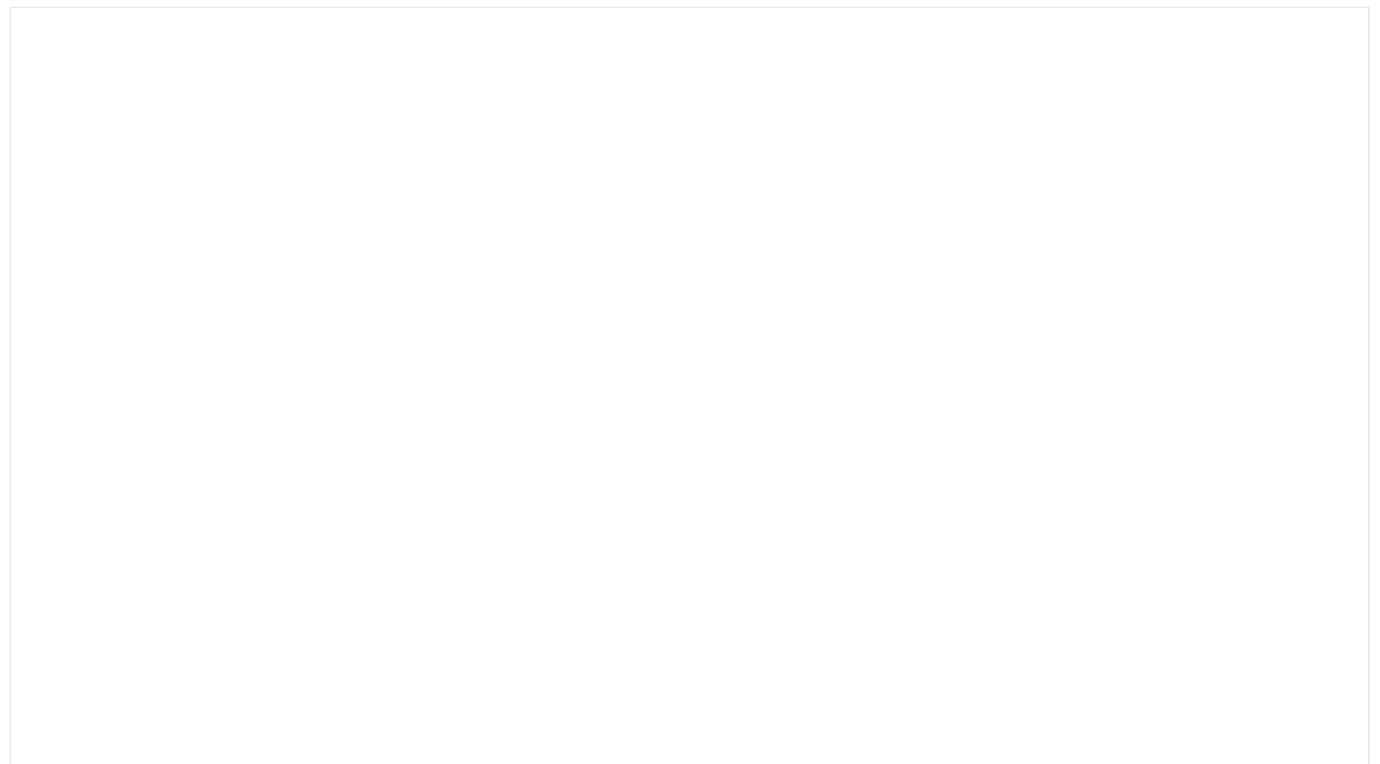


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# Support when you're feeling blue

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Life is more than cat pictures. There are tough days, heartbreak, and hugs. When do people share difficult feelings, and how do their friends respond?

We want people's experiences on Facebook to be supportive and meaningful. Just as people reach out to their closest friends in person for solace when they're feeling blue, we want to ensure that people going through difficult times feel supported by their friends on Facebook, as well.

To understand how often people share difficult moments on the site and how their friends respond, we analyzed the feeling annotations that people include with their status updates (e.g., *feeling excited* or *feeling grumpy*). We analyzed 32 million de-identified, aggregate feeling annotations and examined characteristics of the responses posts with those feelings received.

When they express negative feelings (like *feeling worried* or *feeling stressed*), their friends respond in a different way, showering them with support in the form of long, supportive comments. The effect is amplified when those feelings relate to a person's self-worth, such as *feeling unloved* or *feeling helpless*.

These results appear in a new paper:

Burke, M. and Develin, M. (2016) [Once more with feeling: Supportive responses to social sharing on Facebook](#). ACM CSCW 2016: Conference on Computer-Supported Cooperative Work and Social Computing.

## Measuring feelings and counting feedback

To understand how the presence and type of feeling shared affects how friends respond, we built a dataset consisting of approximately 14 million posts with feeling annotations and another 18 million posts without feeling annotations (to serve as a baseline). Significant steps were taken to ensure user privacy: All data were de-identified and analyzed in aggregate such that no individual's text was viewed by researchers. All data were observational—no experiment was performed and no one's experience on the site was any different than usual.

We categorized the top 200 feelings as positive or negative, and whether they related to the poster's self-worth (e.g., *feeling accomplished*, *feeling proud*, *feeling defeated*, *feeling stupid* all relate to self-worth, while *feeling lucky*, *feeling rested*, *feeling tired*, and *feeling furious* don't). Ambiguous or neutral feelings (like *feeling weird*, *feeling crazy*, *feeling hungry*) were omitted from analysis (about 11% of feelings). See the paper for the [full list of feelings](#). Roughly 1/3 of feelings shared on Facebook are negative, indicating that people share more than just good news on the site.

Then we counted how many likes and comments these posts received. Not surprisingly, posts with positive feelings (like *feeling excited*) get about 58% more likes, and positive self-worth feelings (like *feeling strong*) get about 71% more likes. Our analyses control for other factors likely to affect the use of feelings and feedback rates, such as posters' age, gender, friend count, and years using Facebook.

negative self-worth feelings (like *feeling lonely*) get 72% more comments. Figure 1 shows these effects.

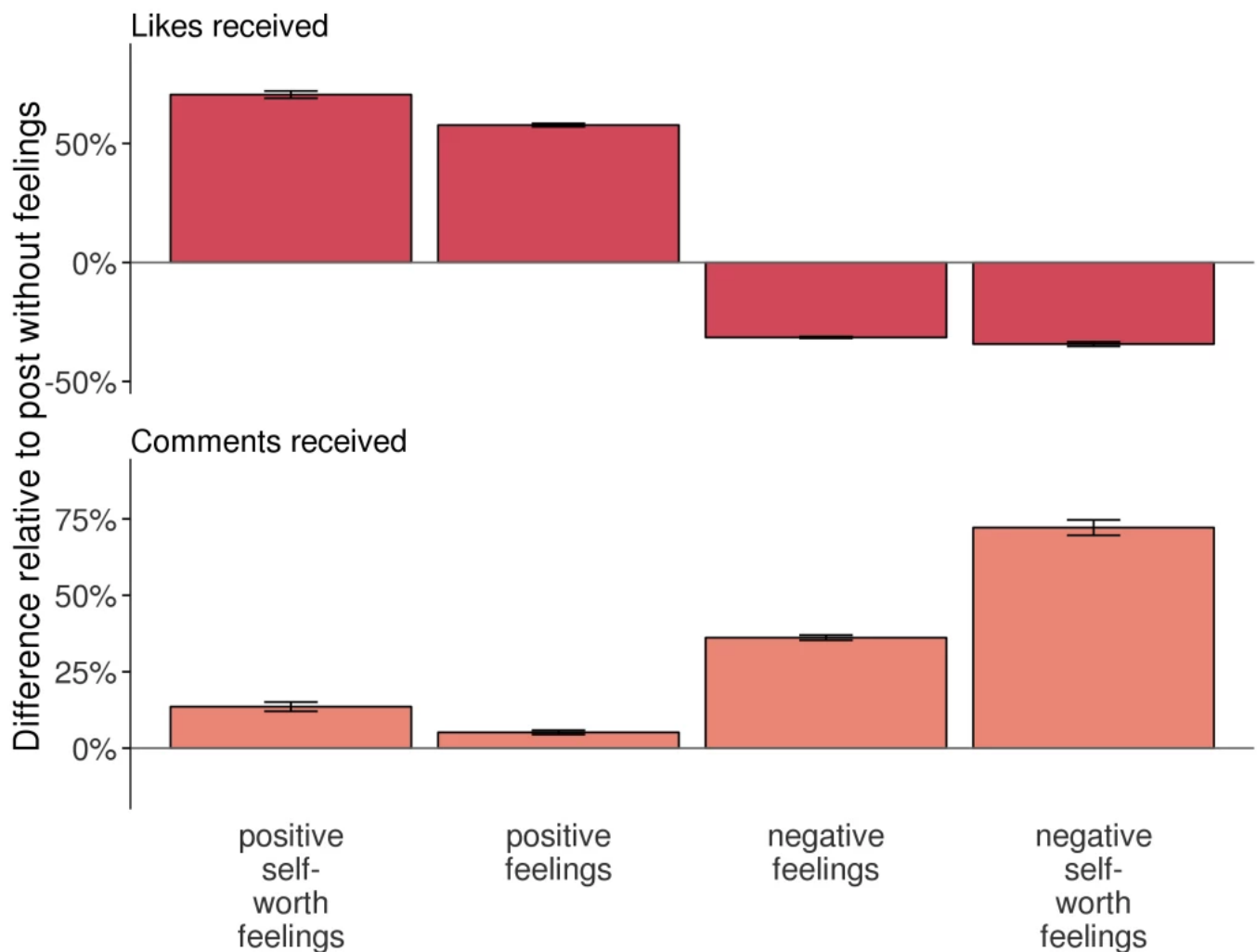


Figure 1. Posts with positive feeling annotations, especially those related to self-worth (like feeling loved) receive far more likes than posts without feeling annotations. On the other hand, posts with negative feeling annotations, especially those related to self-worth (like feeling hopeless) receive far more comments and far fewer likes. Error bars are doubled for visibility.

## Understanding the nature of support

Beyond simple counts of likes and comments, we wanted to understand whether friends were really supporting each other. So, we built a list of supportive terms gathered from websites providing examples of sympathy or condolences (e.g., *affection, awful, better, bless, care, hang, hug, shock, sorrow, strength*), and then ran the comments through an automatic process to count the number of supportive terms. As before, no comment text was viewed by researchers.

addition to creating a list of supportive terms, we also automatically counted the number of positive and negative emotion terms in comments and found (not surprisingly) that posts with negative feelings elicit comments with negative emotional support, too (we imagine that friends are saying things like “That sucks” or “I’m so sorry to hear that”). See the paper for additional forms of feedback measured.

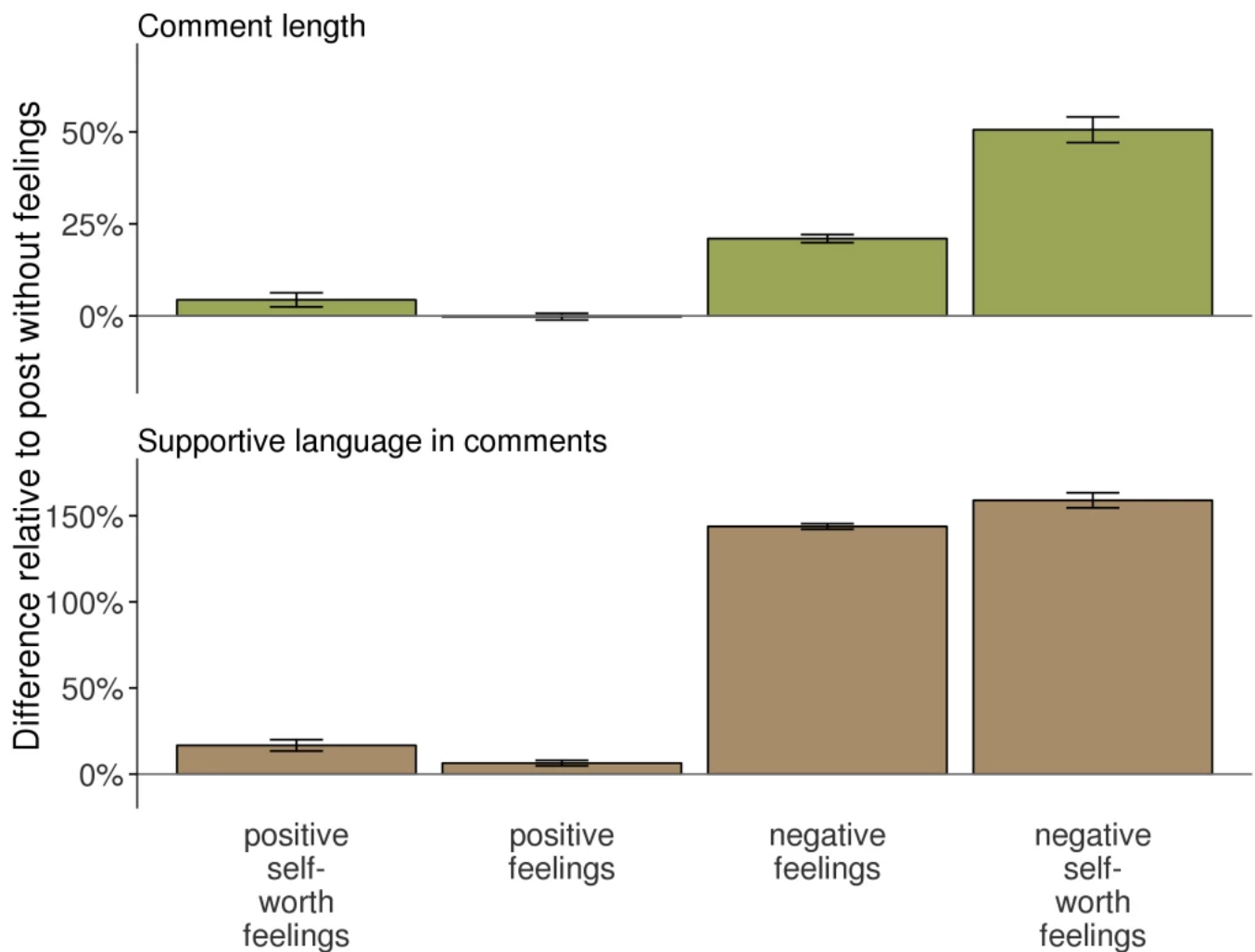


Figure 2. Posts with negative feeling annotations, especially those related to self-worth (like feeling defeated) receive much longer and more supportive comments from friends. Error bars are doubled for visibility.

Which feelings elicited the most feedback? Figure 3 shows the feeling annotations that received the most comments. Most relate to self-worth and thus elicit longer, more supportive comments as well. Notably, *feeling nervous*, elicits more likes than average (while most of these difficult feelings receive fewer likes); people often feel nervous around joyous events (like getting married or starting a new job), so we expect that many of these posts reflect those major life events.



Figure 3. Feelings that received some of the most comments.

## Conclusion

Millions of feelings are shared on Facebook every day. The present study demonstrates that posts with explicit feeling annotations, such as “*feeling wonderful*” or “*feeling heartbroken*” receive far more responses than ordinary posts. Positive feelings elicit more feedback than text without feelings, and negative feelings elicit even more responses than positive. The nature of those responses differs, as well, with positive feelings receiving more likes and emotionally positive comments, and negative feelings getting longer, more empathetic comments. Feelings related to self-worth heighten these effects. The results mirror face-to-face support provision, with friends lifting each other up in times of sadness and joy.

Read more in the full paper: Burke, M. and Develin, M. (2016) [Once more with feeling: Supportive responses to social sharing on Facebook](#). ACM CSCW 2016. Conference on Computer-Supported Cooperative Work and Social Computing.

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