

Social Media as Sources of Emotions

14

Sonja Utz

Contents

Introduction	205
Social Media	206
Emotions	207
Capitalization	208
Emotional Contagion The Field Approach The Survey Approach The Experimental Approach	208 209 209 210
Social Comparison Theory	210
Taking into Account the Affordances of Social Media	213
Facebook and Envy: Application to Consumer Behavior	215
Recommended Reading	216
Guiding Answers to Questions in the Chapter	217
References	217

S. Utz (🖂)

Leibniz-Institut für Wissensmedien, Tübingen, Germany

University of Tübingen, Tübingen, Germany e-mail: s.utz@iwm-tuebingen.de

Introduction

If you are one of the 2.2 billion active Facebook users, you might regularly check your Facebook newsfeed. Intermixed with news or posts from celebrities and brands, you then see what your friends are up to: having fun at a party, going on a weekend trip, and posting a picture with their partner or a gorgeous-looking selfie. How do these messages affect you? Are you happy for your Facebook friends or do you experience envy? Taking these questions as a starting point, this chapter will summarize the literature on the impact of social media use on emotions and discuss (studies) on its implications for marketing.

Checking the latest updates on social media has become part of a daily routine for many people: Instagram reports 800 million monthly active users (Statista, 2018), and the Chinese platform Weibo reports 441 million users.¹ Many of these users check the platforms daily, and the updates on social media are mostly positive, cool, and entertaining (Barash, Duchenaut, Isaacs, & Bellotti, 2010; Utz, 2015). Researchers therefore have wondered how reading these positive updates affects the emotions of users (Krasnova, Wenninger, Widjaja, & Buxmann, 2013; Lin & Utz, 2015). The potential negative effects have

K. Sassenberg, M. L. W. Vliek (eds.), *Social Psychology in Action*, https://doi.org/10.1007/978-3-030-13788-5_14

¹https://expandedramblings.com/index.php/weibo-user-statistics/

[©] Springer Nature Switzerland AG 2019

received a great deal of attention; reading posts on social media is assumed to reduce well-being because the posts elicit envy (Krasnova et al., 2013; Verduyn, Ybarra, Résibois, Jonides, & Kross, 2017). But emotions also influence consumer behavior. Most platforms are free for the users, but make money from advertising. Facebook alone made roughly 40 billion dollars from advertising in 2017.² Understanding how social media use influences emotions should thus also pay off for companies.

This chapter will review several socialpsychological theories that help to explain how social media use influences emotions. It will also demonstrate the applied relevance of this knowledge by summarizing research showing how social media-triggered envy influences consumer behavior. The chapter starts with a discussion of social media and their affordances, before emotions are briefly defined. The effects of social media use on emotions are then discussed from two perspectives: first from the perspective of the person who shares the emotion and second from the perspective of the person who reads social media updates. In a final step, the influence of emotions on consumer behavior and implications for brands are discussed.

Social Media

The most popular forms are **social network sites** (SNS) such as Facebook, but also weblogs or microblogging services such as Twitter fall under this umbrella term. Social media are characterized by the user-generated content and the (semi-)public nature of conversations. Content can be produced by everyone by simply typing some text into a box when prompted to do so by questions such as "What's on your mind, <username>?". Photos can easily be added. Messages go usually to a large group of people. On Twitter, contributions are (by default) even visible for people without an account on the platform.

Definition Box

Social Network Sites: "networked communication platforms in which participants (1) have uniquely identifiable profiles that consist of user-supplied content, content provided by other users, and/ or system-provided data; (2) can publicly articulate connections that can be viewed and traversed by others; and (3) can consume, produce, and/or interact with streams of user-generated content provided by their connections on the site" (Ellison & Boyd, 2013, p. 157).

Social media platforms change frequently; some early SNS (e.g., Friendster, Hyves) do no longer exist. Moreover, the existing SNS change rapidly. To analyze and predict the effects of social media, it is therefore more helpful to look at the affordances (see Box 14.1) the SNS provide than to look at a specific feature or platform.

Box 14.1 Zooming In: Affordances

The concept of affordances was coined by Gibson (1977), a perception psychologist who studied animals and argued that objects afford certain uses to animals. A rock can be perceived as something to sit on, as building material, or as a weapon. Thus, how objects are used does not depend so much on their qualities (e.g., hard, sharp), but on the perceived affordances (to sit, to throw). People can differ in how they perceive the affordances of social media (e.g., visibility, persistence). Whereas one person might perceive the high visibility of content on social media as encouragement for an idealized self-presentation in front of a large audience, another person might be discouraged from posting publicly by the same affordance.

²https://www.investopedia.com/ask/answers/120114/ how-does-facebook-fb-make-money.asp

Visibility to a larger audience and persistence – the Internet never forgets – are affordances that characterize most social media. For people who are concerned about their privacy, these affordances are a reason for posting only few and/or not very personal status updates (Utz, 2015). For people scoring high on narcissism or need for popularity (Buffardi & Campbell, 2008; Utz, Tanis, & Vermeulen, 2012), the same affordances make social media an optimal platform for presenting themselves in an idealized way because they can easily reach a large audience. The affordance of editability allows them additionally to carefully curate their self-presentation (Hogan, 2010).

Thus, due to their specific affordances, social media are platforms on which people present the positive sides of their life. This holds even more for Instagram, a photo sharing platform on which the majority of photos depict beautiful happy people engaging in healthy activities (Deighton-Smith & Bell, 2017). Moreover, these overly positive self-presentations are pushed into a user's feed thus increasing exposure to positive messages. The question is therefore which emotional responses posting or reading these overwhelmingly positive posts elicits. Before we discuss these questions, a short introduction into emotions is given.

Emotions

One issue of research on emotions is that there are many definitions and theories of emotion (Scherer, 2005). Early theories (e.g., James, 1884) considered the physiological reactions (e.g., crying, trembling) as the basis of an emotion. According to this view, people feel sad because they cry. **Appraisal** theories, in contrast, assume that the evaluation and interpretation of situations play a central role in the experience of emotions (Arnold, 1960; Lazarus, 1991).

Definition Box

Appraisal: Appraisals are the evaluations of events in the environment. Emotions are not simply determined by physiological arousal, but by the interpretation of the situation.

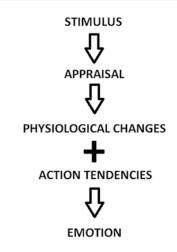


Fig. 14.1 Arnold's appraisal theory of emotion

The first appraisal theory stems from Arnold (1960) (see Fig. 14.1). When a specific situation occurs, people appraise its consequences for themselves (good/bad) which then leads to an emotion and an action. For example, being left by your partner would be appraised first as bad and then trigger the emotion sadness and physiological reactions such as crying and actions such as withdrawal.

Lazarus (1991) developed this model further and distinguished between primary appraisals, which influence the evaluation of an event, and secondary appraisals, which influence the evaluation of potential actions. Primary appraisals deal with the question whether the event is in conflict (negative emotion) or in accordance (positive emotion) with an individual's goals, as well as the relevance and ego relation of this goal. For example, when you are in a restaurant and the waiter doesn't serve you, it might depend on whether you are very hungry (in conflict with goal) or mainly there to socialize with friends (no conflict) whether you experience anger. Secondary appraisals address the question of blame or how the individual can deal with the situation. Is the restaurant simply very crowded or do you think the waiter ignores you on purpose? Do you think you can change something about the situation? This would determine how you deal with the situation - whether you would wait, yell at the waiter, or write a negative review about the restaurant.

The next section will discuss how sharing experiences on social media affects the emotions of the persons who post on social media.

Capitalization

Capitalization describes the process of sharing positive events with (close) others (Gable & Reis, 2010). People are in general more likely to share positive (vs. negative) news with close others – not only because positive events are more prevalent (Gable & Haidt, 2005) but also because of the intrapersonal and interpersonal benefits of sharing positive emotions (Gable & Reis, 2010).

Definition Box

Capitalization: The sharing of positive events with (close) others

Two intrapersonal and one interpersonal mechanism have been identified (see Gable & Reis, 2010, for a review): first, sharing positive experiences intensifies the salience and memorability of positive events, which is desirable in itself. Second, sharing requires a reflection process which helps people to find meaning in the event, which further increases positive emotions. Third, the positive reactions of (close) others strengthen the relationship, which also triggers positive emotions.

Capitalization studies usually did not (explicitly) take the medium into account, but due to the large proportion of positive updates on social media (Barash et al., 2010; Utz, 2015), the capitalization framework is well suited for this context. On social media, posts are often shared with a larger group. Addressing a larger group might increase the appraisal that the event is important. Carefully editing the post might foster the reflection process.

Choi and Toma (2014) examined the effects of sharing emotions across a number of media channels, including social media. They conducted a daily diary study in which participants indicated either for the most important positive or the most important negative event of the day on which channel(s) they have shared it. Positive and negative affect after sharing was measured as well. The effects of sharing were identical across channels: people experienced more positive affect after sharing positive events and more negative affect after sharing negative events. The finding that there are no differences between the channels contradicts the idea that sharing (semi-) publicly on social media further increases the salience of the experience and fosters the reflection process.

Sharing with many others on social media might have interpersonal effects. Scissors, Burke, and Wengrovitz (2016) looked at the role of likes received and found that the number of likes was less important than from whom people received likes. The majority expected likes from close friends or their partner, indicating that the relationship strengthening effect of capitalization occurs mainly with close others.

Taken together, these studies show that capitalization processes also occur on social media. Sharing positive news with friends strengthens positive emotions. However, close friends still matter most for the intensification of positive emotions. For the person who shares experiences on social media, the intrapersonal and interpersonal benefits seem to be the same as for sharing face-to-face or on traditional media. How about the person who reads these social media posts?

Emotional Contagion

One possible explanation how posts on social media could influence emotions is emotional contagion (Hatfield, Walster, & Berscheid, 1978). Emotional contagion means that people take over the emotions displayed by others, especially by close others. This can happen without conscious awareness by automatically mimicking others, thus not necessarily requiring appraisals (Hatfield, Cacioppo, & Rapson, 1993). Emotional contagion has also been shown in computer-mediated communication. Hancock, Gee, Ciaccio, and Lin (2008) induced negative mood in one group of chat participants and observed that they used fewer and sadder words and that this pattern and the corresponding negative affect were picked up by chat interaction partners.

The Field Approach

Studying emotional contagion on social media is not easy because naturally occurring emotions are difficult to detect and lab experiments are often artificial. Kramer, Guillory, and Hancock (2014) cooperated with Facebook and conducted a massive field experiment in which they manipulated the newsfeed of roughly 700,000 Facebook users. They created four conditions: in one group, each post containing negative words such as "sad" was removed with a likelihood between 10% and 90%; in another group, the same percentage of posts containing positive words was removed. In the two control groups, the identical percentage of posts was blocked, but at random. This was done to compare the effect of reduction in information with reduction in positivity or negativity. Subsequently, Kramer et al. (2014) tracked the posts from the users and analyzed the number of positive and negative words. They found a significant increase of positive words and a decrease in negative words (compared to the control condition) in the negativity-reduced group and the reverse pattern in the positivity-reduced group and took this as evidence for emotional contagion. Although significant through the large sample, the effect was however very small; only 0.1% of the subsequent posts changed.

This experiment has been heavily criticized (see Panger (2016) for an excellent review; the following sections are a summary of his analysis). Most criticism has addressed ethical concerns: the participants did not know that they were part of an experiment and never gave their informed consent; the study did also not undergo a review process by an ethics committee. More relevant for the question which emotions are triggered by social media use are the methodological concerns.

First, there are problems with the internal validity of the study. Removing positive posts not only reduces the proportion of positive posts but also increases the proportion of negative posts. It is thus difficult to say whether the observed effects are due to reduced positivity or increased negativity.

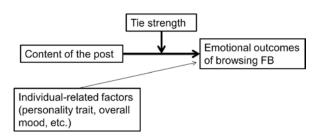
A second criticism is the measure of emotions. LIWC, the Linguistic Inquiry and Word Count (Pennebaker, Francis, & Booth, 2007), was used for inferring the emotions. LIWC is a computer program that can calculate the percentage of words that correspond to certain emotions from a pre-defined dictionary. Although LIWC is in general a well-recognized tool, it is less clear how well it can deal with short social media posts. Tools such as SentiStrength (http:// sentistrength.wlv.ac.uk/) that were specifically developed for the analysis of sentiment in short social media posts reveal better results than the more general LIWC (Buttliere, 2017).

Moreover, it has not been controlled whether people first posted what they had experienced and then read their newsfeed or whether they first read their newsfeed and then posted. Emotional contagion effects can only occur if people first read what their Facebook friends have written. Thus, the limited internal validity reduces the contribution of this field study, although it has a high external validity that is due to the natural setting.

The Survey Approach

Lin and Utz (2015) used alternative methods to examine emotional contagion on social media. In a first exploratory survey, they asked participants to log into Facebook and to answer a series of questions on the four most recent status updates in their newsfeed. Among others, participants indicated how negative vs. positive the content of the post was and which emotions it elicited. One goal of this survey was to get information on the prevalence of positive and negative emotions. The second goal was to explore the relationship with tie strength, i.e., relational closeness (see Fig. 14.2 for the research model). Similar to capitalization research, it was expected that emotional contagion effects are stronger with increasing closeness (i.e., tie strength).

With regard to the first goal, getting information on the prevalence of emotions, the results **Fig. 14.2** Research model by Lin and Utz (2015, p. 31)



showed that positive emotions prevailed. From the 598 status updates that did not stem from Facebook pages or celebrities (provided by 207 participants), 64% elicited happiness, whereas only 12.4% elicited envy and 11% jealousy. With regard to the second goal, a significant interaction between tie strength and positivity of the posts occurred for happiness. The more positive the update, the happier was the reader. This effect was stronger for closer relationships. That is, participants reacted more extremely with the corresponding emotion to positive and negative posts from close friends than from acquaintances. Appraisals have not been measured in this study, but one can assume that people appraised positive events in the life of their friends also as positive for themselves.

Thus, this pattern supports the predictions from emotional contagion research. A methodological limitation is that it was impossible to hold the content of the posts from close friends and acquaintances constant in a survey; it could be that the Facebook algorithm selects different types of posts for different Facebook friends and that it is the content of the post that drives happiness.

The Experimental Approach

To overcome this limitation, Lin and Utz (2015) conducted an experiment in which all participants were exposed to the same vacation picture (see Fig. 14.3). Tie strength was manipulated by letting people think either of a close friend, a friend, or an acquaintance on Facebook. Participants filled in some filler questions about the target and the friendship history to make the relationship more salient. Next, they were instructed to imagine that this Facebook friend

had posted the vacation picture and to indicate their emotions.

As can be seen in Fig. 14.4 (columns for happiness), the experiment revealed the same pattern as the survey: the happy vacation picture induced happiness in the readers, and it did so even more when the photo was supposedly posted by a close friend. A limitation is that the situation was rather artificial; some participants might have thought about a friend who would never go on a hiking vacation, reducing the credibility of the manipulation.

Nevertheless, across three different methods (a massive field experiment, a survey, an experiment), the same pattern emerged: people experience happiness when reading positive posts of (close) others. There is thus support for emotional contagion on social media. Nevertheless, there were also incidents of negative emotions (envy, jealousy) as reaction to positive posts that cannot be explained by emotional contagion. We therefore turn to social comparison theory in the next section.

Box 14.2 Question for Elaboration

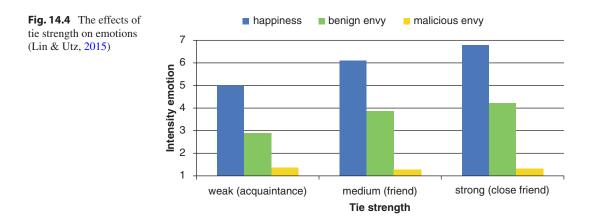
A joy shared is a joy doubled, a trouble shared is a trouble halved. Does this proverb also hold for sharing joys and troubles on social media?

Social Comparison Theory

Social media provide people with information about others: to which bars they go, what clothes they wear, or where they spend their vacations. When reading such information,

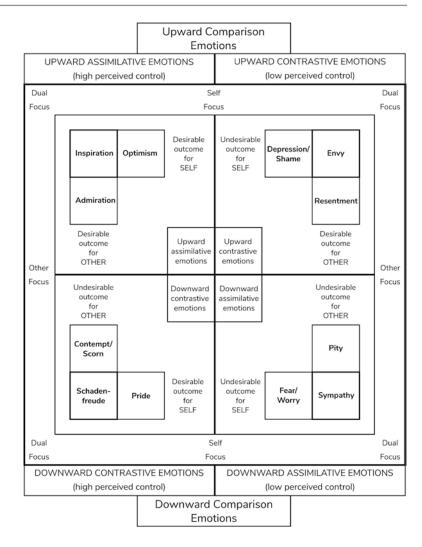


Fig. 14.3 Emotion-evoking picture used as stimulus material in Lin and Utz (2015)



people usually compare themselves with these others. This so-called social comparison is a fundamental process (Festinger, 1954). The results of social comparisons have also been linked to emotions since they influence appraisals. Smith (2000) summarized the different possible reactions (see Fig. 14.5). The first distinction we can identify in Fig. 14.5 is the comparison direction, being either upward or downward. Upward comparisons occur when the comparison target performs better or is richer or more attractive than oneself; downward comparisons occur when the comparison target performs worse and is poorer or less attractive than

Fig. 14.5 Social comparison-based emotions (Smith, 2000, p. 176)



oneself. A recent meta-analysis (Gerber, Wheeler, & Suls, 2018) showed that contrastive emotions are the dominant reaction (e.g., envy if another person is performing better and schadenfreude if another person is performing worse), but both, positive and negative emotions, have been found for both comparison directions (Buunk, Collins, Taylor, VanYperen, & Dakof, 1990). Appraisals based on the other two dimensions are important to determine the triggered emotion: the focus, which can be primarily on the self, the other, or on both interaction partners, and the desirability of the outcome for the self and the other person.

For example, when a competing candidate gets the job you applied for (an undesirable outcome for the self), the emotion depends on whether the focus of your appraisals about the situation is purely on what the other has, on what you don't have, or on both. When you focus only on yourself, i.e., your poor performance in the job interview, you might experience shame. An exclusive focus on the other results in resentment. When you focus on what the other has but also on what you lack (dual focus), envy is likely. Envy is a negative emotion that "arises when another person lacks another's superior quality, achievement or possession and either desires it or wishes that the other lacked it" (Parrott & Smith, 1993, p. 908).

When it comes to social comparison processes on social media, the majority of studies have focused on envy (see Appel, Gerlach, & Crusius, 2016, for a review). Recently, research started to go beyond Smith (2000) by distinguishing between benign envy and malicious envy (Van de Ven, Zeelenberg, & Pieters, 2009). Benign envy is defined as a levelling-up motivation; the focus is on the envied object or state, and benign envy motivates people to work harder toward reaching the envied object or state (van de Ven, Zeelenberg, & Pieters, 2011). Malicious envy in contrast is a levelling-down motivation; the focus is on the envied person, and it is characterized by wishing ill to the envied person.

Box 14.3 Zooming In: Benign Versus Malicious Envy

Although envy usually has a negative connotation, it can also have a motivating role, and researchers started therefore to focus on the antecedents and consequences of benign vs. malicious envy. The appraisal of deservedness is important: malicious envy is more likely to occur when the advantage of the envied person is perceived as undeserved; benign envy is more likely when the advantage of the other is perceived as deserved and the situation as controllable (the individual can reach the same object/state). Malicious envy is more similar to envy in the Smith (2000) model, whereas benign envy has similarity with inspiration in the upward assimilative emotions quadrant.

In the experiment described above by Lin and Utz (2015), benign and malicious envy were measured as well. The holiday can be perceived as a desirable outcome for the other, and - at least at the moment – undesirable for oneself, and might thus trigger (malicious) envy. When the holiday is perceived as a desirable and reachable goal for oneself, the post should elicit benign envy, even more so for close friends because these are usually more similar and therefore more relevant comparison targets. In line with the latter argument, participants reported higher levels of benign envy for posts from (close) friends than for posts from weak acquaintances (Fig. 14.4). Levels of malicious envy were very low, probably because holidays are not

perceived as underserved, an important appraisal for malicious envy.

De Vries, Möller, Wieringa, Eigenraam, and Hamelink (2018) proposed an approach how the often-contradicting predictions from emotional contagion and social comparison theory can be brought together. They suggested that social comparison orientation, the chronic tendency of people to compare themselves with others (Gibbons & Buunk, 1999), determines whether people are happy when their social media friends are happy or whether they experience envy. Participants were either exposed to positive or neutral Instagram posts. Social comparison orientation was measured. For people high in social comparison orientation, the contrastive pattern predicted by the social comparison perspective was found: participants showed lower levels of positive affect when exposed to positive posts. People low in social comparison orientation showed the opposite pattern: in line with the emotional contagion perspective, they showed higher positive affect when exposed to positive posts (vs. neutral posts). Social comparison orientation is thus a moderator that can explain which of the two opposing theories applies for a specific individual - those low in social comparison orientation seem to share the emotions displayed on social media, whereas those high in social comparison orientation rather show contrasting emotions.

Taking into Account the Affordances of Social Media

The studies reported so far used existing socialpsychological theories and argued that they also hold on social media, without taking the affordances of social media discussed in the beginning of this chapter into account. Affordances have been taken into account in research on jealousy evoked by social media posts. Jealousy is the "negative response to the actual, imagined or expected emotional or sexual involvement of the partner with someone else" (Buunk, 1997, p. 998). Especially anxious jealousy, i.e., ruminating about potential actions of the partner, is negatively related to relationship quality (Barelds & Barelds-Dijkstra, 2007).

When it comes to jealousy triggered by social media, Muise, Christofides, and Desmarais (2009) argued that Facebook makes more information about the partner and his/her interactions with potential rivals - comments, likes, or pictures visible than ever before. This visibility and public display can also influence the appraisals of threat. Muise et al. (2009) therefore argued that Facebook use could increase jealousy. They measured Facebook elicited jealousy by a scale that asked for the likelihood to experience jealousy in ambivalent situations such as "after seeing that your partner has received a wall message from someone of the opposite sex" and not in actual transgressions (see Table 14.1, left column). This scale thus covers mainly anxious jealousy. They also assessed people's general disposition to react jealously. Although this disposition predicted the largest part of the variance in online jealousy, time spent on Facebook explained an additional part of variance.

Utz and Beukeboom (2011) built on this work and proposed need for popularity as an additional predictor of jealousy experienced on SNS. They argued that especially people with a high need for popularity are attracted by social media because their affordances allow them to present an idealized version of their self to impress a large

Table 14.1 Example items from the SNS jealousy scale(Muise et al., 2009) and the SNS happiness scale (Utz &Beukeboom, 2011)

SNS jealousy	SNS happiness
How likely are you to	
be upset if your partner	become happy if
does not post an accurate	your partner posted an
relationship status on the	accurate relationship
SNS.	status.
become jealous after	become happy if
seeing that your partner has	your partner posted a
posted a message on the	message to your wall
wall of someone of the	referring to your
opposite sex.	relationship.
experience jealousy if	become happy if
your partner posts pictures	your partner post
of him or herself with an	pictures of him or
arm around a member of the	herself with an arm
opposite sex.	around you.

audience. When the partner endangers the picture of a happy relationship, for example, by exchanging flirtatious comments with an attractive person, the (semi-)public display of this action at least within the group of close peers might influence the appraisal of severity of the threat to the relationship and thereby increase the feeling of jealousy. Research on offline jealousy has found that public self-threats are perceived as more severe (Afifi, Falato, & Weiner, 2001).

Utz and Beukeboom (2011) aimed to get a more comprehensive picture and argued that in a similar vein public displays of affection by the partner might increase happiness with the relationship because these could be appraised as a sign of commitment. SNS happiness was measured by mirroring the SNS jealousy items (see Table 14.1, right column). The results showed that people in general expressed higher levels of SNS happiness than SNS jealousy. Need for popularity was related to SNS jealousy, especially among low self-esteem individuals, indicating that the affordances of social media are interpreted differently by people with low vs. high need for popularity or self-esteem.

The relationship between need for popularity and social media jealousy was replicated in another study that compared jealousy on Facebook and Snapchat (Utz, Muscanell, & Khalid, 2015). In contrast to other social media, messages on snapchat are not persistent, but disappear after several seconds. Again, this affordance can influence the appraisal of acts such as communicating with an ex-partner. People might become more suspicious when the partner uses Snapchat and assume that the flirt must be serious if a secret communication channel is chosen. In line with these predictions, Snapchat jealousy was higher than Facebook jealousy.

Box 14.4 Questions for Elaboration

What advice would you give platform providers to increase the well-being of their users? What can teachers or parents do to reduce the risk that their children experience negative emotions after using social media?

Facebook and Envy: Application to Consumer Behavior

Why is knowledge about the emotions triggered by social media use so important? First, emotions influence well-being, and it has often been argued that reading social media posts leads to envy which in turn leads to lowered well-being (Verduyn et al., 2017). Second, emotions also influence consumer behavior. The business model of most social media platforms is making money from selling advertisements. For brands, it is thus important to know how purchase intentions of customers could be influenced. The default approach is often to target ads to specific groups (e.g., females aged 21–25 interested in beauty and fashion). A smarter way could be to use posts from social media friends as triggers for ads.

Research on benign vs. malicious envy has found that benign envy motivates people to buy the same product as the envied person has, whereas malicious envy motivates people to buy a different and even superior product to distance themselves from the envied target (Van de Ven, Zeelenberg, & Pieters, 2010). Lin (2018) examined whether this also applies on social media. She distinguished between experiential and material purchases (Van Boven & Gilovich, 2003). Material purchases (e.g., an expensive watch, jewelry, a car) are bought "to have," whereas experiential purchases (e.g., a weekend trip) are bought "to be." Lin (2018) argued that experiential purchases might trigger more benign envy because they are often appraised as selfrelevant and trigger liking of the other person.

To examine how envy triggered by social media use influences consumer behavior, Lin conducted a survey among 200 active social media users (100 females; mean age = 35). The majority of respondents (n = 136) had already purchased something after browsing social media; most of them had done so several times. Purchasing behavior was more frequently triggered by posts from friends (58) than by posts from brands or ads (31). In the remaining cases, the triggers could not be clearly identified. These descriptive data already suggest that social media posts influence consumer behavior.

Participants read a definition of experiential vs. material products and were asked how often they encounter posts about these two types of purchases in their timeline. On average, they saw posts about experiential purchases several times a week and posts about material purchases between once and several times a week.

Next, they were asked to recall a situation in which they experienced envy after being exposed to such a post. The vast majority (n = 185) was able to recall such a situation, indicating that envy about the purchases and experiences of others is a common experience. Most purchases (120) were experiential in nature, predominantly vacations, restaurant visits, or similar events. Posts about material purchases (48) were on cameras, laptops, cars, or houses.

The type of experienced envy (benign vs. malicious) was measured with the scale by Crusius and Lange (2014). A sample item for benign envy is "I felt inspired to also attain X" (X stands for the product/experience mentioned by the participant); a sample item for malicious envy is "I wished that the person would fail at something." The central dependent variables were the purchase intention for the same and the purchase intention for a superior product (e.g., "It is very likely that I will buy the same X/a similar but superior product/service").

People experienced more benign envy than malicious envy. Interestingly and in contrast to the hypothesis, there was no relationship between post type (experiential vs. material) and type of envy. Exploratory analysis showed that malicious envy was higher when the self-relevance of the purchase was high. The pattern for appraisals was however as expected: when participants felt that the person who has posted the purchase or experience had not deserved the purchase, just wanted to show off, was disliked but also similar to the participants, malicious envy was higher. Most important, in line with the hypotheses, benign envy was positively correlated with purchase intentions for the same product, whereas malicious envy was related to purchase intention for a superior product.

A limitation of the self-report study is that people mentioned more experiential than material purchases, resulting in reduced power to find effects for material purchases. The purchases also varied widely in price, desirability, and many other factors. To get more equal sample sizes, in a second study, participants were asked to either remember a post about an experiential purchase or a post about a material purchase. To control for the different types of purchases, a third study was conducted in which the same product, a MacBook Pro, was framed either in experiential or material terms. The post in the experiential condition read "My new Macbook Pro makes me enjoy my work! #ExploreAndDiscover #DoMore," whereas the post in the material condition read "My new Macbook Pro looks just awesome! #ExpensiveBuy #MustHave." The main finding that benign envy predicts purchase intentions for buying the same product and malicious envy triggers purchase intentions for buying an even superior product was replicated in both studies.

Taken together, across three studies using different methods, Lin (2018) showed that people experience more benign than malicious envy when exposed to social media posts about experiential or material purchases. The more participants experienced benign envy, the higher also was their intention to purchase the same product. Malicious envy, in contrast, was triggered by the perceived intention to show off and lead to the desire to purchase a superior product.

These results can directly be translated into advice for brands. Instead of showing ads to target user groups based on demographics and interests, brands should (also) post ads next to relevant posts. This could be especially interesting for travel agencies but also for fashion manufacturers or tech companies. Social media platforms would need to adapt their targeting services and offer targeted marketing based on relevance of users' posts. Users often provide information about their location by using check-ins or hashtags in their posts, making it easy to find the appropriate posts for restaurants, bars, or hotels. Algorithms are also getting better and better in analyzing pictures. Although malicious envy is unlikely to occur, searching for hashtags that refer to showing off (see, e.g., #richkidsofinstagram) could be an indicator of potential malicious envy. This would

be the place for luxury brands to advertise their superior products.

To conclude, this chapter has shown that posts on social media trigger emotions in both the people who post them and the people who read them. Being able to predict the emotions experienced by social media users also helps brands because emotions experience consumer behavior.

Summary

- Sharing positive emotions on social media further intensifies positive emotions, a process known as capitalization.
- Posts from close friends usually result in emotional contagion: people feel good when their friends feel good.
- Positive posts on social media can trigger social comparison processes and (benign) envy.
- The affordances of social media, especially visibility, can intensify jealousy.
- Social comparison orientation and selfesteem moderate these effects: people with low social comparison orientation/ high self-esteem experience positive emotions when exposed to positive posts from friends, whereas people with high social comparison orientation/low selfesteem experience envy.
- Envy also influences consumer behavior; benign envy increases the intention to buy the same product the envied person has.

Recommended Reading

- Appel, H., Gerlach, A. L., & Crusius, J. (2016). The interplay between Facebook use, social comparison, envy, and depression. *Current Opinion in Psychology*, 9, 44–49. https://doi. org/10.1016/j.copsyc.2015.10.006
- De Vries, D. A., Möller, A. M., Wieringa, M. S., Eigenraam, A. W., & Hamelink, K. (2018). Social comparison as the thief of joy:

Emotional consequences of viewing strangers' Instagram posts. *Media Psychology*, 21, 222–245. https://doi.org/10.1080/15213269.2 016.1267647

- Panger, G. (2016). Reassessing the Facebook experiment: Critical thinking about the validity of Big Data research. *Information, Communication & Society*, 19, 1108–1126. https://doi.org/10.1080/13691 18X.2015.1093525
- Smith, R. H. (2000). Assimilative and contrastive emotional reactions to upward and downward social comparisons. In J. Suls & L. Wheeler (Eds.), *Handbook of social comparison* (pp. 173–200). New York, NY: Springer.

Guiding Answers to Questions in the Chapter

1. Q (With Box 14.2) A joy shared is a joy doubled, a trouble shared is a trouble halved. Does this proverb also hold for sharing joys and troubles on social media?

A: The first part of this proverb corresponds to capitalization. Sharing a joy with close others intensifies the joy, and this has also been found for social media posts. Research on emotional contagion showed that readers also become happy when their friends share positive experiences. Findings on sharing troubles have been less unequivocal; sharing troubles might – at least in the short run – intensify negative emotions.

2. Q (With Box 14.4) What advice would you give platform providers to increase the well-being of their users?

A: Platform providers could mainly display the positive posts from close friends. Closeness can be inferred automatically from frequency of private messages, being tagged on the same photo, and mutual likes. Posts with hashtags that are likely to trigger malicious envy (e.g., #richkids) could be displayed less prominently in the newsfeed. 3. Q (With Box 14.4) What can teachers or parents do to reduce the risk that their children experience negative emotions after using social media?

A: Teachers and parents could train the media literacy of children/adolescents by making them aware that people present themselves in an idealized way on social media. They could teach them to use social media actively for relationship maintenance, instead of mainly passively browsing. Strengthening the self-esteem provides them also with a buffer against negative effects of social media posts.

References

- Afifi, W. S., Falato, W. L., & Weiner, J. L. (2001). Identity concerns following a severe relational transgression: The role of discovery method for the relational outcomes of infidelity. *Journal of Social and Personal Relationships*, 18, 291–308. https://doi. org/10.1177/0265407501182007
- Appel, H., Gerlach, A. L., & Crusius, J. (2016). The interplay between Facebook use, social comparison, envy, and depression. *Current Opinion in Psychology*, 9, 44–49. https://doi.org/10.1016/j.copsyc.2015.10.006
- Arnold, M. B. (1960). *Emotion and personality*. New York, NY: Columbia University Press.
- Barash, V., Duchenaut, N., Isaacs, E., & Bellotti, V. (2010). Faceplant: Impression (Mis) management in facebook status updates. In *Proceedings of the Fourth International AAAI Conference on Weblogs and Social Media* (pp. 207–210). Palo Alto, CA.
- Barelds, D. P. H., & Barelds-Dijkstra, P. (2007). Relations between different types of jealousy and self and partner perceptions of relationship quality. *Clinical Psychology & Psychotherapy*, 14, 176–188. https:// doi.org/10.1002/cpp.532
- Buffardi, L. E., & Campbell, W. K. (2008). Narcissism and social networking web sites. *Personality and Social Psychology Bulletin*, 34, 1303–1314. https:// doi.org/10.1177/0146167208320061
- Buunk, B. P. (1997). Personality, birth order and attachment styles as related to various types of jealousy. *Personality and Individual Differences*, 23, 997–1006. https://doi.org/10.1016/S0191-8869(97)00136-0
- Buunk, B. P., Collins, R. L., Taylor, S. E., VanYperen, N. W., & Dakof, G. A. (1990). The affective consequences of social comparison: Either direction has its ups and downs. *Journal of Personality and Social Psychology*, 59, 1238–1249. http://psycnet.apa.org/ doi/10.1037/0022-3514.59.6.1238
- Buttliere, B. (2017). Cognitive conflict in science: Demonstrations in what scientists talk about and

study. Retrieved from https://publikationen.unituebingen.de/xmlui/bitstream/handle/10900/79850/ Buttliere%20Dissertation.r%20For%20Printing%20 Final.pdf?sequence=1&isAllowed=y

- Choi, M., & Toma, C. L. (2014). Social sharing through interpersonal media: Patterns and effects on emotional well-being. *Computers in Human Behavior*, 36, 530– 541. https://doi.org/10.1016/j.chb.2014.04.026
- Crusius, J., & Lange, J. (2014). What catches the envious eye? Attentional biases within malicious and benign envy. *Journal of Experimental Social Psychology*, 55, 1–11. https://doi.org/10.1016/j.jesp.2014.05.007
- De Vries, D. A., Möller, A. M., Wieringa, M. S., Eigenraam, A. W., & Hamelink, K. (2018). Social comparison as the thief of joy: emotional consequences of viewing strangers' Instagram posts. *Media Psychology*, 21, 222–245. https://doi.org/10.1080/152 13269.2016.1267647
- Deighton-Smith, N., & Bell, B. T. (2017). Objectifying Fitness: A content and thematic analysis of #fitspiration images on social media. *Psychology of Popular Media Culture*, Advance online publication http:// psycnet.apa.org/doi/10.1037/ppm0000143
- Ellison, N. B., & Boyd, D. (2013). Sociality through Social Network Sites. In W. H. Dutton (Ed.), *The* Oxford handbook of Internet studies (pp. 151–172). Oxford, UK: Oxford University Press. https://doi. org/10.1093/oxfordhb/9780199589074.013.0008
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117–140. https://doi. org/10.1177/001872675400700202
- Gable, S. L., & Haidt, J. (2005). What (and why) is positive psychology? *Review of General Psychology*, 9, 103–110. https://doi.org/10.1037/1089-2680.9.2.103
- Gable, S. L., & Reis, H. T. (2010). Good news! Capitalizing on positive events in an interpersonal context. Advances in Experimental Social Psychology, 42, 195–257. https://doi.org/10.1016/ S0065-2601(10)42004-3
- Gerber, J. P., Wheeler, L., & Suls, J. (2018). A social comparison theory meta-analysis 60+ years on. *Psychological Bulletin*, 144, 177–197. https://doi. org/10.1037/bul0000127
- Gibbons, F. X., & Buunk, B. P. (1999). Individual differences in social comparison: Development of a scale of social comparison orientation. *Journal of Personality* and Social Psychology, 76, 129–142. https://doi. org/10.1037/0022-3514.76.1.129
- Gibson, J. J. (1977). The concept of affordances. In R. E. Shaw & J. Bransford (Eds.), *Perceiving, acting, and knowing: toward an ecological psychology* (pp. 67–82). Hillsdale, NJ: Lawrence Erlbaum.
- Hancock, J. T., Gee, K., Ciaccio, K., & Lin, J. M.-H. (2008). I'm sad you're sad: emotional contagion in CMC. In *Proceedings of the 2008 ACM conference on Computer Supported Cooperative Work* (pp. 295–298). ACM. https://doi.org/10.1145/1460563.1460611
- Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1993). Emotional contagion. *Current Directions in*

Psychological Science, 2, 96–100. https://doi. org/10.1017/CBO9781139174138

- Hatfield, E., Walster, G. W., & Berscheid, E. (1978). *Equity: Theory and research*. Boston: Allyn and Bacon.
- Hogan, B. (2010). The Presentation of Self in the Age of Social Media: Distinguishing Performances and Exhibitions Online. *Bulletin of Science, Technology & Society, 30*, 377–386. https://doi. org/10.1177/0270467610385893
- James, W. (1884). What is an emotion? *Mind*, *9*, 188–205. https://doi.org/10.1037/10735-001
- Kramer, A. D. I., Guillory, J. E., & Hancock, J. T. (2014). Experimental evidence of massive-scale emotional contagion through social networks. *Proceedings of the National Academy of Sciences*, 111, 8788–8790. https://doi.org/10.1073/pnas.1320040111
- Krasnova, H., Wenninger, H., Widjaja, T., & Buxmann, P. (2013). Envy on Facebook: A hidden threat to users' life satisfaction? Paper presented at the 11th International Conference on Wirtschaftsinformatik (WI), Leipzig, Germany. https://doi.org/10.7892/boris.47080
- Lazarus, R. S. (1991). Progress on a cognitivemotivational-relational theory of emotion. *American Psychologist*, 46, 819–834. https://doi. org/10.1037/0003-066X.46.8.819
- Lin, R. (2018). Silver lining of envy on social media? The relationships between post content, envy type, and purchase intentions. *Internet Research*, 28, 1142–1164. https://doi.org/10.1108/IntR-05-2017-0203
- Lin, R., & Utz, S. (2015). The emotional responses of browsing Facebook: Happiness, envy, and the role of tie strength. *Computers in Human Behavior*, 52, 29–38. https://doi.org/10.1016/j.chb.2015.04.064
- Muise, A., Christofides, E., & Desmarais, S. (2009). More information than you ever wanted: Does Facebook bring out the green-eyed monster of jealousy? *Cyberpsychology & Behavior*, 12, 441–444. https:// doi.org/10.1089/cpb.2008.0263
- Panger, G. (2016). Reassessing the Facebook experiment: critical thinking about the validity of Big Data research. *Information, Communication & Society*, 19, 1108–1126. https://doi.org/10.1080/13691 18X.2015.1093525
- Parrott, W. G., & Smith, R. H. (1993). Distinguishing the experiences of envy and jealousy. *Journal of Personality and Social Psychology*, 64, 906–920. https://doi.org/10.1037/0022-3514.64.6.906
- Pennebaker, J. W., Francis, M. E., & Booth, R. J. (2007). Linguistic inquiry and word count: LIWC [Computer software]. Austin, TX: Liwc. Net.
- Scherer, K. R. (2005). What are emotions? And how can they be measured? *Social Science Information*, 44(4), 695–729. https://doi.org/10.1177/0539018405058216
- Scissors, L., Burke, M., & Wengrovitz, S. (2016). What's in a Like?: Attitudes and behaviors around receiving Likes on Facebook. In *Proceedings of the 19th ACM Conference on Computer-Supported Cooperative* Work & Social Computing (pp. 1501–1510). ACM. https://doi.org/10.1145/2818048.2820066

- Smith, R. H. (2000). Assimilative and contrastive emotional reactions to upward and downward social comparisons. In J. Suls & L. Wheeler (Eds.), *Handbook of social comparison* (pp. 173–200). New York: Springer. https://doi.org/10.1007/978-1-4615-4237-7_10
- Utz, S. (2015). The function of self-disclosure on social network sites: Not only intimate, but also positive and entertaining self-disclosures increase the feeling of connection. *Computers in Human Behavior*, 45, 1–10. https://doi.org/10.1016/j.chb.2014.11.076
- Utz, S., & Beukeboom, C. (2011). The role of social network sites in romantic relationships: Effects on jealousy and relationship happiness. *Journal of Computer-Mediated Communication*, 16, 511–527. https://doi.org/10.1111/j.1083-6101.2011.01552.x
- Utz, S., Muscanell, N., & Khalid, C. (2015). Snapchat elicits more jealousy than Facebook: A comparison of Snapchat and Facebook use. *Cyberpsychology, Behavior and Social Networking*, 18, 141–146. https:// doi.org/10.1089/cyber.2014.0479
- Utz, S., Tanis, M., & Vermeulen, I. (2012). It's all about being popular: The effects of need for popularity on social network site use. *Cyberpsychology, Behavior and*

Social Networking, 15, 37–42. https://doi.org/10.1089/ cyber.2010.0651

- Van Boven, L., & Gilovich, T. (2003). To do or to have? That is the question. *Journal of Personality and Social Psychology*, 85, 1193–1202. http://psycnet.apa.org/ doi/10.1037/0022-3514.85.6.1193
- Van de Ven, N., Zeelenberg, M., & Pieters, R. (2009). Leveling up and down: the experiences of benign and malicious envy. *Emotion*, 9, 419–429. https://doi. org/10.1037/a0015669
- Van de Ven, N., Zeelenberg, M., & Pieters, R. (2010). The envy premium in product evaluation. *Journal* of Consumer Research, 37, 984–998. https://doi. org/10.1086/657239
- Van de Ven, N., Zeelenberg, M., & Pieters, R. (2011). Why envy outperforms admiration. *Personality and Social Psychology Bulletin*, 37, 784–795. https://doi.org/10.1177/0146167211400421
- Verduyn, P., Ybarra, O., Résibois, M., Jonides, J., & Kross, E. (2017). Do social network sites enhance or undermine subjective well-being? A critical review. *Social Issues and Policy Review*, 11, 274–302. https:// doi.org/10.1111/sipr.12033