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Brandon T. McDaniel PhD

Eric Wesselmann

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"You phubbed me for that?" Reason given for phubbing and perceptions of interactional quality and exclusion

Brandon T. McDaniel[1] | **Eric Wesselmann**[2]

[1]Health Services and Informatics Research, Parkview Mirro Center for Research and Innovation, Fort Wayne, Indiana

[2]Department of Psychology, Illinois State University, Normal, Illinois

Correspondence

Brandon T. McDaniel, Health Services and Informatics Research, Parkview Mirro Center for Research and Innovation, 10622 Parkview Plaza Dr., Fort Wayne, IN 46845.
Email: btmcdaniel.phd@gmail.com

Abstract

When someone focuses on their phone, rather than the person in front of them ("phubbing" or "technoference"), this can lead to feelings of exclusion and dissatisfaction. Few studies have examined this phenomenon experimentally using a confederate during face-to-face interactions, and to our knowledge the published research has yet to examine the role that attributional information may have on the effects of being phubbed. Thus, we conducted an experiment investigating how attributional information influenced the effects of phone use on feelings of exclusion and interactional quality during a face-to-face interaction. We randomly assigned 99 young adults into one of three conditions: no phone use, important use, or trivial use. In the phone conditions, the participant's interaction partner (a confederate) pulled out their phone 2 min into the interaction, gave either an important or trivial reason for use, and then interacted with their phone, making intermittent eye contact while continuing to interact with the participant. Phubbed individuals reported feeling more excluded, less close, and like the partner was more distracted in the phone use conditions, regardless of reason. However, individuals phubbed for an important reason reported feeling less excluded and like the partner was less distracted as compared with participants in the trivial condition. Results suggest that people take attributional information into account during the phubbing experience. Given the frequency of phone use during social interactions, these data suggest giving a good reason for use may help in relationships and interactions; yet, it may not alleviate all the potential negative effects.

KEYWORDS

conversation quality, exclusion, mobile phone, multitasking, phone distraction, phubbing, relationship satisfaction, smartphone addiction, smartphone use, technoference

1 | INTRODUCTION

People need to belong, and they pay attention to verbal/non-verbal cues that convey information about social value (Baumeister & Leary, 1995; Leary, 1999). When people receive cues that suggest they are not valued in a relationship, such as being told they are not welcome or being ignored in some way, they feel excluded and experience negative psychological outcomes (e.g., threatened belonging; Williams & Nida, 2011; Wesselmann et al., 2016). Unfortunately,

these situations are common social experiences (Nezlek et al., 2012; Williams, 2001).

One way that people may make others feel ignored or otherwise excluded is by using phones during conversations or time spent together. When someone focuses on their phone, rather than the person ("phubbing" or "technoference"), this can lead to feelings of exclusion and dissatisfaction (Hales et al., 2018; McDaniel et al., 2020; McDaniel & Coyne, 2016; McDaniel & Drouin, 2019; Roberts & David, 2016). However, the reason for focusing on the

phone could potentially influence how the phubbed person feels. For example, there could be times when phone use is important and other times when use is trivial. Might being phubbed for an important reason hurt less than being phubbed for a trivial reason? In general, individuals are known to make attributions about why they are being excluded and then take steps to recover from this sense of exclusion (Wesselmann et al., 2015). To our knowledge, no published studies have directly examined the effect that the reason for the phubbing may have on the psychological outcomes of the phubbed partner. Thus, we designed an experiment to examine this question.

1.1 | Theoretical and conceptual background

Many theorists have argued that humans' need to belong is biologically rooted and adaptive, often making humans overly sensitive to any social information that could signal their social standing (e.g., Kerr & Levine, 2008; Lieberman, 2013; MacDonald & Leary, 2005; Pickett & Gardner, 2005). Some theorists argue that because humans historically depended upon social inclusion for survival, social exclusion could be just as dire of a threat as a physical injury. As such, humans' neurological pain systems should be tuned to detect both physical and social threats similarly (Eisenberger & Lieberman, 2004; MacDonald & Leary, 2005). Indeed, psychological research demonstrates that participants report experiencing social exclusion as painful, both phenomenologically and neurologically (Eisenberger et al., 2003; Kross et al., 2011; Leary et al., 1998). Further, various studies have demonstrated that excluded individuals subsequently are more attentive to social information relevant to future social inclusion or exclusion (Bernstein et al., 2010; Golubickis et al., 2018; Lyyra et al., 2017).

There are various ways people can make others feel socially excluded. For example, people can exclude someone verbally by providing explicit statements that someone is unwanted in a group (Twenge et al., 2001; Wesselmann et al., 2010). Even hurtful, mean-spirited laughter can make someone feel excluded (Klages & Wirth, 2014). There are other, more subtle and indirect ways of making someone feel excluded—ways that involve ignoring someone. These range from completely ignoring someone by refusing to acknowledge their presence physically (often called giving someone "the silent treatment" or "the cold shoulder"; Williams, 2001), to ignoring someone's calls, texts, and social media posts (colloquially called "ghosting"; e.g., Freedman et al., 2019; Hayes et al., 2018; Smith & Williams, 2004; Wolf et al., 2014).

Some studies have found that refusing or not giving eye contact when someone would otherwise expect it can make them feel excluded. In one study, participants imagined interacting with a virtual interaction partner, represented by a face animated using PowerPoint. The virtual confederate appeared on the computer screen for a brief period and either provided consistent eye contact or looked away from the participant for most of the virtual interaction. Participants who were refused eye contact reported feeling more excluded, ignored, and experiencing threats to basic psychological needs

(e.g., belonging, self-esteem) than participants who received consistent eye contact (Wirth et al., 2010; see also Böckler et al., 2014). Another study found that pedestrians who were refused eye contact and "stared through" by a confederate subsequently felt more socially "disconnected" than pedestrians who received eye contact from that same confederate (Wesselmann et al., 2012). Disrupted eye contact is not the only subtle cue that can make someone feel ostracized—even uncomfortable silences can negatively impact a person's sense of belonging and social value (Koudenburg et al., 2011).

Technoference or phubbing, where individuals use their phone or device in the presence of an interactional or romantic partner, likely creates social cues that may be perceived as exclusionary, such as breaks in eye contact or uncomfortable disruptions in conversations. Additionally, during time spent together partners may, at least at times, expect undivided attention, and when this expectation is violated negative feelings about the partner and the interaction may emerge (Miller-Ott & Kelly, 2015). Although much of the research has utilized survey research and focused on the potential dissatisfaction and negative emotions experienced when phubbed by a partner (e.g., Amichai-Hamburger & Etgar, 2016; Halpern & Katz, 2017; Krasnova et al., 2016; McDaniel et al., 2018; McDaniel & Coyne, 2016; Roberts & David, 2016; Wang et al., 2017), the significant associations among these suggest that individuals likely perceive differences in interactional quality due to phone use. Speaking directly to this point, recent research where individuals in couple relationships report on technoference each night for a series of days has found that on days when greater technoference is experienced individuals feel less positive about their face-to-face interactions with their partner (McDaniel & Drouin, 2019) as well as perceive that their time spent together was of lower quality (McDaniel et al., 2020).

Moreover, experimental work on phone use during interactions suggest that the individuals being phubbed may experience this behavior as exclusionary. For example, one experiment suggested that participants who were phubbed by a confederate reported feeling ostracized, especially if they disliked technology (Gonzales & Wu, 2016). Another study found that when participants watched a video and engaged in perspective-taking for a phubbed character, they reported experiencing negative psychological outcomes similar to outcomes in other social exclusion paradigms (e.g., threatened belonging; Chotpitayasunondh & Douglas, 2018); yet another study with similar video methods found that making eye contact with one's phone, especially during times when one should be listening, was perceived negatively, and participants perceived that interactional partner as being less affiliative (e.g., friendly; Vanden Abeele & Postma-Nilsenova, 2018). Other research found that individuals recalled feeling ostracized and experienced other negative psychological outcomes (e.g., threatened belonging; lower perceived relational value) when being phubbed by a friend during a social interaction, regardless of whether the content of their conversation was mundane or serious (Hales et al., 2018); and a series of two experiments showed that the individual using their phone was perceived as less polite and more distracted while the conversation was perceived as lower quality (Vanden Abeele et al., 2016). Finally, although not an experiment,

observations of students in a restaurant also revealed that phone use by an interactional partner was related to feeling less intimacy in the interaction (Vanden Abeele et al., 2019).

One potential influence on the impacts of technoference or phubbing could be the perceived reason for this phone use. There are many reasons why someone would monitor their cellphone during a face-to-face interaction, and it is likely that reason for use may influence how understanding the phubbed partner may be. For example, someone monitoring their phone would be more understandable if they were engaging in this behavior for a serious reason (e.g., childcare or health issues) than if it were for a mundane or trivial reason (e.g., scheduling future social plans or to assuage boredom). Even if the occasional break in conversation momentarily jars the phubbed individual, an explicit reason would provide clear attributional information for the interruption.

Williams (2009) argues that there is a temporal structure to experiencing ostracism (and other forms of social exclusion; Wesselmann et al., 2016). First, individuals reflexively respond to cues of ostracism with feelings of pain, negative affect, and threats to basic psychological needs. These effects happen immediately with little cognitive effort. However, individuals then are motivated to attend to the situation, make accurate attributions about why they are being ostracized, and then take the appropriate steps to recover their basic need satisfaction (often by seeking re-inclusion, though not always; Wesselmann et al., 2015). Thus, attributional ambiguity may be one factor that makes various forms of social exclusion difficult to recover from because without clear information about why it is happening, a person cannot know if they are being excluded for something they did (e.g., "*I'm* boring") or if it is something about the other person (e.g., "*They* are distracted by a potential emergency"; Williams, 2009). Recognizing that one is being excluded because of something about the other person likely makes it easier for individuals to engage in the cognitive portion of the recovery process, especially if it is perceived as a good reason. Thus, being phubbed for a trivial reason may be painful, but being phubbed for an important reason likely softens the blow, perhaps reducing the pain entirely.

There is little research examining how attributional information can affect the experience of ostracism and other forms of exclusion, so this argument largely is theoretical. Thus, it is important to investigate this directly, both for phubbing research specifically and for exclusion research broadly. Further, most of the experimental studies on phubbing involve participants watching videos of someone being phubbed and taking their perspective, or by asking participants to recall a time when they were phubbed (compared to a different type of autobiographical event). To our knowledge, there are only a small number of published papers that use confederates to phub participants during real-time interactions (e.g., Gonzales & Wu, 2016; Vanden Abeele et al., 2016) and neither directly examine attributional information in the experience. Thus, it is important for experimental studies of phubbing to involve more confederate studies to strengthen the scientific understanding of the phubbing experience.

1.2 | Hypotheses

We designed an experiment to examine the role that attributional information may have on the negative effects of phubbing on an individual and their perceptions of interaction quality. First, we hypothesized that being phubbed by an interaction partner would (H1a) increase participants' feelings of exclusion and (H1b) negatively impact their perceptions of the interaction compared with someone who received the partner's full attention during the interaction. Further, we hypothesized (H2) that the reason for the partner's phubbing would change the impact of the phubbing on participants' experience and feelings, such that being phubbed for a trivial reason would show the strongest effect. We left open as a research question (RQ1) whether being phubbed for an important reason would mitigate the entire impact of being phubbed.

2 | METHOD

2.1 | Participants

Participants were recruited via the Psychology student subject pool and announcements in general education courses across various majors at a Midwestern university. Thus, participants were from a variety of majors (e.g., only 13% of those who participated in the experiment were from Psychology). Participants engaged in a two-part study: Part 1 was an online survey and Part 2 was an in-person lab experiment that took place at a later date. Participants received extra credit for their participation when they completed both sessions. We did not conduct a formal power analysis but rather strove to collect as many participants as possible during the semester.

We recruited 221 participants for Part 1, and 99 participated in the experimental task (Part 2; the focus of the current study). Those who completed the task were not significantly different from the initial recruited sample on any demographic characteristics, except they were more likely to be Caucasian as compared to other races in the Part 2 sample as compared with the full recruited sample in Part 1, χ^2 (1) = 10.65, p < .001. In our final experimental task sample (Part 2; n = 99), 77% were Caucasian, 86% were female, the median age was 19 years (SD = 2.42), with 91% in the age range of 18–21. All owned a smartphone, and participants reported using their phone for approximately 5 hours per day (median; SD = 3.59).

2.2 | Procedure

The study procedures are outlined in Figure 1. Upon recruitment, participants (N = 221) first completed an online consent form and then baseline online survey which measured phone use, demographic characteristics, and other well-being measures (e.g., depression, life satisfaction). Then, participants were contacted by a member of the
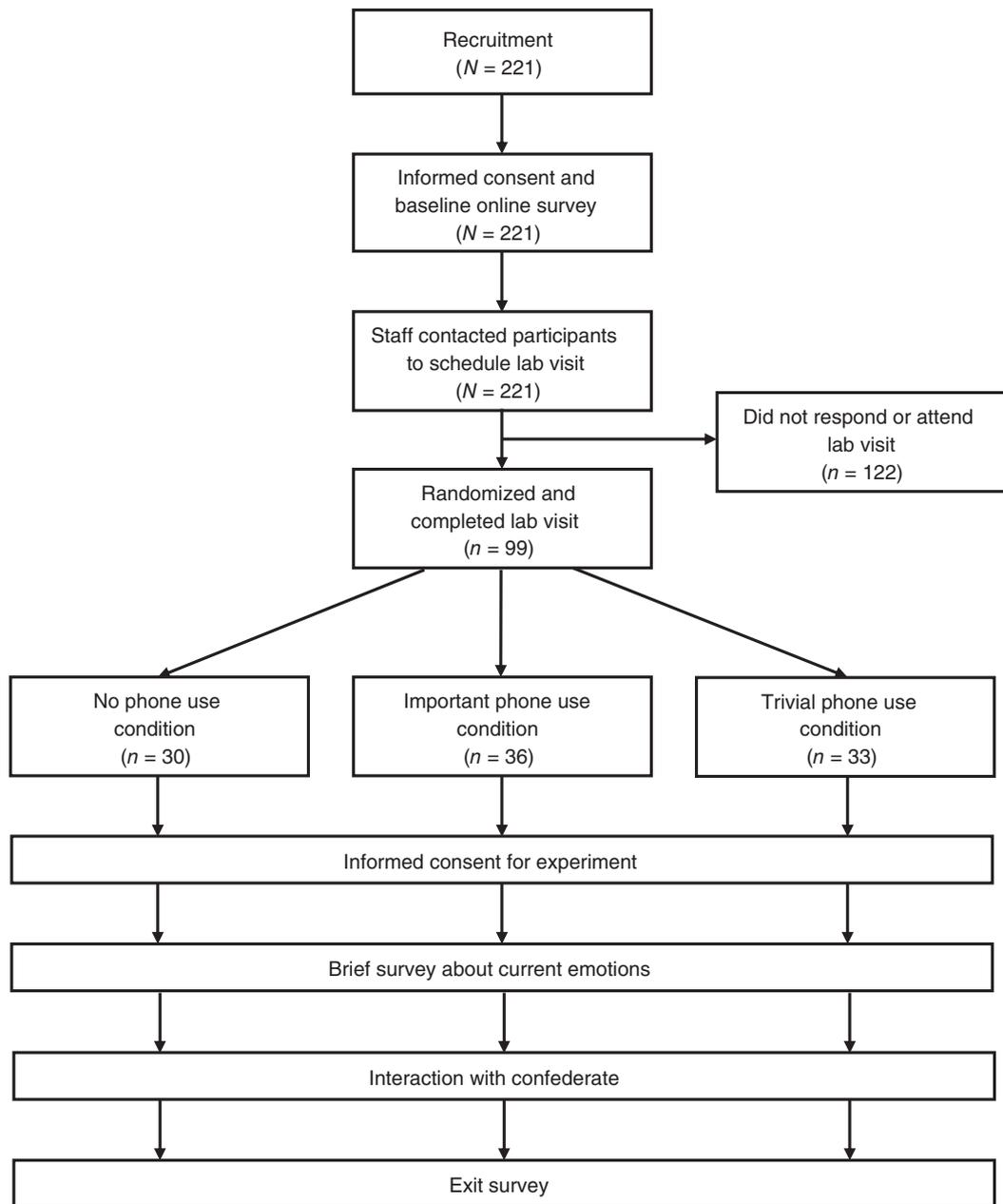
FIGURE 1   Flow chart of study design and procedures

research team to schedule their visit to the lab for the experiment. Participants were randomly assigned to one of three conditions, including control ($n = 30$), important phone use ($n = 36$), and trivial phone use ($n = 33$). A single participant came to the lab at a given time, and two members of the research staff were already there—one acting as the researcher and one acting as another participating student (confederate). Upon entering the lab room, the researcher followed a script and explained to the two students that the researchers were simply interested in what it is like for people to get to know one another. The participant and the confederate were then seated at two different locations in the room to be consented for the experimental part of the study and to then complete a brief online survey (on a tablet) which asked about the emotions they were

currently feeling; the confederate pretended to complete the survey on a tablet while the participant completed their survey on a separate tablet. Once the participant had completed their survey, the researcher brought the participant and confederate to a table where they sat directly across from one another. The researcher explained to them how the interaction would work (i.e., one person reads the question and then each responds to the question, then rotate, and so forth), and a timer was started and left on the table (near them and within their view). They then discussed a series of "icebreaker" questions with one another (e.g., "Where are you from?", "What are your hobbies?") for a total of 5 min (modeled after Sedikides et al., 1999).[1]

In the *control* condition, the interaction proceeded normally with no phone interruptions. However, in the two phone use conditions,

the confederate pulled out their phone 2 min into the interaction and then used the phone (in sight of their interaction partner) during the rest of the interaction (i.e., the remaining 3 min), making intermittent eye contact throughout and continuing to interact and answer the questions. Additionally, when the confederate pulled out their phone, they explained their phone use. In the *important use* condition, the confederate explained that their mother was in the hospital. In the *trivial* use condition, the confederate explained that they were making plans with their friends for the weekend.

When the timer sounded at the end of the 5 min, the interaction ended. The participant and confederate were then separated, and the participant completed an online exit survey on a tablet (while the confederate acted like they were also completing an online survey on a separate tablet), measuring such things as feelings of interactional quality, closeness/connection, exclusion, and so forth. The current study focuses on these exit measures. After completing this final survey, the participant was provided with a debriefing handout and left the lab. Participants received extra credit at their instructors' discretion.

2.3 | Measures

2.3.1 | Interactional quality

Participants rated three items that asked the degree to which the interaction felt awkward, smooth, and comfortable on a 10-point scale, ranging from 1 (Not at all) to 10 (Very much). An example item is, "To what degree did the interaction seem smooth, natural, and relaxed to you?" Items came from Cuperman and Ickes (2009) and showed good internal consistency (alpha = .82). The items were averaged such that higher composite scores indicated higher perceived interaction quality.

2.3.2 | Interactional closeness

Participants rated four items that asked the degree to which they felt closer to partner, understood, and accepted on a 10-point scale, ranging from 1 (Not at all) to 10 (Very much). An example item is, "To what extent did this interaction make you feel closer to your partner?" Items came from Cuperman and Ickes (2009) and showed good internal consistency (alpha = .82). The items were averaged such that higher composite scores indicated higher perceived interactional closeness.

2.3.3 | Distraction

Participants rated a single item that asked the degree to which they felt their partner was distracted during the interaction on a 10-point scale, ranging from 1 (Not at all) to 10 (Very much) (Cuperman & Ickes, 2009).

2.3.4 | Exclusion

Participants were asked to rate the feelings they experienced during the interaction on a 5-point scale, from 1 (Not at all) to 5 (Extremely). The three items included: (1) I felt ignored; (2) I felt rejected; (3) I felt excluded. These items were chosen/adapted from scales commonly used in studies on exclusion (e.g., Hales et al., 2018). The items in these scales often show high inter-item correlations (Williams, 2009). Thus, we selected these three specific items to balance brevity with face validity. The internal consistency of the items was good (alpha = .90). The items were averaged such that higher composite scores indicated higher perceived exclusion.

3 | RESULTS

3.1 | Manipulation checks

At the end of the exit survey, participants responded to a single item that asked, "How often do you feel like your partner was on their phone during the interaction?" The item was rated on a 5-point scale, ranging from 1 (Never) to 5 (Almost all the time). Participants in the phone use conditions (not control) also responded to a single item that asked, "How important do you feel it was for your partner to use their phone during the interaction?" The item was rated on a 10-point scale, ranging from 1 (Not at all important) to 10 (Very important). We examined the effects of our manipulation on these checks using two univariate general linear models. There was a significant effect of our manipulation on perceived confederate phone use, $F(2, 96) = 72.54$, $p < .001$, $Eta^2 = .60$. Participants in the conditions perceived different amounts of confederate phone use such that, although participants in the phone use conditions perceived similar amounts of phone use regardless of the condition ($p = .841$, $d = .13$; important use $M = 3.25$, $SD = 0.97$; trivial use $M = 3.39$, $SD = 1.14$), both groups perceived more phone use than those in the control condition ($ps < .001$, $ds > 2.95$), which perceived no phone use ($M = 1.00$, $SD = .00$). This is what we had hoped as the confederate was instructed to act the same in terms of how they utilized the phone regardless of which phone use condition they were in. For the importance manipulation check, those participants in the important phone use condition ($M = 8.33$, $SD = 2.17$) indeed perceived their partner's phone use to be more important than those in the trivial phone use condition ($M = 4.27$, $SD = 3.40$), $F(1, 67) = 35.58$, $p < .001$, $Eta^2 = .35$; thus, our manipulation was successful both in the degree to which participants noticed the confederate's phone use and the degree of perceived importance for the behavior.

3.2 | Primary analyses

We ran a series of One-way ANOVAs by experimental condition on the exit survey variables. When significant differences were found, Tukey post hoc comparisons were conducted (unless the Levene's

TABLE 1 Means and standard deviations for experimental conditions

	Condition			F (2, 96)	Eta²	p
	Control (n = 30)	Important use (n = 36)	Trivial use (n = 33)			
Interactional quality	6.74 (2.32)	6.42 (1.64)	6.03 (2.20)	0.96	.02	.388
Interactional closeness	6.56 (1.77)ₐ	5.72 (1.81)	4.85 (1.90)ₐ	6.86	.12	.002
Partner distraction	1.87 (1.31)ₐᵦ	6.86 (2.02)ₐc	8.12 (1.97)ᵦc	103.89	.68	.000
Exclusion	1.07 (0.22)ₐᵦ	1.45 (0.72)ₐc	2.06 (1.13)ᵦc	12.65	.21	.000

Note: Subscripts denote means that are significantly different (within a row). Tukey post hoc comparisons were conducted unless the Levene's test revealed unequal variances; then, Games-Howell comparisons were conducted.

test revealed unequal variances; then, Games-Howell comparisons were conducted). Means, standard deviations, and overall *F*-test results for the primary outcome variables by condition are presented in Table 1.

No significant differences were found in perceived interactional quality. However, significant differences were found in perceived interactional closeness (Table 1 and Figure 2). Post hoc tests revealed that participants felt less closeness in the trivial phone use condition as compared with the control condition, $p < .001$, $d = .93$, but those in the important phone use condition did not feel significantly less closeness than those in the control condition, $p = .155$, $d = .47$.

Participants also felt significantly different levels of distraction from their partner depending on condition (Table 1 and Figure 3). Those in the trivial phone use condition perceived the greatest distraction in their partner as compared with important phone use, $p = .013$, $d = .63$, and control, $p < .001$, $d = 3.74$. Those in the important phone use condition also perceived greater distraction in their partner than the control condition, $p < .001$, $d = 2.82$.

Participants felt significantly different levels of exclusion depending on condition (Table 1 and Figure 4). Those in the trivial phone use condition perceived the greatest exclusion as compared with important phone use, $p = .029$, $d = .64$, and control, $p < .001$, $d = 1.22$. Those in the important phone use condition also perceived greater exclusion than those in the control, $p = .011$, $d = .71$.

4 | DISCUSSION

In this study, we examined the potential impact of phone use by an interactional partner during a conversation in a sample of young adults on feelings of exclusion, partner distraction, interactional quality, and interactional closeness. More specifically, we examined whether attributional information (the importance of the reason given for phone use) would change the potential effects of phone use. Although perceptions of interactional quality were not significantly affected by phone use in these brief 5-min interactions, phubbed individuals reported feeling more excluded, less close, and like the partner was more distracted in the phone use conditions. We also found that the importance of the reason given for the phone use had a significant impact on the phubbed partner's feelings about the partner and the interaction.
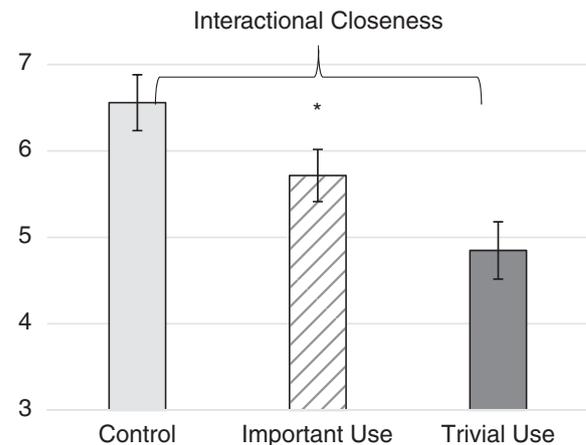

FIGURE 2 Average interactional closeness scores by experimental condition. Error bars represent ±1 standard error of the mean. *represents a significant difference between two conditions
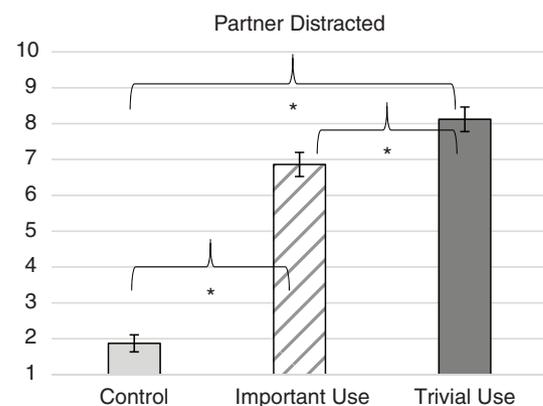

FIGURE 3 Average partner distraction by experimental condition. Error bars represent ±1 standard error of the mean. *Represents a significant difference between two conditions

As prior experimental work has already demonstrated that phone use in interactions produces negative outcomes, such as feelings of exclusion and worse feelings about the partner (e.g., Chotpitayasunondh & Douglas, 2018; Gonzales & Wu, 2016; Hales et al., 2018; Vanden Abeele et al., 2016; Vanden Abeele &
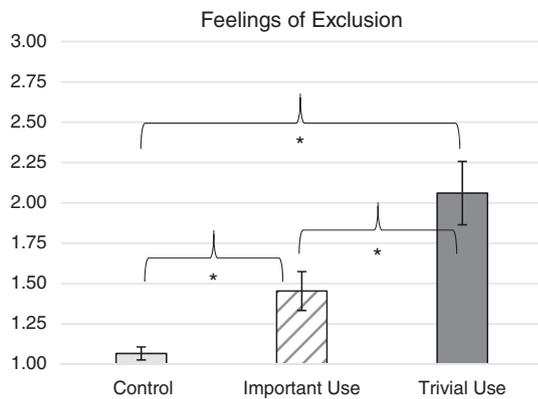
FIGURE 4 Average feelings of exclusion by experimental condition. Error bars represent ±1 standard error of the mean. *Represents a significant difference between two conditions

Postma-Nilsenova, 2018), we turn our attention to the nuances of our current study. Our data extend prior work by demonstrating that people take attributional information into account when a phone is used during an interaction. Overall, individuals responded less negatively to phubbing for an important reason as compared with phubbing for a trivial reason. No negative effects of phone use on feelings of closeness were observed when an important reason was given. However, individuals phubbed for an important reason *still* experienced feelings of exclusion and partner distraction. However, the feelings of exclusion and partner distraction were stronger in the trivial reason condition as compared with the important reason condition.

Williams (2009) argues that attributional information is an important part of understanding how individuals make sense of being ostracized and ultimately how they recover. Relating this to the current study, one of the ways that individuals' recovery efforts can be affected cognitively is by the attributions they make about the situation once they process their partner's reason for phubbing (e.g., is there an intrinsic or extrinsic reason for the ostracism?). If one is not given a clear reason to attribute the ostracism to, the person will likely ruminate on multiple possibilities without any clear answer. This rumination can prolong the recovery process (Hales et al., 2016; Wesselmann et al., 2013). Moreover, in the current research, the important reason clearly related to external attributional information (i.e., they were distracted by information that was relevant to their life, not because of anything intrinsically wrong with the participant). The trivial reason also related to external attributional information. However, attribution types for ostracism are not mutually exclusive: one could make a combination of external and internal attributions to the experience (Wirth & Williams, 2009). It is possible that participants also made internal attributions in the trivial condition if they thought they may be too boring to hold the person's attention for the brief conversation. Future research examining attributions for ostracism and other forms of social exclusion as they relate to phubbing are warranted to better understand the specific attributions individuals make during phubbed interactions.

It is interesting that although individuals perceived a similar amount of phone use between the trivial and important reason conditions (as indicated by our manipulation check) phubbed individuals perceived their partner as more distracted in the trivial condition as compared with the important condition. This coincides with prior research that shows that phubbed individuals negatively evaluate their partners and their behavior (e.g., Vanden Abeele et al., 2016; Vanden Abeele & Postma-Nilsenova, 2018). However, this result extends prior research, illustrating that perceptions of the impact of a partner's phone behavior on that partner's ability to attend to the phubbed partner are colored by the attributional information the partner provides (e.g., reason given for use). We find it interesting that participants rated the confederate who had a trivial reason for phubbing as being more distracted than the confederate with the serious reason. One might also predict the opposite pattern because a serious reason, such as having a loved one in the hospital, would take more of one's attention away from the moment because of the potential anxiety involved. It may be that the participants interpreted the word "distracted" in a negative way, and perhaps if we asked additional questions about how "concerned" or "worried" they felt we would have seen a different pattern. Often when discussing phubbing research, either in community workshops or informal conversations, individuals have suggested they try to give an explanation to their partner or family member about their phone use to mitigate any negative effects. Indeed, our results provide at least some initial evidence that support these anecdotes: providing an important reason for one's phone use may help to mitigate some negative effects of the phubbing. Therefore, we recommend that individuals take the time to explain their use to one another. However, individuals should also reflect on whether the reason, although perhaps seen as important to the user, will be *perceived* as important by the phubbed partner. The potential mitigation of the negative effects of phubbing likely only applies when the phubbed partner also perceives the reason for use as important.

There are limitations to the current study. In our experiment, the interaction partners were strangers. There are likely different relationship dynamics and expectations that occur in established relationships as compared to casual interactions or those with strangers. For example, prior history of phone use in the relationship, set expectations and rules regarding phone use in the relationship, and relationship quality (e.g., Miller-Ott et al., 2012; Miller-Ott & Kelly, 2015) could potentially impact the kinds of attributional information partners pay attention to, the kinds of information that are desired, the contexts in which trivial and important phone use are seen as acceptable, and the potential impacts of this information during phone use. Future work is needed to extend our initial examination into samples of romantic couples and other family relationships. However, previous studies have demonstrated that being phubbed in various relationship contexts can have negative effects, so it is unlikely that any one of these factors would make someone immune to any negative effects of phubbing. Additionally, the context of the situation may influence the above things—e.g., partners on a romantic date versus simply hanging out on the couch at home—as partners may have different

expectations for undivided versus divided attention (e.g., Miller-Ott & Kelly, 2015). The same may hold for the content of the conversation; phubbing may hurt more when the conversation is serious rather than casual. One previous study (Hales et al., 2018, Study 2) found that the content did not moderate the negative effects of being phubbed; it is important to note, however, that the Hales et al. (2018) study used an autobiographical recall paradigm in which participants recalled a time they were phubbed and then answered the dependent measures based on how they remember feeling. Memory is reconstructed and can be subject to various biases; it is possible that the conversations that they chose to remember were ones in which they were still upset about regardless of the content, and as such any differences between the two contexts may not be recalled accurately. Live interactions may show a different pattern. In the current study, we kept the content of the topics held constant at low or moderate intimacy in order to avoid potential confounds because of topic seriousness that may emerge organically during interactions. Future research using this type of live paradigm should consider manipulating the topic content to investigate potential moderation. Finally, the self-report survey measures used in this study were kept brief; yet this brevity also means that not all parts of the various constructs may have been measured and future work could use more detailed measurement.

In conclusion, these data replicate and further strengthen the research demonstrating that people experience phubbing as exclusion, as these data are from an experiment that used a confederate to phub participants during a face-to-face interaction. More importantly however, these data extend prior work by demonstrating that people take attributional information into account during the phubbing experience—e.g., people respond less negatively to phubbing that occurs for an important reason. Yet, individuals phubbed for an important reason *still* experienced feelings of exclusion. Given the frequency of phone use during social interactions in society, these data suggest giving a good reason for use may help in relationships and interactions; yet, it may not alleviate all the potential negative effects, and it is still possible that results could change in different kinds of situations based on the expectations of the interactional or romantic partners.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study cannot be shared with the public due to our protection of human subjects agreements with participants.

ORCID

Brandon T. McDaniel https://orcid.org/0000-0002-0743-0367

ENDNOTE

[1] Questions were piloted in a separate online survey of 100 participants, where we presented the questions and asked participants to rate how intimate they felt the question would be to respond to. Participants rated each question on a scale of 1 (Not intimate at all), 2 (A little bit intimate), 3 (Moderately intimate), and 4 (Very intimate). We then only utilized questions in the present experimental study where at least 80% or more of pilot participants rated the question as being of moderate or lesser intimacy. This was to avoid the possibility of people being phubbed when giving very serious/intimate answers (i.e., to avoid potential real harm to participants).

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AUTHOR BIOGRAPHIES

Dr. Brandon T. McDaniel is a family scientist (Ph.D. in Human Development and Family Studies from Pennsylvania State University), Research Scientist at the Parkview Mirro Center for Research and Innovation, Adjunct Clinical Assistant Professor of Pediatrics at Indiana University School of Medicine Fort Wayne, and nationally recognized expert on the impacts of technology use on couple relationships, families, and children.

Dr. McDaniel's research on technoference—the interference of device use in our face-to-face interactions and family relationships—has attracted international attention. He also regularly engages in community education in the promotion of healthy digital habits.

Dr. Eric D. Wesselmann is an Associate Professor in the Department of Psychology at Illinois State University. He received his Ph.D. from Purdue University in 2010 with a specialization in social psychology. His research focuses predominately on the dynamics of social inclusion and exclusion in daily life. He is a fellow of Midwestern Psychological Association and the Society for Experimental Social Psychology. He is on the editorial boards for *Group Dynamics: Theory, Research & Practice*, *The Journal of Social Psychology*, and *Small Groups Research*.