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# Designing Paralinguistic Digital Affordances for Social Support

**Mousa Ahmadi**

New Jersey Institute of Technology  
Newark, NJ 07103, USA  
sa722@njit.edu

**Donghee Yvette Wohn**

New Jersey Institute of Technology  
Newark, NJ 07103, USA  
wohn@njit.edu

**Mary E. Schneider**

New Jersey Institute of Technology  
Newark, NJ 07103, USA  
mes34@njit.edu

**Rohit Kadam**

New Jersey Institute of Technology  
Newark, NJ 07103, USA  
rbk8@njit.edu

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**Abstract**

Paralinguistic digital affordances (PDAs) [2] are simple cues that one can give in response to social media content with one click. The Like, while ubiquitous, can be inappropriate for certain situations due to its literal meaning. In this study, we conducted focus groups with young adults to understand what type of PDAs would be best in a system designed specifically for social support. Hugs were considered to be a good alternative, although cultural sensitivities should be taken into consideration.

**Author Keywords**

Social support; social media; PDA; hugs; feedback

**ACM Classification Keywords**

H.5.m. Information interfaces and presentation

**Introduction**

Social support has an important role in enhancing mental and physical health [5]. Studies have shown that individuals can receive social support using channels which include social media [3,4,6]. One of the important features of social media which has not changed over time is the ability to engage in small interactions with other users. These simple forms of feedback can be conceptualized as paralinguistic digital affordances (PDAs) [2]. Depending on the type of social

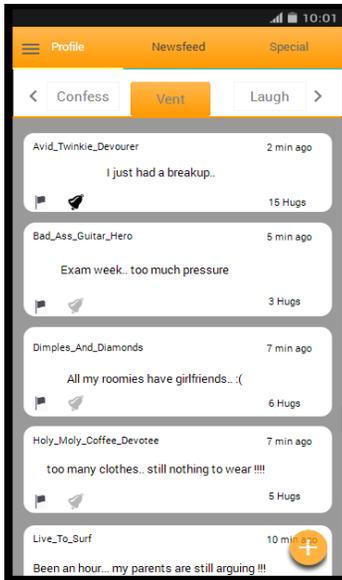


Figure 1: Social support app prototype

medium, PDAs can come in different forms such as the Like (Facebook, Instagram, and now Twitter) or voting (Reddit and Yik Yak). Facebook has also introduced the new “Reactions” feature presenting users with six alternatives to the Like in the form of a heart icon and five face emoji of varying emotions [1].

In this study, we investigated how college students feel about different PDAs for social support. Likes are the most ubiquitous form of PDAs, but they may not best serve the purpose of social support because they may be perceived as inappropriate in certain scenarios [2]. In particular, we focused on whether Hugs as PDAs might be able to fill this gap and enhance systems designed specifically to encourage social support.

## Methods

We conducted five focus groups with 26 participants of a variety of cultural, ethnic, and racial backgrounds (mean age=21), all students at the New Jersey Institute of Technology, a heavily STEM-oriented university. Participants received free food and drinks for the participation in the study. All the focus groups were audio and video recorded. In addition to the moderator, two researchers were present in each focus group observing and taking notes.

We showed participants screenshots (see Figure.1) of a pseudonymous social support system with Hugs as PDAs. The system enabled people to post things, receive Hugs, and give Hugs by double tapping existing posts. Participants were asked about how they felt receiving or giving Hugs on our system. We also asked how they feel about other forms of PDAs.

## Results

### Perception of Hugs

#### HUGS ARE UNIVERSAL

Most participants believed virtual Hugs were appropriate as PDAs for social support because physical hugs are widely accepted as a form of social support. Participants described that hugs always bring warmth and happiness to any context in general and can be sympathy and encouragement together. Moreover, virtual Hugs, unlike Likes, can be suitable for a variety of contexts, both positive and negative. As one participant put it:

*“Hugs are like aloha, like hello, and goodbye. I’ll hug you when you’re happy and I’ll hug you when you’re sad.”* (Male, 25)

However, there were two participants who thought it would be “weird” to receive hugs for both positive and negative situations: *“Someone says something that is positive and gets lots of hugs and then I say... I’m having something bad going on and lots of people give me hugs too, that causes a disconnect in my mind.”* (Male, 29)

When asked to provide ideas for alternative PDAs, participants suggested touching feet (an indicator of blessing in India), snapping, pre-determined list of empathetic phrases, and donation buttons, but most participants thought Hugs would be better.

#### HUGS CAUSE COMPETITION

Three participants in our focus group described that displaying the number of Hugs received may lead to competition between users and may even change how people use the system: *“It’s like you start comparing*

### Thoughts about Hugs and Gender

*"It's virtual so as long as some random person doesn't walk up to me out of nowhere and hug me, it's fine."* P3-2

*"I see a hug from a guy, I would be like yikes! Where do I know him from? I think it would be different. Even though it's just a word, or just clicking 'hug.'" (Female, 22)*

*"If there were gender, no one would hug guys. Because most guys would feel awkward about hugging other guys. And I feel women would feel like nah. Because people who use it for the right reasons might be just afraid that if I hug this dude, he will be like, 'this girl is kinda into me.'" (Male, 21)*

*your problems to other people's problems."* (Male, 28). These responses illustrated that the type of competition which is caused by having visible metrics for posts could change how users would use the system.

### HUGS AND GENDER REACTIONS

Participants had mixed feelings about receiving virtual Hugs from and giving Hugs to the opposite gender. On one hand, fourteen participants mentioned that gender of users would not change the way they interact with those users. This was partly because of the pseudonymous nature of the system enabling users to Hug posts without their real identity revealed. Another reason was the nature of hugs as one of our participants put it, *"I don't think it will make a difference since it's just someone who is trying to show affection."* (Female, 28)

On the other hand, five participants told us that they believed gender would be an important factor in receiving and giving Hugs for many users. This demonstrates that providing gender information on the social support system could change the way people interact with each other.

When we asked if culture or religion would play a role in gender-specific interactions, two Indian students described that although hugs might be considered mildly inappropriate in their culture that did not affect their feelings toward hugs because they distinguished between virtual and real hugs. *"People in cities wouldn't really have a problem but conservative places like villages might have a problem."* (Male, 25)

We did not have any Muslim or Orthodox Jewish participants, which may be why most participants saw no cultural issue with gender.

### Is Virtual Support Real?

A third of our participants were skeptical about Hugs because they did not think any type of virtual support was "real." They described physically reaching out to the individuals, having conversations with them, texting, and making donations as instances of helpful support. For instance, one participant said, *"If the app provides something like clear communication that'll be much better, like a voice call."* (Male, 24)

*"I don't think it's enough feedback. Because I hugged something. What do I get out of that? I wanna know that they understood me or they're going through the same things."* (Female, 23)

### Multiple Feedback Options

We asked our participants how they would feel if presented with several options for feedback on one system, such as with Facebook's new "Reactions" feature [1]. Participants from several of the groups felt that having options is a good feature, such as one participant who said, *"I think it widens our spectrum"* (Female, 22). Participants also shared that having options lifted some of the conflict of having only a "Like" button, which is not always appropriate to certain contexts:

*"Think about someone posing a sad comment, or a sad thing on Instagram. But the only option is to Like. Like in my mind, that does not even make sense. Like it's something bad and then you like it."* (Male, 21)

### Thoughts about Negative Feedback

"That doesn't make sense. They are there for support, or a Like. Who wants to fight? I don't think that's the intention of your app... Nobody should punch anybody. No aggression." (Female, 21)

"If I receive too many negative emotions, I would stop using the app..." (Male, 30)

"For example, if someone is going to say, 'Oh, I'm gonna bully this person,' and a whole bunch of people react badly, they might say, 'Let's not bully this person.'" (Male, 20)

However, another participant felt that having multiple feedback options might over-complicate a system:

"It's so complicated. You can see the post and click Like, and you don't think much. And with my Reaction, I choose, then spend time on it and that's not convenient... I would still use a Like." (Male, 24)

### Negative Feedback

We also asked participants about the possibility of having a negative feedback option, such as a "Punch" or a "Slap in the Face" next to positive feedback, and if there would be a circumstance in which negative feedback could be an expression of social support. Most participants were confused by the suggestion and did not think that would foster social support. Several, however, saw negative feedback as a form of constructive criticism or an opportunity to collectively react to bad or offensive content in order to convince the user who posted said content to change their behavior.

One participant (Male, 20) saw negative feedback as a potential outlet to diffuse emotions that might otherwise become destructive: "He or she is expressing, letting it out instead of bottling it up, so it's kind of like mental[ly] healthy, like a release of pressure..." (Male, 20)

### Design Suggestions and Conclusion

In this study, we explored the use of Hugs as PDAs in a system specifically designed to foster social support. Unlike Likes, participants thought Hugs were an appropriate response for both negative and positive posts. However, displaying the number of Hugs that each post receives may lead to competition or

comparison. From a design perspective, we may want to hide these metrics altogether or make them only available to the user so they can see how many hugs they receive but not how many others receive. We also found mixed responses to gender information and Hugs. Despite few negative responses, most participants thought that virtual Hugs as PDAs were more about support than a signal of romantic interest, but commented that there could be different reactions based on cultural or religious beliefs.

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