

How Affective Is a “Like”?: The Effect of Paralinguistic Digital Affordances on Perceived Social Support

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Abstract

A national survey asked 323 U.S. adults about paralinguistic digital affordances (PDAs) and how these forms of lightweight feedback within social media were associated with their perceived social support. People perceived PDAs (e.g., Likes, Favorites, and Upvotes) as socially supportive both quantitatively and qualitatively, even without implicit meaning associated with them. People who are highly sensitive about what others think of them and have high self-esteem are more likely to perceive higher social support from PDAs.

Introduction

SOcial media are demonstrated sources of social support to users. However, given the diversity of communicative tools in social media, it is important to continue to isolate effects of specific features.¹ This study expands the social support literature to explore the effect of paralinguistic digital affordances (PDAs) on perceived social support. PDAs are lightweight forms of communication that one can provide in response to others' content on social media with a single click,² such as Facebook Likes and Google+ +1s. Given the phatic, social task nature of PDAs and the frequency of their use, do the quantity and quality of PDAs received through a social medium affect subsequent perceptions of social support? In addition, this research probes whether these effects can be seen after considering three psychological well-being factors—public self-consciousness, self-esteem, and loneliness—thus accounting for the role of both network and individual factors in the provision of social support online.

Paralinguistic Digital Affordances

Conceptualized by Hayes et al.² as “cues in social media that facilitate communication and interaction without specific language associated with their messages” (p. 2), PDAs represent some of the most common tools of social media. Their uses and meaning are more varied than their phatic nature might indicate. Looking at perhaps the most well-known PDA, the Facebook Like button, Eranti and Lonkila³ found that this simple tool plays a significant role in the

maintenance of social ties. Thus, PDAs go far beyond the literal indication a user Likes or has a Favorite post as their nomenclature denotes. Finding users who both send and receive PDAs as a form of emotional support and acknowledgment, Hayes et al.² posited that their use could be a form of social support.

PDAs and Perceived Social Support

Social support is the “extent to which an individual believes that his or her needs for support, information, and feedback are fulfilled.”^{4(p2)} The *perception* of social support afforded by an individual is not the same as the *actual* support provided by one's network,^{4,5} although the perception of social support still depends on external factors (e.g., availability and usefulness). Ultimately, perceived social support is an internalized attribution, whereby an individual feels that support needs are met. The Internet has considerably increased access to social support,⁶ and research has demonstrated that individuals' social support needs can be fulfilled online, with Rains et al.⁷ documenting 41 studies that indicated positive gains in health-related social support in computer-mediated contexts. Other scholars note that the Internet can facilitate support from both strong and weak relational ties.⁸ However, research exploring perceived social support afforded through social media has typically been limited to support through written comments,⁹ whereas the processes underlying the receipt and perception of social support through other channels online—such as PDAs—have only begun to emerge.^{10,11}

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Within this research, the evidence points to PDAs contributing to the perceived social support accrued through social media.^{12,13} For example, Ellison et al.¹⁴ found that “signals of relational investment” on Facebook, such as Liking, were positively related with perceptions of social support; Ahmadi et al.¹⁵ also found that PDAs in the form of “hugs” could be considered as being supportive in nature, and Carr et al.¹¹ found that while PDAs can be perceived of as supportive, PDAs from relationally close connections are perceived as most supportive. Although PDAs can offer a multitude of meanings for both senders and receivers,² these studies suggest that the quantity, quality, and valence of PDAs received to one’s post can affect perceptions of social support, although how that happens is unclear. The moderating role of well-being variables such as loneliness, self-esteem, and public self-consciousness could help to explain these relationships.

Thus, this investigation will explore how quantity, perceived quality, and the moderating role of well-being variables impacts perceived social support.

Social support from PDAs

Several studies suggest that the mere volume of PDAs can influence perceived social support. Bazarova et al.¹³ found that the number of Likes received on a Facebook post is positively correlated with how satisfied one is with the responses received. Relatedly, the volume of directed communication—a combination of actions such as Liking and tagging photos—is correlated with bonding social capital,⁹ which often facilitates social support. These studies, however, only looked at PDAs in the context of Facebook and did not look at the direct relationship between the PDA and perceived social support. To determine whether these findings reflect conceptual links that are generalizable beyond Facebook Likes, it is important to examine PDAs in the context of other social media. Thus, we predict a positive relationship between the quantity of PDAs received and perceived social support, regardless of specific PDA or social medium:

H1: The number of PDAs received is positively associated with perceived social support.

The quality of feedback through PDAs perceived may affect perceived social support, parallel to the quantity of PDAs received. Carr et al.¹¹ found that if the receiver of the PDA thinks that the sender did so without much thought, he or she would feel less social support, especially if the person were close. Bazarova et al.¹³ found increased satisfaction with more personally relevant social media interactions and that the quality of the interaction was just as important, if not more so, as the quantity of interactions. We thus expect that one’s satisfaction with the quality of PDAs received will be positively associated with perceived social support:

H2: Satisfaction with PDAs received is positively associated with perceived social support.

Individual Differences

In examining these hypotheses, it is important to take into account individual differences. In this study, we examine three psychological well-being variables that have been shown to be associated with social support in previous literature, yet represent different social dynamics that are re-

lated with self-presentation. Public self-consciousness is how an individual feels about how others perceive them, while loneliness is how an individual feels in relation to others; self-esteem is an emotional independent evaluation of one’s own worth that measures a self-presentational orientation.¹⁶

Public self-consciousness is a personality trait that indicates a tendency of a person to direct attention outward and be more affected by what other people think and say.¹⁷ In the context of Facebook, studies have found that people who are more self-conscious post more frequently, receive more Likes on their posts,¹⁸ and are more likely to think that Likes are important.¹⁰ Thus, we expect a highly self-conscious person would be more likely to perceive higher social support from receiving PDAs:

H3a: People who have higher public self-consciousness have stronger perceived social support after receiving PDAs.

Loneliness is a feeling of lack of connectedness with others or perceived social isolation and can occur even when one is surrounded by other people.¹⁹ Loneliness has been associated with increased Internet use as individuals reach out online for companionship and is strongly correlated to social support.²⁰ As PDAs can be seen as a form of attention and acknowledgment²—factors that can reduce loneliness—it could be that lonely people feel more social support when they receive PDAs compared to people who are less lonely as they are more attentive to PDA numbers as they seek companionship online:

H3b: People who are more lonely have stronger perceived social support from receiving PDAs.

Finally, *self-esteem* is a trait variable that indicates how highly one thinks of oneself. People with low self-esteem are often more affected by negative comments and put less value on their opinions and ideas than those with high self-esteem and often lack social support.¹⁷ People with low self-esteem are also more likely to have less stable relationships than people who have high self-esteem,¹⁸ which may make them feel more supported through the positive reinforcement of the PDA receipt. Studies have also found that people with low self-esteem who use Facebook more are more likely to gain social capital, which includes perceived social support.¹⁹ This effect was not present for those with high self-esteem, which suggests that an online environment may prove to be more beneficial for those with lower self-esteem. A more recent study found that individuals with low self-esteem were more likely to feel bad if they did not receive “enough” Likes on Facebook.¹⁰ We thus posit that people with low self-esteem will feel a stronger sense of social support based on how many PDAs they receive than those with high self-esteem:

H3c: People with lower self-esteem have stronger perceived social support from receiving PDAs.

Materials and Methods

Participants

To test these hypotheses and others as a part of a larger study, a U.S. national sample of self-identified social media users ($N_{\text{respondent}}=323$) was recruited with the assistance of, and compensated according to their agreement with, the

Qualtrics research firm, to complete an online study. Respondents (216 females, 66.9%) had a mean age of 45.95 ($SD=14.29$; range: 18–80) years, reflective of the population of social media users²¹ save for a slight over-sampling of females. *A priori* power analysis revealed that, to detect the medium effect sizes identified in prior related work, a sample of at least 121 participants would be needed to detect an effect size of at least $f^2=0.16$. Thus, the $N=323$ obtained was sufficient to ensure sufficient statistical power (0.95) to detect relationships at the $p<0.05$ level among all five study variables and minimize the likelihood of a Type I error.

Procedure

After consenting to participate, respondents were asked to select, from a list of five social media (Facebook, Twitter, Pinterest, Instagram, and LinkedIn, the most-accessed social media at the time as identified through the Alexa analytic firm), which social medium they had most recently logged into before beginning the survey. This procedure allowed for a cross-sectional identification and analysis of social media and their various PDAs. Because use of specific social media channels is not evenly distributed, our sample predominantly self-reported most recently using Facebook ($n=210$; 65.0%), followed by Twitter ($n=29$; 9.0%), Instagram ($n=28$; 8.7%), LinkedIn ($n=28$; 8.7%), and Pinterest ($n=28$; 8.7%).

Based on the social medium identified by each respondent, the survey engine adapted a standard instrument with small alterations of verbiage and communication tools to reflect the respondent’s selection. Each respondent was asked to identify the last post they had made to the service and complete several measures they received to that post and the social support perceived from those PDAs, as well as several psychological measures.

Measures

Perceived social support ($M=4.86$, $SD=1.28$, Cronbach’s $\alpha=0.86$) was adapted from the Multidimensional Scale of Perceived Social Support²² by replacing “friends” with “[specific social medium] friends.” Respondents rated six items on a scale of 1 (very strongly disagree) to 7 (very strongly agree). Items included: “My [medium] friends really try to help me,” “I can count on my [medium] friends when things go wrong,” “I have [medium] friends with whom I can share my joys and sorrows,” and “I can talk about my problems with my [medium] friends.”

Loneliness ($M=4.88$, $SD=1.89$, Cronbach’s $\alpha=0.88$) was assessed by a three-item index²⁰ asking, “How often do you feel that you lack companionship?” “How often do you feel left out?” and “How often do you feel isolated from others?” Responses were summed so that index scores could range from 3 to 9, with higher scores indicating greater loneliness. *Self-esteem* ($M=3.55$, $SD=1.27$) was assessed with the validated²³ Single Item Self-Esteem measure,²¹ where participants rated the statement “I have high self-esteem” from 1 (not very true of me) to 5 (very true of me). *Public self-consciousness* ($M=2.60$, $SD=0.63$, Cronbach’s $\alpha=0.78$) was measured by a six-item measure¹² using a four-point scale with response options of “false, mostly false, mostly true, true.”

Satisfaction with feedback was assessed by asking how satisfied the individual was with the feedback on a scale of 1 to 7 ($M=5.25$, $SD=1.34$). *Quantity of feedback* was operationalized

as the number of PDAs the participants received on a specific post. The remaining respondents indicated receiving a range of between 1 and 166 ($M=15.21$, $SD=23.01$) PDA, which was subsequently log transformed for analysis to range between 0 and 2.22 ($M=0.82$, $SD=0.56$).

Results

The first two hypotheses predicted positive relationships between the perception of social support and (H1) the quantity of PDAs received and (H2) the quality of PDA. To test these hypotheses, an OLS regression with listwise deletion was conducted predicting perceived social support from the respondent’s satisfaction with the number of PDAs received to a post and the respondent’s self-reported satisfaction with the feedback received to the post through PDAs, controlling for the age and gender of each respondent. The regression supported the predicted relationships, $F(4, 301)=22.83$, $p<0.001$, $R=0.48$, and adjusted $R^2=0.22$. Controlling for an individual’s age and gender, the satisfaction with feedback received ($\beta=0.30$, $SE=0.05$, $p<0.001$) positively predicted an individual’s perceived social support. The quantity of PDAs received was also a significant predictor of perceived social support, $\beta=0.69$, $SE=0.12$, and $p<0.001$. Thus, H1 and H2 were supported.

H3 posited that (a) public self-consciousness, (b) loneliness, and (c) self-esteem would be correlated with perceived social support. A regression model with perceived social support as the dependent variable tested this hypothesis. Age, gender, and the three psychological well-being variables formed the base model, with quality of PDAs received (H1) and quantity of PDAs received (H2) as the main predictors. The model was statistically significant, $F(7, 298)=18.13$, $p<0.001$, $R^2=0.55$, and adjusted $R^2=0.28$.

Of the psychological control variables, public self-consciousness was a positive predictor ($\beta=0.40$, $SE=0.11$, $p<0.001$), indicating that people who were more self-conscious were more likely to perceive higher social support. Self-esteem was also significantly correlated with perceived social support, but in the opposite direction as hypothesized. People with higher self-esteem ($\beta=0.18$, $SE=0.05$, $p=0.001$) were more likely to experience higher social support. Loneliness ($\beta=0.03$, $SE=0.04$, $p=0.44$) was not significantly

TABLE 1. LINEAR REGRESSION MODELS PREDICTING PERCEIVED SOCIAL SUPPORT

	Model 1	Model 2	Model 3
	H1	H2	H3
Control variables			
Gender	-0.01	-0.04	-0.02
Age	0.07	-0.02	0.08
Loneliness	—	—	0.04
Public self-consciousness	—	—	0.19*
Self-esteem	—	—	0.18*
Independent variables			
PDAs received (Log)	0.39*	—	0.28*
Satisfaction with PDAs received	—	0.42*	0.30*
R^2 (adjusted)	0.137*	0.171*	0.282*

Standardized beta coefficients reported; * $p \leq 0.001$. PDAs, paralinguistic digital affordances.

correlated with perceived social support. Both satisfaction with PDAs ($\beta=0.29$, $SE=0.05$, $p<0.001$) and quantity of PDAs received ($\beta=0.64$, $SE=0.12$, $p<0.001$) were positively associated with perceived social support, after controlling for the psychological variables. Table 1 presents these analyses and the standardized coefficients.

Discussion

Our findings indicate that PDAs—whether by sheer volume received or one's subjective satisfaction with them—mean something to the receiver. These quantitative results provide further support to the qualitative work of Hayes et al.² that people ascribe varied meaning to the receipt of PDAs and that they mean more to users than their simple nomenclature would suggest.

It is also notable that these results persist even after controlling for individual psychological differences. This suggests that receiving more PDAs is associated with perceived social support for both people with high and low psychological well-being. The personality trait of being self-conscious about others' opinions had a positive main effect. The semi-public nature of social media means that the number of PDAs received is visible to both oneself and others, which could be why people who are highly concerned about others perceive more social support from receiving more PDAs. Experimentally manipulating the visibility of the number of PDAs received to just oneself and to others may be able to disentangle whether or not receiving PDAs is related to social support due to intrinsic or extrinsic (i.e., showing off) means.

The positive relationship between self-esteem and perceived social support through PDAs suggests a “rich get richer” phenomena, where people who already feel confident with themselves are more likely to perceive social support through these small social media cues. This could mean that for people with low esteem, PDAs may not be enough and that more in-depth interactions are required for them to feel supported. Further research is needed to understand why people with low self-esteem are less likely to perceive PDAs as being supportive.

Loneliness did not have a direct effect on perceived social support. This may be because the connection between loneliness and perceived social support is very weak—future studies may want to look at more extreme cases, such as comparing clinically depressed with nondepressed individuals. Moreover, while this study focused on aggregate measurements of PDAs received—such as volume and satisfaction—future research should further investigate the qualitative aspect of PDAs, and how much the relationship with the PDA giver affects perceptions of social support. Similarly, our conceptualization and measurement of social support was very unidimensional. While this enables us to see patterns between social support and PDA receipt, future studies may want to take a more nuanced approach to understanding the various dimensions of social support²⁴ and how both social and technical contextual factors alter (or not) the dynamics of giving and receiving PDAs.

Conclusion

PDAs are seemingly simple acts of feedback that people can display on social media in response to others' content. We found that both quantity (number of PDAs received) and

quality (satisfaction) of PDAs received were related to an individual's perception of social support, even after taking into consideration individual psychological differences. People who are highly self-conscious and have high self-esteem were found to perceive greater social support by receiving PDAs, which reinforces that PDAs, seemingly lightweight interactions, have important and varied meanings for receivers.

Author Disclosure Statement

No competing financial interests exist.

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