INTRODUCTION

For charities seeking opportunities for growth, online giving delivers. An analysis of $46.4 billion in donations in the most recent Charitable Giving Report highlights that online giving – donations made on electronic devices – has grown by 42% since 2019. As charities look to expand online giving, mobile giving (i.e., online donations made on smartphones), in particular, has gained popularity, with 28% of all online contributions coming from smartphones in 2021; this figure has more than tripled since 2014 (Blackbaud Institute, 2022).

A review of the donation pages of Forbes Top 100 Charities list reveals they typically utilize identical appeals when targeting consumers across device types (see Appendix SI: A). However, recent research has identified a “mobile mindset,” recognizing that consumers process information and behave differently on their smartphones than on their PCs (i.e., laptops, desktop computers) (Grewal & Stephen, 2019; Lurie et al., 2018; Melumad & Meyer, 2020). We propose this mobile mindset leads to differences in online giving as a function of device type. Specifically, we posit that consumers are less likely to donate and donate less on their smartphones (vs. PCs). To support this assertion, we highlight key attributes of a mobile mindset that we expect to drive this effect and identify an intervention charities can use to close this mobile giving gap. Taken together, our findings offer theoretical insights related to the mobile mindset and its impact on consumer behavior and highlight that charities should tailor their donation appeals based on device type.

KEYWORDS
charitable giving, donations, mobile mindset, self- vs. other-focus, smartphones
lay the groundwork for future research to identify additional strategies to overcome the mobile giving gap.

THEORETICAL BACKGROUND

Charities have long recognized the benefits of a multichannel approach; for example, appealing to consumers door-to-door, through direct mailers, with personal phone calls, and more recently, through virtual reality. Perhaps unsurprisingly, these strategies differ in their effectiveness (Brockner et al., 1984; Kandaurova & Lee, 2019; Kristofferson et al., 2022; Weyant & Smith, 1987). In part because of inherent differences in these channels (e.g., one-vs. two-way communication, visual vs. verbal), charities commonly adapt their appeals to align with the solicitation method. Interestingly, although charities are willing to adapt their appeals for these different channels, they have not yet recognized the importance of adapting their online appeals across device types. Drawing upon the recent literature exploring the distinct attributes of smartphones, we advise that there are important implications that organizations should account for when targeting consumers on their smartphones versus PCs.

The impact of a mobile mindset on donation behavior

Smartphones and PCs differ in many meaningful ways. For example, smartphones are easily portable, create a sense of privacy, and are highly personalized (Melumad & Pham, 2020; Trub & Barbot, 2016). Smartphone users tend to disclose more personal information (Melumad & Meyer, 2020) and generate more affective content than PC users (Melumad et al., 2019; Ransbotham et al., 2019). Smartphones have been labeled an “adult pacifier” (Melumad & Pham, 2020) because, unlike other devices, they are a constant sidekick, providing psychological comfort and stress relief.

In their conceptual piece, Lurie et al. (2018, p. 22) speculate that “because smartphones are with their owners constantly and may be seen as extensions of the self, mobile might activate thoughts of the self (instead of others).” In line with this speculation, recent work by Song and Sela (2023) finds that because smartphones are highly personal, intimate, and private devices, using them shifts one’s attention toward the private self. Collectively, this research describes certain critical attributes of a “mobile mindset,” in which consumers are more self-focused and less other-focused on their smartphones than on their PCs. We propose that this key attribute of a mobile mindset, at least in part, explains the negative impact of smartphones (vs. PCs) on consumers’ donation behavior.

Donation behavior requires people to focus on and empathize with others. However, if smartphones induce self-focus, then people’s tendency to focus on and empathize with others should be reduced. Lurie et al. (2018, p. 22) consider various potential consequences of a “mobile mindset”; they speculate, but never test empirically, that “If mobile leads to a focus on the self, then consumers may act more selfishly, prioritizing individual preferences over those of others. A focus on the self might also reduce pro-social or helping behavior.” Several papers support this claim. For instance, Gibbons and Wicklund (1982) highlight the negative role of increased self-focused attention on prosocial behavior. Mayer et al. (1985) affirm these findings and go on to examine the mediating role of felt responsibility. By contrasting self- versus other-focus, Fisher et al. (2008) find that people are more likely to donate if the call for donations highlights the benefits to others rather than to the self. Paulin et al. (2014) replicate this effect and find that in order to gain the support of millennials for a social cause through social media, the cause should highlight the benefits to others rather than to the self. These studies manipulate self- vs. other-focus through the donation appeal. We argue that the use of smartphones can be another source for increasing self-focus and decreasing other-focus, which reduces donation behavior, creating a mobile giving gap. As such, we propose that inducing an other-focus at the time of donation will reduce this gap and increase donations made by consumers on mobile phones, which we discuss next.

Inducing an other- (vs. self-) focus to close the mobile giving gap

When appealing to consumers, charities use a variety of messaging strategies, which research finds can vary in effectiveness based on myriad factors such as levels of guilt sensitivity (Zemack et al., 2016), political ideology (Farmer et al., 2020), and gender (Nelson et al., 2006). When appealing to consumers on smartphones, we expect that the most effective appeals will be those that help consumers overcome the heightened self-focus elicited by a mobile mindset (Melumad & Meyer, 2020; Melumad & Pham, 2020). We thus propose that one way to effectively appeal to consumers on smartphones is by inducing an other- (vs. self-) focus. Other-focused charitable appeals are positioned by highlighting that the main beneficiary of support is another individual or group (vs. the role of the self in supporting the cause or simply focusing on the campaign’s details, emphasizing neither others nor one-self); for example, an ad highlighting others may specify that the donor can “help those less fortunate” (White & Peloza, 2009). Based on this, we propose that when donation appeals explicitly highlight the needs of others, individuals on their smartphones will become less focused on their own and more conscious of others’ needs; this increased awareness of others’ needs, which is associated with increased donations (Clary et al., 1998; White & Peloza, 2009), will dissipate the mobile giving gap.
OVERVIEW OF STUDIES

In study 1, we provide evidence that smartphone (vs. PC) users are less likely to donate real money to a charitable organization. In study 2, we show that this effect is mediated by other-focus. Finally, a field experiment using Google display ads (study 3) demonstrates that the main effect of device type is attenuated when the appeal specifically focuses on others.

In order to increase the validity of our findings, we use use three different charities (the American Red Cross, The Salvation Army, and Aktion Deutschland Hilft “Campaign Germany Helps”) from different countries (the U.S. and Germany) and two behavioral dependent variables (donation behavior and click-through rate).

STUDY 1: SMARTPHONES DECREASE DONATION LIKELIHOOD

Participants, method, and design

This study was preregistered (AsPredicted #133308). We recruited 272 U.S.-based, “CloudResearch approved participants” with an approval rating of 75% or higher and less than 10,000 studies completed through the TurkPrime application for nominal payment (Litman et al., 2017). Despite checking “prevent multiple submissions” and “bot detection,” 40 participants were still marked by Qualtrics as either duplicate (22; RelevantIDDuplicate=True and/or RelevantIDDuplicateScore ≥75), fraudulent (15; RelevantIDFraudScore ≥30), or both (3). In line with our preregistration, we excluded them. Thus, our final sample for all analyses is 232 (M_{age} = 38.39, 57.3% female, 0.4% non-binary). Including these participants does not change the significance of our results (main effect: p = 0.029). We used a one-factor (device: smartphone vs. PC) between-subjects design with random assignment.

In line with Song and Sela (2023), we advertised that we were recruiting participants who had both their personal smartphone and PC (desktop or laptop) ready to use and told participants that they would be asked to use a specific device to take the survey. Once participants entered the study, we randomly assigned them to type a shortened survey link into either their smartphone or PC, which redirected them automatically to the main study. We prevented participants from reloading the page and thereby choosing their device condition. Participants who did not follow the device assignment instructions were detected using Qualtrics’s meta-information and automatically terminated. We used the same approach in study 2.

After participants passed an attention check, we showed them a call for donations from their local American Red Cross. We used their meta-information

to pipe in their city and state to increase involvement. On the first screen, they saw the image of a woman with a child in her arms and the header “Support all the urgent humanitarian needs of the American Red Cross with your financial gift.” This call for donations was taken directly from the American Red Cross’ website. In addition to their study payment, all participants were told they would receive a bonus that they could either donate to their local American Red Cross or keep, which served as the focal dependent variable. Lastly, we asked them if they had ever donated to a charitable cause (yes, no), how often and how much (in USD) per year they donate, how many times they had donated last year using the device they were completing the survey with, and recorded demographics. Upon completing the study, we donated the designated funds to the American Red Cross. Appendix S1: B provides full study details.

Results

Donation likelihood

A binary logistic regression, controlling for if they had ever donated to a charitable cause (p = 0.208), how often (p = 0.697), how much per year they donate (p = 0.490), how often they donate using their device (p = 0.061), gender (p = 0.111), age (p = 0.006; older participants were more likely to donate), and income (p = 0.235), revealed a significant effect for device type (β = −0.63, SE = 0.29, χ^2 = 4.70, p = 0.030), such that a lower percentage of participants in the smartphone condition was willing to donate (34.5%, N = 41) compared to participants in the PC condition (52.2%, N = 59). The main effect of device type improves when excluding all covariates (β = −0.73, SE = 0.27, χ^2 = 7.37, p = 0.007). Appendix S1: C shows regression tables for all studies.

Discussion

This study provides causal evidence that smartphone users are less likely to donate in a controlled setting. The goal of the next study is to provide process support by showing that the effect of device type on donation behavior is mediated by other-focus.

STUDY 2: OTHER-FOCUS MEDIATES THE EFFECT

Participants, method, and design

This study was preregistered (AsPredicted #150633). Two-hundred and eighty-four U.S.-based, “CloudResearch approved participants” with an approval rate of 75% or higher and less than 10,000 studies completed the study
through the TurkPrime application for nominal payment (Litman et al., 2017). In line with our preregistration, we excluded 37 participants (19 duplicate IP addresses, 16 fraudulent responses, 2 both). Thus, our final sample for all analyses is 247 ($M_{age}=38.47$, 55.9% female, 3.2% non-binary). Including these participants does not change the significance of our results (donation likelihood: $p=0.006$; other-focus: $p<0.001$; mediation 95% CI $[-1.131, -0.354]$). We used a one-factor (device: smartphone vs. PC) between-subjects design with random assignment.

We exposed participants to a real call for donations from The Salvation Army, the largest non-government provider of social services in the United States. We piped in participants’ city and state to make the scenario more realistic and told them that The Salvation Army is currently running a campaign to raise funds for their city and state. Participants could then donate their bonus to The Salvation Army in their community or keep it, which served as the focal dependent variable. After that, we assessed our mediator, other-focus, using a 3-item measure adapted from Han et al. (2017): “I was focused on the people in the campaign,” “I was thinking about the people in the campaign,” “My thoughts were focused on the people in the campaign” ($α=0.98$). Lastly, we asked them if they had ever donated to a charitable cause (yes, no), how much per year they donate, how often they donate using their device, how much per year they donate in USD, and how many times they have donated to a charitable cause (yes, no). We employed a 2 (device: smartphone vs. PC) × 2 (ad: control vs. other-focus) between-subjects design and simultaneously published four paid display ads. We employed the SPSS bootstrapping macro developed by Hayes (2017, model 4) with 5000 bootstrap samples. The path from device type to donation likelihood was significantly mediated by other-focus ($β=0.82$, SE=0.11) as the 95% CIs for the indirect effect excluded zero ($-1.258, -0.354$). None of the covariates, with the exception of income ($p=0.052$), was significant ($ps>0.16$).

**Discussion**

This study provides causal evidence that the impact of smartphones on donation behavior is mediated by other-focus. The goal of the final study is to demonstrate additional process support and provide charities with a strategy to close the mobile giving gap. If the negative impact of smartphones on donation behavior occurs because individuals are less focused on others, then specifically highlighting others in the call for donations should attenuate the effect.

**STUDY 3: FOCUSING ON OTHERS CLOSES THE MOBILE GIVING GAP (FIELD STUDY)**

This field study was preregistered (AsPredicted #140223) and involved sponsored Google display ads. We approached “Aktion Deutschland Hilft” (ADH; “Campaign Germany Helps”), an alliance of German humanitarian aid agencies, received permission to run the ads, and suggested changes to their ads based on our findings.

Click-through rate (CTR) is the ratio of users who click on a specific ad to the number of total users exposed to the ad. Thus, CTRs are commonly used to measure the effectiveness of ad campaigns (e.g., Cakanlar et al., 2023) or, in our case, the effectiveness of calls for donations. We employed a 2 (device: smartphone vs. PC) × 2 (ad: control vs. other-focus) between-subjects design and simultaneously published four paid display ads. We expected that participants would be less likely to click on a paid call for donations on their smartphone versus PC in the control condition, but we expected no difference in the other-focus conditions.

**Participants, method, and design**

We ran our campaigns for 1 day to eliminate variance across days and restricted the location to Germany
and participants 18+ years of age. We utilized images from ADH’s website and constructed identical display ads for each condition (control vs. other-focus), one each for smartphones and PCs. The control condition stated, “Campaign Germany Helps. We provide emergency help for the Ukraine – Donate Now,” whereas the other-focus condition, which was adapted from White and Peloz (2009), stated, “Campaign Germany Helps. The people suffering in the Ukraine need help – Donate Now” (all translated to German). A post-test confirmed that the other-focus condition indeed primes other-focus, while ruling out alternative explanations based on perceived need, need severity, victim identification, and suffering (see Appendix S1: F for details). Clicking on either ad took participants to the same landing page. Appendix S1: E provides the stimuli and Google Ads settings.

Results

CTR

The ads generated 34,005 impressions and 300 clicks in total (Control/PC: 6682 impressions, 69 clicks, CTR 1.03%; Control/Smartphone: 12,392 impressions, 90 clicks, CTR 0.73%; Other-Focus/PC: 6388 impressions, 55 clicks, CTR 0.86%; Other-Focus/Smartphone: 8543 impressions, 86 clicks, CTR 1.01%). Figure 1 displays the pattern of results. We employed the SPSS bootstrapping macro developed by Hayes (2017, model 1) with 5000 bootstrap samples and regressed CTRs on device type, ad type, and their interaction term.

The regression revealed non-significant main effects for ad type ($\beta = 0.04$, $SE = 0.06$, $p = 0.538$) and device type ($\beta = -0.05$, $SE = 0.06$, $p = 0.404$). Most importantly, we observed a significant ad type $\times$ device type interaction ($\beta = 0.13$, $SE = 0.06$, $p = 0.030$). In the control conditions, CTRs were significantly lower for smartphone users ($M_{\text{smartphone}} = 0.73\%$ vs. $M_{\text{PC}} = 1.03\%$; $\beta = -0.18$, $SE = 0.08$, $p = 0.027$), further supporting our focal effect. However, this effect is attenuated for the other-focus conditions ($M_{\text{smartphone}} = 1.01\%$ vs. $M_{\text{PC}} = 0.86\%$; $\beta = 0.08$, $SE = 0.09$, $p = 0.363$). When viewing the ad on a mobile phone, we also find a significant difference between the control and other-focus condition ($\beta = 0.17$, $SE = 0.08$, $\chi^2 = 4.73$, $p = 0.030$), suggesting the effectiveness of this strategy for charitable organizations seeking to increase engagement for smartphone users. When viewing the ad on a PC, we do not find a difference between the control and other-focus conditions ($\beta = -0.09$, $SE = 0.09$, $\chi^2 = 1.02$, $p = 0.312$).

Discussion

In this final study, we examined CTRs as a proxy of donation behavior. The Google Ads setting allows us to (i) draw causal inferences using real advertisements, (ii) study consumer behavior in a natural setting with a broad audience, and (iii) utilize a different but equally meaningful behavioral dependent variable.

In line with our prediction, smartphones have lower CTRs on calls for donations in the control condition, but not for the ads that specifically focus on others. As such, we provide practitioners with one easily implementable strategy to help close the mobile giving gap. In doing so, we also provide additional evidence for the mechanism underlying this phenomenon.

GENERAL DISCUSSION

In this research, we find that consumers are less likely to donate on their smartphones (vs. PCs), a phenomenon we call the mobile giving gap. We test this theory across three lab and field experiments and with different operationalizations of the dependent measure. We also offer an easily implementable strategy for charities to use in advertising to overcome this effect.

We thereby contribute to the extensive literature on factors that drive donation behavior, including identity factors (e.g., Farmer et al., 2020), message framing (e.g., Nelson et al., 2006), and donation structure/choice (e.g., Ein-Gar et al., 2021), among others. We identify device type as a new and ubiquitous factor influencing donation behavior, which practitioners have largely ignored. We also contribute to the emerging literature stream that examines the impact of smartphone usage on various aspects of consumer behavior. Unlike some research that examines how thinking about smartphones influences behavior (Abraham et al., 2012; Thornton et al., 2014; Ward et al., 2017), we examine how actual smartphone usage influences behavior. In line with this approach, previous research has shown that the unique properties of smartphones can shape the psychological underpinnings of consumer cognitions (e.g., Melumad & Pham, 2020), decision-making (e.g., Ransbotham et al., 2019), and choice (e.g., Grewal & Stephen, 2019). We find that the mobile mindset can influence users’ cognitions and
decision-making, such that people on their smartphones are less likely to donate to charities.

Future research could work to identify other moderators that organizations can employ to help overcome the negative impact of smartphones on donation behavior. For example, charity websites with payment links that emphasize high-security protocols may help relieve smartphone users’ concerns about the safety of their personal information. This area of future research is particularly critical as smartphone use continues to rise and, in some cases, replace the use of PC devices entirely. Today, 85% of Americans own a smartphone, and 15% are “smartphone only” users (Pew Research Center, 2021). As smartphone usage continues to surpass other forms of device usage, it is essential for researchers to help charitable organizations find new ways to encourage donations on mobile devices.

While we focus our research on exploring monetary donations to charities, future research may investigate the impact of smartphones on a wide range of other prosocial behaviors. For example, researchers can examine the impact of device type on consumers’ intentions to donate their time to helping others (i.e., volunteering) across a variety of consumer settings (e.g., in hospitals, at homeless shelters, or during local or global crises). Relatedly, future research can explore how device type can influence a broader category of prosocial behaviors like choosing green products or recycling.

More broadly, our research also emphasizes the need for more research exploring the impact of mobile devices on consumer behavior and in which contexts smartphones may help or hurt (1) consumers’ health and well-being and (2) companies’ marketing efforts. It also goes without saying that research should continue to work to identify novel ways to increase charitable giving, which becomes much more critical in the wake of crises like the ongoing wars between Israel and Hamas or Russia against Ukraine and during an increasing number of weather-related events and natural disasters recently spurred by climate change.

From a practical perspective, charities need to understand that although mobile giving may appear to be on the rise, this uptick is likely driven by increases in overall smartphone ownership. Our research suggests that charities are leaving money on the table by using a one-size-fits-all strategy for all forms of online giving. As such, we recommend that charities consider the characteristics of the mobile mindset when targeting potential donors on their smartphones. Companies, including many nonprofits, spend over $224 billion annually on Google Ads (Statista, 2023). In fact, highlighting the value of this platform for nonprofits, Google Ads offers eligible nonprofits $120,000 of free Google ads per year. Since 2003, the Google Ads Grants program has provided $10 billion in free advertising to more than 115,000 nonprofits across 51 countries (Nonprofits Source, 2023). Importantly, when developing Google ads, charities can create different ads targeted at consumers on either smartphones or PCs. We also provide these charities with an easily implementable strategy to help close this mobile giving gap. We urge future researchers to identify additional strategies.

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CONFLICT OF INTEREST STATEMENT
None.

DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available from the corresponding author upon reasonable request.

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**SUPPORTING INFORMATION**

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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