing

goal. For example, the public photo-sharing network Instagram has over 300 million users, who post more than 70 million photos per day (Systrom 2014; Pershan 2014). Similarly, even though Facebook users can post a variety of content items, photo sharing is one of the most common activities, with over 350 million photos uploaded every day (Facebook 2013).

In a world where photo-taking is increasingly integrated with our daily lives, and where photo sharing has become an extremely prevalent phenomenon, it is important to understand how this photo-taking goal influences the way consumers experience an event while it occurs. Given the results of our exploratory studies, our subsequent studies will contrast a sharing goal with the other most commonly reported goal in taking photos: preserving memories for oneself. Our findings that a substantial portion of people's photo-taking behavior strives to meet a memory goal are not surprising. Recalling memories of one's experiences can increase positive affect and meaning (Wildschut et al. 2006; Holbrook 1993; Leboe and Ansons 2006). Accordingly, people value opportunities to preserve and protect their memories (Zauberman, Ratner, and Kim 2009; Baumgartner, Sujan, and Bettman 1992), and often take actions in the present to create memories they can draw on in the future (Elster and Loewenstein 1992; Keinan and Kivetz 2011). In the domain of photo-taking, people often make photo scrapbooks or create albums on their computers to look back on and remember their experiences. As such, photo-taking for oneself constitutes a natural comparison for photo-taking to share with others.

THE CURRENT RESEARCH: HOW DO PHOTO-TAKING GOALS AFFECT EXPERIENCE?

First, to assess people's beliefs about how these two primary photo-taking goals may affect enjoyment of an experience, we asked 200 online respondents (48% female, 18 to 65 years, mean age = 34.6 years) for their intuitions. When comparing the effects of these two goals on experiences, approximately 18.5% thought that taking photos *for themselves* would increase their enjoyment of an experience compared to taking photos to share with others, while 20% held the opposite belief, that taking photos *to share* would increase enjoyment compared to taking photos for themselves. The remaining 61.5% thought these photo-taking goals would not affect their enjoyment differentially. Clearly people do not share a single intuition as to whether or how photo-taking goals influence their evaluation of experiences.

Given these conflicting intuitions, our research systematically tests the effect of these photo-taking goals on consumers' enjoyment. One possibility is that consumers will anticipate different post-experience benefits of sharing (e.g., Lambert et al. 2013; Reis et al. 2010), and that this anticipation will increase enjoyment of the experience they are photographing. However, despite the utility people may gain from sharing their photos at a later point, we hypothesize that the process of taking photos to share with others may induce greater self-presentation concern and thus may decrease enjoyment of the experience itself.

In general, people are motivated to present themselves to others in a favorable light (e.g., Leary and Baumeister 2000; Goffman 1959; Jones and Pittman 1982; Jones and Wortman 1973). Social interactions inherently involve the prospect of being evaluated or judged by others in ways that can influence future outcomes (Schlenker and Leary 1982; Leary and Kowalski 1990). As a result, social situations often increase people's concerns with self-presentation, or their desire to control the way they appear to real or imagined audiences (Tetlock and Manstead 1985; Schlenker 1980; Tedeschi 1981).

We suggest that taking photos with the goal of sharing them with others may lead people to consider how they will be perceived by their audience. As a result, the objective to share one's photos may increase self-presentational concern. Though self-presentational concern may be particularly pronounced when people are in the photo themselves, even sharing pictures that do not include the self or that are not inherently social (e.g., photographing the mountain view during a solitary run) can trigger such concerns. Indeed, any type of photo can convey information about an individual that others might evaluate, and one of the primary motives of self-presentation is to communicate desired identities to others (Leary and Kowalski 1990; Gollwitzer 1986). Consistent with this notion, people spend a lot of time curating their presence on social media, and frequently feel worried about managing their impressions in these contexts (Manago et al. 2008; Gonzales and Hancock 2011). Hence, we expect that when people take photos to share with others, they will experience greater self-presentational concern than when taking photos for themselves (i.e., to preserve their memories), which tends to be more private and less likely to evoke concerns of being evaluated by others.

How might self-presentational concern affect people's evaluations of their experiences? We propose that effects on enjoyment could potentially occur through two different paths. First, self-presentational concern is a negative state and thus may decrease enjoyment of the experience directly. Indeed, concern about conveying a certain image of the self to others has been shown to conflict with the objective to maximize one's own satisfaction (Mackie and Goethals 1987; Ariely and Levav 2000), and these concerns can be triggered in advance, well before people enter the social setting (Baumeister 1982; Schlenker and Leary 1982). Moreover, self-presentational concern is often associated with pressure to make a good impression, as well as with self-conscious emotions, such as anxiety (Leary 2007; Miller 1992; Hung and

Mukhopadhyay 2012). Ultimately, these self-conscious emotions and self-awareness may directly reduce hedonic emotions, such as enjoyment (Diener 1979; Hung and Mukhopadhyay 2012).

Second, self-presentational concern could also affect enjoyment through the distal mechanism of engagement, or involvement, with the experience (Csikszentmihalyi 1997; Higgins 2006). Self-presentational concern that arises from considering how others will view one's photos may lead people to feel less immersed in the experience itself, which can reduce their enjoyment (Csikszentmihalyi 1997, Killingsworth and Gilbert 2010; Barasch, Diehl, & Zauberger, 2015). Similarly, taking photos to share may shift people's perspective from that of a participant to that of an observer (e.g., Jones and Nisbett 1972). Taking an observer's perspective, rather than seeing oneself as an actor in the experience, may in turn cause people to become less engaged and to focus less on their internal or hedonic feelings of enjoyment (Storms 1973; Hung and Mukhopadhyay 2012).

Thus, we propose that taking photos to share, relative to taking photos for the self, will increase self-presentational concern, or anxiety, during the experience. This, in turn, will diminish enjoyment of the experience itself, either directly or by decreasing engagement in the experience.

H1: *Relative to taking pictures for the self, taking pictures to share with others will reduce enjoyment of an experience.*

H2: *Reduced enjoyment from sharing goals will be driven by increased self-presentational concern during the experience.*

H3: *Self-presentational concern will diminish enjoyment either directly or by reducing engagement in the experience.*

Study Overview

Nine studies test these predictions, demonstrating how photo-taking goals impact enjoyment of the experience itself and identifying the underlying role of self-presentational concern. In our studies we rely on people's retrospective evaluation of their experiences (e.g., Raghunathan and Corfman 2006; Novemsky and Ratner 2003), either moments after the experience or after a short delay.

In the first three studies, we test our hypotheses in the field by examining participants' actual experiences. Studies 1 and 2 document the basic effect with correlational data, showing in natural settings that individuals who are taking photos to share enjoy their experiences less than individuals who are taking photos for themselves. This is the case for a variety of recent experiences that people recall photographing (Study 1), as well as for visits to a famous tourist attraction (Study 2). Building on these correlational studies, Study 3 demonstrates this effect with participants' real holiday experiences, but does so by experimentally inducing people to take photos with one of the two primary goals in mind. In all of these field studies, we demonstrate that photo-taking goals matter in rich contexts where individuals are taking part in self-selected experiences.

In the remaining studies, we manipulate photo-taking goals in a unique laboratory paradigm that simulates real-life experiences in a controlled setting. This lab paradigm allows us to achieve greater control over the photo-taking environment so that we can more precisely isolate the effect of photo-taking goals on enjoyment during the experience itself, as well as the psychological mechanism driving the effect.

Studies 4 through 6 explore the role of how salient the photo-taking goal, and thus self-presentational concern, is during the experience. In Study 4, we examine situations where people have both the self and share goals in mind, and manipulate the extent to which each goal is active at the time of photo-taking. In Study 5, we investigate the interaction of photo-taking goals with trait self-consciousness, an individual difference measure that captures the extent to which self-presentational concern is chronically salient. In Study 6, we manipulate whether the ability to delete pictures is available and salient during the experience, a feature that helps manage self-presentational concern and thus moderates the negative effect of the *share* goal.

In the final three studies, we examine the role of the sharing target audience and gain further insight into the psychological mechanism. In Study 7, we demonstrate the effect of sharing on enjoyment of the experience when people actually share their photos with a partner who separately went through the same experience. In Study 8, we manipulate audience closeness and show that when people share with close friends (versus acquaintances), they experience less self-presentational concern and thus more enjoyment. In both Studies 7 and 8, we also find evidence for the distal mechanism by which self-presentational concern mediates the effect of photo-taking goals on enjoyment: through its effect on engagement. Finally, in Study 9, we examine the effect of the time at which the photos will be shared or reviewed (in the near or distant future). When people take photos to be viewed in the distant future, even just by *themselves*, they experience heightened self-presentational concern and reduced enjoyment as if they were expecting to share them with another person.

STUDY 1: PHOTO-TAKING IN THE REAL WORLD

In order to assess the relationship between enjoyment and people's naturally-chosen photo-taking goals, in this first study we collected data on people's photo-taking behavior during a recent experience. We asked a sample of participants to describe the last situation during which they took a photo and to report how much they enjoyed that experience. Then, we asked them to select which goal(s) they had in mind *in the moment* of taking the photo. Although these data are correlational, it allows us to examine our hypothesis while goals are evoked spontaneously across a wide range of actual experiences.

Methods

Two-hundred three individuals (40.9% female; mean age = 32.0) participated in an online study in exchange for payment via Amazon.com's Mechanical Turk. The recruitment announcement for all MTurk studies we report specified that participants should be over 18 years of age and U.S. residents.

All participants were asked to think back to the last photo they took, and to take some time to describe the photo and experience they were photographing in an open-ended text box. Participants also reported when the photo was taken from the following options: "Today", "Yesterday", "Two days ago", "Within the past week", "Within the past month", and "Within the past year". Then, participants were asked "How much did you enjoy the experience that you were taking a photo of" on a 7-point Likert scale ranging from 1 = "Not at all" to 7 = "Extremely."

On a separate page, participants were then asked, "At the moment of taking the photo, what was your primary goal for taking this photo?" and selected at least one answer from a multiple-choice list including "I took the photo for myself (personal memories)", "I took the

photo to share (with other people)”, “I took the photo with a different goal in mind (neither for myself or to share)” and “I took the photo without any particular goal in mind”.

Results

In line with the descriptive reporting of goals in the Introduction, a majority of respondents (86.7%) reported that they took photos for one of two goals: to capture memories for themselves (30.0%) or to share with others (35.5%), or a combination of both these goals (21.2%). Only a small proportion of people reported that they took photos for another goal (8.4%) or with no particular goal in mind (4.9%). In order to examine the effects of our two primary goals more cleanly, in this study we will focus on individuals who reported pursuing only the self goal or only the share goal during their latest photo-taking encounter ($n = 133$). We will examine the issue of pursuing multiple goals in Study 4, and further discuss the issue in the General Discussion.

For those who took a photo with one of these two goals in mind, 18.0% said that the photo was taken today, 15.8% said it was yesterday, 18.0% said it was two days ago, 18.0% said it was within the last week, 16.5% said it was within the past month, and 13.5% said it was within the past year. There were no differences in these frequencies across those who took a photo for themselves and those who took a photo to share ($\chi^2 = 6.68, p = .25$).

To examine the effect of photo-taking goal on enjoyment, we estimated a regression with photo-taking goal as the independent variable and enjoyment as the dependent variable. Photo-taking goal was coded so that *self goal* was equal to 0 and *share goal* was equal to 1. Consistent with our predictions, we found a significant effect of photo-taking goal on enjoyment ($B = -.585, SE = .215, t(131) = -2.73, p < .01$), such that taking photos to share diminished enjoyment

relative to taking photos for the self. This effect of photo-taking goals on enjoyment holds when the time that the photo was taken is included in the model.

Discussion

Study 1 provides initial evidence in support of our hypothesis. When people take a photo with a share goal in mind, they report that they enjoyed the experience less than when they take a photo with a self goal in mind. Thus, in a situation where people are freely selecting their own photo-taking goals in their own experiences, taking photos with the intent to share them is associated with harmful effects on enjoyment.

While Study 1 supports our hypothesis, it relied on participants' recollection both for their reported photo-taking goal and for their evaluation of enjoyment. Even though we asked people to tell us what they had in mind at the "moment of taking the photo," it is possible that people misremember what their photo-taking goal was during the experience itself, and that what they eventually ended up doing with the photos influenced their answers. In the next study, we ask participants to report their photo-taking goals *in the course of* the actual experience.

Another limitation of these correlational data is that the *types* of experiences where people remember having a self goal versus a share goal might be different. That is, it is possible that experiences where individuals take photos to share are those that are less enjoyable on their own than experiences where individuals take photos for themselves. In the next study, we control the nature of the experience by surveying individuals going through the exact same experience.

STUDY 2: PHOTO-TAKING AT A TOURIST ATTRACTION

In order to examine the association between photo-taking goals and enjoyment in a situation where participants were not relying on recollections of past experiences, in this study we surveyed tourists while they were visiting a popular landmark in a major metropolitan city. This landmark is a statue of a famous individual in front of a museum, and it is one of the top-rated tourist attractions in this city. During normal visiting hours, there is typically a line of people waiting for their chance to take a photo with the statue. We recruited participants from this line to take our survey. That is, we only surveyed individuals who were definitely planning to take a photo with the statue (not individuals who were just observing the statue from afar). We conjectured that these individuals already had a salient goal for their photos in mind before we approached them.

Methods

Two research assistants collected data for this study across four days (for a total of twelve hours). The RAs were instructed to approach individuals who were about to take a photo of the focal statue, and to ask them if they would be willing to take a short survey about their experience in exchange for a souvenir candy bar (decorated with famous city sights). For groups, RAs were told to ask only the person who was “in charge” of the camera. Note that respondents themselves may or may not have been in the photos they took. As discussed earlier, the effect of photo-taking goals should hold for either type of photo, and if anything, this selection serves as a conservative test.

Across the four days, one-hundred fifty-three individuals (47.1% female; mean age = 31.8) completed the survey. Among these participants, 20.9% were from outside the U.S. and 19.0% reported that English was not their first language.

The survey consisted of the same questions about photo-taking goals and enjoyment from the previous study, except that enjoyment was measured on a 15-point instead of a 7-point scale. In addition, as another indicator of how much individuals enjoyed their experience, we asked them “To what extent would you recommend visiting the [xxx] statue to a friend?” from 1 = “Not at all” to 15 = “Extremely”. Finally, we asked participants to report how many photos they had taken at the statue during their visit that day.

To test the robustness of the effect, we counterbalanced the order of that question and the actual photo-taking. Half the participants were asked about their photo-taking goal *right before* they took their photo(s). Then, after taking their photo, they were asked the questions about enjoyment, recommendation, and demographics. The other half of participants were asked all questions *right after* they had taken their photo(s). To avoid any effects of assessing photo-taking goals before asking about enjoyment, the order of questions for these participants was similar to Study 1: enjoyment and recommendation items, photo-taking goal question, and then demographics. Order did not have any significant effect on the results, but was included as a factor in the regression models for completeness.

Results

Consistent with the descriptive reporting of goals in the Introduction, a majority of respondents (96.0%) reported that they were taking photos at the statue for one of two goals: to capture memories for themselves (35.3%) or to share with others (52.3%), or a combination of both these goals (8.5%). Only a small proportion of people reported that they were taking photos for another goal (2.0%) or with no particular goal in mind (2.0%). As in Study 1, we will focus

only on those individuals who reported pursuing only the self goal or only the share goal at the tourist attraction ($n = 134$).

To test our hypothesis that sharing goals decrease enjoyment, we estimated a regression with enjoyment as the dependent variable and photo-taking goal (self goal = 0; share goal = 1), question order (goal asked before taking photo = 0; goal asked after taking photos = 1), and their interaction as the independent variables. Consistent with Study 1, we found an effect of photo-taking goal ($B = -1.539$, $SE = .575$, $t(130) = -2.68$, $p < .01$), such that taking photos to share reduced enjoyment relative to taking photos for the self. There was no main effect of question order ($B = -.231$, $SE = .665$, $t(130) = -.35$, $p = .73$), nor was there a photo-taking goal by question order interaction ($B = .984$, $SE = .857$, $t(130) = 1.15$, $p = .25$).

Similar results emerged for a regression that had recommendation as the dependent variable. We found a marginally significant effect of photo-taking goal ($B = -1.211$, $SE = .618$, $t(130) = -1.96$, $p = .052$), such that taking photos to share made people less likely to report that they would recommend the experience to a friend. There was no main effect of question order ($B = -.456$, $SE = .714$, $t(130) = -.64$, $p = .52$), nor was there a photo-taking goal by question order interaction ($B = .935$, $SE = .920$, $t(130) = 1.02$, $p = .31$).

There was also a significant effect of photo-taking goals on the number of photos people took ($B = 3.842$, $SE = 1.930$, $t(127) = 1.99$, $p = .049$).¹ Individuals who were taking photos to share took more photos ($M = 8.87$, $SD = 9.81$) than individual who were taking photos for themselves ($M = 5.40$, $SD = 4.54$). There was no main effect of question order ($B = -3.081$, $SE = 2.215$, $t(127) = -1.39$, $p = .17$), nor was there a photo-taking goal by question order interaction ($B = -.415$, $SE = 2.861$, $t(127) = -.15$, $p = .89$). Note that for this and all other studies reported in the

¹Only 131 out of 134 participants responded to this question.

paper, the effect of photo-taking goals on enjoyment holds when number of photos taken is included in the model.

Discussion

Study 2 provides additional evidence that when individuals take photos to share, they enjoy the experience less than when they take photos for themselves. This is the case even in a situation where individuals are not relying on their memory to recall their photo-taking goals or their enjoyment of the experience. In addition, the results suggest that this reduction in enjoyment from sharing goals may also result in people being less likely to recommend that experience to others.

In another correlational study, we replicated these results during an even more meaningful real-life experience: graduation weekend at a university. Leading up to graduation, the university ran a social media campaign encouraging people to post photos of the celebrations on different social media platforms: electronic billboards on campus advertised a specific hashtag ($\#[xxx]Grad$), accompanied by smiling students in graduation regalia and the tagline “Capture the Moment”. During graduation weekend, we surveyed one-hundred eighty-six individuals (56.5% female; mean age = 33.3) taking photos at a popular campus statue. After answering how much they enjoyed their experience at the statue, participants were asked “Are you planning to post any of the photos you just took at the [xxx] statue on social media (Facebook, Instagram, Twitter, etc.)?” Consistent with Study 2, we found a marginally-significant effect of photo-taking goal ($B = -.610$, $SE = .328$, $t(184) = -1.86$, $p = .07$), such that those taking photos to share on social media ($n = 126$) enjoyed the experience less than those

who were not ($n = 60$). This provides additional evidence that individuals enjoy their experience less when they take photos to share, even during a very important real-life experience.

Results from these first set of studies provide initial support for our hypothesis in situations where consumers have freely chosen their own photo-taking goals. This is important for establishing the phenomenon in real-life settings with high ecological validity. However, because these studies are correlational in nature, we obviously cannot make strong causal claims that the photo-taking goals themselves caused these differences in enjoyment. In particular, we cannot rule out that the causal effect goes in the other direction (people choose different photo-taking goals depending on how much they are enjoying the experience), or that certain types of individuals are more likely to take photos with certain goals in mind, and that these individuals are more or less likely to enjoy their experiences due to some other characteristic. Thus, in the remaining studies, we will build on this correlational evidence with experimental studies that manipulate people's photo-taking goals directly. We will first do this with people's real-life holiday experiences, and then in simulated experiences in the laboratory that afford us more control and the ability to explore the self-presentational process in greater detail.

STUDY 3: EXPERIMENTALLY EXAMINING THE EFFECT OF PHOTO GOALS IN THE FIELD

The next study tests our hypothesis in the field with people's real holiday experiences. We recruited participants for a study involving photo-taking, randomly assigned them to take photos for a self goal (for personal memories) or a share goal (to post on social media), and then examined how those goals influence their evaluation of their holiday experience.

To gain initial insight into the mechanism, we assess two indicators of self-presentational concern: memory perspective and the content of people's photos. First, we build on prior work (Nigro and Neisser, 1983; Libby and Eibach 2011) showing that when people remember an experience, they tend to visualize it either from an "actor" perspective (i.e., from their original, first-person point-of-view) or from an "observer" perspective (i.e., from a third-person point-of-view, as an outside observer might have seen the scene). Importantly, third-person memories are more common when an event causes self-awareness, or in situations where individuals are conscious of being observed or evaluated (Nigro and Neisser 1983). Third-person memories have also been associated with greater intensity of self-conscious emotions, such as anxiety (Hung and Mukhopadhyay 2012). Thus, we predict that when individuals take photos with the explicit goal of sharing them with others, as opposed to keeping them for personal memories, they will be more inclined to adopt the perspective of an observer, and thus more likely to remember their experience from a third-person perspective.

Second, to gain additional indirect evidence of the self-presentational process, we also examine the content of people's photos as a function of photo-taking goal. We had two sets of predictions about the types of photos people would include in their albums for a self goal versus a share goal. The first set of hypotheses was about the people in the photos. Given self-presentational motives, creating an album for social media might spur people to include photos that present the people in them (including themselves) in the best possible light. Thus, we predict that individuals who are creating albums to share will include more photos of themselves, more posed photos (as opposed to candid ones), and more photos of people smiling. The second hypothesis was about the types of objects in the photos. Photos to share with others may need to stand alone and tell viewers a complete story, including the occasion and context, whereas this

information is known to the photo-taker when creating personal albums. Thus, we predict that individuals who are creating albums to share will include more photos that are typical or representative of the event, in this case, Christmas (e.g., Christmas trees, stockings, reindeer, etc.).

Method

Four hundred forty students at a Northeastern university signed-up to participate in a study about their Christmas holiday experience. The recruitment announcement was posted for several weeks before the holiday break began on the behavioral lab website. The only requirements to sign-up for the study were that participants had to be celebrating Christmas and be willing to take photos of their Christmas experience. No other information was provided to participants during the sign-up phase of the study.

Participants were randomly assigned to one of two Photo-taking Goal conditions (*Self-Goal*, *Share-Goal*) in a between-subjects design. Two days before Christmas, on December 23rd, participants received an email with a link to a survey that contained detailed instructions for their assigned photo-taking goal. All participants were asked to take at least 10 photos during their holiday experience. In the *Self-Goal* condition, they were told: “Please take these photos with a specific purpose in mind: to make an album that you can keep for yourself, to look back on and remember the day.” In the *Share-Goal* condition, they were told: “Please take these photos with a specific purpose in mind: to make an album that you can share on Facebook or other social media, if you would like to do so.” All participants were asked to confirm that they read their special photo-taking instructions, and that they would take photos for the goal that they had been assigned. Then, they confirmed that they would be willing to complete a follow-up survey after

their Christmas holiday and upload all of their photos at that time. Of the original 440 participants who signed up for the study, 332 completed this pre-holiday survey, with no significant differences in response rate between conditions (*Self-Goal*: 74%, *Share-Goal*: 77%, $\chi^2 = .44, p = .51$).

On Christmas Eve (December 24th), all participants who had completed the pre-holiday survey were sent one reminder email with their assigned photo-taking goal instructions in the body of the email (no survey link). No emails were sent on Christmas Day.

Post-holiday Survey. Finally, two days after Christmas, on December 27th, all participants were sent an email with a post-holiday survey. In the survey, participants were first asked to think back to their Christmas experience using an established procedure (Pronin and Ross 2006):

Think back again to your Christmas experience, including the times when you took photos. We're interested in your image of this event. We would like you to take a moment to form a clear picture of it in your mind. First, *shut your eyes and visualize the Christmas situation*, and then be prepared to answer some questions about it.

After visualizing their Christmas experience, participants were asked “How much did you enjoy your Christmas experience as a whole” on a 7-point Likert scale ranging from 1 = “Not at all” to 7 = “Extremely.” This served as our primary dependent variable across all of our studies.

Then, participants responded to a memory perspective measure, which served as an indirect measure of the self-presentation process (Pronin and Ross 2006). They were asked to rate that image in their head as either more from a first-person (actor) perspective, or more from a third-person (observer) perspective. The two perspectives were described as follows.

A. I saw the scene from my original point of view (not as an external observer would see it). I did not see myself in the image, since it was as though I was looking at the event through my own eyes.

- B. I saw the scene as an observer might see it (not from my original point of view). I saw myself in the image, since it was as though I was looking at the event through the eyes of an observer.

In line with prior procedures, participants rated their memory perspective on a 7-point Likert scale ranging from 1 = “Mostly A” to 4 = “Mixture of A and B” to 7 = “Mostly B”.

Finally, participants responded to a few demographic questions (gender and age) and reported how many photos they took during Christmas.

Of the 332 participants who successfully completed the pre-Christmas survey, 227 people (75% female; mean age = 22.0) completed the full post-holiday survey, with no significant differences in response rate between conditions (*Self-Goal*: 66%, *Share-Goal*: 71%, $\chi^2 = 1.10$, $p = .29$). Further, the percentage of people who did not follow the instructions to take at least 10 photos during the holiday did not differ by condition (*Self-Goal*: 7.5%, *Share-Goal*: 10.8%, $\chi^2 = .76$, $p = .38$). We analyze our results for all participants who completed all phases of the study, but the results hold when we restrict the sample to participants who took at least 10 photos.

Photo Upload and Content Analysis. At the very end of the survey, participants were asked to upload ten photos into a Christmas album to fulfill their assigned photo-taking goal. Participants were again reminded of their photo goal before creating the album: in the *Self-Goal* condition, they were instructed to make a personal album that they could keep for themselves to look back on and remember the day, while in the *Share-Goal* condition, they were instructed to make a shared album that they could post on Facebook or other social media (see full instruction wording in Web Appendix A). Of the 227 people who completed the full post-holiday survey, 222 people successfully uploaded albums at this stage.

To test our predictions about the content of photos, we had four separate research assistants who were blind to the research question and condition code photos on each of the following characteristics: posed photos, smiling photos, Christmas photos (see exact wordings

from the coding guide in the Web Appendix B). Each research assistant coded one-half of the total albums, such that two research assistants coded the first half of the photos and two different research assistants coded the second half of the photos (approximately 1,050 each). Each pair of coders exhibited high initial inter-rater reliability and resolved disagreements through subsequent discussion (each $\kappa > .8$). Because coders could not clearly identify how many photos in each album included participants themselves, we asked each participant to report this information after uploading their album of 10 photos.²

Results

Photos taken. There were no differences in the reported number of photos taken across the two photo-taking goal conditions ($M_{Self-Goal} = 28.25$, $SD_{Self-Goal} = 42.27$, $Min_{Self-Goal} = 2$, $Max_{Self-Goal} = 300$; $M_{Share-Goal} = 29.16$, $SD_{Share-Goal} = 52.05$, $Min_{Share-Goal} = 1$, $Max_{Share-Goal} = 500$; $F(1,225) = .02$, $p = .89$).

Enjoyment. Consistent with our predictions, participants who took photos to share enjoyed their Christmas experience less ($M = 5.15$, $SD = 1.34$) than those who took photos for a personal album ($M = 5.58$, $SD = 1.23$; $F(1,225) = 6.29$, $p = .01$).

Memory Perspective. When asked to recall their Christmas experience, participants in the *Share-Goal* condition were more likely to rate their memory as being from a third-person versus a first-person perspective ($M = 3.55$, $SD = 1.78$) than those in the *Self-Goal* condition ($M = 2.92$, $SD = 1.91$, $F(1,225) = 6.72$, $p = .01$).

²The subset of participants who responded to this question about whether the self was in the photo is slightly different than the subset of participants who uploaded photo albums that were subsequently coded. That is, 2 participants who answered this question did not end up uploading an album, and 2 participants who uploaded an album did not answer this question. We report all data collected for each measure.

Photo content. A majority of people ($n = 200$, 90.1%) uploaded the requested 10 photos into their albums, and the average number of photos in an album did not differ by condition ($M = 9.60$, $SD = 1.33$; $F(1,220) = .24$, $p = .62$). Still, because the number of photos in each album differed across participants, we calculated the proportion of total photos in each person's album that contained each content of interest (self photos, posed photos, smiling photos, Christmas photos).

First, while there were no differences in the proportion of photos with people in them (self: $M = 58\%$, $SD = 32\%$; share: $M = 60\%$, $SD = 29\%$; $F(1,220) = .24$, $p = .62$), participants who created albums to share did include a greater proportion of photos of themselves ($M = 31\%$, $SD = 28\%$) than those who created personal albums ($M = 15\%$, $SD = 21\%$; $F(1,220) = 22.15$, $p < .001$). Further, as predicted, participants who created albums to share with others included a greater proportion of posed photos ($M = 43\%$, $SD = 31\%$) than those who created albums to keep for themselves ($M = 25\%$, $SD = 26\%$; $F(1,220) = 23.90$, $p < .001$). In addition, participants who created albums to share included a greater proportion of photos with people smiling ($M = 40\%$, $SD = 30\%$) than those who created albums for themselves ($M = 20\%$, $SD = 22\%$; $F(1,220) = 32.27$, $p < .001$). Finally, participants who created albums to share included a greater proportion of photos with items typical of Christmas ($M = 58\%$, $SD = 30\%$) than those who created personal albums ($M = 50\%$, $SD = 28\%$; $F(1,220) = 4.66$, $p = .03$).

Discussion

The present field study provides experimental evidence from people's own, real-life experiences that taking photos to share with others can decrease enjoyment relative to taking photos for the self. This is the case even though participants are explicitly told that sharing is

optional (i.e., the album they create would be something for them to share if they choose to do so). We demonstrate this effect in the field with individuals' real Christmas experiences, a holiday where people naturally take a lot of photos; as such, our findings speak to many meaningful experiences in consumers' lives.

Moreover, we provide initial evidence of the hypothesized self-presentational mechanism, showing that when people take photos to share, they remember their experience more from a third-person perspective. This suggests that taking photos to share makes people consider how the event (and the photos) would be evaluated by an observer, a result of self-presentational concern triggered by the sharing goal.

Relatedly, we also show that people include different types of photos in a shared album compared to a personal album. Consistent with the self-presentational mechanism we propose, when people create an album to share on social media, they are more likely to choose photos of themselves and photos where the people are posed (as opposed to candid) and smiling, suggesting that they want to present themselves in a positive light to their audience. In addition, with shared albums, people are more likely to include photos that have items that are typical of the holiday and thus provide details about the occasion and context for those who were not there.

Note that this study is agnostic about whether the effect of photo-taking goals operates at encoding (i.e., during the experience), or at the time of retrieval (i.e., at the point of creating albums and recollecting the experience). If the effect of photo-taking goals takes place at encoding, it is necessary for the photo-taking goal to be salient during the experience itself in order to affect people's enjoyment. However, if the effect of photo-taking occurs at retrieval, it would be sufficient for photo-taking goals to become salient only after the experience (e.g., when reviewing or sharing pictures).

In a separate study, we recruited students ($n = 209$) who were about to experience Easter or Passover. We manipulated the timing of goal assignment in order to isolate whether it is necessary for photo-taking goals to be salient during the experience, or whether it is sufficient for such goals to be salient only afterwards. Half the participants received their photo-taking goal instructions before the experience (as in the Christmas study); the other half received their photo-taking goal instructions only prior to creating their album (two days after the experience). This latter condition is similar to a situation where people only decide what to do with their photos after the experience is over, when selecting photos to include in an album for a particular goal.

In this study, we replicated our effect from the Christmas study for the group assigned their goal *before* the experience: compared to taking photos for the self, taking photos to share reduced people's enjoyment of their holiday experiences when that goal was implemented during the experience itself. However, for people who were assigned their photo-taking goal only at the stage of album-creation, there was no difference in their evaluations of their holiday experience. This suggests that photo-taking goals change how the event is experienced at encoding. If a person adopts a photo-taking goal only after the experience, it does not change their remembered enjoyment for that event.

Note that this result is conceptually distinct from the absence of order effects for the timing of question that we found in Study 2. In Study 2, we approached tourists who were waiting in line specifically to take a photo, and thus already had a salient photo-taking goal that was central to their experience. Consequently, we find a negative relationship between share goals and enjoyment regardless of whether we asked respondents about their goal before or after taking photos. In contrast, in the study discussed above, taking photos is generally not the primary focus when celebrating Easter or Passover with one's family. Therefore, in this setting,

our explicit manipulation was able to make one goal or the other relatively more salient throughout the holiday when it was activated *before* the experience, but doing so *after* the experience did not affect enjoyment.

THE LABORATORY PARADIGM

In the studies reported above, we examined the effect of photo-taking goals on people's experiences in the field, both correlationally and experimentally. While this allows us to test the consequences of these goals on actual behavior in a natural context, it does not afford us full control over the photo-taking environment to isolate the mechanism. For instance, having different goals might influence what people choose to experience or which aspect to document (as we saw in the photo content), contributing to the observed differences. Accordingly, in the remaining studies, we test our hypotheses in a controlled laboratory setting. Doing so permits us to hold the experience constant across conditions so we can identify the effect of photo-taking goals beyond any effects on the selection of experiences.

Across our laboratory studies, participants are told that they will watch a video depicting a first-hand travel experience (e.g., a city bus tour), and that they should try to imagine that they are actually there at the event experiencing it themselves, not just watching it on the screen. Participants are able to take pictures during the depicted experience, just like they would during an actual experience, by clicking their mouse on the "camera" button. The photos show up below the video, similar to how photos are displayed on a digital camera or camera phone. The computer program records how many photos were taken during the experience. For a screenshot demonstrating the laboratory photo-taking experience, see Figure 1.

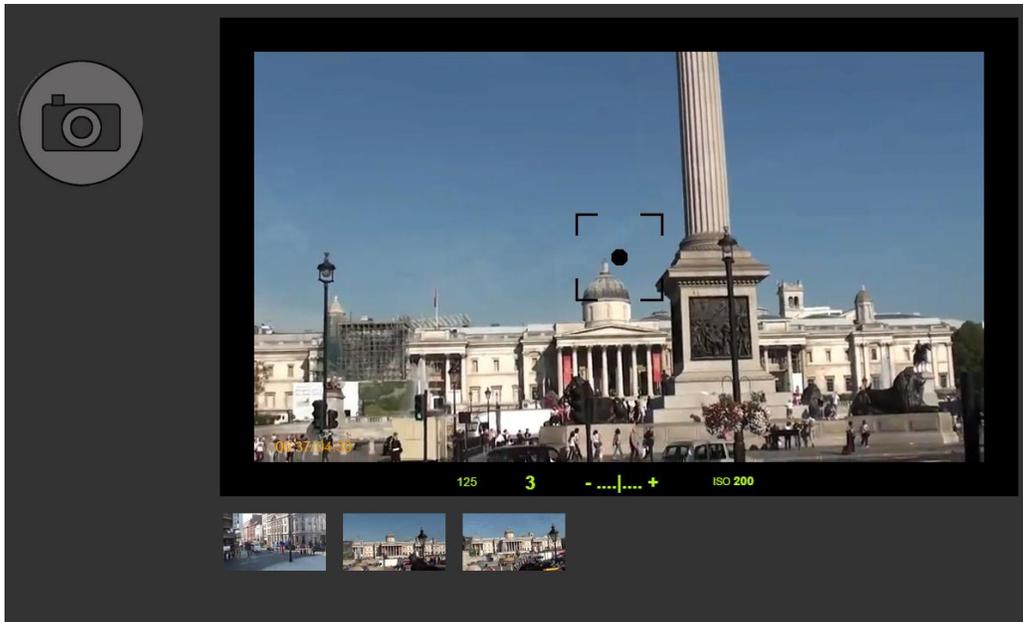


Figure 1: Photo-taking experience in the laboratory.

Similar to the field study, across our laboratory studies, the only difference between the photo-taking goal conditions is whether they were assigned to take photos for themselves or to share with others. For example, in an initial test of the laboratory paradigm, participants in the *Self-Goal* condition were told: “When taking photos, please imagine that you are planning to make an album to look at and keep for yourself. Your goal is to take pictures so that you can preserve the experience for yourself.” In the *Share-Goal* condition, they were told: “When taking photos, please imagine that you are planning to make an album to share with others on social media (e.g., Facebook). Your goal is to take pictures so you can share the experience with others, if you would like to do so.”

In this initial study, participants experienced a 4-minute London city bus tour from the first-person perspective of someone actually going on the tour. The video was taken from the top of a typical double-decker bus with a tour guide giving riders an overview of the main city attractions. Immediately following the bus tour, participants were asked “How much did you enjoy the bus tour experience?” on a 7-point Likert scale ranging from 1 = “Not at all” to 7 =

“Extremely.” We found that participants who were instructed to take photos with the goal of sharing the experience with others enjoyed the experience less ($M = 4.70$; $SD = 1.65$) than those instructed to take photos for themselves ($M = 5.31$; $SD = 1.31$; $F(1,129) = 5.51$, $p = .02$). These results replicate our effects from the field in a more controlled laboratory setting, where the underlying experience and what can be photographed are held constant. This provides credence to the lab paradigm’s ability to capture the basic effect we observe in the field. In the following studies, we build on this finding and utilize this laboratory paradigm to further test the proposed psychological mechanism of self-presentational concern.

STUDY 4: DIFFERENTIAL GOAL SALIENCE WHEN BOTH GOALS ARE ACTIVE

Study 4 further clarifies the nature of the photo-taking goal construct. In particular, we examine what happens when people have both self and share goals in mind at the same time, but one goal is more salient than the other. This approach allows us to distinguish whether it is the mere *presence* or the *salience* of photo-taking goals that affects enjoyment.

While people may have both self and share goals in mind when taking pictures, we argue that it is the relative salience of the two goals during the experience that matters, not merely their presence. In particular, the effect of photo-taking goals on enjoyment should depend on which goal is the “primary” goal, or the goal that is most activated during that experience. As we saw in the study briefly discussed following Study 3, activating these goals after the experience does not have the same effect on retrospective enjoyment as activating them prior to the experience. Similarly, we argue that when one goal is more salient during the experience than the other, that

goal will have greater influence on enjoyment of the experience. As such, if sharing photos with others is more salient during the experience than keeping photos for oneself, we expect self-presentational concern to be heightened. If, however, keeping the photos for oneself is more salient than sharing the photos with others, then self-presentational concern should play less of a role. Thus, it is not necessary for the goals to be mutually exclusive, or for other goals to be fully absent from one's mind for a photo-taking goal to have an effect on an individual's experience. The key is the relative salience of the different goals.

In order to test this prediction, all conditions in this study explicitly mention both goals. That is, all participants were told that they should take photos with both goals in mind. Yet, in two conditions, participants were instructed to take photos with one of these goals as their PRIMARY goal. In other words, just like in real life, everyone knew that they may want to use a photo for personal memories or to share with others. But one of those goals was more strongly activated during that experience. We provide manipulation checks to assure that both goals were indeed activated at the same time but differentially so. In addition, because some people report that they take photos with both goals in mind at once, we will introduce a third condition where both goals are equally salient during the experience (neither of them the primary goal). For this third condition, we expect self-presentational concern and enjoyment of the experience to fall somewhere in between the other two conditions.

In this study, we also explore the proposed mechanism by directly measuring individuals' self-reported levels of self-presentational concern during the experience. Finally, we test the alternative explanation that greater distraction associated with the share goal can account for observed effect of photo taking goals on enjoyment.

Methods

Two-hundred seven individuals (66.7% female; mean age = 23.1) at a Northeastern university participated in a study in exchange for payment. In this study, participants experienced a 3-minute African safari adventure depicting a pack of warthogs who were feeding on an antelope.

Participants were randomly assigned to one of three experimental between-subjects conditions (*Primarily-Self-Goal*, *Primarily-Share-Goal*, *Equal-Goals*). In all conditions, participants were told “Two main reasons why people take photos are so that they can look back at the photos themselves and so that they can share the photos with others. As you go through the experience, please take photos with both of these goals in mind.” So in all conditions, it was explicit that the photos they took could serve either of these two goals. The only difference between the three photo-taking conditions was which of these two goals they were instructed to have most salient during the experience. In the *Primarily-Self-Goal* condition, participants then read: “However, your PRIMARY goal should be to take photos so you can look back at those photos and remember the experience in the future.” In the *Primarily-Share-Goal* condition, participants read: “However, your PRIMARY goal should be to take photos so you can share those photos with other people.” For this condition, the two goals were mentioned in reverse order in the introductory sentence that stated the “two main reasons” why people take photos (share goal first). In the *Equal-Goals* condition, participants read: “Your goal should be to take pictures so that you can look back at those photos to remember the experience in the future and also so that you can share those photos with other people.” The order in which the two goals were mentioned in the *Equal-Goals* condition was counterbalanced, but since it did not affect any of the dependent measures, we collapse across order in subsequent analyses.

Immediately following the safari, participants responded to one item assessing their overall evaluation of their experience: “How much did you enjoy the safari experience?” on a 7-point Likert scale ranging from 1 = “Not at all” to 7 = “Extremely.” We also collected responses on an additional item to measure a behavioral implication of participants’ enjoyment: “To what extent would you be interested in participating in a similar future experiment?” (1 = “Not at all interested” to 7 = “Extremely interested”; Raghunathan and Corfman 2006).

Participants were also asked three items measuring their self-presentational concern. Because self-presentational concern often triggers the self-conscious emotion of anxiety (e.g., Leary 2007; Miller 1992, Hung and Mukhopadhyay 2012), we assess participants’ feelings of anxiety during the experience to examine the self-presentational process with the item “How anxious did you feel during the bus tour experience?” on a 7-point Likert scale from 1 = “Not at all anxious” to 7 = “Extremely anxious”. In addition, participants responded to two additional items that asked about the self-presentational process even more directly: “How worried were you that you were taking photos that would show yourself in the best possible light?” and “To what extent were you attempting to control your impression while taking photos?”, both on 7-point Likert scales from 1 = “Not at all” to 7 = “Extremely”. These three items loaded together in a factor analysis, so we combined them to form a measure of Self-presentational Concern ($\alpha = .67$). All effects hold when we separately analyze each of the items making up our Self-presentational Concern scale.

As a manipulation check of the goal salience manipulation, we included two items at the end of the study to capture relative goal activation during the experience: “To what extent were you focused on capturing photos for yourself to look back on in the future while experiencing the safari?” and “To what extent were you focused on capturing photos to share with others while

experiencing the safari?”, both on 0-100 Likert scales from 0 = “Not at all” to 100 = “A great deal”.

In addition, we collected three ancillary measures to test the potential alternative explanation that taking photos to share is more distracting than taking photos for the self. In all three conditions, participants were asked: “How distracted did you feel by your photo-taking goal(s) during the safari experience?” (1 = “Not at all distracted” to 7 = “Extremely distracted”), “How much did you feel like you were missing out on the safari experience while taking photos?” (1 = “Not very much” to 7 = “Very much”), and “Taking photos for that goal(s) really disrupted my safari experience.” (1 = “Strongly disagree” to 7 = “Strongly agree”). These three items loaded on a single factor and were averaged to form a measure of Distraction ($\alpha = .87$).

Results

Photos taken. Across the three photo-taking conditions, there was a no difference in the number of photos taken ($F(2,199) = 1.99, p = .14$).³ On average, participants took 13 photos across the 3-minute safari ($M = 13.19, SD = 7.52, \text{Min} = 2, \text{Max} = 41$).

Goal Salience Manipulation Check. Consistent with the intended manipulation, a one-way ANOVA revealed a significant effect of photo-taking condition on the two goal salience manipulation checks (self: $F(2,204) = 9.67, p < .001$; share: $F(2,204) = 15.92, p < .001$).

Participants in the *Primarily-Self-Goal* condition reported that they were capturing photos for themselves to look back on in the future ($M = 70.97; SD = 21.95$) more than those in the *Primarily-Share-Goal* condition ($M = 51.09; SD = 29.23; t(138) = 4.38, p < .001$) and marginally more than participants in the *Equal-Goals* condition ($M = 62.71; SD = 28.61; t(137) = 1.81, p =$

³Due to a computer error in the photo-taking software, we obtained this data only for 202 of the 207 participants.

.07). In addition, those in the *Equal-Goals* condition reported that they were taking photos for this reason more than those in the *Primarily-Share-Goal* condition ($t(136) = 2.54, p = .01$).

On the other hand, participants in the *Primarily-Share-Goal* condition reported that they were capturing photos to share with others ($M = 78.78; SD = 21.49$) more than those in the *Primarily-Self-Goal* condition ($M = 55.33; SD = 26.72; t(138) = 5.64, p < .001$) and more than participants in the *Equal-Goals* condition ($M = 67.26; SD = 24.99; t(136) = 2.75, p < .01$). In addition, those in the *Equal-Goals* condition reported that they were taking photos for this reason more than those in the *Primarily-Self-Goal* condition ($t(137) = 2.86, p < .01$).

Enjoyment. Consistent with our main prediction, an ANOVA revealed a significant effect of photo-taking condition on enjoyment ($F(2,204) = 3.68, p = .03$). Replicating the previous studies, participants who took photos during the safari with the primary goal of sharing the experience with others enjoyed the experience less ($M = 4.19; SD = 1.70$) than those who took photos with the primary goal of preserving the experience for themselves ($M = 4.99; SD = 1.57; t(138) = 2.71, p < .01$). Participants who took photos with both of these goals equally salient fell between the two primary goal conditions: they enjoyed their experience just as much ($M = 4.62; SD = 1.92$) as those who took photos primarily for themselves ($t(137) = 1.25, p = .21$) and those who took photos primarily to share with others ($t(136) = 1.45, p = .15$).

Interest in similar experience. An ANOVA revealed a marginally significant effect of photo-taking condition on interest in participating in a similar experience ($F(2,204) = 2.34, p = .099$). Participants who took photos during the safari with the primary goal of sharing the experience with others reported that they would be less likely to participate in a similar future experiment ($M = 4.12; SD = 1.75$) than those who took photos with the primary goal of preserving the experience for themselves ($M = 4.73; SD = 1.62; t(138) = 2.13, p = .04$).

Participants who took photos with both of these goals equally salient fell between the two primary goal conditions: they were just as likely to go through a similar experience ($M = 4.32$; $SD = 1.71$) as those who took photos primarily for themselves ($t(137) = 1.40, p = .17$) and those who took photos primarily to share with others ($t(136) = .72, p = .48$).

Self-presentational Concern. An ANOVA also revealed a significant effect of photo-taking condition on self-presentational concern ($F(2,204) = 4.39, p = .01$). Participants who took photos with the primary goal of sharing the experience with others felt more self-presentational concern ($M = 3.97$; $SD = 1.29$) than those who took photos with the primary goal of preserving the experience for themselves ($M = 3.30$; $SD = 1.21$; $t(138) = 2.96, p < .01$). Participants who took photos with both of these goals equally in mind fell in between primary goal conditions: they felt as much self-presentational concern ($M = 3.62$; $SD = 1.47$) as those who took photos primarily for themselves ($t(137) = 1.41, p = .16$) and those who took photos primarily to share with others ($t(136) = 1.53, p = .13$).

Distraction. There were no differences between the three Photo-Goal conditions in distraction ($F(2,204) = .54, p = .59$). Individuals who took photos primarily to share ($M = 3.13$; $SD = 1.39$) or for both goals equally ($M = 3.38$; $SD = 1.51$) were no more distracted than individuals who took photos primarily for themselves ($M = 3.27$; $SD = 1.38$). The effect of photo-taking goals on enjoyment holds when distraction is included in the model.

Mediation analyses. We conducted a mediation analysis using the bootstrap procedure with 10,000 samples (Preacher, Rucker, and Hayes 2007; SPSS Macro PROCESS Model 4) to test the process by which photo-taking goals affects enjoyment. Our mediation model included Photo-taking Goal as the independent variable (*Primarily-Self-Goal* = 0; *Primarily-Share-Goal* = 1), Self-presentational Concern as the mediator variable, and Enjoyment as the dependent

measure. We find a significant indirect effect of self-presentational concern (Indirect effect = -.418, SE = .151, 95% CI = [-.756, -.160]). Taking photos to share increased self-presentational concern ($a = .67, p < .01$), and as self-presentational concern increased, enjoyment decreased ($b = -0.67, p < .001$). Once we included self-presentational concern in our model, the effect of photo goals on enjoyment significantly decreased from $c = -.80, p < .01$ to $c' = -0.38, p = .14$, suggesting full mediation.

Discussion

This study supports the proposition that when a share goal is salient, even when it is accompanied by another (less salient) self goal, there can be negative effects on enjoyment. That is, having primarily a sharing goal in mind reduces enjoyment relative to having primarily a self goal in mind, replicating our effects even when it is explicit that both goals are possible. In addition, as expected, when both goals are equally salient, enjoyment of the experience falls in between the two primary goals. This pattern of results is also present for a more behavioral measure: likelihood to participate in another related experience. Thus, taking photos to share does not just reduce enjoyment of the experience itself; it can also extend to intentions of future behavior.

Further, we do not find any evidence that taking photos to share is more distracting than taking photos for the self. This study addresses this alternative explanation in two ways. First, we show that the effect of self versus share goals replicates even when the both goals are present. That is, even though people with a primary self or share goal also had the other goal in mind (confirmed by the manipulation check), we still see a difference in enjoyment. If anything, taking photos explicitly for both goals should be the most distracting, but individuals in this condition

do not experience lower enjoyment than individuals in either primary goal condition. Second, we find no differences across conditions on our measure of distraction. While null effects do not provide conclusive evidence, this suggests that there was no additional distraction from having a primary share goal compared to having a primary self goal. Thus, it does not appear that distraction from differential activation of additional goals is driving the differences in enjoyment between conditions.

STUDY 5: MODERATION BY TRAIT SELF-CONSCIOUSNESS

Study 4 provided evidence that the reduced enjoyment experienced by individuals taking photos to share depends on how salient that goal is relative to other goals. Study 5 seeks to demonstrate the importance of salience further by examining how the salience of self-presentational concern itself, as measured by a relevant individual difference variable, interacts with photo-taking goals. The Trait Self-Consciousness Scale (Fenigstein, Scheier, and Buss 1975; Scheier and Carver 1985) is a questionnaire which measures individual differences in the extent to which individuals are concerned with presentation of the self and the reactions of others to that presentation. We examine two sub-scales relevant to our context: the *Public Self-Consciousness* scale, which measures an individual's tendency to think about self-aspects that are matters of public display, and the *Social Anxiety* scale, which measures an individual's sense of apprehension over being evaluated by others in one's social context. People who are high in these aspects of self-consciousness have a high awareness of how others regard them and frequently feel as though others are evaluating them (Fenigstein 1979). We expect that the effect

of reduced enjoyment when individuals take photos to share will be the strongest for those who are high on these dimensions of self-consciousness.

Methods

Two-hundred twenty-four individuals (50.4% female; mean age = 35.5) participated in an online study via Amazon.com's Mechanical Turk in exchange for payment.

Participants were randomly assigned to a *Self-Goal* or *Share-Goal* condition in a between-subjects design. Participants received the same photo-taking goal instructions as in the pilot lab study and then watched a first-person video of a walking tour through Carcassonne, France that took 3 minutes and 22 seconds.

After the walking tour video ended, all participants responded to the same enjoyment question from the previous studies. Then, participants were asked to indicate the extent to which 13 items from two relevant sub-scales of the Trait Self-Consciousness Scale were like them, using the following response format: 0 = "Not like me at all", 1 = "A little like me", 2 = "Somewhat like me", and 3 = "A lot like me". The Public Self-Consciousness sub-scale includes items such as "I care a lot about how I present myself to others", while the Social Anxiety sub-scale includes items such as "I feel nervous when I speak in front of a group" (see Web Appendix C for full list of scale items). Responses were summed across all 13 items to form our individual difference measure of Trait Self-Consciousness ($\alpha = .78$). The measure could, in theory, range from 0 (i.e., not at all self-conscious) to 39 (i.e., extremely self-conscious). In our sample, responses ranged from 7 to 36 with $M = 20.91$ and $SD = 6.70$. This measure was not affected by the photo-goal manipulation ($F(1,222) = .39, p = .53$).

Results

Photos taken. There was no difference in the number of photos taken across the conditions ($M_{Self-Goal} = 24.66$, $SD_{Self-Goal} = 14.83$; $M_{Share-Goal} = 23.36$, $SD_{Share-Goal} = 14.96$; $F(1,222) = .42$, $p = .52$).

Enjoyment. To test our hypothesis that those who score higher in trait self-consciousness will be more likely to experience reduced enjoyment in the sharing condition, we estimated a regression with enjoyment as the dependent variable and Photo-taking Goal ($Self-Goal = 0$; $Share-Goal = 1$), Trait Self-Consciousness (mean-centered), and their interaction as the independent variables.

In estimating the regression, we found a significant effect of Photo-Goal Condition ($B = -.501$, $SE = .170$, $t(220) = -2.96$, $p < .01$), replicating our findings from the previous studies that participants enjoyed the experience less in the *Share-Goal* condition than the *Self-Goal* condition. There was no significant effect of Self-Consciousness ($B = .016$, $SE = .018$, $t(220) = .87$, $p = .39$). Most importantly, however, consistent with our predictions, we found a significant Photo-Goal Condition by Self-Consciousness interaction ($B = -.066$, $SE = .025$, $t(220) = -2.58$, $p = .01$).

To decompose this interaction, we first examined the relationship between scores on the trait self-consciousness scale and enjoyment for each photo-taking goal condition (Aiken and West 1991; Spiller et al. 2013). For the *Self-Goal* condition, when self-presentational concern should not be as much of a factor, there was no significant relationship between self-consciousness and enjoyment ($B = .016$, $SE = .018$, $t(220) = .87$, $p = .39$). However, for the *Share-Goal* condition, when self-presentational concern could play a role, there was a significant negative association between self-consciousness and enjoyment ($B = -.050$, $SE = .018$, $t(220) = -$

2.82, $p < .01$). In other words, the higher participants scored on trait self-consciousness, the less they enjoyed the experience, but only when they were taking photos to share.

In order to identify the range of self-consciousness scores for which the simple effect of the photo-goal manipulation was significant, we used the Johnson-Neyman technique. This analysis revealed that there was a significant effect of photo-taking goal for any self-consciousness score greater than 18.6 ($B_{JN} = -.353$, $SE = .179$, $p = .05$), but not for any self-consciousness score less than 18.6. Figure 2 displays the effect of both photo-taking goals on enjoyment for the entire range of the Trait Self-Consciousness Scale.

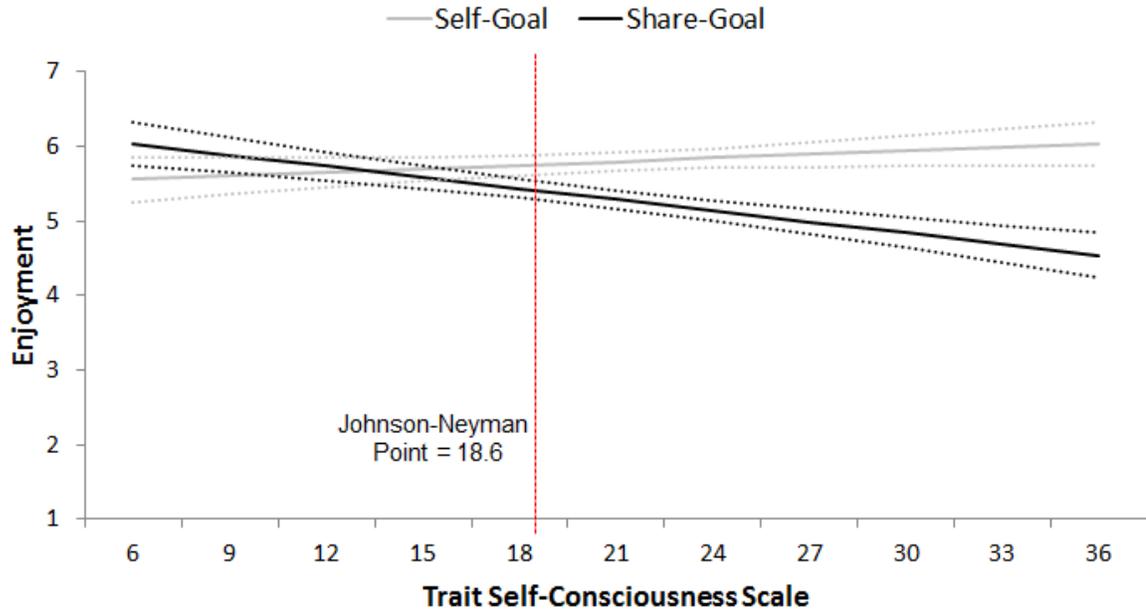


Figure 2: Enjoyment results in Study 5. Dotted lines represent ± 1 standard error. Mean trait self-consciousness for this study was 20.91 ($SD = 6.70$).

Discussion

Study 5 replicates our previous findings showing that taking photos to share diminishes enjoyment relative to taking photos for the self. In addition, we find that individual differences in self-consciousness affect people's enjoyment depending on their photo-taking goal. For those

who take photos for themselves, self-consciousness is not related to enjoyment. However, for those who take photos to share with others, being higher in self-consciousness is related to lower enjoyment during the experience, arguably because those individuals who have a more chronically salient concern about self-presentation are the ones whose anxiety most prevents them from enjoying the experience. This provides further support for the proposed self-presentational mechanism.

STUDY 6: THE EFFECT OF THE SALIENT ABILITY TO DELETE PHOTOS DURING THE EXPERIENCE

In Study 5, we showed that the more chronically salient self-presentational concern is for an individual, the more a sharing goal reduces enjoyment of that person's experience relative to a self goal. In Study 6, we alter the *situational* salience of self-presentational concern by changing a feature of the photo-taking environment, and thus experimentally moderate the effect of photo-taking goals on enjoyment.

In the previous studies, taking photos to share with others reduced enjoyment even when participants could decide *after* the experience which photos to include in their album, as long as the goal to share was salient during the experience. Further, as we learned from the study briefly presented in the discussion section following Study 3, photo-taking goals must be active during the experience itself (not just during album-creation) in order to affect evaluations of that experience. Hence, in order to reduce self-presentational concern when a share-goal is actually active, we target the experience itself and manipulate whether, *during* the bus tour experience, it is salient for participants that they have the ability to select which photos to keep. To do that, half

the participants were given the opportunity to “delete” photos from their “camera” during the experience, which was made highly salient to them. We predict that individuals in the share condition will be more likely to delete photos, a self-presentational behavior, and that making it salient that photos can be deleted during the experience will reduce self-presentational concern and attenuate the negative effect on enjoyment.

Methods

Five-hundred ninety individuals (58.6% female; mean age = 25.8) at a Northeastern university participated in a study in exchange for payment. All participants experienced the same London bus tour from the first laboratory study.

We randomly assigned participants to one of four conditions in a 2 (Photo-taking Goal: *Self-Goal, Share-Goal*) x 2 (Ability to Delete: *No Delete, Delete*) between-subjects design. We manipulated photo-taking goal as we did before: participants imagined that they were taking photos either for themselves or to share with others. To manipulate the ability to delete photos from one’s album during the experience, we changed a feature of the photo-taking interface. Half the participants experienced the tour and took photos the same way that they did in the previous studies (*No Delete* condition), while half the participants were told that they could delete photos they had taken by clicking on a small “x” at the top-right of the image (*Delete* condition). This feature was in place and salient as they experienced the tour. For an example of the Delete interface, see Figure 3.

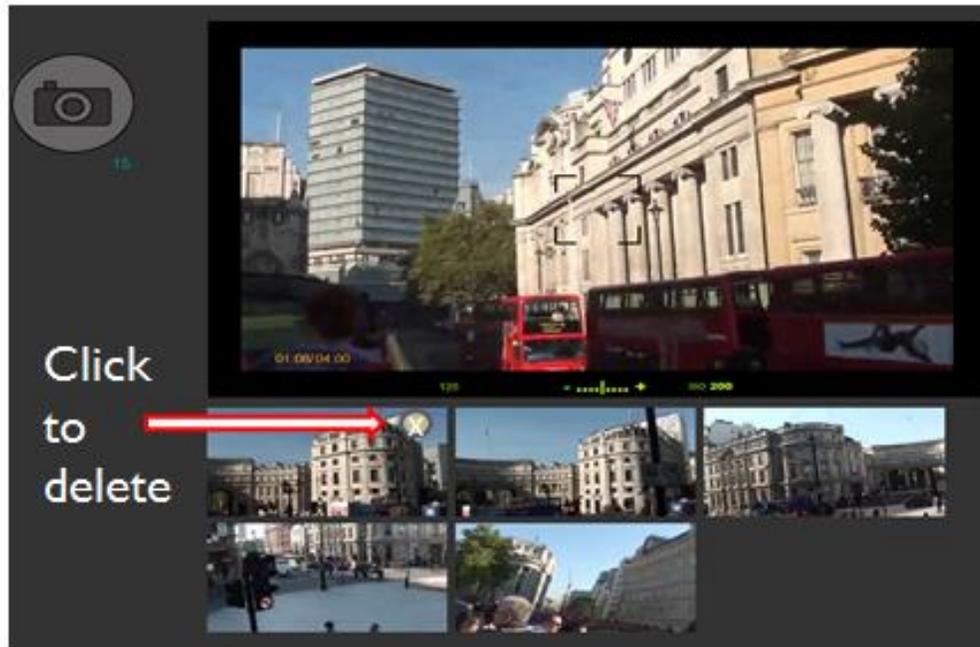


Figure 3: Visual instructions for delete interface used in Study 6. Participants were able to delete photos from their album while they experience the bus tour by clicking an “x” in the top right-hand corner of the photo.

After the bus tour ended, all participants responded to the same question about their overall enjoyment during the experience. Then, to measure self-presentational concern, all participants responded to the same three questions from Study 4 ($\alpha = .63$).

Results

Photos taken and deleted. There were no differences in the total number of photos initially taken across Photo-taking Goal conditions ($F(1,586) = .07, p = .79$) and Ability to Delete conditions ($F(1,586) = .03, p = .85$), nor was there a significant interaction ($F(1,586) = .55, p = .46$). On average, participants took 20 photos across the 4-minute bus tour ($M = 19.57, SD = 14.85, \text{Min} = 0, \text{Max} = 126$).

Focusing on the two conditions where photo deletion was possible, we find a significant effect of photo-taking goal on the number of photos deleted ($F(1,269) = 10.86, p < .01$).

Participants in the *Share-Goal* condition deleted more photos ($M = 4.36, SD = 4.44$) than participants in the *Self-Goal* condition ($M = 2.74, SD = 3.61$).

Enjoyment. A two-way ANOVA revealed only the predicted Photo-taking Goal by Ability to Delete interaction effect on enjoyment ($F(1,586) = 8.14, p < .01$). Consistent with the previous studies, participants in the *No Delete* condition enjoyed the experience less when they took photos to share with others ($M = 3.97, SD = 1.58$) than when they took photos for themselves ($M = 4.52, SD = 1.65; F(1,586) = 10.44, p = .001$). However, when it was salient throughout the experience that participants were able to delete photos from their albums, there was no difference between the two Photo-taking Goal conditions ($M_{Share-Goal} = 4.91, SD_{Share-Goal} = 1.48, M_{Self-Goal} = 4.74, SD_{Self-Goal} = 1.40; F(1,586) = .81, p = .37$).

Looking at the data another way, while there was no effect of Ability to Delete in the *Self-Goal* condition, ($F(1,586) = 4.49, p = .22$), there was in the *Share-Goal* condition, such that making it salient that deleting is possible during the experience made them enjoy the experience more ($F(1, 586) = 27.29, p < .001$). Figure 4 displays these results.

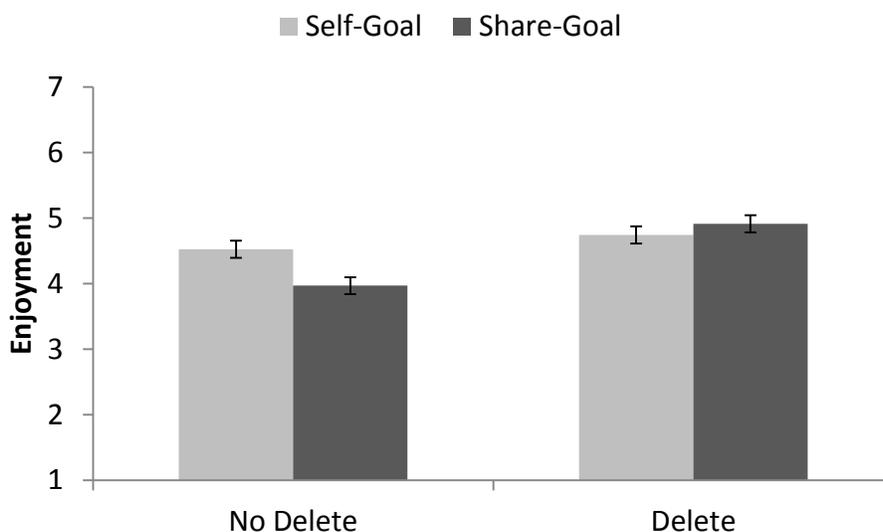


Figure 4: Enjoyment results in Study 6. Error bars represent ± 1 standard error.

Self-presentational Concern. A two-way ANOVA revealed the predicted Photo-taking Goal by Ability to Delete interaction on self-presentational concern ($F(1,586) = 7.73, p < .01$). Consistent with Study 4, participants in the *No Delete* condition felt more self-presentational concern when they took photos to share with others ($M = 3.45, SD = 1.36$) than when they took photos for themselves, ($M = 2.69, SD = 1.24; F(1,586) = 27.87, p < .001$). However, in the *Delete* condition, when the ability to delete photos from their albums was salient for participants, there was no difference between the two photo-goal conditions ($M_{Share-Goal} = 3.08, SD_{Share-Goal} = 1.35; M_{Self-Goal} = 2.91, SD_{Self-Goal} = 1.18; F(1,586) = 1.18, p = .28$).

As expected, while there was no effect of Ability to Delete in the *Self-Goal* condition, ($F(1,586) = 2.18, p = .14$), there was in the *Share-Goal* condition, such that making it salient that deleting is possible during the experience made them feel less self-presentational concern ($F(1,586) = 6.01, p = .01$).

Mediation analyses. We conducted a moderated mediation analysis using the bootstrap procedure with 10,000 samples (Preacher, Rucker, and Hayes 2007; MacKinnon, Fairchild, and

Fritz 2007; SPSS Macro PROCESS, Model 7) to test the process by which photo-taking goals affects enjoyment. Specifically, we predicted that in the *No Delete* condition, taking photos to share would increase self-presentational concern, which would decrease enjoyment. However, in the *Delete* condition, we did not expect photo-taking goals to affect feelings of self-presentational concern or enjoyment. Our mediation model included Photo-taking Goal as the independent variable (*Self-Goal* = 0; *Share-Goal* = 1), Ability to Delete as the moderator variable (*No Delete* = 0; *Delete* = 1), Self-presentational Concern as the mediator variable, and Enjoyment as the dependent measure. We find a significant indirect effect of self-presentational concern in the *No Delete* condition (Indirect effect = $-.193$, SE = $.056$, 95% CI = $[-.324, -.100]$). That is, we replicate our mediation results from Study 4: taking photos to share increased self-presentational concern ($a = .76$, $p < .001$), and as self-presentational concern increased, enjoyment decreased ($b = -0.35$, $p < .001$). Once we included self-presentational concern in our model, the effect of photo goals on enjoyment significantly decreased from $c = -.56$, $p < .01$ to $c' = -0.32$, $p = .08$, suggesting full mediation. However, we did not find a significant indirect effect of self-presentational concern in the *Delete* condition (Indirect effect = $-.043$, SE = $.040$, 95% CI = $[-.129, .032]$).

Discussion

As predicted, providing people with the salient ability to delete photos during the experience moderates the effect of photo-taking goals on enjoyment. When individuals take photos for themselves, that is, when self-presentational concern should play a negligible role because there is no anticipated evaluation, the salient ability to delete does not have an effect on enjoyment. However, when individuals take photos to share, making it salient during the

experience that they can delete photos leads them to feel less self-presentational concern than when they do not have the ability to delete photos. Consistent with our hypothesis, people delete more photos when they are taking photos to share compared to when they were taking photos for themselves. In fact, being able to delete photos while on the bus tour causes individuals in the share condition to enjoy their experience just as much as individuals in the self condition. This provides further evidence against the possibility that greater distraction in the share goal condition plays a central role since deleting should only make the photo-taking process more distracting (Barasch, Diehl, and Zauberger 2015).

Note that being able to delete photos was not simply available to participants, but, by design, was also highly prominent during the experience. Other aspects of the photo-taking environment (e.g., knowing that the photos do not have to be shared, or that the photo album may be edited later) may be known from the start, but are not as salient during the experience, and thus do not moderate the impact of photo-taking goals on enjoyment in the same way. We expect that in order for something to reduce self-presentational concern, it must be conspicuous during the experience itself, and perhaps even cause some behavior (e.g., deleting undesirable photos) on the part of the photo-taker.

In our studies thus far, respondents expected to share photos with others who were not specifically identified. In the final three studies, we more closely examine the role of the sharing target audience to gain further insight into the psychological mechanism.

STUDY 7: SELF-PRESENTATIONAL CONCERN AFFECTS ENJOYMENT THROUGH ENGAGEMENT

In the laboratory studies reported so far, participants in the photo sharing condition imagined that they would create an album to share with others. Study 7 seeks to replicate these findings when participants know they will *actually* share their photos with another person who undergoes the same bus tour experience. This study also tests whether self-presentational concern affects enjoyment via the distal mechanism of engagement in the experience.

Methods

One-hundred sixty-nine students (57.4% female; mean age = 22.2) at a Northeastern university participated in a study in exchange for payment. Participants were randomly assigned to one of two conditions in a 2-group (*Self-Goal*, *Share-Goal*) between-subjects design. In the *Self-Goal* condition, participants received the same photo-taking goal instructions as in the previous studies: to take photos for an album that they could look back on and keep for themselves. In the *Share-Goal* condition, however, participants were instructed to take photos for an album that they would subsequently share with another, randomly-assigned person in the lab. Though no participants knew their partner before the study, they were given an opportunity to introduce themselves and talk for a few minutes before watching the travel video. Most participants were students at the same university, which brought to mind the possibility of seeing their partner again in classes or extra-curricular activities. Hence, this design created a controlled situation in which self-presentational concern was likely to operate.

Participants in both conditions experienced the same London city bus tour. After the bus tour ended, all participants responded to the same question from the previous studies about their enjoyment during the overall experience. Following the enjoyment item, participants responded to two questions about their level of engagement in the bus tour experience: “How much did you

feel immersed in the bus tour experience?” on a 7-point Likert scale from 1 = “Not at all” to 7 = “Extremely” and “To what extent did you feel you were really part of the bus tour experience?” from 0 = “Felt I was not at all part of the experience” to 100 = “Felt I was entirely part of the experience” (Barasch, Diehl, and Zauberman 2015). Because these two items were on different scales, they were standardized and then averaged to form a measure of Engagement ($r(169) = .74, p < .001$). All participants were also asked the same single-item self-presentational anxiety question used in Studies 4 and 6. Finally, participants in the share condition actually had their partners come over to their computers to look at the photos they took during the bus tour.

Results

Photos taken. There were again no differences in the number of photos taken across the conditions ($M_{Share-Goal} = 19.04, SD_{Share-Goal} = 16.12; M_{Self-Goal} = 23.08, SD_{Self-Goal} = 20.07; F(1,167) = 2.01, p = .16$).

Enjoyment. Replicating our findings from the previous studies, participants enjoyed the experience less in the sharing condition ($M = 3.92, SD = 1.44$) than the self condition ($M = 4.44, SD = 1.45; F(1,167) = 5.42, p = .02$).

Self-presentational Concern. Self-presentational concern was also greater among individuals who were taking photos to share ($M = 4.82, SD = 1.64$) than those who were taking photos for themselves ($M = 3.80, SD = 1.61; F(1,167) = 16.50, p < .001$).

Engagement. In addition, participants felt less engaged when they took photos to share with their partner ($M = -.19, SD = .99$) than when they took photos for themselves ($M = .16, SD = .86; F(1,167) = 6.10, p = .01$).

Mediation Analysis. We used the bootstrapping technique for estimating multi-step mediation with 10,000 samples (Hayes, Preacher, and Myers 2011; SPSS Macro PROCESS, Model 6) using Photo-taking Goal condition as the independent variable (*Self-Goal* = 0; *Share-Goal* = 1), Self-presentational Concern as the first mediator, Engagement as the second mediator, and Enjoyment as the dependent variable. The 95% confidence interval for the total model did not include zero, indicating that self-presentational concern mediates the effect of photo goals on enjoyment through its effect on engagement (Indirect Effect = -0.193, SE = 0.063; 95% C.I. = [-.360, -0.097]). In particular, we found that taking photos to share increased self-presentational concern ($a_1 = 1.02, p < .001$), and the more self-presentational concern participants felt, the less engaged they were in the experience ($a_3 = -0.23, p < .001$). Further, the less engaged participants felt, the less they enjoyed the experience as a whole ($b_2 = 0.82, p < .001$). Once we included self-presentational concern and engagement in our model, the effect of photo goals on enjoyment significantly decreased from $c = -0.52, p = .02$ to $c' = -0.23, p = .25$, suggesting full mediation. The path model with estimated coefficients is displayed in Figure 5.

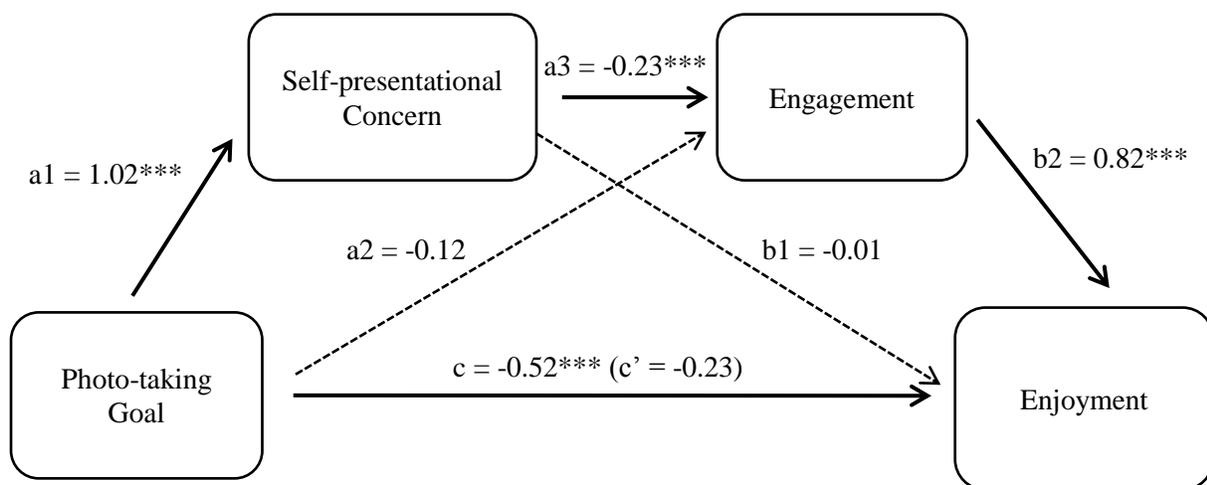


Figure 5: Mediation results in Study 7.

Discussion

These findings replicate and extend our findings from the previous studies. We show that individuals who take photos to share (in this experiment, with a particular person) enjoy their experience less than those who take photos for themselves. In addition, we find that this effect is driven by feelings of self-presentational concern during the experience. Importantly, both participants know they experienced the same event, though separately at their respective workstation. As such, they know that their partner is aware of any limitations of the types of photos that could be shared; still, taking photos to share heightens self-presentational concern and lowers enjoyment.

Further, we find additional mediational evidence as to how self-presentational concern affects enjoyment: through its effect on engagement. Those with sharing goals feel stronger self-presentational concern, which makes them less engaged in the experience, and in turn causes them to enjoy the experience less.

Similar results for this indirect mechanism emerged for the correlational study mentioned in the discussion of Study 2, where respondents took photos in front of a statue on campus during graduation. We found a significant effect of photo-taking goal on self-presentational concern ($B = -1.667$, $SE = .622$, $t(184) = 2.68$, $p < .01$), such that taking photos to share made people feel more anxious during the experience, as well as an effect on engagement ($B = -.873$, $SE = .416$, $t(184) = -2.10$, $p = .04$), such that taking photos to share made people less immersed in the experience. Estimating the same multi-step mediation model as above, we again found evidence that self-presentational concern mediates the effect of photo goals on enjoyment through its effect on engagement (Indirect Effect = -0.067 , $SE = 0.044$; 95% C.I. = $[-.187, -0.005]$). In particular, we found that taking photos to share increased self-presentational concern ($a_1 = 1.67$,

$p < .01$) and also decreased engagement in the experience ($a_2 = -0.72, p = .09$). The more self-presentational concern participants felt, the less engaged they were in the experience ($a_3 = -0.09, p = .06$). Further, the more self-presentational concern participants felt ($b_1 = -0.06, p = .06$) and the less engaged they felt ($b_2 = 0.45, p < .001$), the less they enjoyed the experience as a whole. Once we included self-presentational concern and engagement in our model, the effect of photo goals on enjoyment significantly decreased from $c = -0.61, p = .07$ to $c' = -0.12, p = .67$.

STUDY 8: THE EFFECT OF SHARING WITH DIFFERENT AUDIENCES

In the previous study, we demonstrated that sharing goals reduce enjoyment when people actually share their photos with a peer in the lab who went through the same experience. In Study 8, we manipulate the closeness of the audience with whom participants imagine sharing their photos. Within social interactions, some audiences carry greater prospect of interpersonal evaluation, which in turn, increases the anxiety people experience from communicating with those individuals (e.g., Schlenker and Leary 1982; Gynther 1957). In particular, social interactions with family and close friends rarely lead to the same level of social anxiety or shyness as other situations (Zimbardo 1977). Thus, sharing photos with close others may not induce the same level of self-presentational concern relative to sharing photos with acquaintances or classmates, because people are less likely to expect that close friends would judge them (or change their opinions of them) from viewing their photos (e.g., Tice, Butler, Muraven, and Stillwell 1995). In addition, there is less uncertainty about close friends' expectations (e.g., Houghton et al. 2013), and uncertainty is a major antecedent of social anxiety (Dibner 1958; Pilkonis 1977). To the extent that sharing with closer others leads to lower levels

of self-presentational concern, it should moderate the effect of sharing goals and reduce the negative effect of sharing on enjoyment.

In this study, we again test whether self-presentational concern affects enjoyment via the distal mechanism of engagement in the experience.

Method

One-hundred fifty-three students (44.4% female; mean age = 23.7) at a Northeastern university participated in a study in exchange for payment. All participants experienced the same London bus tour from Studies 6 and 7.

Participants were randomly assigned to one of three experimental conditions (*Self-Goal*, *Share-Goal-Acquaintances*, *Share-Goal-Friends*) in a between-subjects design. The *Self-Goal* condition was the same as in the previous studies: to take photos for a personal album. In the two *Share-Goal* conditions, participants were given a short description of GooglePlus, a social networking website that allows people to share content selectively to “Circles” of selected groups of people. In these two conditions, participants were told to imagine that they were taking photos to share with one of their GooglePlus Circles. Since audience size can affect the extent to which individuals share self-presentational content or feel anxiety (Barasch and Berger 2014; Jackson and Latané 1981), we hold audience *size* constant at 10 people. We then manipulated the closeness of the audience in the Circle of 10 people: participants in the *Share-Goal-Acquaintances* condition were told to take photos to share with a Circle of 10 acquaintances, while participants in the *Share-Goal-Friends* condition were told to take photos to share with a Circle of 10 close friends.

After the bus tour experience, reported on how much they enjoyed the experience, how engaged they felt in the experience ($r(153) = .89$; $p < .001$), and how anxious they felt during the experience with the same items that were used in Study 7.

Results

Photos taken. There were no differences in the number of photos taken across the conditions ($F(2,192) = 1.18$, $p = .31$). On average, participants took 18 photos on the London bus tour ($M = 18.31$, $SD = 10.43$, $Min = 1$, $Max = 56$).

Enjoyment. An ANOVA revealed a significant effect of Photo-taking Goal on enjoyment ($F(2,150) = 3.96$, $p = .02$). Consistent with results from our previous studies, relative to taking photos for the self ($M = 5.55$, $SD = 1.20$), taking photos to share with a circle of acquaintances decreased participants' enjoyment ($M = 4.92$, $SD = 1.58$; $t(102) = 2.36$; $p = .02$). However, audience closeness moderated the effect of Photo-taking Goal on enjoyment. When taking photos to share with a circle of close friends ($M = 5.60$, $SD = 1.24$), participants enjoyed the experience more than when taking photos to share with acquaintances ($t(99) = 2.52$; $p = .01$) and just as much as when taking photos for a personal album ($t(102) = .20$; $p = .84$).⁴ Figure 6 displays these results.

⁴We also replicated these findings in another study ($n=214$) that did not control for audience size. In that study, instead of sharing with an acquaintance Circle, participants imagined sharing with all their contacts on GooglePlus (including friends and acquaintances, similar to a Facebook post). The other two conditions (*Self-Goal* and *Share-Goal-Friends*) were identical to this study. The pattern of results is the same as in the study reported here.

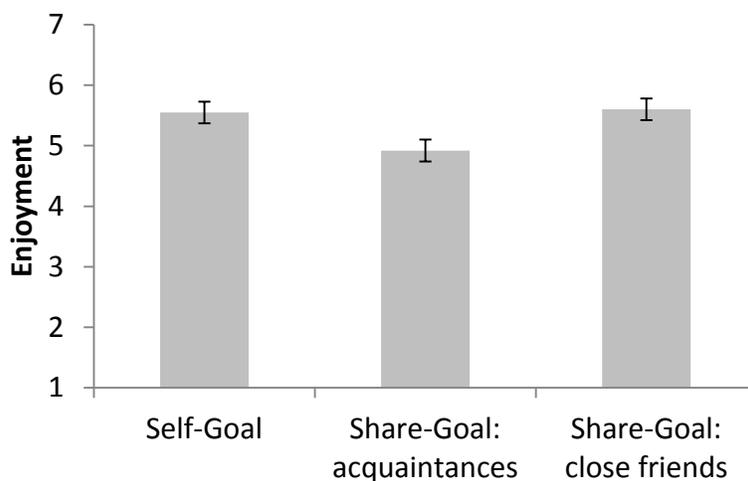


Figure 6: Enjoyment results in Study 8. Error bars represent ± 1 standard error.

Self-presentational concern. Ratings of self-presentational concern during the experience were also affected by Photo-taking Goal ($F(2,150) = 4.99, p < .01$). Similar to Study 7, relative to taking photos for a personal album ($M = 2.74, SD = 1.67$), taking photos to share with a circle of acquaintances increased feelings of self-presentational concern ($M = 3.76, SD = 1.99, t(102) = 2.96; p < .01$). However, when taking photos to share with a circle of close friends ($M = 2.90, SD = 1.59$), participants felt less self-presentational concern than when taking photos to share with acquaintances ($t(99) = 2.45; p = .02$) and just as much as when taking photos for a personal album ($t(102) = .47; p = .64$).

Engagement. A one-way ANOVA revealed a significant effect of Photo-taking Goal on engagement ($F(2,150) = 6.77, p < .01$). Compared to taking photos for the self ($M = .05, SD = .89$), taking photos to share with a circle of acquaintances decreased participants' engagement ($M = -.37, SD = 1.10; t(102) = 2.25; p = .03$). However, when taking photos to share with a circle of close friends ($M = .32, SD = .80$), participants felt more engaged in the experience than when taking photos to share with acquaintances ($t(99) = 3.64; p < .001$) and just as much as when taking photos for a personal album ($t(102) = 1.44; p = .15$).

Mediation Analysis. Finally, we conducted a bootstrap analysis for estimating multi-step mediation with 10,000 samples (Hayes, Preacher, and Myers 2011; SPSS Macro PROCESS, Model 6) using Photo-taking Goal condition as the independent variable, Self-presentational Concern as the first mediator, Engagement as the second mediator, and Enjoyment as the dependent variable. Replicating our effects from the previous studies, the 95% confidence interval for the comparison between *Self-Goal* and *Share-Goal-Acquaintances* did not include zero, indicating that self-presentational concern mediates the effect of photo goals on enjoyment through its effect on engagement (Indirect effect = $-.072$, SE = $.056$; 95% C.I. = $[-.244, -.007]$).

Specifically, we found that taking photos to share with acquaintances increased self-presentational concern ($a_1 = 0.52$, $p < .01$) and also decreased engagement in the experience ($a_2 = -.21$, $p = .04$). The more self-presentational concern participants felt, the less engaged they were in the experience ($a_3 = -0.24$, $p < .001$). Further, as self-presentational concern increased ($b_1 = -0.21$, $p < .01$) and engagement decreased ($b_2 = 0.54$, $p < .001$), the less participants enjoyed the experience. Once we included self-presentational concern and engagement in our model, the effect of photo goals on enjoyment significantly decreased from $c = -0.31$, $p = .03$ to $c' = -0.17$, $p = .22$, suggesting full mediation. As expected, for the comparison between *Self-Goal* and *Share-Goal-Friends*, self-presentational concern and engagement did not mediate the effect of photo goals on enjoyment (Indirect effect = $-.001$, SE = $.013$; 95% C.I. = $[-.051, .013]$).

Discussion

This study provides further support for the self-presentational mechanism between photo-taking goals and enjoyment. In this study, we manipulate the closeness of the sharing audience and show that it moderates the effect we found in the previous studies. That is, having people

imagine that they will share their photos with close friends makes the experience significantly more enjoyable than imagining that they will share with acquaintances, and just as enjoyable as taking photos for one's own personal album and memories. We again show that this effect is driven by feelings of self-presentational concern, which in turn affect how engaged people feel during the experience.

Note, however, that these effects are unlikely to increase monotonically with distance from one's current self. For instance, when one truly does not care about the people viewing one's photos (such as complete strangers they will never see again), self-presentational concern may not emerge or diminish enjoyment at all.

STUDY 9: TAKING PHOTOS TO BE VIEWED IN THE NEAR VS. DISTANT FUTURE

In the previous two studies, we demonstrated that whether a share goal reduces enjoyment or not depends on whom people share their photos with: greater distance from the sharing audience heightens self-presentational concern and thus reduces enjoyment. In the current study, we show a similar effect of distance on self-presentational concern and enjoyment when people are taking photos for a more distant *self*.

Prior literature suggests that people feel less connected to and more distant from their long-term future selves because they believe they will change considerably over time (Bartels and Urminsky 2011). If that is the case, then sharing photos with a distant future self (e.g., putting photos in a time-capsule to view in 50 years) may feel like taking photos to share with a different person (e.g., see Hershfield 2011; Pronin and Ross 2006). This, we expect, will increase

the pressure people feel to present themselves in a positive light to that future self and will thus decrease enjoyment.

In order to test this prediction, we manipulate the photo-taking goal (self vs. share) as before, as well as when the photos will be viewed by the self or by others (near vs. distant future). When taking photos for the near future, we expect to replicate our previous results: sharing goals will heighten self-presentational concern and reduce enjoyment relative to self goals. However, when taking photos for the distant future, both self goals and share goals will trigger self-presentational concern and reduce enjoyment. In other words, we predict that taking photos for oneself to look back on many years from now will decrease enjoyment similar to taking photos to share with others, because doing so feels like sharing the photos with a different person.

Methods

One-hundred ninety-nine individuals (47.7% female; mean age = 35.2) participated in an online study via Amazon.com's Mechanical Turk in exchange for payment. In this study, participants watched a first-person video of a walking tour through Bern, Switzerland.

We randomly assigned participants to one of four conditions in a 2 (Photo-taking Goal: *Self-Goal, Share-Goal*) x 2 (Goal Timing: *Near-Future, Distant-Future*) between-subjects design. The photo-taking goal manipulation was the same as in the previous studies. In addition, we also manipulated the timing of when the goal was to be completed. Half the participants were told to imagine that they would be looking back at their photos [sharing their photos] in one week (*Near-Future* condition). The other half of participants were told to imagine that they would be looking back at their photos [sharing their photos] in fifty years (*Distant-Future*

condition). Further, to reinforce the idea that one's distant future self is very different than his current self, we made this fact salient for the Self-Goal condition with language from the literature (Bartels and Urminsky 2011). Participants in the *Near-Future* condition were reminded that their identity was unlikely to change that much over the next week, while participants in the *Distant-Future* condition were reminded that their identity was likely to change radically over those fifty years (see Web Appendix D for full wording).

After the walking tour ended, all participants rated how much they enjoyed their tour experience and to what extent they felt self-presentational concern ($\alpha = .71$) using the same items from Studies 4 and 6. Finally, as a manipulation check for the goal timing manipulation, we used a measure from the literature that graphically depicts connection between the self and another (either a future self or another person) with circles that are either more or less overlapping (e.g., Bartels and Urminsky 2011; Aron, Aron, and Smollan 1992). Participants were asked to "Choose the set of circles that best reflects your opinion about the degree of connectedness between your current self and your future self who would be looking at these photos [the individuals with whom you would share these photos], where no overlap means 'completely different' and complete overlap means 'exactly the same.'" Participants selected one of the nine Euler circles (see Web Appendix Figure 1), which were coded as numeric scores (e.g., 1 to 9, with higher scores representing more overlap, or connectedness).

Results

Photos taken. There were no differences in the total number of photos taken across Photo-taking Goal conditions ($F(1,195) = .77, p = .38$) and Goal Timing conditions ($F(1,195) = .01, p = .92$), nor was there a significant interaction ($F(1,195) = 2.64, p = .11$). On average,

participants took 20 photos across the 3-minute walking tour ($M = 20.01$, $SD = 11.46$, $Min = 2$, $Max = 64$).

Connectedness Manipulation Check. In addition to a main effect of Photo-taking Goal ($M_{Self-Goal} = 6.41$, $SD_{Self-Goal} = 2.41$; $M_{Share-Goal} = 3.76$, $SD_{Share-Goal} = 1.67$; $F(1,195) = 96.97$, $p < .001$) and a main effect of Goal Timing ($M_{Near-Future} = 5.67$, $SD_{Near-Future} = 2.57$; $M_{Distant-Future} = 4.49$, $SD_{Distant-Future} = 2.19$; $F(1,195) = 19.32$, $p < .001$), a two-way ANOVA revealed the predicted Photo-taking Goal x Goal Timing interaction effect on connectedness ($F(1,195) = 14.00$, $p < .001$). Consistent with the intent of the manipulation, participants in the *Self-Goal* condition felt more connected to their future self in the *Near-Future* condition ($M = 7.55$, $SD = 1.80$) than in the *Distant-Future* condition ($M = 5.34$, $SD = 2.42$; $F(1,195) = 32.30$, $p < .001$). However, in the *Share-Goal* condition, participants felt equally connected to their sharing audience in both conditions ($M_{Near-Future} = 3.86$, $SD_{Near-Future} = 1.76$; $M_{Distant-Future} = 3.68$, $SD_{Distant-Future} = 1.59$; $F(1,195) = .22$, $p = .64$).

Enjoyment. In addition to a main effect of Goal Timing ($M_{Near-Future} = 5.67$, $SD_{Near-Future} = 1.39$; $M_{Distant-Future} = 5.22$, $SD_{Distant-Future} = 1.42$; $F(1,195) = 5.35$, $p = .02$), a two-way ANOVA revealed the predicted Photo-taking Goal x Goal Timing interaction effect on enjoyment ($F(1,195) = 6.21$, $p = .01$). Consistent with the previous studies, participants in the *Near-Future* condition enjoyed the experience less when they took photos to share with others ($M = 5.29$, $SD = 1.46$) than when they took photos for themselves, ($M = 6.06$, $SD = 1.21$; $F(1,195) = 7.58$, $p < .01$). However, in the *Distant-Future* condition, there was no difference between the two photo-taking goal conditions ($M_{Share-Goal} = 5.32$, $SD_{Share-Goal} = 1.50$; $M_{Self-Goal} = 5.12$, $SD_{Self-Goal} = 1.33$; $F(1,195) = .54$, $p = .46$).

Moreover, as we predicted, while there was no effect of Goal Timing in the *Share-Goal* condition, ($F(1,195) = .02, p = .90$), there was one in the *Self-Goal* condition, such that taking photos to look back on many years from now made them enjoy the experience less than taking photos to look back on in one week ($F(1,195) = 11.26, p = .001$). Figure 7 displays these results.

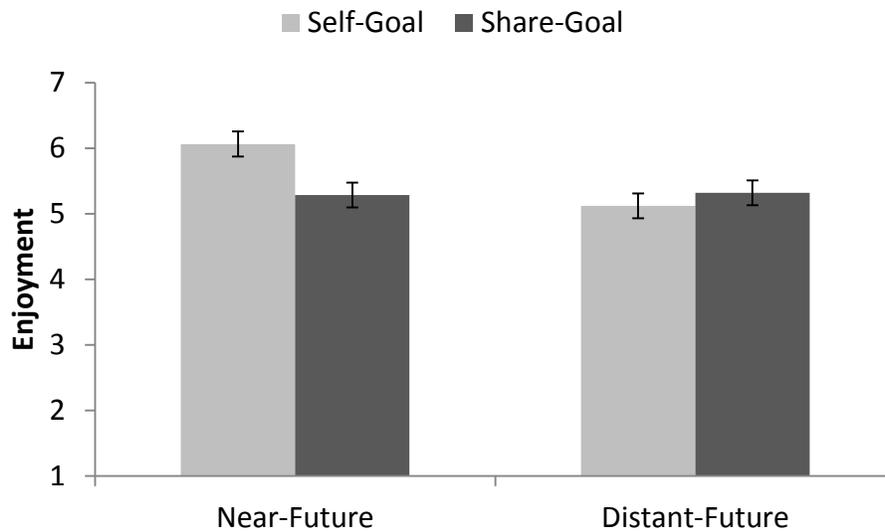


Figure 7: Enjoyment results in Study 9. Error bars represent ± 1 standard error.

Self-presentational Concern. The pattern of results for self-presentational concern followed that of enjoyment. In addition to a main effect of Goal Timing ($M_{Near-Future} = 2.93, SD_{Near-Future} = 1.33; M_{Distant-Future} = 3.62, SD_{Distant-Future} = 1.19; F(1,195) = 16.06, p < .001$), an ANOVA revealed the predicted Photo-taking Goal x Goal Timing interaction effect on self-presentational concern ($F(1, 195) = 8.59, p < .01$). Replicating the previous studies, participants in the *Near-Future* condition felt more self-presentational concern when they took photos to share with others ($M = 3.35, SD = 1.44$) than when they took photos for themselves, ($M = 2.50, SD = 1.06; F(1,195) = 11.49, p = .001$). However, in the *Distant-Future* condition, there was no difference between the two photo-taking goal conditions ($M_{Share-Goal} = 3.53, SD_{Share-Goal} = 1.20; M_{Self-Goal} = 3.71, SD_{Self-Goal} = 1.19; F(1,195) = .50, p = .48$).

Consistent with our hypotheses, while there was no effect of Goal Timing in the *Share-Goal* condition, ($F(1,195) = .59, p = .44$), there was in the *Self-Goal* condition, such that taking photos to look back on many years from made them feel more self-presentational concern than taking photos to look back on in one week ($F(1,138) = 23.49, p < .001$).

Mediation analyses. We conducted a moderated mediation analysis using the bootstrap procedure with 10,000 samples (Preacher, Rucker, and Hayes 2007; MacKinnon, Fairchild, and Fritz 2007; SPSS Macro PROCESS, Model 7) to test the process by which photo-taking goals affects enjoyment. Specifically, we predicted that in the *Near-Future* condition, taking photos to share would increase self-presentational concern, which would decrease enjoyment. However, in the *Distant-Future* condition, photo-taking goals would not affect feelings of self-presentational concern or enjoyment. Our mediation model included Photo-taking Goal as the independent variable (*Self-Goal* = 0; *Share-Goal* = 1), Goal Timing as the moderator variable (*Near-Future* = 0; *Distant-Future* = 1), Self-presentational Concern as the mediator variable, and Enjoyment as the dependent measure. We find a significant indirect effect of self-presentational concern in the *Near-Future* condition (Indirect effect = $-.542$, SE = $.176$, 95% CI = $[-.940, -.231]$). That is, we replicate our mediation results from the previous studies: taking photos to share increased self-presentational concern ($a = .85, p = .001$), and as self-presentational concern increased, enjoyment decreased ($b = -0.68, p < .001$). Once we included self-presentational concern in our model, the effect of photo goals on enjoyment significantly decreased from $c = -.78, p < .01$ to $c' = -0.22, p = .34$, suggesting full mediation. However, we did not find a significant indirect effect of self-presentational concern in the *Distant-Future* condition (Indirect effect = $.110$, SE = $.150$, 95% CI = $[-.177, .415]$).

Discussion

As predicted, the perceived connectedness between the current self and the intended photo audience alters the effect of photo-taking goals on enjoyment. The greater the degree of psychological distance, the more strongly people experience self-presentational concern and a reduction in enjoyment. This is true for sharing with others in either the near or distant future, but is also true when taking photos for a future self that feels very distant from one's current self. People who imagine looking back at their photos many years in the future, at a time when their identity will have changed greatly, feel more self-presentational concern than if they imagine looking back on their photos in a week. Thus, when people think about viewing their photos in the distant future, it is more similar to sharing with a different person, leading to the same decrease in enjoyment as when people share with others.

GENERAL DISCUSSION

Experiences are vital to the lives and well-being of consumers, and understanding the factors that affect those experiences is important both to consumers in their pursuit of happiness and to those who create and market experiences. Experiences also happen to be widely shared with others through written and verbal communication, and as we examine, through photos. In fact, more and more of our lives now include photo-taking to capture experiences as they unfold, and millions of those photos are shared each day through social media and other channels. While prior research on sharing has examined situations where the decision to share follows the experience, our findings highlight the importance of understanding how salient sharing goals during the experience shape the experience itself.

Across nine field and laboratory studies, we investigate how taking photos to share with others influences consumers' enjoyment of an experience. Compared to taking photos for one's own memories, taking photos to share leads people to enjoy their experiences less. This effect holds across a variety of real experiences, such as tourist visits, college graduation, and family holidays (Studies 1-3), as well as in more controlled laboratory settings with a virtual photo-taking experience that simulates the real world (Studies 4-9). The effect exists when people naturally choose their own photo-taking goals (Studies 1 and 2) and when photo-taking goals are experimentally induced (Studies 3-9). We demonstrate that this effect both shifts people's immediate evaluations after an experience (Studies 2 and 4-9) and persists after some delay (2 days or even longer; Studies 1 and 3).

We also show that these effects on enjoyment translate into outcomes with behavioral implications, including people's likelihood to recommend an experience to others (Study 1) and their desire to repeat a similar experience in the future (Study 4). Further, while people may simultaneously pursue multiple goals when taking photos, we show that the ultimate effect of photo-taking goals on enjoyment depends on which goal is the "primary" goal, that is, the goal most salient during that experience (Study 4).

Across these studies, we demonstrate that negative effects of photo-sharing goals on enjoyment are due to feelings of self-presentational concern during the experience. Taking photos to share with others increases feelings of anxiety to present oneself in a positive light, which in turn reduces enjoyment during the experience. Our laboratory studies establish direct support for the role of self-presentation via both mediation (Studies 4, 6, 7, 8, and 9), and moderation by individual differences (Study 5) and features of the photo-taking environment that shift self-presentational concern (Studies 6, 8, and 9). We also show indirect evidence for this

mechanism through memory perspective and photo content: creating an album to share makes people more likely to remember the experience from a third-person perspective, as well as to select photos with smiling people, posed (vs. candid) format, and more typical holiday content (Study 2). We further demonstrate that besides reducing enjoyment directly (Studies 4, 6, and 9), self-presentational concern can also lower enjoyment indirectly by lowering engagement with the experience (Studies 7 and 8).

Our moderation evidence also highlights boundary conditions for these effects. Taking photos to share is less likely to decrease enjoyment when the ability to actively delete photos is salient during the photo-taking process (Study 6), or when people are sharing exclusively with close friends who are less likely to judge them based on their photos (Study 8). We also show that even taking photos for the self can trigger self-presentation concern and decrease enjoyment when people imagine that a distant version of themselves will be looking back on those photos many years from now (Study 9).

Theoretical Contributions

The present research offers several novel insights for consumer research. While a variety of prior work has shown the personal benefits of sharing experiences with others (e.g., from self-disclosure or communicating word-of-mouth; Tamir and Mitchell 2012; Reis et al. 2010; Lambert et al. 2013), most of that work has only examined those *positive* effects of sharing *after the experience is over*. Our work highlights the “other side” of sharing: if the sharing goal is salient *during the experience*, this active intention to share in the future can *negatively* affect the current experience.

Relatedly, we advance prior research on impression management and self-presentation by identifying a highly prevalent behavior that can impose hedonic costs that is rooted in desires to self-present. Though previous work has shown that public (versus private) situations can trigger anxiety about how one will be judged by others (Schlenker and Leary 1982; Baumeister 1982), this prior work has not explored how even anticipating future self-presentation can impact people's hedonic enjoyment in the moment. We demonstrate that social concerns can be activated by photo-taking goals, even when the initial situation would not have necessarily done so.

Though people frequently *choose* to take photos to share, possibly because they anticipate the benefits of sharing their photos *after* an experience, they may not be aware that doing so could have unintended negative consequences *during* the experience itself. This possibility is supported by our intuition data: few people predict the direction of this effect, with over 80% saying that taking photos to share will either increase current enjoyment of an experience or have no effect whatsoever. Our research also unifies the sharing literature with work examining the trade-offs between present and future sources of utility. Just as seeking greater future happiness can undermine psychological health and well-being in the present (Mauss et al. 2011; Schooler, Ariely, and Loewenstein 2003), seeking future utility from sharing photos can diminish utility from other sources in the present.

Our findings are also the first to document when and how the process of taking photos to share can alter that very experience. While some research has begun to explore how taking photos *in general* can affect the consumer experience (Barasch, Diehl, and Zauberan 2015; Henkel 2014), no prior work has considered the various *goals* people pursue when taking photos, and how these goals impact their experiences. Our studies also highlight a variety of novel situational and dispositional factors that can moderate the influence of photo-taking goals on

enjoyment. In doing so, we contribute to the literature on experiential consumption (Van Boven and Gilovich, 2003; Kahneman et al. 2004), which has not looked closely at the specific factors that can improve or detract from our experiences.

More generally, this work helps us understand how new technologies, such as camera phones and social media, are reshaping consumer behavior and influencing how people experience their lives. Because taking photos requires actions during an experience, we argue that it makes the sharing goal salient throughout the event. Sharing via other communication channels, such as blogging about one's experience afterwards, does not necessarily require activity during the experience itself, and thus may not trigger the same level of self-presentational concern. In one unreported study, we orthogonally manipulated the medium used to capture an experience (photo vs. writing), as well as whether it was intended to be shared with others or preserved for oneself. While taking photos to share decreased enjoyment, intending to share an experience via blogging did not have these negative effects. These results support the notion that technologies negatively affect enjoyment when they heighten the activation of the sharing goal during the experience. Importantly, using these same technologies to compose narratives or tweet *during* an experience is likely to reduce enjoyment just like taking photos to share with others.

Implications

Our work also has a number of substantive contributions. People share hundreds of millions of photos every day (Facebook 2013; Systrom 2014). Capitalizing on the powerful appeal of the sharing goal, companies are increasingly providing consumers with reminders and discounts for sharing their photos with others. For example, some restaurants now include

hashtags on their menus encouraging consumers to take photos and share them on social media (Mancini 2014), some hotels give guests a free night for posting a photo of their stay on Instagram (Veix 2013), and certain ski resorts provide consumers the ability to post photos straight from the ski slopes to social networking sites such as Facebook (Boyd 2011). However, providing services to facilitate easy sharing of experiences might have unintended costs if it reduces the enjoyment people feel during the experience itself, with detrimental effects on people's retrospective evaluations of those events. Companies invest substantial resources to create experiences that will maximize consumer enjoyment (Pine and Gilmore 1999; Schmitt 1999), so encouraging consumers to take photos to share may be counterproductive to these objectives. Moreover, as we saw in Studies 1 and 4, these negative effects on consumers' experiences may subsequently affect their propensity to repeat purchase or recommend the experience to others.

However, our work also indicates an opportunity for marketers to highlight occasions for consumers to take photos during an experience for their own personal memories (rather than to share). Though some restaurants now prohibit diners from taking photos during their meals and some musicians request that fans refrain from taking photos during their concerts (Stapinski 2013; Wright 2012), some consumers will inevitably resent or disregard these policies and take photos anyway. Instead of fighting a photo-taking trend that is only increasing, companies and entertainers may want to find ways to encourage consumers to stop taking photos to instantly share on social media, and instead to take photos so they can relive their treasured experiences and memories in the future.

Similarly, consumers themselves might benefit from focusing their photo-taking objectives on their own memories instead of on sharing, so that important events in their lives are

not disrupted by self-presentational concern. Doing so might help people get the most out of their “extraordinary” experiences (e.g., visiting Disney World, attending a Super Bowl) that are rare or special. Moreover, since photo-taking and sharing are becoming increasingly common during a wide array of mundane, “ordinary” experiences (e.g., cooking dinner at home, shopping at the mall), this shift in goals might also increase people’s well-being on a daily basis. At the same time, focusing on reliving memories too far into the future might also harm consumers' present enjoyment, as our last study showed. For example, even important life milestones that are often photographed for the sake of long-lasting personal memories (e.g., graduations and weddings) might induce self-presentational concern and disrupt a special experience for individuals too fixated on making special memories for a distant future self.

Directions for Future Research

As with any investigation into a new research question, there are many interesting new directions to explore. While the current research focuses on the enjoyment consumers experience during an event itself, taking photos clearly involves other sources of utility. Future work should consider additional ways that photo-taking goals might impact overall consumer utility, such as influencing enjoyment during the photo album creation process or during the actual fulfillment of those goals (i.e., revisiting or sharing photos after the experience). While we have demonstrated that taking photos to share can decrease enjoyment of the experience itself, it is possible that the additional utility associated with sharing versus keeping photos for oneself outweighs this discrepancy in longer-term evaluations. This possibility is consistent with the various benefits individuals have been found to gain from telling others about their experiences (Reis et al. 2010; Lambert et al. 2013). Though our studies control for other sources of utility in

order to isolate the effects on the experience itself and the self-presentational mechanism, future work should examine other sources of utility from photo-taking and contribute to a more integrative understanding of individual and social experiences over time.

Future work could also explore how photo-taking goals affect other outcomes besides enjoyment. We have found initial evidence that photo-taking goals affect memory perspective, whether people remember their experience from an “actor” or from an “observer” perspective. However, these goals may also impact other aspects of memory, such as people’s ability to remember specific details of the event and their subjective impressions of how much they remember. Examining other features of the photographs that result from each of these photo-taking goals might also yield interesting insights. Given self-presentational motives, taking photos to share might spur people to take better-composed, higher quality photos, or to capture especially positive aspects of their experiences (e.g., the fun parts of a trip, leaving out the unhappy ones). Over time, people might benefit from their attempts to take the “best” pictures to share—after enough time has passed, what most impresses our friends may also be what most appeals to us. On the other hand, these photos might seem less “authentic” or representative of the true experience, and might contribute to less vivid or even false memories. Beyond these additional outcomes, future work might also explore other mechanisms by which photo-taking goals affect enjoyment, as well as additional distal mediators between self-presentational concern and enjoyment besides engagement.

Future research should also investigate additional situational variables that might moderate the influence of photo-taking goals on enjoyment. While we manipulated audience closeness, other features of the audience could also influence the effects of taking photos to share. For example, in almost all of our studies, people took photos to share with others who

were not involved in the same experience. Taking photos to share with others who experienced the same event might induce less anxiety (because there is less concern about capturing it in a certain way if the person experienced it too) or more anxiety (because one feels more pressure from direct photo comparison). In addition, while we primarily investigated the effect of photo-taking goals on enjoyment for positive or fun events (e.g., holiday and travel experiences), it is possible that the effect would be different for negative or boring events. For example, during a funeral, taking photos for personal memories might not be particularly appealing, whereas taking photos to share with others could bring additional utility from the anticipation of being able to share one's sadness and gain social support (Graham et al. 2008; Clark and Taraban 1991). Similarly, for particularly important experiences (e.g., once-in-a-lifetime), taking photos for the self might be just as stressful as taking photos to share due to feelings of pressure to capture the moment faithfully for posterity. Attributes of the photo-taking medium or communication channel could also play a role. For example, taking a photo to share on Snapchat could evoke less anxiety if people believe that the photo will be permanently deleted shortly after being viewed. In general, to the extent that a photo feels less public or more fleeting, self-presentational concerns may diminish and enjoyment may increase.

Individual differences may also play an important role in shaping how people approach photo-taking. Across our studies, we do not find that age or gender interacts with the effects of photo-taking goals on enjoyment. However, only a small proportion of our behavioral lab and Mturk samples were 60 years of age or older. To explore the influence of age more carefully, we specifically recruited younger (18-25 years old) and older (60-85 years old) participants via Qualtrics panel for an unreported study. We predicted that older participants with a sharing goal would experience less self-presentational concern, since they are less likely than young

consumers to use technology to share with distant others (e.g., through social media). Consistent with this prediction, age moderated the effect of photo-taking goals: within the older age bracket, taking photos to share did not induce as much anxiety, and thus did not decrease enjoyment.

This paper demonstrates that manipulating photo-taking goals has a causal impact on consumers' enjoyment across a wide variety of experiences. Future research might also investigate whether people *select* different photo-taking goals depending on what they are experiencing. Certain situations may be more likely to trigger the sharing goal than others (e.g., tourist visits), with important implications for consumers, as well as firms that want to optimize those types of experiences. Researchers might also examine other photo-taking goals beyond the two we focus on in this paper, as well as how people trade off between goals within the same experience. These open questions have implications for a number of active literatures.

In sum, by exploring how photo-taking goals impact consumers' evaluations of their experiences, the current research merely scratches the surface of an understudied behavior. Understanding the psychological effects of photo-taking has direct implications for well-being, memory, social behavior, and a variety of marketing applications. We close this paper with a call for future work to further explore the role photo-taking plays in people's lives, as this activity only continues to expand in breadth and importance.

References

- Aiken, Leona S. and Stephen G. West (1991), *Multiple Regression: Testing and Interpreting Interactions*. Newbury Park, CA: Sage Publications.
- Aknin, Lara B., Elizabeth W. Dunn, Gilian M. Sandstrom, and Michael I. Norton (2013), "Does social connection turn good deeds into good feelings? On the value of putting the "social" into prosocial spending," *International Journal of Happiness and Development*, 1(2), 155-171.
- Ariely, Dan, and Jonathan Levav (2000), "Sequential choice in group settings: Taking the road less traveled and less enjoyed," *Journal of Consumer Research*, 27, 279-290.
- Aron, Arthur, Elaine N. Aron, and Danny Smollan (1992), "Inclusion of Other in the Self Scale and the structure of interpersonal closeness," *Journal of personality and social psychology*, 63 (4), 596-612
- Barasch, Alixandra and Jonah Berger (2014), "Broadcasting and Narrowcasting: How Audience Size Affects What People Share," *Journal of Marketing Research*, 51, 286-299.
- Barasch, Alixandra, Kristin Diehl, and Gal Zauberaman (2015), "Does Taking Photos Get in the Way? The Effect of Photo-taking on the Enjoyment of Experiences," Wharton Working Paper.
- Bartels, Daniel M., and Oleg Urminsky (2011), "On intertemporal selfishness: How the perceived instability of identity underlies impatient consumption," *Journal of Consumer Research*, 38 (1), 182-198.
- Baumeister, Roy F. (1982), "A self-presentational view of social phenomena," *Psychological Bulletin*, 91, 3-26.
- Baumgartner, Hans, Mita Sujana, and James R. Bettman (1992), "Autobiographical memories, affect, and consumer information processing," *Journal of Consumer Psychology*, 1 (1), 53-82.
- Bhattacharjee, Amit, and Cassie Mogilner (2014), "Happiness from ordinary and extraordinary experiences," *Journal of Consumer Research*, 41(1), 1-17
- Boyd, E. B. (2011), "Vail Cannibalizes its Own Photo Business in the Name of Sharing," *Fast Company*, September 1.
- Caprariello, Peter A., and Harry T. Reis (2013), "To do, to have, or to share? Valuing experiences over material possessions depends on the involvement of others," *Journal of Personality and Social Psychology*, 104 (2), 199-215.

- Carter, Travis, and Thomas Gilovich (2010), "The relative relativity of experiential and material purchases," *Journal of Personality and Social Psychology*, 98, 146–159.
- Carter, Travis, and Thomas Gilovich (2012), "I am what I do, not what I have: the differential centrality of experiential and material purchases to the self," *Journal of personality and social psychology*, 102 (6), 1304-1317.
- Clark, Margaret S., and Carolyn Taraban (1991), "Reactions to and willingness to express emotion in communal and exchange relationships," *Journal of Experimental Social Psychology*, 27(4), 324-336.
- Csikszentmihalyi, Mihaly (1997), *Flow and the Psychology of Discovery and Invention*. New York, NY: Harper Perennial.
- Dibner, Andrew S. (1958), "Ambiguity and anxiety," *The Journal of Abnormal and Social Psychology*, 56, 165-174.
- Diener, Ed (1979), "Deindividuation, self-awareness, and disinhibition," *Journal of Personality and Social Psychology*, 37 (7), 1160-1171.
- Diener, Ed, and Seligman, Martin E. P. (2002), "Very happy people," *Psychological Science*, 13(3), 81-84.
- Dunbar, R. I. M., Anna Marriott, and N. D. C. Duncan (1997), "Human conversational behavior," *Human Nature*, 8 (3), 231-246.
- Elster, Jon, and George Loewenstein (1992), "Utility from memory and anticipation," in *Choice over time*, ed. George Loewenstein and Jon Elster, New York: Russell Sage Foundation Publications, 213-234.
- Emler, Nick (1990), "A social psychology of reputation," *European Review of Social Psychology*, 1, 171–193.
- Facebook Whitepaper (2013), "A Focus on Efficiency," <http://internet.org/efficiencypaper>.
- Fenigstein, Allan (1979), "Self-consciousness, self-attention, and social interaction," *Journal of Personality and Social Psychology*, 37 (1), 75-86.
- Fenigstein, Allan, Michael F. Scheier, and Arnold H. Buss (1975), "Public and private self-consciousness: Assessment and theory," *Journal of consulting and clinical psychology*, 43 (4), 522-527
- Fishbach, Ayelet, and Melissa Ferguson (2007), "The Goal Construct in Social Psychology," in *Social Psychology: Handbook of Basic Principles*, ed. Arie W. Kruglanski and Tory E. Higgins, New York, NY: Guilford, 490-515.

- Gilovich, Thomas, Amit Kumar, and Lily Jampol (2015), "A wonderful life: Experiential consumption and the pursuit of happiness," *Journal of Consumer Psychology*, 25 (1), 152-165.
- Goffman, E. (1959). *The Presentation of Self in Everyday Life*, New York: Anchor.
- Gollwitzer, Peter M. (1986), "Striving for specific identities: The social reality of self-symbolizing," in *Public self and private self*, ed. Roy F. Baumeister, New York, NY: Springer-Verlag, 143-159.
- Gonzales, Amy L., and Jeffrey T. Hancock (2011), "Mirror, Mirror on My Facebook Wall: Effects of Facebook Exposure on Self Esteem," *Cyberpsychology, Behavior, and Social Networking*, 14 (January/February), 79–83.
- Graham, Steven M., Julie Y. Huang, Margaret S. Clark, and Vicki S. Helgeson (2008), "The positives of negative emotions: Willingness to express negative emotions promotes relationships," *Personality and Social Psychology Bulletin*, 34(3), 394-406.
- Gynther, Ruth Autrey (1957), "The effects of anxiety and of situational stress on communicative efficiency," *The Journal of Abnormal and Social Psychology*, 54, 274-276.
- Hayes, Andrew F., Kristopher J. Preacher, and Teresa A. Myers (2011), "Mediation and the estimation of indirect effects in political communication research," *Sourcebook for political communication research: Methods, measures, and analytical techniques*, 434-465.
- Henkel, Linda A. (2014), "Point-and-Shoot Memories: The Influence of Taking Photos on Memory for a Museum Tour," *Psychological Science*, 25 (2), 396-402.
- Hershfield, Hal E. (2011), "Future self-continuity: how conceptions of the future self transform intertemporal choice," *Annals of the New York Academy of Sciences*, 1235 (1), 30-43.
- Higgins, E. Tory (2006), "Value from Hedonic Experience and Engagement," *Psychological Review*, 113 (3), 439-460.
- Holbrook, Morris B. (1993), "Nostalgia and Consumption Preferences," *Journal of Consumer Research*, 20, 245–56.
- Houghton, David, Adam Joinson, Nigel Caldwell, and Ben Marder (2013), "Tagger's delight? Disclosure and liking in Facebook: the effects of sharing photographs amongst multiple known social circles," Discussion Paper. University of Birmingham, Birmingham.
- Hung, Iris W., and Anirban Mukhopadhyay (2012), "Lenses of the Heart: How Actors' and Observers' Perspectives Influence Emotional Experiences," *Journal of Consumer Research*, 38 (6), 1103-1115.

- Jackson, Jeffrey M., and Bibb Latané (1981), "All alone in front of all those people: Stage fright as a function of number and type of co-performers and audience," *Journal of Personality and Social Psychology*, 40 (1), 73-85.
- Jones, Edward E., and Richard E. Nisbett (1972), "The actor and the observer: Divergent perceptions of the causes of behavior," in *Attribution: Perceiving the causes of behavior*, ed. Edward E. Jones, Morristown, NJ: General Learning Press.
- Jones, Edward E., and Thane S. Pittman (1982), "Toward a general theory of strategic self-presentation," in *Psychological perspectives on the self*, ed. Jerry M. Suls, Hillsdale, NJ: Erlbaum, 231-262.
- Jones, Edward E., and Camille B. Wortman (1973), *Ingratiation: An attributional approach*. Morristown, N.J.: General Learning Press.
- Kahneman, Daniel, Alan B. Krueger, David A. Schkade, Norbert Schwarz, and Arthur A. Stone (2004), "A survey method for characterizing daily life experience: The day reconstruction method," *Science*, 306, 1776-1780.
- Keinan, Anat and Ran Kivetz (2011), "Productivity Orientation and the Consumption of Collectable Experiences," *Journal of Consumer Research*, 37, 935-950.
- Killingsworth, Matthew A., and Daniel T. Gilbert (2010). "A wandering mind is an unhappy mind," *Science*, 330, 932-932.
- Kruglanski, Arie W., James Y. Shah, Ayelet Fishbach, Ron Friedman, Woo Young Chun, and David Sleeth-Keppler (2002), "A theory of goal-systems," *Advances in Experimental Social Psychology*, 34, 311-378.
- Lambert, Nathaniel M., A. Marlea Gwinn, and Roy F. Baumeister, Amy Strachman, Isaac J. Washburn, Shelly L. Gable, and Frank D. Fincham (2013), "A boost of positive affect: The perks of sharing positive experiences," *Journal of Social and Personal Relationships*, 30 (1), 24-43.
- Landis, M. H., and Harold E. Burt (1924), "A Study of Conversations," *Journal of Comparative Psychology*, 4 (1), 81-89.
- Langston, Christopher A. (1994), "Capitalizing on and coping with daily-life events: Expressive responses to positive events," *Journal of Personality and Social Psychology*, 67 (6), 1112-1125.
- Leary, Mark R. (2007), "Motivational and emotional aspects of the self," *Annual Review of Psychology*, 58, 317-344.

- Leary, Mark R., and Roy F. Baumeister (2000), "The nature and function of self-esteem: Sociometer theory," in *Advances in experimental social psychology Vol 32*, ed. Mark P. Zanna, San Diego, CA: Academic Press, 1–62.
- Leary, Mark R., and Robin M. Kowalski (1990), "Impression management: A literature review and two-component model," *Psychological Bulletin*, 107 (1), 34-47.
- Leboe, Jason P., and Tamara L. Ansons (2006), "On misattributing good remembering to a happy past: An investigation into the cognitive roots of nostalgia," *Emotion*, 6 (4), 596-610.
- Libby, Lisa K., and Richard P. Eibach (2011), "Visual Perspective in Mental Imagery: A Representational Tool that Functions in Judgment, Emotion, and Self-Insight," in *Advances in experimental social psychology Vol 44*, ed. Mark P Zanna and James M Olson, San Diego, CA: Academic Press, 185-245.
- Mackie, Diane M., and George R. Goethals (1987), "Individual and Group Goals," in *Review of Personality and Social Psychology: Group Processes*, ed. Clyde Hendrick, Newbury Park, CA: Sage.
- MacKinnon, David P., Amanda J. Fairchild, and Matthew S. Fritz (2007), "Mediation analysis," *Annual Review of Psychology*, 58(1), 593-614.
- Manago, Adriana M., Michael B. Graham, Patricia M. Greenfield, and Goldie Salimkhan (2008), "Self-presentation and gender on MySpace," *Journal of Applied Developmental Psychology*, 29, 446-458.
- Mancini, Al (2014). "Local Eateries Embrace Social Media in Their Menus," *Vegas Seven*, July 9.
- Mauss, Iris B., Maya Tamir, Craig L. Anderson, and Nicole S. Savino (2011), "Can seeking happiness make people unhappy? Paradoxical effects of valuing happiness," *Emotion*, 11, 807-815.
- McFerran, Brent, and Jennifer Argo (2014), "The Entourage Effect," *Journal of Consumer Research*, 40 (5), 871-884.
- Miller, Rowland S. (1992), "The nature and severity of self-reported embarrassing circumstances," *Personality and Social Psychology Bulletin*, 18 (2), 190-198.
- Myers, David G. (2000), "The funds, friends, and faith of happy people," *American Psychologist*, 55(1), 56–67.
- Naaman, Mor, Jeffrey Boase and Chih-Hui Lai (2010), "Is It Really About Me?: Message Content in Social Awareness Streams," in *Proceedings of the 2010 ACM Conference on Computer Supported Cooperative Work*, Savannah, GA, 189–192.

- National Geographic (2012), "Digital Photos Taken By Americans," <http://hyperallergic.com/48765/how-many-photos-do-americans-take-a-year/>
- Nicolao, Leonardo, Julie R. Irwin, and Joseph K. Goodman (2009), "Happiness for sale: do experiential purchases make consumers happier than material purchases?" *Journal of Consumer Research*, 36 (2), 188-198.
- Nigro, Georgia, and Ulric Neisser (1983), "Point of view in personal memories," *Cognitive Psychology*, 15 (4), 467-482.
- Novemsky, Nathan, and Rebecca K. Ratner (2003), "The time course and impact of consumers' erroneous beliefs about hedonic contrast effects," *Journal of Consumer Research*, 29 (4), 507-516.
- Pershan, Caleb (2014), "\$35 Billion Instagram Valuation Overtakes Twitter, Approaches Uber," *sfnist*, December 19.
- Pilkonis, Paul A. (1977), "The behavioral consequences of shyness," *Journal of Personality*, 45, 596-611.
- Pine, B. Joseph, and James H. Gilmore (1999), *The Experience Economy: Work Is Theater and Every Business a Stage*, Boston: Harvard Business School Press.
- Preacher, Kristopher J., Derek D. Rucker, and Andrew F. Hayes (2007), "Addressing Moderated Mediation Hypotheses: Theory, Methods, and Prescriptions," *Multivariate Behavioral Research*, 42, 185-227.
- Pronin, Emily, and Lee Ross (2006), "Temporal differences in trait self-ascription: when the self is seen as an other," *Journal of Personality and Social Psychology*, 90 (2), 197.
- Raghunathan, Rajagopal, and Kim Corfman (2006), "Is happiness shared doubled and sadness shared halved? Social influence on enjoyment of hedonic experiences," *Journal of Marketing Research*, 43 (3), 386-394.
- Ramanathan, Suresh, and Ann L. McGill (2007), "Consuming with others: Social influences on moment-to-moment and retrospective evaluations of an experience," *Journal of Consumer Research*, 34 (4), 506-524.
- Reis, Harry T., Shannon M. Smith, Cheryl L. Carmichael, Peter A. Caprariello, Fen-Fang Tsai, Amy Rodrigues, and Michael R. Maniaci (2010), "Are you happy for me? How sharing positive events with others provides personal and interpersonal benefits," *Journal of Personality and Social Psychology*, 99 (2), 311-329.

- Rosenzweig, Emily, and Thomas Gilovich (2012), "Buyer's remorse or missed opportunity? Differential regrets for material and experiential purchases," *Journal of personality and social psychology*, 102 (2), 215-223.
- Scheier, Michael F., and Charles S. Carver (1985), "The Self-Consciousness Scale: A Revised Version for Use with General Populations," *Journal of Applied Social Psychology*, 15 (8), 687-699.
- Schlenker, Barry R. (1980), *Impression management: The self-concept, social identity, and interpersonal relations*. Monterey, CA: Brooks/Cole.
- Schlenker, Barry R. and Mark R. Leary (1982), "Social anxiety and self-presentation: A conceptualization model," *Psychological Bulletin*, 92 (3), 641-669.
- Schmitt, Bernd (1999), *Experiential Marketing: How to Get Customers to Sense, Feel, Think, Act, and Relate to Your Company and Brands*, New York: Free Press.
- Schooler, Jonathan W., Dan Ariely, and George Loewenstein (2003), "The pursuit and assessment of happiness can be self-defeating," *The Psychology of Economic Decisions*, 1, 41-70.
- Spiller, Stephen A., Gavan J. Fitzsimons, John G. Lynch Jr, and Gary H. McClelland (2013), "Spotlights, floodlights, and the magic number zero: Simple effects tests in moderated regression," *Journal of Marketing Research*, 50 (2), 277-288.
- Stapinski, Helene (2013), "Restaurants Turn Camera Shy," *New York Times*, January 22.
- Storms, Michael D. (1973), "Videotape and the attribution process: reversing actors' and observers' points of view," *Journal of Personality and Social Psychology*, 27, 165-175.
- System, Kevin (2014), "300 Million: Sharing Real Moments," Instagram Blog.
<http://blog.instagram.com/post/104847837897/141210-300million#notes>
- Tamir, Diana I. and Jason P. Mitchell (2012), "Disclosing Information About the Self Is Intrinsically Rewarding," *Proceedings of the National Academy of Sciences*, 109 (21), 8038-8043.
- Tedeschi, James T. (1981), *Impression management theory and social psychological research*. New York: Academic Press.
- Tetlock, Philip E. and Antony S. Manstead (1985), "Impression management versus intrapsychic explanations in social psychology: A useful dichotomy?" *Psychological Review*, 92 (1), 59-77.

- Tice, Dianne M., Jennifer L. Butler, Mark B. Muraven, and Arlene M. Stillwell (1995), "When modesty prevails: Differential favorability of self-presentation to friends and strangers," *Journal of Personality and Social Psychology*, 69 (6), 1120-1138.
- Van Boven, Leaf (2005), "Experientialism, materialism, and the pursuit of happiness," *Review of General Psychology*, 9 (2), 132-142.
- Van Boven, Leaf, and Thomas Gilovich (2003), "To do or to have? That is the question," *Journal of personality and social psychology*, 85 (6), 1193-1202.
- Veix, Joe (2013), "You Can Stay at this Luxury Hotel for Free (If You Have 10K Instagram Followers)," *Deathandtaxes*, September 16.
- Wildschut, Tim, Constantine Sedikides, Jamie Arndt, and Clay Routledge (2006), "Nostalgia: Content, Triggers, Functions," *Journal of Personality and Social Psychology*, 91, 975-93.
- Wright, Danny (2012), "Should you be tweeting at gigs? Jack White and Bruce Dickinson think not," *The Guardian Music Blog*, July 27.
- Zauberman, Gal, Rebecca K. Ratner, and B. Kyu Kim (2009), "Memories as assets: Strategic memory protection in choice over time," *Journal of Consumer Research*, 35 (5), 715-728.
- Zimbardo, Philip G. (1977), *Shyness: What it is, what to do about it*, New York: Jove.

WEB APPENDIX A

Photo Upload Instructions in Study 3

Before uploading their photos, participants reported which photo-taking devices they used during Christmas to take their photos. Participants used a variety of devices, including point-and-shoot cameras (10.1%), digital SLRs (11.0%), cell phones (94.3%), video cameras (.9%), and film cameras (.4%). Note that participants could take photos with more than one device, and thus percentages add up to more than 100%.

In the *Self-Goal* condition, participants were instructed “Now that Christmas is over, we would like you to create an album for yourself. Please select 10 photos from Christmas that you would like to make into a personal album, for you to keep just for yourself, to look back on and remember the day. These should be the 10 photos that you are most excited to look back on, to keep your own memories alive.”

In the *Share-Goal* condition, they were instructed “Now that Christmas is over, we would like you to create an album to share. Please select 10 photos from Christmas that you would like to make into a shared album, for you to share on Facebook or other social media. These should be the 10 photos that you are most excited to share with all of your Facebook and other friends.”

Both conditions were then presented with an “Upload” function that allowed them to choose photos for their album. The system did not let them upload more than 10 photos, and if they accidentally uploaded a photo that they did not want in their album, they could remove it. The system warned participants if they tried to proceed with less than 10 photos, but did not prevent them from proceeding if they wanted to. Once they hit the final “Continue” button, the photos they had selected were stored onto our secure server.

WEB APPENDIX B

Photo Coding Guide used in Study 3

PEOPLE: Are there any people in the photo? (0 = no people, 1 = yes people)

POSED: Is at least one person “posing” for the camera? That is, is this a photo where at least one person is acting posed, rather than acting naturally or spontaneously (i.e., not “candid”)? (0 = candid, 1 = posed)

SMILING: Is at least one person clearly smiling directly at the camera? Look for “upturned” corners of the mouth, and only say “yes” if it is definitely a smile (not a “smirk”, etc.) (0 = no smile, 1 = yes smile)

TYPICAL OF CHRISTMAS: Does this photo include items that are typical of Christmas, and would likely not be seen at another time of year (e.g., decorations, tree, lights, stockings, Santa, reindeer, gifts, poinsettia flowers, ornaments, candy canes, red and green objects, etc.)? These items can be anywhere in the photo (i.e., they do not have to be the primary “focus” of the photo. (0 = no Christmas items, 1 = yes Christmas items)

WEB APPENDIX C

Trait Self-Consciousness Scale used in Study 5

(Scheier and Carver 1985)

Public self-consciousness

1. I'm concerned about my style of doing things.
2. I care a lot about how I present myself to others.
3. I'm self-conscious about the way I look.
4. I usually worry about making a good impression.
5. Before I leave my house, I check how I look.
6. I'm concerned about what other people think of me.
7. I'm usually aware of my appearance.

Social anxiety

1. It takes time to get over my shyness in new situations.
2. It's hard for me to work when someone is watching me.
3. I get embarrassed very easily.
4. It's easy for me to talk to strangers.
5. I feel nervous when I speak in front of a group.
6. Large groups make me nervous.

WEB APPENDIX D

Connectedness manipulation used in Study 9

(Adapted from Bartels and Urminsky 2011)

Research shows that day-to-day life events change appreciably [a bit] over [1 week/50 years], but what changes the most [least] over [1 week/50 years] is a person's core identity. The important characteristics that make you the person you are right now are likely to change radically in the next [1 week/50 years] [are established early in life and fixed by the end of adolescence.] Several studies conducted with people before and after a [1-week/50-year] period have found large fluctuations in these important characteristics [have shown that the traits that make up your personal identity remain remarkably stable].

WEB APPENDIX FIGURE 1

Euler circles used as a connectedness manipulation check in Study 9

