

# What Comments Did I Get? How Post and Comment Characteristics Predict Interaction Satisfaction on Facebook

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## Abstract

Commenting on social media posts is an important part of interaction on Facebook and other social media sites. The number of comments people receive has been linked to their experience on social media, but less is known about how the content of comments relates to both the original posts and posters' communicative outcomes, such as their mood and satisfaction with the interaction. The present study analyzed 822 Facebook status updates from a sample of 233 participants, along with 1175 corresponding comments, to determine how post, comment, and outcome characteristics are interrelated. We found congruence in valence and intimacy between status updates and comments, supporting the reciprocity principle of self-disclosure. Controlling for the number of comments and the content of posts, the content of comments mattered for satisfaction: more intimate comments were associated with higher levels of interaction satisfaction, and both intimacy and positive valence of comments were associated with more lasting effects on mood.

## Introduction

A key feature of the Facebook experience is the ability to comment on friends' content and to receive comments in return. According to a Pew survey, Facebook users comment on their friends' photos much more frequently than they update their own statuses: 31% of users comment daily whereas only 10% update their status daily (Smith 2014). Researchers have explored the type of Facebook posts that receive feedback, finding that post topic (Wang, Burke, and Kraut 2013) and posts with explicit requests for help or recommendations (Lampe et al. 2014) influence the number of comments people receive on status updates. Research has also evaluated the impact of comments – particularly the quantity and perceived quality of comments – on Facebook users' overall satisfaction with their posts (Bazarova et al. 2015). However, further research is needed to understand how posts predict the actual content

of comments, as well as how comments impact posters' communicative outcomes. Studying the linkages between posts, comments, and outcomes will contribute to the understanding of interaction dynamics on Facebook.

Posts and comments form a joint communicative action on Facebook by creating a “quasi-conversational space” for conversational exchange and meaning construction (Frobenius and Harper 2015). Status updates function as initiating posts in this conversational space, and thus set an interaction agenda and shape a trajectory for comments (Stommel and Lamerichs 2014). The comments that follow can vary greatly, but previous research has established a link between the topic of posts and comment volume on online blogs (Yano and Smith 2010) and the emotional language of Facebook posts and comments (Burke and Develin 2016), supporting the notion of a joint communication episode constructed by status updates and comments. We extend this research by further examining the congruence in intimacy and valence of status updates and comments.

In addition to being tied to status updates by linguistic style and content, comments may affect how users interpret statuses and evaluate communicative outcomes. For example, peoples' perceptions of a user's status update are influenced by comments on that status update, with more positive comments leading to more favorable evaluations of the original poster (Ballantine, Lin, and Veer 2015). Therefore, comment content, in addition to quantity, may influence how original posters evaluate the interaction and, consequently, the satisfaction they derive from it. The goal of this study is to examine how comment characteristics are related to initial posts, and how they affect communicative outcomes for the original poster.

## The Present Study

Status updates as initiating posts in a conversational thread set the agenda for subsequent comments (Stommel and Lamerichs 2014), so we expect to see some content congruence between the two. Indeed, Facebook status updates

with emotional language, whether positive or negative, elicit more comments compared to posts with no emotional language (Burke and Develin 2016). Furthermore, the same study shows that the number of positive emotion words in status updates predicts the number of positive emotion words in comments, while the number of negative emotion words in status updates elicits more emotion and supportive language in comments. Based on these findings, we predict valence congruence between status updates and comments such that status updates and subsequent comments have corresponding emotional content. Similarly, we expect to find intimacy congruence between status updates and comments based on reciprocity principles of self-disclosure that suggest that people try to match perceived levels of disclosure intimacy (Altman and Taylor 1973). For example, audiences can share their own “parallel” experiences intended to legitimize and validate the initiating post (Stommel and Lamerichs 2014). Thus, we hypothesize that intimate content in status updates should elicit reciprocal intimate comments.

*H1: Status updates and corresponding comments on Facebook are congruent in levels of a) intimacy and b) valence.*

Next, we examine how the content of comments may affect outcomes for original posters. Studies of other online forums indicate that the type of response, rather than just response volume, predicts various outcomes for the original poster (e.g., Chang and Bazarova 2016; Wang, Kraut and Levine 2012). In particular, we argue that characteristics of comments are likely to play a role in posters’ satisfaction. Furthermore, satisfaction with comments may be more nuanced and warrants closer examination. For example, people may not be satisfied with merely receiving positive comments; instead, they may desire their network to respond with deeper self-disclosure or intimacy rather than superficial positivity. Therefore, we ask this research question:

*RQ: How do characteristics of Facebook comments (i.e., valence and intimacy) predict positive outcomes for the original poster, such as satisfaction with responses, perceived usefulness of responses, effect on mood, and overall interaction satisfaction?*

## Method

### Participants

Undergraduate and graduate student participants were recruited from a U.S. university through a student research participation system, and from large universities nationwide through Craigslist. They were compensated with a \$5 Amazon.com gift certificate or course extra credit. In total, 233 participants agreed to participate in the study. Participants ranged in age from 18 to 31 ( $M=20.64$ ,  $SD=2.27$ ) and 75.5% of the sample identified as female. Participants

were asked about their Facebook use, such as number of years on Facebook ( $M=5.55$ ,  $SD=1.67$ ), minutes per day spent using Facebook ( $M=84.69$ ,  $SD=76.14$ ), and number of Facebook friends ( $M=750$ ,  $SD=471$ ).

### Procedures

After providing informed consent, study participants were asked to install a custom Facebook application that asked questions about their most recent status updates. Participants were shown their most recent status updates along with any comments and likes that each post had received. Posts were filtered using affect-related words from the LIWC 2007 dictionary (Pennebaker, Booth, and Francis 2007) to ensure that they contained some kind of emotional expression. In total, the application collected data for 822 status updates and 1175 comments. These data were collected as part of a larger study on Facebook use and participants’ mental health status (Bazarova et al. 2017), which was approved by the institution’s Internal Review Board (IRB).

### Measures

*Post and Comment Characteristics.* Each status update and comment received was coded by two members of the research team on a 3-point scale for intimacy (1=not intimate, 2=somewhat intimate, 3=very intimate;  $\kappa=.83$ ) and valence (1=negative, 2=neutral, 3=positive;  $\kappa=.84$ ). Conflicts were resolved through discussion with two of the authors. Content was coded as not intimate if it contained no personal or identifying information, or did not reveal anything about the poster’s opinions, feelings, thoughts, or location. Conversely, content was coded as very intimate if it contained very personal emotions or private information. Content was coded as positive if it showed happiness, excitement, gratitude, or other positive emotions. It was coded as negative when it expressed sadness, anger, disappointment, and other negative emotions. Neutral content showed little or no emotion, or contained mixed emotions.

*Outcome Variables.* Participants were also asked to rate the outcome of each of their own status updates in light of the comments they had received using measures from Bazarova et al. (2015). They included two questions about satisfaction with the overall outcome of posting the status update (e.g., “After sharing this message, to what extent do you feel satisfied with the outcome?”,  $\alpha=.84$ ; two questions about satisfaction with responses (e.g., “To what extent were you satisfied with the responses to your post?”),  $\alpha=.94$ ; two questions about the perceived usefulness of responses, (e.g., “To what extent did you find the responses to your post useful?”),  $\alpha=.92$ ; and one question about the degree to which the comments affected the participant’s mood (“To what extent did the responses to your post affect your mood?”). All questions used a 5-point scale, from 1= “Not at all” to 5= “Very much”.

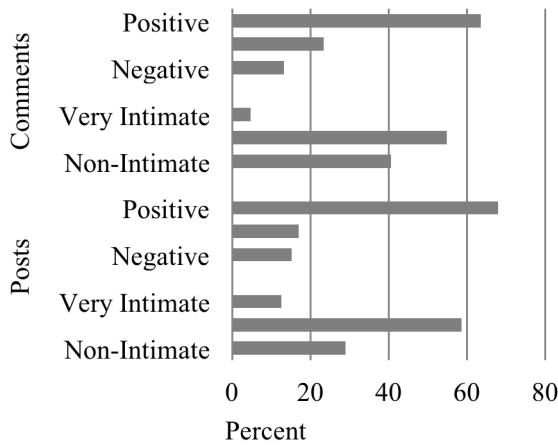


Figure 1. Frequency of Types of Comments and Posts.

## Results

IBM SPSS Statistics 23 was used for all analyses. Three-level multilevel models were used to account for the nested structure of the data, with comment characteristics nested under post characteristics, which were nested under participant characteristics. Most comments had either low or medium levels of intimacy, and the majority were positive (see Figure 1). Most of the status updates were also non-intimate and positive in nature (see Figure 1). Correlation between the intimacy and valence of posts was small ( $r=.07, p<.05$ ). 458 out of the 822 status updates received at least one comment ( $M=2.57, SD=1.24$ ). All analyses controlled for gender, age, and Facebook use.

### The Effect of Post Characteristics on Comments

In support of H1a, the intimacy of the initial status update post was associated with the intimacy of the comments on the post, with more intimate posts receiving more intimate comments (see Table 1). Likewise, there was an association between the intimacy of the post and the valence of the comments received, with more intimate posts getting more positive comments. In line with H1b, the valence of the post influenced the valence of the comments, such that more positive posts received more positive comments (see

Table 1). The valence of the post did not influence the intimacy of comments. Overall, we see evidence for valence and intimacy congruence of posts and comments.

### The Effect of Comments on Interaction Outcomes

Receiving more intimate comments was found to be positively associated with how satisfied participants were with their responses and with the outcome of their posts, even when controlling for characteristics of the post itself and the number of comments received on the post (see Table 1). The valence of comments was also associated with response satisfaction, with participants who received more positive comments being more satisfied with the overall responses to their post. Participants also found more intimate comments to be more useful. Comments also affected participants' moods, with more positive and more intimate comments having a greater effect on their mood.

## Discussion

This study examined content linkages between Facebook status updates and comments as parts of a joint communicative action, and how the content of comments relates to original posters' satisfaction with the interaction.

Although most comments received on status updates were positive but not intimate in nature, receiving more intimate comments was associated with higher levels of interaction satisfaction and greater influences on mood. The intimacy of comments also predicted perceptions of response usefulness and response satisfaction, suggesting that people appreciate deeper engagement more than superficial remarks in comments, even when controlling for the initial status update's valence and intimacy. However, comment valence only predicted response satisfaction and mood effects, not overall interaction satisfaction or perceived response usefulness. Taken together, these results suggest that the nature of responses to status updates matter for posters, perhaps because higher-intimacy comments suggest deeper involvement and responsiveness, and greater validation of the original post through reciprocal sharing. As discussed in Facebook relational maintenance literature (e.g., Tong, Kashian, and Walther 2011), conversational participation via commenting on friends' status updates signals attention and interactional co-presence; com-

	Comment Intimacy <i>B(SE)</i>	Comment Valence <i>B(SE)</i>	Outcome Satisfaction <i>B(SE)</i>	Response Satisfaction <i>B(SE)</i>	Response Usefulness <i>B(SE)</i>	Response's Effect on Mood <i>B(SE)</i>
Post Intimacy	.18(.03)***	.09(.04)*	.05(.07)	-.02(.07)	.07(.09)	.23(.10)*
Post Valence	.01(.03)	.36(.03)***	.15(.06)*	.08(.06)	-.06(.08)	.02(.08)**
Comment Intimacy	-	-	.19(.09)*	.22(.09)*	.27(.11)*	.39(.16)*
Comment Valence	-	-	.09(.08)	.17(.08)*	.16(.11)	.35(.11)**

\*  $p<.05$ . \*\*  $p<.01$ . \*\*\*  $p<.001$ ; coefficients (*B*) are unstandardized.

Table 1. Summary of Multilevel Models

ments that are more intimate may be seen as stronger signals of relational investment compared to less intimate but positive comments.

The congruence of post and comment characteristics suggests certain strategies to help users optimize the outcomes they gain from Facebook communication. For instance, users could post more intimate content in order to elicit more intimate – and thus more satisfying – responses. The finding that intimate posts receive intimate comments supports the norm of disclosure reciprocity whereby people try to match perceived levels of disclosure intimacy in communication (Altman and Taylor, 1973). However, the valence of the post did not influence the intimacy of comments, thus simply posting positive content may not be the optimal strategy for beneficial communicative outcomes such as interaction satisfaction.

It is worth noting that few status updates in our data were intimate in nature (12.4%; N=102). While most instances of Facebook communication contain no intimate information or are mundane in nature (Tong, Kashian, and Walther 2011), our study suggests that sharing more intimate updates may lead to more beneficial outcomes for posters, as they invite deeper engagement in the form of comments from others. Future work must explore design solutions that help people balance sharing intimate content with privacy concerns on Facebook. Similarly, the positive impact of receiving intimate, self-disclosing comments on posters' interaction satisfaction suggests that there is potential to design for greater satisfaction on social media by encouraging reciprocal self-disclosure.

### Limitations and Future Work

Facebook messages were selected for inclusion in the study based on pre-defined linguistic categories indicating emotion. Therefore, it is possible that different comment or satisfaction outcomes may result for posts without emotional content. Future work should use larger and more comprehensive datasets to further explicate the effect of comments on satisfaction across all content types.

This study also asked limited questions relating to satisfaction and other emotional outcomes. Future research could explore the relationships between post and comment types, emotional outcomes, or well-being effects for the poster. Further, no information about commenters' characteristics was collected. The relationship between posters and commenters, or commenters' motivations for responding, may also affect posters' mood or satisfaction.

Lastly, the present study's population consisted of college students, a group known for their extensive use of social media sites. Future work could explore whether the present findings hold true across different age groups, levels of social media experience, or other personal or demographic factors.

## Acknowledgements

This work is supported by NSF CHS Medium grant #1405634. We thank Dan Cosley, Victoria Sosik, and Janis Whitlock for their contributions to study design and data collection, and Sydney Smith and Gabriela Keane for their assistance in coding.

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