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## RESEARCH ARTICLE

WILEY

# The impact of facial emotional expression on the effectiveness of charitable advertisements: the role of sympathy and manipulative intent

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## Abstract

In charitable advertisements, organizations often display the image of a person in need with different facial emotional expressions. Prior research showed the positive effect of using a sad- (vs. happy- or neutral-) faced image in evoking sympathy from viewers. Across five studies ( $N = 2141$ ), we demonstrate that a sad-faced image evokes not only sympathy but also an inference about the organization's manipulative intent. Moreover, we show that inference of manipulative intent and sympathy simultaneously mediate the effects of facial expression on donation and on attitude toward the advertising campaign, but in opposing directions. While greater sympathy leads to larger donation, greater inference of manipulative intent lowers donation, together contributing to a null effect of facial expression on donation. In contrast, using a sad-faced image reduces attitude toward the advertising campaign because the mediating effect of inference of manipulative intent tends to be larger than the mediating effect of sympathy in absolute size. The negative effect of a sad-faced image on attitude toward the advertising campaign is attenuated when the prominence of the image is low (vs. high). Finally, we show that these effects also emerge in the cause-related marketing advertising context.

## KEYWORDS

charitable giving, facial emotional expression, inference of manipulative intent, persuasion knowledge, sympathy, cause-related marketing

## 1 | INTRODUCTION

In 2020, American individuals and corporations jointly donated about \$65B to charities that provide direct services to people in need (e.g., feeding the hungry; Giving USA, 2021). To solicit these donations, charitable organizations often display the image of a person in need in their advertisements. These charitable ads may vary by the facial emotional expression of the person in need with some ads displaying a person expressing sadness and other ads displaying a person expressing happiness.

Prior research has demonstrated that sad facial expression evokes sympathy in viewers due to an emotional contagion process (Baberini et al., 2015; Small & Verrochi, 2009).<sup>1</sup> That is, sad (vs. happy or neutral) facial expression of a person in need elicits sadness, which in turn evokes sympathy. While Small and Verrochi (2009) showed that sad (vs. happy or neutral) facial expression evokes sympathy, which they defined as “emotional concern for the welfare of another person” (p. 778), it was in only one study (Study 1) that the authors showed that the sad facial expression increases donation. Further, the mediating effect of sympathy between facial expression and donation

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was not tested. Baberini et al. (2015) replicated the effect of sad facial expression on increasing sympathy in a single experiment, and while they measured both sympathy and intention to donate, they did not report the effect of facial expression on intention to donate nor did they test the mediating effect of sympathy. Cao and Jia (2017), in one study, found an interactive effect of sad (vs. happy) facial expression and viewer's psychological involvement with the charity on intention to donate. A sad-faced (vs. happy-faced) image increased (decreased) intention to donate among less (more) involved participants. However, based on the description of the study, it seems that the sad-faced and happy-faced images were of different children rather than of the same child, which could introduce confounds (e.g., attractiveness of the child and prominence of the facial expression in the image).

Overall, the prior research suggests a robust positive effect of sad facial expression on sympathy. However, it provides weak evidence for the effect of facial expression on donation or on the mediating role of sympathy between facial expression and donation. Our objective is to fill this research gap by more systematically examining the effect of facial expression on donation and establishing sympathy as a mediator. More importantly, we identify an additional mediator in the underlying process: inference of manipulative intent (IMI).

Building on the persuasion knowledge literature (Friestad & Wright, 1994), we propose that when people are exposed to a sad-faced (vs. happy-faced or neutral-faced) image in charitable advertisements, in addition to feeling greater sympathy, they also make stronger inferences about the organization's manipulative intent, defined as an inference "that the advertiser is attempting to persuade by inappropriate, unfair, or manipulative tactics" (Campbell, 1995, p. 228). We further propose that IMI and sympathy have opposing effects on donation such that IMI *decreases* donation, while sympathy *increases* donation. As a preview of the findings, we show that facial expression does not significantly influence donation. The results suggest that the two opposing processes contribute to the null finding on donation.

To provide further insight on the opposing processes of IMI and sympathy, we also examine the effect of sad facial expression on attitude toward the advertising campaign ( $A_{ad}$ ). Past research shows that different appeal effectiveness measures can exhibit different outcomes (Erlandsson et al., 2018), suggesting that examining different effectiveness measures can deepen our understanding of appeal effectiveness. We find that the negative effect of sad facial expression via IMI dominates the positive effect of sad facial expression on sympathy, leading to a net negative effect on  $A_{ad}$ . We also show that the negative effect on  $A_{ad}$  is attenuated when the image of a person in need is less prominent in the advertisement because lower prominence attenuates the mediating effect of IMI more than that of sympathy. Finally, we examine these effects for cause-related marketing (CRM) advertisements in which for-profit organizations link purchase of their product to support of charitable causes.

In sum, by considering two mediators (IMI and sympathy) and two effectiveness measures (donation and  $A_{ad}$ ) in both charitable and CRM advertisements, we provide a more comprehensive framework of the effect of facial emotional expression.

## 2 | CONCEPTUAL FRAMEWORK

### 2.1 | Effects of facial emotional expression on sympathy and IMI

Research has demonstrated that viewing a victim's facial emotional expression in charitable advertisements automatically elicits vicarious emotion in the observer, which is termed emotional contagion (Baberini et al., 2015; Small & Verrochi, 2009). Because of emotional contagion, an image of a sad-faced (happy-faced) victim elicits sadness (happiness) in viewers; the sadness, in turn, generates sympathy. Moreover, the affect-as-information heuristic suggests that experienced affect associated with a victim (e.g., feeling sad after seeing a sad-faced victim) can lead people to assess that they are feeling sympathy (Loewenstein et al., 2001). Consistent with these findings, we expect that:

**H1.** The image of a sad-faced (vs. happy-faced or neutral-faced) person in need in a charitable advertisement increases sympathy.

This potential benefit of sad facial expression in evoking an emotional reaction toward the person in need appears robust. We introduce a potential negative effect of sad facial expression: greater perceived manipulative intent on the part of the charitable organization. We draw on the persuasion knowledge literature to make this prediction. Persuasion knowledge is defined as personal knowledge about persuasion agents' goals and tactics. Such knowledge helps people to skillfully respond to persuasion attempts so that they can achieve their own goals (Friestad & Wright, 1994). Persuasion targets actively apply their persuasion knowledge to interpret advertising messages (Campbell & Kirmani, 2000). This suggests that when people are exposed to an advertisement with an image of a person in need, they would make an inference about the organization's motives underlying the use of the image. Specifically, we propose that when a charitable advertisement displays a sad-faced (vs. happy-faced or neutral-faced) image, people infer greater manipulative intent on the part of the organization. We draw from several research streams to make this proposition.

First, when people encounter a sad-faced image in a charitable advertisement, they may perceive that the organization is forcing them to experience a negative, aversive emotion. Individuals have a chronic goal to maintain positive feeling states and to improve negative feeling states (Lazarus & Folkman, 1984). When people perceive that an organization is using a tactic that creates psychological costs to them for the organization's benefit (e.g., attention and sales), they infer manipulative intent by the organization (Campbell, 1995). Likewise, we expect that people will perceive the display of a sad-faced image as a tactic that incurs psychological costs (i.e., negative emotions) to them and, therefore, as manipulative. In contrast, we expect that people will be less likely to perceive the display of a happy-faced or neutral-faced image as a manipulative tactic because they do not incur psychological costs. This argument is consistent with research

showing that guilt appeals are perceived as manipulative (Coulter & Pinto, 1995).

Second, research suggests that media companies have excessively appropriated images of others' suffering (e.g., images of starving or crying kids) to appeal to audiences as these companies typically view images of others' suffering as an effective tool for grabbing attention and emotionally appealing to those audiences (Kleinman & Kleinman, 1996; Moeller, 1999). This practice may lead people to infer that suffering is used as an attention-grabbing hook. Consistent with this perspective, a report on attitudes toward philanthropic charities in the United Kingdom shows that respondents can perceive the use of distressing information and images in charitable appeals as triggering "a guilt trip" or as "a form of manipulation" (Seu & Orgad, 2014, p. 18).

The survey findings by Seu and Orgad (2014), along with other research (Cotte et al., 2005), contradicts the argumentation that a sad-faced image could not be perceived as manipulative in charitable advertising because the ultimate goal of charities is to benefit people in need rather than to pursue self-interest (i.e., "the end justifying the means"). Therefore, we expect that people will view a sad-faced image as a manipulative tactic to grab their attention and to play on their emotion even when they acknowledge that a charity is pursuing social good.<sup>2</sup> In sum, we hypothesize that:

**H2.** The image of a sad-faced (vs. happy-faced or neutral-faced) person in need in a charitable advertisement increases IMI.

## 2.2 | Mediating roles of sympathy and manipulative intent on donation and $A_{ad}$

So far, we proposed that sad facial expression increases IMI (H2) as well as sympathy (H1). How do sympathy and IMI combine to influence donation? We propose that sympathy and IMI have opposing effects. Specifically, we expect that sympathy will have a positive effect on donation. The positive link between sympathy and helping behavior, whether via donation or volunteering, is well established as people cope with their feelings of sympathy by helping others (Bagozzi & Moore, 1994; Kogut & Ritov, 2005). In contrast, we expect that IMI will have a negative effect on donation. Prior research in a for-profit advertising domain found that IMI led to lower purchase intentions for the advertised products (Campbell, 1995; Coulter & Pinto, 1995). Likewise, we expect that when people perceive the charitable organization as using a manipulative tactic, they are less likely to support the organization by making a donation. Thus, we hypothesize that:

**H3A.** Sympathy positively mediates the effect of sad (vs. happy or neutral) facial expression on donation, such that sad facial expression increases sympathy, which in turn increases donation.

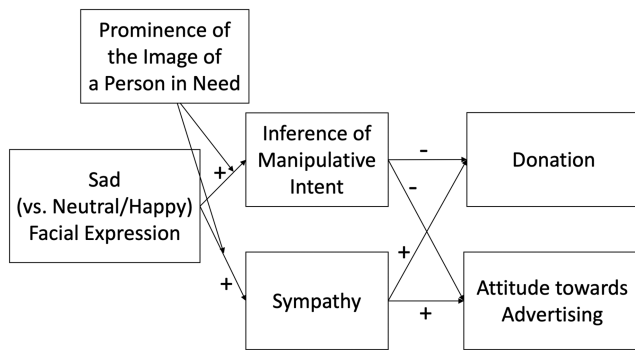
**H3B.** IMI negatively mediates the effect of sad (vs. happy or neutral) facial expression on donation, such that sad facial expression increases IMI, which in turn reduces donation.

Although we hypothesize opposing mediating effects of sympathy and IMI, we do not make a formal prediction on the directional effect of sad facial expression on donation as there is, as far as we know, no literature suggesting which mediating path would be stronger. To preview our findings, we find a net null effect of sad facial expression on donation and the absolute size of the two indirect effects do not differ. We note the possibility that there are other mediators that we do not consider that may contribute to the net null effect.<sup>3</sup>

So far, we discussed the effect of facial expression on donation. To provide further insights on the opposing mediating processes of IMI and sympathy, we examine another advertising effectiveness measure: attitude towards the advertising campaign ( $A_{ad}$ ).  $A_{ad}$  is a widely examined advertising effectiveness measure and refers to a person's favorable or unfavorable evaluation of the advertising (Brown et al., 1998). Unlike with donation, we make an explicit prediction for the effect of facial expression on  $A_{ad}$ . IMI captures perceptions about *the charitable organization* which created *the advertising* because it considers people's inferences of whether the organization is using a manipulative tactic in the advertising. In contrast, sympathy captures responses toward *the person in need*. Since  $A_{ad}$  is an evaluation of advertising, and not the person in need, we argue that IMI, compared to sympathy, more strongly mediates the effect of facial expression on  $A_{ad}$ . Accordingly, we hypothesize that:

**H4.** The image of a sad-faced (vs. happy-faced or neutral-faced) person in need in a charitable advertisement decreases  $A_{ad}$ .

To provide further evidence for the conceptual framework, we tested for the moderating role of prominence of the image of the person in need. Advertisers make conscious decisions about all aspects of an advertisement including how prominently to position the image (e.g., size or position of the image). We argue that when the organization opts for low (vs. high) prominence, consumers would be less likely to infer that the organization tried to direct consumers to the sad-faced image, thereby lowering IMI. We expect, however, that prominence would not influence IMI for the happy-faced or neutral-faced images because people would not infer IMI from the happy-faced or neutral-faced images in the first place. Similarly, low (vs. high) prominence would lower sympathy evoked from the sad-faced image, as the person in need is less focal, but would not affect sympathy in the happy-faced or neutral-faced images. Put differently, we expect that the effect of sad facial expression on IMI and sympathy would be attenuated when prominence of the image is low (vs. high). Since we theorize that the negative effect of sad facial expression on  $A_{ad}$  is primarily driven by IMI (cf., H4), we expect the facial expression effect to be attenuated in the low (vs. high) prominence condition. More formally:



**FIGURE 1** Conceptual framework

**H5.** When prominence of the image is low (vs. high), the negative effect of sad facial expression on  $A_{ad}$  will be attenuated.

In contrast, we do not make an explicit hypothesis for donation because it is unclear which mediator would be more relevant.

See Figure 1 for the conceptual framework.

### 2.3 | Effects of facial emotional expression in CRM advertising

So far, we discussed a charitable advertisement context. We examine whether our conceptual framework also applies to the CRM context. For-profit organizations spend significant resources on CRM campaigns. For example, in 2019, for-profit organizations in North America spent about \$2.1B on CRM (IEG, 2020). As with charitable advertisements, in CRM advertisements, companies often display an image of a person in need with different facial expressions.

Prior literature suggests two different patterns of effects for IMI. First, drawing on literatures on organizational stereotypes and relational models, there may be a stronger effect of sad facial expression on IMI in the CRM context than in the charity context. Nonprofits are perceived to be warmer than for-profits (Aaker et al., 2010). Most people expect for-profit organizations to focus on maximizing profits (i.e., market pricing relationship), but nonprofit organizations, such as churches, to prioritize communal sharing, like helping (McGraw et al., 2012). This suggests that people could be even more skeptical about the persuasion tools used by for-profit organizations than by nonprofit charitable organizations. On the other hand, the literature on persuasion knowledge suggests that the effect of sad facial expression on IMI (cf., H2) may not differ across contexts as people perceive that both nonprofit and for-profit organizations use manipulative persuasion tactics (Campbell, 1995; Cotte et al., 2005). Given that charitable and CRM advertisements have similar messages of encouraging people to help others in need, people are likely to apply similar persuasion knowledge (e.g., use of sad emotions to encourage helping) to their promotional tactics. To preview the findings,

consistent with the latter prediction, we did not find evidence for a difference between charitable and CRM contexts.

## 3 | OVERVIEW OF STUDIES

We tested the proposed conceptual framework in five studies. In Study 1, we established support for the conceptual framework in both the charitable and CRM advertising contexts. In Studies 2–3, we replicated the findings of Study 1 in the charitable advertising context using an incentive-compatible donation amount as the dependent variable. In Study 3, we varied the intensity of sad facial expression and showed no difference in the effects between a moderately sad and strongly sad facial expression. In Study 4, we replicated the findings of Study 1 in the CRM advertising context with an incentive-compatible CRM purchase as the dependent variable. Finally, in Study 5, we demonstrated the moderating effect of prominence of the image of the person in need.

Within each study, the images across facial expression conditions were of the same child ensuring that all aspects of the images other than the child's facial expression were the same. Across the studies, we used images of different children of different races and images with different characteristics (e.g., focused only on the child's facial expression vs. incorporated a natural background context; child is gazing vs. not gazing at the camera), thereby showing the robustness of the results.

### 3.1 | Study 1

Study 1 tested the conceptual framework in both the charitable and CRM advertising contexts. We measured IMI, sympathy,  $A_{ad}$ , and behavioral intention to donate (in the charitable advertising context) or make a CRM purchase (in the CRM advertising context). Although CRM purchase can be influenced by factors related to the product (e.g., interest in the product), donation and CRM purchase are similar in that they both capture helping behavior. To provide a strong test for the hypotheses, in the charitable advertising context, we used the same advertising stimuli (i.e., the same image of the child, text, and ad layout) used in Study 1 of Small and Verrochi (2009). In the CRM advertising context, we used the same images of the child but revised the text and added an image of a product.

#### 3.1.1 | Methods

The study was a 3 (facial expression: happy vs. neutral vs. sad)  $\times$  2 (advertising type: charitable advertising vs. CRM advertising) between-subjects design. We aimed to recruit 600 US residents from MTurk and received 624 responses (56.4% female,  $M_{age} = 36.3$ ).<sup>4</sup> A post hoc sensitivity analysis using GPower 3.1 (Faul et al., 2009) indicated that with  $\alpha = .05$  and  $\beta = .80$ , a sample size of  $N = 624$  provides sufficient power to detect the main effect of facial expression

**TABLE 1** Means (standard deviations) for the mediators and effectiveness measures (Studies 1–5)

	Condition	Facial expression			F-statistics
<b>Study 1</b>	Ad context	Sad	Neutral	Happy	$F(2,618)$
Sympathy	Charitable	3.33 (1.64)	2.66 (1.47)	2.55 (1.38)	$F = 9.37^{***}$
	CRM	3.10 (1.54)	2.75 (1.40)	2.69 (1.45)	
IMI	Charitable	3.17 (1.55)	2.43 (1.39)	2.25 (1.08)	$F = 18.75^{***}$
	CRM	3.06 (1.42)	2.47 (1.33)	2.46 (1.35)	
Donation intention	Charitable	4.45 (1.67)	4.70 (1.84)	4.53 (1.71)	$F = .31$
CRM purchase intention	CRM	4.77 (1.82)	4.79 (1.80)	4.83 (1.87)	
$A_{ad}$	Charitable	5.33 (1.38)	5.63 (1.44)	5.91 (1.20)	$F = 6.73^{**}$
	CRM	5.63 (1.41)	5.98 (1.23)	5.97 (1.20)	
<b>Study 2</b>	Background	Sad	Neutral	Happy	$F(1,399)$
Sympathy	Rich	3.65 (1.69)		2.81 (1.52)	$F = 23.45^{***}$
	Impoverished	3.75 (1.64)		3.00 (1.70)	
IMI	Rich	2.89 (1.35)		2.33 (1.30)	$F = 6.69^*$
	Impoverished	2.62 (1.53)		2.49 (1.12)	
Donation amount	Rich	\$1.76 (1.73)		\$1.97 (1.58)	$F = 2.08$
	Impoverished	\$2.01 (1.81)		\$2.29 (1.73)	
$A_{ad}$	Rich	5.66 (1.16)		5.97 (1.09)	$F = 2.48$
	Impoverished	5.76 (1.44)		5.84 (1.22)	
<b>Study 3</b>		Sad (strong)	Sad (moderate)	Happy	$F(2, 276)$
Sympathy		4.21(1.43)	4.12 (1.40)	3.30 (1.19)	$F = 12.91^{***}$
IMI		3.17 (1.40)	3.31 (1.46)	2.62 (1.05)	$F = 7.34^{**}$
Donation amount		\$3.88 (1.78)	\$3.55 (1.99)	\$3.57 (1.84)	$F = 0.90$
$A_{ad}$		5.36 (1.47)	5.42 (1.37)	5.92 (1.13)	$F = 5.01^{**}$
<b>Study 4</b>		Sad	Neutral	Happy	$F(1,195)$
Sympathy		3.71 (1.50)		2.32 (1.29)	$F = 48.60^{***}$
IMI		3.87 (1.54)		2.90 (1.23)	$F = 24.33^{***}$
CRM purchase		47.0%		45.4%	$\chi^2 = 0.05$
$A_{ad}$		4.45 (1.55)		5.25 (1.28)	$F = 15.58^{***}$
<b>Study 5</b>	Prominence	Sad	Neutral	Happy	$F(1,634)$
Sympathy	High	3.93 (1.67)		2.86 (1.54)	$F = 34.45^{***}$
	Low	3.48 (1.67)		2.99 (1.58)	$F = 7.41^{**}$
IMI	High	3.43 (1.64)		2.73 (1.35)	$F = 17.57^{***}$
	Low	3.05 (1.54)		2.75 (1.49)	
CRM purchase	High	31.6%		26.8%	$\chi^2 = 0.91$
	Low	26.7%		25.9%	
$A_{ad}$	High	5.25 (1.57)		5.92 (1.17)	$F = 17.55^{***}$
	Low	5.57 (1.44)		5.68 (1.49)	$F = 0.47$

Notes: (1) For Studies 1, 2, and 5, we present the  $F$ -statistic for the main effect of facial expression when the interaction effect is not significant and the  $F$ -statistic for the simple main effect of facial expression at each level of the other factor when the interaction effect is significant. (2) In Study 3,  $df$ 's for donation amount was (2, 275) due to a missing value. (3) IMI stands for the inference of manipulative intent.  $A_{ad}$  stands for attitude toward advertising campaign.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

of  $f = .12$  or  $\eta^2 = .014$ . In this, and all subsequent studies, we include all observations in the data analysis and we report all conditions and all measures. We did not use attention checks in any of the studies. The materials and data of each study can be found on [https://osf.io/2xhzz/view\\_only=99d623f8460d489d80e2440a97696067](https://osf.io/2xhzz/view_only=99d623f8460d489d80e2440a97696067).

Participants first read that they would view an advertising campaign. In the [charitable/CRM] advertising condition, participants read: "You will be asked to view a campaign by [the non-profit charitable organization, Children's Cancer Research Fund/the for-profit manufacturer and retailer of candles and related accessories, Lucerna]."



Participants then viewed an advertisement displaying the image of a happy-, neutral-, or sad-faced child (see Appendix SB for the stimuli). The advertisement in the [charitable/CRM] advertising condition stated: ["You can fight childhood cancer"/"You can fight childhood cancer with Lucerna's Helping Kids candle. For every purchase of a \$5 Helping Kids candle, Lucerna will donate all proceeds to Children's Cancer Research Fund"].

We then measured the following variables in the order as described. We measured behavioral intention with intention to donate in the charitable advertising condition ("How likely would you be to donate to Children's Cancer Research Fund?" 1 = *very unlikely*, 7 = *very likely*) and intention to purchase the candle in the CRM advertising condition ("How likely would you be to purchase a Helping Kids candle from Lucerna?" 1 = *very unlikely*, 7 = *very likely*).  $A_{ad}$  was measured with the question, "Check the circle that best represents your overall impression of [Children's Cancer Research Fund's/Lucerna's] campaign shown in the advertisement" on the following items: negative/positive, unfavorable/favorable, bad/good, and dislike/like ( $\alpha = .97$ ).<sup>5</sup> Sympathy was measured with the question, "To what extent did you feel the following emotions toward the child in the advertisement?" on the following items: alarmed, grieved, troubled, distressed, upset, disturbed, worried, perturbed (1 = *not at all*, 7 = *very much*;  $\alpha = .93$ ; adapted from Batson et al., 1997).<sup>6</sup> IMI was measured with six items ( $\alpha = .93$ ; Campbell, 1995; see Appendix A for the items). We also included manipulation check items for facial expression and type of advertising. Results indicated that the manipulations worked as intended (see Appendix SE). In this and subsequent studies, we measured other variables to rule out alternative explanations or to explore moderating effects of individual difference variables. We report detailed results on these variables in Appendix SE.

### 3.1.2 | Results

Unless otherwise indicated, 3 (facial expression)  $\times$  2 (advertising type) between-subjects ANOVAs were used to test for the proposed effects. See Table 1 for cell means, standard deviations, and *F*-statistics for the mediators and dependent variables for all studies.

#### Sympathy and IMI

For sympathy, there was a significant main effect of facial expression ( $F(2,618) = 9.37, p < .001, \eta^2_p = .03$ ). Consistent with H1, sympathy was greater in the sad condition than in the neutral ( $F(1,618) = 12.11, p = .001, \eta^2_p = .02$ ) and happy ( $F(1,618) = 16.53, p < .001, \eta^2_p = .03$ ) conditions ( $M_{sad} = 3.22$  vs.  $M_{neutral} = 2.71$  vs.  $M_{happy} = 2.62$ ). There was no difference between the happy and neutral conditions ( $F(1,618) = .36, p = .55$ ). The main effect of advertising type ( $F(1,618) = .00, p = 1.00$ ) and the interaction effect ( $F(2,618) = .91, p = .40$ ) were not significant.

For IMI, there was a significant main effect of facial expression ( $F(2,618) = 18.75, p < .001, \eta^2_p = .06$ ). Consistent with H2, IMI was higher in the sad condition than in the neutral ( $F(1,618) = 24.44,$

$p < .001, \eta^2_p = .04$ ) and happy ( $F(1,618) = 32.43, p < .001, \eta^2_p = .05$ ) conditions ( $M_{sad} = 3.12$  vs.  $M_{neutral} = 2.45$  vs.  $M_{happy} = 2.35$ ). There was no difference between the happy and neutral conditions ( $F(1,618) = .58, p = .45$ ). The main effect of advertising type ( $F(1,618) = .17, p = .68$ ) and the interaction effect ( $F(2,618) = .72, p = .49$ ) were not significant.

#### Behavioral intention and $A_{ad}$

For behavioral intention, there was no main effect of facial expression ( $M_{sad} = 4.60$  vs.  $M_{neutral} = 4.74$  vs.  $M_{happy} = 4.68$ ;  $F(2,618) = .31, p = .74$ ), main effect of advertising type ( $F(1,618) = 2.73, p = .099$ ), or interaction effect ( $F(2,618) = .27, p = .76$ ). Overall, facial expression did not influence either donation intention or CRM purchase intention.

For  $A_{ad}$ , there was a significant main effect of facial expression ( $F(2,618) = 6.73, p = .001, \eta^2_p = .02$ ), such that  $A_{ad}$  was lower in the sad condition than in the neutral ( $F(1,618) = 6.36, p = .012, \eta^2_p = .01$ ) and happy ( $F(1,618) = 13.21, p < .001, \eta^2_p = .02$ ) conditions ( $M_{sad} = 5.47$  vs.  $M_{neutral} = 5.80$  vs.  $M_{happy} = 5.94$ ). There was no difference between the happy and neutral conditions ( $F(1,618) = 1.29, p = .26$ ). There was a significant main effect of advertising type ( $M_{charity} = 5.63$  vs.  $M_{CRM} = 5.87$ ;  $F(1,618) = 5.04, p = .025, \eta^2_p = .01$ ), but the interaction effect was not significant ( $F(2,618) = .76, p = .47$ ). Overall, consistent with H4, sad facial expression decreased  $A_{ad}$ .

#### Mediation analysis

We tested for parallel mediation by sympathy and IMI using the PROCESS macro for SPSS (Model 4: 5000 iterations; Hayes, 2018). We ran two mediation models each for behavioral intention and  $A_{ad}$ , one to compare sad versus neutral expression and one to compare sad versus happy expression. When testing for the effect of sad versus happy expression, we included a sad dummy variable (1 = *sad*, 0 = *happy*, 0 = *neutral*) as the independent variable, IMI and sympathy as parallel mediators, and a neutral dummy variable (0 = *sad*, 0 = *happy*, 1 = *neutral*) as a covariate. When testing for the effect of sad versus neutral expression, we included a happy dummy variable (0 = *sad*, 1 = *happy*, 0 = *neutral*) as the covariate. We did not include advertising type as a moderator because the interaction effects were not significant for either the dependent variables or the mediators. Mediators and dependent variables were standardized to facilitate within- and between-study comparisons of effects (Pieters, 2017). See Table 2 for detailed mediation analysis results.

As expected, the paths from sympathy to behavioral intention ( $\beta = .32, p < .001$ ) and to  $A_{ad}$  ( $\beta = .08, p = .007$ ) were positive, and the paths from IMI to behavioral intention ( $\beta = -.46, p < .001$ ) and to  $A_{ad}$  ( $\beta = -.66, p < .001$ ) were negative.

For behavioral intention, consistent with H3A and H3B, the effect of sad (vs. happy or neutral) facial expression on behavioral intention was positively mediated by sympathy (sad vs. happy:  $B = .13, 95\% CI = [.06, .20]$ ; sad vs. neutral:  $B = .11, 95\% CI = [.04, .18]$ ) and negatively mediated by IMI (sad vs. happy:  $B = -.25, 95\% CI = [-.34,$

**TABLE 2** Mediation analyses (Studies 1–5)

Study	IV (facial expression)	Moderators	Mediators	Path from mediator to DV	Indirect effect: B [95% CI]	Difference in indirect effects: C [95% CI]
<b>DV: Donation or CRM purchase</b>						
1	0 = happy		Sympathy	$\beta = .32^{***}$	.13 [.06, .20] <sup>†</sup>	.13 [.01, .24] <sup>*</sup>
	1 = sad		IMI	$\beta = -.46^{***}$	-.25 [-.34, -.16] <sup>†</sup>	
	0 = neutral		Sympathy	$\beta = .32^{***}$	.11 [.04, .18] <sup>†</sup>	.11 [-.00, .22]
	1 = sad		IMI	$\beta = -.46^{***}$	-.22 [-.32, -.13] <sup>†</sup>	
2	0 = happy		Sympathy	$\beta = .31^{***}$	.15 [.08, .23] <sup>*</sup>	-.09 [-.18, .01]
	1 = sad		IMI	$\beta = -.24^{***}$	-.06 [-.12, -.01] <sup>†</sup>	
3	0 = happy		Sympathy	$\beta = .26^{***}$	.17 [.08, .30] <sup>†</sup>	-.11 [-.25, .01]
	1 = sad (strong)		IMI	$\beta = -.13$	-.06 [-.14, -.01] <sup>*</sup>	
	0 = happy		Sympathy	$\beta = .26^{***}$	.16 [.08, .28] <sup>†</sup>	-.09 [-.21, .03]
	1 = sad (moderate)		IMI	$\beta = -.13$	-.07 [-.16, -.02] <sup>†</sup>	
4	0 = happy		Sympathy	$\beta = .56^{**}$	.50 [.20, .91] <sup>†</sup>	-.14 [-.55, .25]
	1 = sad		IMI	$\beta = -.54^{**}$	-.36 [-.67, -.14] <sup>†</sup>	
5	0 = happy	High prominence	Sympathy	$\beta = .12$	.08 [-.04, .22]	.35 [.06, .55] <sup>*</sup>
	1 = sad	IMI	$\beta = -.85^{***}$	-.39 [-.63, -.19] <sup>†</sup>		
	0 = happy	Low prominence	Sympathy	$\beta = .12$	.04 [-.02, .12]	.11 [-.10, .36]
	1 = sad	IMI	$\beta = -.85^{***}$	-.17 [-.37, .02]		
<b>DV: Attitude toward advertising campaign (A<sub>ad</sub>)</b>						
1	0 = happy		Sympathy	$\beta = .08^{**}$	.03 [.01, .07] <sup>†</sup>	.33 [.20, .46] <sup>*</sup>
	1 = sad		IMI	$\beta = -.66^{***}$	-.36 [-.50, -.23] <sup>†</sup>	
	0 = neutral		Sympathy	$\beta = .08^{**}$	.03 [.01, .06] <sup>†</sup>	.29 [.15, .42] <sup>*</sup>
	1 = sad		IMI	$\beta = -.66^{***}$	-.32 [-.45, -.18] <sup>†</sup>	
2	0 = happy		Sympathy	$\beta = .22^{***}$	.10 [.05, .17] <sup>†</sup>	.06 [-.08, .21]
	1 = sad		IMI	$\beta = -.64^{***}$	-.16 [-.30, -.04] <sup>†</sup>	
3	0 = happy		Sympathy	$\beta = .17^{**}$	.11 [.04, .22] <sup>†</sup>	.10 [-.07, .29]
	1 = sad (strong)		IMI	$\beta = -.51^{***}$	-.21 [-.37, -.07] <sup>†</sup>	
	0 = happy		Sympathy	$\beta = .17^{**}$	.10 [.03, .20] <sup>†</sup>	.16 [.00, .35] <sup>*</sup>
	1 = sad (moderate)		IMI	$\beta = -.51^{***}$	-.26 [-.44, -.12] <sup>†</sup>	
4	0 = happy		Sympathy	$\beta = .17^{†}$	.15 [.02, .28] <sup>†</sup>	.26 [.05, .48] <sup>*</sup>
	1 = sad		IMI	$\beta = -.61^{***}$	-.41 [-.59, -.24] <sup>†</sup>	
5	0 = happy	High prominence	Sympathy	$\beta = .14^{***}$	.09 [.04, .14] <sup>*</sup>	.22 [.06, .38] <sup>*</sup>
	1 = sad	IMI	$\beta = -.69^{***}$	-.32 [-.48, -.16] <sup>†</sup>		
	0 = happy	Low prominence	Sympathy	$\beta = .14^{***}$	.04 [.01, .08] <sup>†</sup>	.10 [-.04, .26]
	1 = sad	IMI	$\beta = -.69^{***}$	-.14 [-.29, .01]		

Notes: (1) In the “Indirect effect: B [95% CI]” column, significance is indicated when the CI does not include zero (marked with \*). (2) The “Difference in indirect effects: C [95% CI]” column denotes the difference in effect size between the indirect effects of IMI and sympathy; [95% CI] denotes the corresponding confidence interval. C is calculated by adding “/contrast = 2” in the PROCESS macros for SPSS (Hayes, 2018). When the 95% CI does not include zero, it indicates the two indirect effects are significantly different from each other (marked with \*). For Study 5, the PROCESS macro for SPSS does not provide a test of the difference in the size of the indirect effects of two different mediators in the moderated mediation model (Model 8), so to generate “C,” we analyzed data separately for each prominence condition. (3) IMI stands for the inference of manipulative intent. A<sub>ad</sub> stands for attitude toward advertising campaign.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

-.16]; sad vs. neutral:  $B = -.22$ , 95% CI = [-.32, -.13]). Although the indirect effect via IMI was significantly larger than that via sympathy in absolute size when explaining the effect of sad versus happy expression ( $C = .13$ , 95% CI = [.01, .24]), they were not significantly

different when explaining the effect of sad versus neutral expression ( $C = .11$ , 95% CI = [-.00, .22]).

For A<sub>ad</sub>, the effect of sad facial expression was positively mediated by sympathy (sad vs. happy:  $B = .03$ , 95% CI = [.01, .07]; sad



vs. neutral:  $B = .03$ , 95% CI = [.01, .06]) and negatively mediated by IMI (sad vs. happy:  $B = -.36$ , 95% CI = [-.50, -.23]; sad vs. neutral:  $B = -.32$ , 95% CI = [-.45, -.18]). Importantly, consistent with H4, the indirect effect of IMI was significantly larger than that of sympathy in absolute size (sad vs. happy:  $C = .33$ , 95% CI = [.20, .46]; sad vs. neutral:  $C = .29$ , 95% CI = [.15, .42]).

Overall, the difference in the indirect effects of sympathy and IMI were larger for  $A_{ad}$  (sad vs. happy:  $C = .33$ ; sad vs. neutral:  $C = .29$ ) than for behavioral intention (sad vs. happy:  $C = .12$ ; sad vs. neutral:  $C = .11$ ), suggesting that the relative strength of the mediating role of IMI as compared to sympathy is greater for  $A_{ad}$  than for behavioral intention.

## 3.2 | Study 2

Study 1 provided support for the conceptual framework in both charitable and CRM advertising contexts. Study 2 aimed to replicate the findings of Study 1 in the charitable advertising context with an incentive-compatible behavioral measure of donation. Additionally, in Study 1, we used images that focused-in on the child's facial expression so the images may be perceived as staged and inauthentic, which could influence IMI (Spielmann & Orth, 2021). In this study, we used images where the child was situated in a more natural setting with background context, and we varied the richness of the background. We expected to replicate the results, showing the robustness of the effects. Since we found no difference between the neutral and happy conditions in Study 1, we only used the happy and sad conditions here.

### 3.2.1 | Methods

We used a 2 (facial expression: happy vs. sad)  $\times$  2 (background context: rich vs. impoverished) between-subjects design. We recruited 400 United States residents from MTurk and received 403 responses (53.2% female,  $M_{age} = 38.9$ ). A post hoc sensitivity analysis indicated that with  $\alpha = .05$  and  $\beta = .80$ ,  $N = 403$  provides sufficient power to detect the main effect of facial expression of  $f = .14$  or  $\eta^2 = .019$ .

Participants first viewed an advertisement of a charitable organization, Helping Children Worldwide, displaying the image of a happy or sad child (see Appendix SB). In the rich background condition, the image showed the child in a setting that was natural for a hungry child with various objects such as a tent and pot. In the impoverished background condition, the image did not contain the objects. The images featured the same child and were pretested for emotional expression (see Appendix SF). Participants then responded to questions measuring donation amount,  $A_{ad}$  ( $\alpha = .97$ ), sympathy ( $\alpha = .95$ ), and IMI ( $\alpha = .92$ ). We measured donation amount by informing participants that they would be entered in a raffle to win one of 10 \$5 cash prizes and asking them how much of the \$5 they would like to donate to Helping Children Worldwide if they were

to win the raffle.<sup>7</sup> All other measures were the same as those in Study 1.

### 3.2.2 | Results

#### *Sympathy and IMI*

For sympathy, there was a significant main effect of facial expression in the expected direction ( $M_{sad} = 3.70$  vs.  $M_{happy} = 2.91$ ;  $F(1,399) = 23.45$ ,  $p < .001$ ,  $\eta^2_p = .06$ ). The background context effect ( $F(1,399) = .76$ ,  $p = .38$ ) and the interaction effect ( $F(1,399) = .08$ ,  $p = .78$ ) were not significant. For IMI, there was a significant facial expression effect in the expected direction ( $M_{sad} = 2.75$  vs.  $M_{happy} = 2.41$ ;  $F(1,399) = 6.69$ ,  $p = .01$ ,  $\eta^2_p = .02$ ). The background context effect ( $F(1,399) = .19$ ,  $p = .67$ ) and the interaction effect ( $F(1,399) = 2.51$ ,  $p = .11$ ) were not significant. The results provide further support for H1 and H2.

#### *Donation amount and $A_{ad}$*

For donation amount, there was no facial expression effect ( $M_{sad} = \$1.88$  vs.  $M_{happy} = \$2.14$ ;  $F(1,399) = 2.08$ ,  $p = .15$ ), background context effect ( $F(1,399) = 2.69$ ,  $p = .11$ ), or interaction effect ( $F(1,399) = .05$ ,  $p = .82$ ). Replicating the findings of Study 1, facial expression did not influence actual donation amount. For  $A_{ad}$ , there was no facial expression effect ( $M_{sad} = 5.71$  vs.  $M_{happy} = 5.90$ ;  $F(1,399) = 2.48$ ,  $p = .12$ ), which was not in line with our hypothesis. We discuss this null finding in Section 4. The background context effect ( $F(1,399) = .04$ ,  $p = .85$ ) and the interaction effect ( $F(1, 399) = .89$ ,  $p = .35$ ) were also not significant.

#### *Mediation analysis*

We tested for parallel mediation separately for donation amount and  $A_{ad}$  with facial expression (0 = happy, 1 = sad) as the independent variable and IMI and sympathy as parallel mediators (Model 4). We did not include background context as a moderator because the interaction effect was not significant for either the dependent variables or mediators. As expected, the paths from sympathy to donation amount ( $\beta = .31$ ,  $p < .001$ ) and to  $A_{ad}$  ( $\beta = .22$ ,  $p < .001$ ) were positive, and the paths from IMI to donation amount ( $\beta = -.24$ ,  $p < .001$ ) and to  $A_{ad}$  ( $\beta = -.64$ ,  $p < .001$ ) were negative (see Table 2).

Consistent with H3A and H3B, for donation amount, the effect of sad (vs. happy) facial expression on behavioral intention was positively mediated by sympathy ( $B = .15$ , 95% CI = [.08, .23]) and negatively mediated by IMI ( $B = -.06$ , 95% CI = [-.12, -.01]). The two indirect effects did not differ in absolute size ( $C = -.09$ , 95% CI = [-.18, .01]). For  $A_{ad}$ , the effect of sad (vs. happy) facial expression was also mediated by both sympathy ( $B = .10$ , 95% CI = [.05, .17]) and IMI ( $B = -.16$ , 95% CI = [-.30, -.04]). Although the indirect effect of IMI was directionally larger than that of sympathy in absolute size, the difference was not significant ( $C = .06$ , 95% CI = [-.08, .21]). This may explain why sad facial expression did not reduce  $A_{ad}$  in this study.

### 3.3 | Study 3

Studies 1 and 2 showed that sad facial expression did not influence donation intention or actual donation amount, respectively. In both studies, we used images with a highly sad facial expression. In Study 1, the manipulation check results showed that the sad image was perceived to be sad at  $M = 5.62$  on a 7-point scale. The pretest for Study 2 showed that the sad image was perceived to be sad at  $M = 5.68$ . Prior research suggests that emotional appeals of different intensities can influence IMI in advertising. For example, a high guilt appeal was perceived as more manipulative than a moderate or low guilt appeal (Coulter & Pinto, 1995). Likewise, since sympathy is based on emotional contagion, when a person in need exhibits a strongly sad (vs. moderately sad) facial expression, viewers may feel greater sadness, which in turn increases sympathy. We tested whether the effects of sad facial expression on IMI and sympathy depend on the intensity of the expression using facial expressions of both high and moderate intensity (selected based on pretest). We expected that both IMI and sympathy would be higher for a strongly sad-faced image than for a moderately sad-faced image, which, in turn, would be higher than for a happy-faced image.

#### 3.3.1 | Methods

We used a three-cell (facial expression: happy vs. moderately sad vs. strongly sad) between-subjects design. As in Study 2, we used a context in which a charity solicits donations and measured an incentive-compatible donation amount. Participants were 279 undergraduate students at a mid-Atlantic university (55.6% female,  $M_{\text{age}} = 20.5$ ). A post hoc sensitivity analysis indicated that with  $\alpha = .05$  and  $\beta = .80$ ,  $N = 279$  provides sufficient power to detect the main effect of facial expression of  $f = .19$  or  $\eta^2 = .034$ .

Participants first read that they were entered in a raffle to win one of 10 \$5 cash prizes. Next, participants viewed an advertisement of the charitable organization, Helping Children Worldwide, displaying the image of a happy, moderately sad, or strongly sad child (see Appendix SB). The pretest showed that the happy-faced child was rated happy at  $M = 5.96$  and the strongly sad child was rated sad at  $M = 6.56$ . The moderately sad image was rated sad at 4.78, which is significantly higher than the midpoint of the scale ( $p = .001$ ), but significantly less sad than the strongly sad image ( $p < .001$ ; see Appendix SF). Participants then responded to the following questions using the same measures used in Study 2: donation amount,  $A_{\text{ad}}$  ( $\alpha = .95$ ), sympathy ( $\alpha = .93$ ), and IMI ( $\alpha = .92$ ).

#### 3.3.2 | Results

##### *Sympathy and IMI*

The effect of facial expression on sympathy was significant ( $F(2,276) = 12.91$ ,  $p < .001$ ,  $\eta^2_p = .09$ ). Participants felt more sympathy in the strongly sad ( $F(1,276) = 21.21$ ,  $p < .001$ ,  $\eta^2_p = .07$ ) and moderately

sad ( $F(1,276) = 17.11$ ,  $p < .001$ ,  $\eta^2_p = .06$ ) conditions than in the happy condition ( $M_{\text{ssad}} = 4.21$  vs.  $M_{\text{msad}} = 4.12$  vs.  $M_{\text{happy}} = 3.30$ ). There was no difference in sympathy between the strongly sad and moderately sad conditions ( $F(1,276) = .19$ ,  $p = .66$ ). There was also a significant effect of facial expression on IMI ( $F(2,276) = 7.34$ ,  $p = .001$ ,  $\eta^2_p = .05$ ). IMI was higher in the strongly sad ( $F(1,276) = 8.38$ ,  $p = .004$ ,  $\eta^2_p = .03$ ) and moderately sad ( $F(1,276) = 13.01$ ,  $p < .001$ ,  $\eta^2_p = .05$ ) conditions than in the happy condition ( $M_{\text{ssad}} = 3.17$  vs.  $M_{\text{msad}} = 3.31$  vs.  $M_{\text{happy}} = 2.62$ ). There was no difference in IMI between the strongly sad and moderately sad conditions ( $F(1,276) = .53$ ,  $p = .47$ ). These results suggest that, unlike our predictions, the effects of strongly sad and moderately sad facial expressions on IMI and sympathy do not differ.

##### *Donation amount and $A_{\text{ad}}$*

There was no effect of facial expression on donation amount ( $F(2,275) = .90$ ,  $p = .41$ ;  $M_{\text{ssad}} = \$3.88$  vs.  $M_{\text{msad}} = \$3.55$  vs.  $M_{\text{happy}} = \$3.57$ ), but there was a significant effect of facial expression on  $A_{\text{ad}}$  ( $F(2,276) = 5.01$ ,  $p = .007$ ,  $\eta^2_p = .04$ ).  $A_{\text{ad}}$  was lower in the strongly sad ( $F(1,276) = 8.31$ ,  $p = .004$ ,  $\eta^2_p = .03$ ) and moderately sad ( $F(1,276) = 6.55$ ,  $p = .011$ ,  $\eta^2_p = .02$ ) conditions than in the happy condition ( $M_{\text{ssad}} = 5.36$  vs.  $M_{\text{msad}} = 5.42$  vs.  $M_{\text{happy}} = 5.92$ ). There was no difference between the strongly and moderately sad conditions ( $F(1,276) = .09$ ,  $p = .76$ ), which suggests that the negative effect of sad facial expression on  $A_{\text{ad}}$  was not affected by the intensity of sad facial expression.

##### *Mediation analysis*

We ran two mediation models each for donation amount and  $A_{\text{ad}}$ . When testing for mediation of the effect of strongly sad versus happy expression, we included a strongly sad dummy variable (0 = moderately sad, 1 = strongly sad, 0 = happy) as the independent variable, IMI and sympathy as mediators, and a moderately sad dummy variable (1 = moderately sad, 0 = strongly sad, 0 = happy) as a covariate. When testing for mediation of the effect of moderately sad versus happy expression, we switched the independent variable with the covariate. As in the prior studies, the paths from sympathy to donation amount ( $\beta = .26$ ,  $p < .001$ ) and to  $A_{\text{ad}}$  ( $\beta = .17$ ,  $p = .002$ ) were positive, and the paths from IMI to donation amount ( $\beta = -.13$ ,  $p = .025$ ) and to  $A_{\text{ad}}$  ( $\beta = -.51$ ,  $p < .001$ ) were negative (see Table 2).

For donation amount, the indirect effects of a strongly sad or moderately sad (vs. happy) facial expression via IMI and via sympathy were both significant, but in opposite directions. Consistent with H3A and H3B, sympathy positively mediated ( $B = .16$ , 95% CI = [.08, .28]) whereas IMI negatively mediated ( $B = -.07$ , 95% CI = [-.16, -.02]) the effect of moderately sad (vs. happy) facial expression on donation amount. Moreover, the absolute size of the two indirect effects were not significantly different ( $C = -.09$ , 95% CI = [-.21, .03]). The mediation pattern for strongly sad (vs. happy) facial expression was similar.

For  $A_{\text{ad}}$ , sympathy positively mediated ( $B = .10$ , 95% CI = [.03, .20]) whereas IMI negatively mediated ( $B = -.26$ , 95% CI = [-.44, -.12]) the effect of moderately sad (vs. happy) facial expression. The

indirect effect of IMI was significantly larger than that of sympathy in absolute size ( $C = .16$ , 95% CI = [.00, .35]). For the effect of the strongly sad (vs. happy) facial expression, the indirect effect of IMI ( $B = -.21$ , 95% CI = [-.37, -.07]) was directionally, but not significantly, larger than that of sympathy ( $B = .11$ , 95% CI = [.04, .22];  $C = .10$ , 95% CI = [-.07, .29]).

### 3.3.3 | Discussion

In sum, we found that the effects of moderately sad and strongly sad facial expressions did not differ from each other, but they differed from that of happy facial expression. These results suggest that the proposed effects are generalizable across sad facial expressions of varying intensities. Note that the findings are different from our prediction that a strongly (vs. moderately) sad facial expression would evoke stronger IMI and greater sympathy. Prior work in facial expression detection indicates a perceptual threshold, defined as “the minimum change in facial expression required for reliably detecting associated emotion” (Maher et al., 2014, p. 1354). While the pretest results (Appendix SF) indicate that the strongly (vs. moderately) sad-faced image was rated as sadder, they also suggest that both levels of sadness reached the threshold to be detected as a “sad facial expression.” Future research can more systematically test the role of intensity of facial emotional expressions.

## 3.4 | Study 4

We aimed to test an incentive-compatible behavioral measure in a CRM advertising context. Moreover, in Studies 1–3, we used images in which the child was gazing directly at the camera. Though Baberini et al. (2015) did not find an effect of gazing on sympathy, one can argue that gaze might influence IMI because a direct gaze at the camera, and thus the viewer, can be interpreted as a more outright attempt to influence viewers. To test this possibility and further generalize our effects, we used images of a child who is not gazing at the camera.

### 3.4.1 | Methods

The study was a two-cell (facial expression: happy vs. sad) between-subjects design. Participants were 197 undergraduate students at a mid-Atlantic university (40.1% female,  $M_{\text{age}} = 19.8$ ). A post hoc sensitivity analysis indicated that with  $\alpha = .05$  and  $\beta = .80$ ,  $N = 197$  provides sufficient power to detect the main effect of facial expression of  $f = .20$  or  $\eta^2 = .039$ .

The general procedure was the same as that of Studies 1–3. The organization was the snack company, Carman's, and the advertisement displayed the image of a happy- or sad-faced child soliciting purchase of a \$5 4-pack of granola bars where \$2.00 would be donated to the charity, *Feed the Children* (see Appendix SB). The images were

pretested for emotional expression (see Appendix SF). Participants responded to questions measuring CRM purchase,  $A_{\text{ad}}$  ( $\alpha = .95$ ), sympathy ( $\alpha = .95$ ), and IMI ( $\alpha = .92$ ). For CRM purchase, participants were informed that they were entered in a raffle to win one of 10 \$5 cash prizes, and they were asked to indicate whether they wanted to receive the \$5 in cash or to purchase and receive a \$5 4-pack of granola bars from Carman's if they were to win the raffle.<sup>8</sup> All other measures were the same as those in the prior studies.

### 3.4.2 | Results

Replicating the prior studies, sympathy and IMI were greater in the sad (vs. happy) condition (sympathy:  $M_{\text{sad}} = 3.71$  vs.  $M_{\text{happy}} = 2.32$ ;  $F(1,195) = 48.60$ ,  $p < .001$ ,  $\eta^2_p = .20$ ; IMI:  $M_{\text{sad}} = 3.87$  vs.  $M_{\text{happy}} = 2.90$ ;  $F(1,195) = 24.33$ ,  $p < .001$ ,  $\eta^2_p = .11$ ). Sad facial expression did not influence CRM purchase (sad: 47.0% vs. happy: 45.4%;  $\chi^2(1, N = 197) = .05$ ,  $p = .82$ ) but did significantly reduce  $A_{\text{ad}}$  ( $M_{\text{sad}} = 4.45$  vs.  $M_{\text{happy}} = 5.25$ ;  $F(1,195) = 15.58$ ,  $p < .001$ ,  $\eta^2_p = .07$ ).

The parallel mediation analysis (see Table 2) showed that the paths from sympathy to CRM purchase ( $\beta = .56$ ,  $p = .002$ ) and to  $A_{\text{ad}}$  ( $\beta = .17$ ,  $p = .011$ ) were positive, and the paths from IMI to CRM purchase ( $\beta = -.54$ ,  $p = .002$ ) and to  $A_{\text{ad}}$  ( $\beta = -.61$ ,  $p < .001$ ) were negative. For CRM purchase, the indirect effects via sympathy ( $B = .50$ , 95% CI = [.20, .91]) and IMI ( $B = -.36$ , 95% CI = [-.67, -.14]) were both significant, but did not differ in absolute size ( $C = -.14$ , 95% CI = [-.55, .25]). For  $A_{\text{ad}}$ , the indirect effects via sympathy ( $B = .15$ , 95% CI = [.02, .28]) and IMI ( $B = -.41$ , 95% CI = [-.59, -.24]) were also both significant. However, the indirect effect via IMI was significantly larger than that via sympathy ( $C = .26$ , 95% CI = [.05, .48]). In summary, we found that our conceptual model is generalizable to non-gazing images.

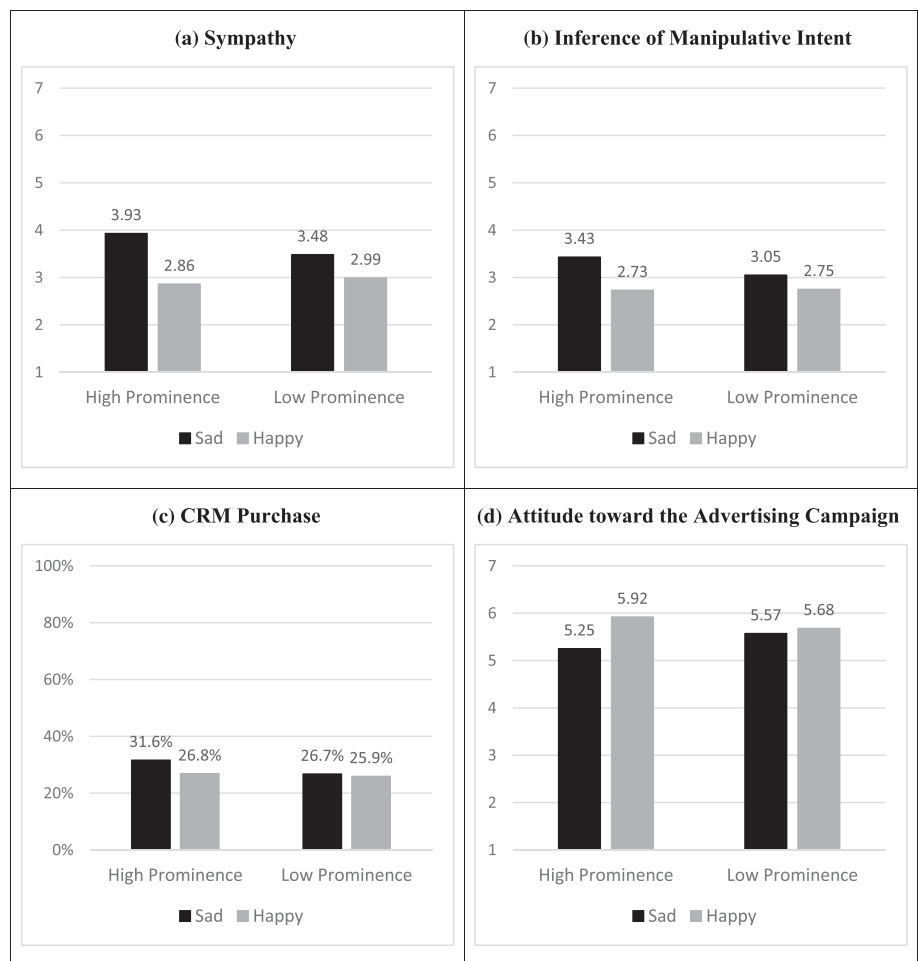
## 3.5 | Study 5

To further examine the underlying processes, Study 5 tested for the moderating effect of prominence of the image of the person in need (i.e., size and location of the image). We predicted that the effects of sad facial expression on both IMI and sympathy are attenuated when prominence of the image is low (vs. high). Moreover, because IMI is the primary driver of the effect of sad facial expression on  $A_{\text{ad}}$ , we expected that the negative effect of sad facial expression on  $A_{\text{ad}}$  will be attenuated (H5). In contrast, for donation/CRM purchase, we did not make an explicit prediction because it was unclear which mediator would be more relevant.

### 3.5.1 | Methods

The study was a 2 (facial expression: happy vs. sad)  $\times$  2 (prominence of image: high vs. low) between-subjects design. As in Study 1, we used a context in which a for-profit company, Lucerna, sells a candle

**FIGURE 2** The effects of facial expression and prominence of image on the mediators and effectiveness measures (Study 5)



as a CRM product. However, we used the child from Study 3. We recruited 650 US residents from MTurk and received 638 responses (53.9% female,  $M_{age} = 36.9$ ). A post hoc sensitivity analysis indicated that with  $\alpha = .05$  and  $\beta = .80$ ,  $N = 638$  provides sufficient power to detect the main effect of facial expression and the interaction effect of  $f = .11$  or  $\eta^2 = .012$ .

Participants viewed an advertisement depicting either a happy- or sad-faced child. We manipulated high (low) prominence of the image by placing the image of the child in a larger size at the center (smaller size at the bottom right side) of the ad (see Appendix SB). A pretest assured that only facial expression, and not prominence of the image, influenced perceived emotional expression, which indicates that the findings in the main study cannot be attributed to any difference in perceptions of facial emotional expression (see Appendix SG).

Next, participants responded to questions measuring CRM purchase,  $A_{ad}$  ( $\alpha = .96$ ), sympathy ( $\alpha = .95$ ), and IMI ( $\alpha = .92$ ). For CRM purchase, participants were informed that they were entered in a raffle to win one of 10 \$4 cash prizes and asked to indicate whether they wanted to receive the \$4 in cash or an Amazon e-coupon with which they can purchase a \$4 candle from Lucerna if they were to win the raffle.<sup>9</sup> We also captured the amount of time spent on viewing the ad; no difference was found across any of the conditions, ensuring no difference in processing of the information ( $ps > .21$ ).

### 3.5.2 | Results

We conducted 2 (facial expression)  $\times$  2 (prominence of image) between-subjects ANOVAs to test for H5. The focal test is to compare the simple main effects of facial expression on  $A_{ad}$  at different levels of prominence since we hypothesize the facial expression effect to be attenuated in the low (vs. high) prominence condition. We also present the results of the simple main effects of prominence at different levels of facial expression because H5 is based on the theorization that low (vs. high) prominence would lower IMI and sympathy only for the sad and not for the happy images.

#### Sympathy and IMI

For sympathy, there was a significant main effect of facial expression ( $F(1,634) = 37.07$ ,  $p < .001$ ,  $\eta_p^2 = .06$ ), no main effect of face prominence ( $F(1,634) = 1.50$ ,  $p = .22$ ), and a significant interaction effect ( $F(1,634) = 5.13$ ,  $p = .024$ ,  $\eta_p^2 = .01$ ; see Figure 2a). In the high prominence condition, sympathy was higher in the sad than in the happy condition ( $M_{sad} = 3.93$  vs.  $M_{happy} = 2.86$ ;  $F(1,634) = 34.45$ ,  $p < .001$ ,  $\eta_p^2 = .05$ ). In the low prominence condition, the effect was significant but attenuated ( $M_{sad} = 3.48$  vs.  $M_{happy} = 2.99$ ;  $F(1,634) = 7.41$ ,  $p = .007$ ,  $\eta_p^2 = .01$ ). This attenuation resulted from low (vs. high) prominence leading to lower levels of sympathy for the

sad-faced image ( $M_{\text{highP}} = 3.93$  vs.  $M_{\text{lowP}} = 3.48$ ;  $F(1,634) = 6.08$ ,  $p = .014$ ,  $\eta^2_p = .01$ ), but not for the happy-faced image ( $M_{\text{highP}} = 2.86$  vs.  $M_{\text{lowP}} = 2.99$ ;  $F(1,634) = 0.54$ ,  $p = .46$ ).

For IMI, there was a significant main effect of facial expression ( $F(1,634) = 17.57$ ,  $p < .001$ ,  $\eta^2_p = .03$ ) but no main effect of prominence ( $F(1,634) = 2.26$ ,  $p = .13$ ). Although the interaction effect was not significant ( $F(1,634) = 2.83$ ,  $p = .093$ ), the pattern of the results is consistent with our expectation (see Figure 2b). IMI was higher in the sad (vs. happy) condition when prominence was high ( $M_{\text{sad}} = 3.43$  vs.  $M_{\text{happy}} = 2.73$ ;  $F(1,634) = 17.04$ ,  $p < .001$ ,  $\eta^2_p = .03$ ), but the effect was attenuated when prominence was low ( $M_{\text{sad}} = 3.05$  vs.  $M_{\text{happy}} = 2.75$ ;  $F(1,634) = 3.18$ ,  $p = .075$ ). This attenuation resulted from low (vs. high) prominence leading to lower levels of IMI in the sad condition ( $M_{\text{highP}} = 3.43$  vs.  $M_{\text{lowP}} = 3.05$ ;  $F(1,634) = 5.08$ ,  $p = .025$ ,  $\eta^2_p = .01$ ), but not in the happy condition ( $M_{\text{highP}} = 2.73$  vs.  $M_{\text{lowP}} = 2.75$ ;  $F(1,634) = 0.02$ ,  $p = .90$ ).

#### CRM purchase and $A_{\text{ad}}$

For CRM purchase, none of the effects were significant ( $ps > .34$ ; see Figure 2c). For  $A_{\text{ad}}$ , there was a significant main effect of facial expression ( $F(1,634) = 12.00$ ,  $p < .001$ ,  $\eta^2_p = .02$ ), no main effect of prominence ( $F(1,634) = 0.14$ ,  $p = .71$ ), but a significant interaction effect ( $F(1,634) = 6.24$ ,  $p = .013$ ,  $\eta^2_p = .01$ ; see Figure 2d). Consistent with H5, in the high prominence condition,  $A_{\text{ad}}$  was lower in the sad than in the happy condition ( $M_{\text{sad}} = 5.25$  vs.  $M_{\text{happy}} = 5.92$ ;  $F(1,634) = 17.55$ ,  $p < .001$ ,  $\eta^2_p = .03$ ); however, the effect was not present in the low prominence condition ( $M_{\text{sad}} = 5.57$  vs.  $M_{\text{happy}} = 5.68$ ;  $F(1,634) = 0.47$ ,  $p = .49$ ). This attenuation emerged because low (vs. high) prominence led to higher levels of  $A_{\text{ad}}$  in the sad condition ( $M_{\text{highP}} = 5.25$  vs.  $M_{\text{lowP}} = 5.57$ ;  $F(1,634) = 4.13$ ,  $p = .043$ ,  $\eta^2_p = .01$ ), but not in the happy condition ( $M_{\text{highP}} = 5.92$  vs.  $M_{\text{lowP}} = 5.68$ ;  $F(1,634) = 2.25$ ,  $p = .13$ ).

#### Mediation analysis

We tested for moderated mediation (Model 8). We entered facial expression as the independent variable (0 = happy, 1 = sad), IMI and sympathy as the mediators, prominence of the image as the moderator, and each effectiveness measure as the dependent variable (see Table 2). Unlike in the prior studies, the path from sympathy to CRM purchase was not significant although it was in the expected direction ( $\beta = .12$ ,  $p = .20$ ). The path from sympathy to  $A_{\text{ad}}$  ( $\beta = .14$ ,  $p < .001$ ) was positive. The paths from IMI to CRM purchase ( $\beta = -.85$ ,  $p < .001$ ) and to  $A_{\text{ad}}$  ( $\beta = -.69$ ,  $p < .001$ ) were negative.

For CRM purchase, in the high prominence condition, IMI significantly mediated the effect of facial expression in the negative direction ( $B = -.39$ , 95% CI =  $[-.63, -.19]$ ). Unlike in previous studies, sympathy did not significantly mediate the effect ( $B = .08$ , 95% CI =  $[-.04, .22]$ ), and the indirect effect of IMI was significantly larger than that of sympathy ( $C = .35$ , 95% CI =  $[.06, .55]$ ). In the low prominence condition, neither sympathy nor IMI significantly mediated the effect of facial expression (sympathy:  $B = .04$ , 95% CI =  $[-.02, .12]$ ; IMI:  $B = -.17$ , 95% CI =  $[-.37, .02]$ ). This result suggests that when

prominence was low, the mediating effects of sympathy and IMI disappeared.

For  $A_{\text{ad}}$ , in the high prominence condition, both sympathy and IMI mediated the effect of facial expression (sympathy:  $B = .09$ , 95% CI =  $[.04, .14]$ ; IMI:  $B = -.32$ , 95% CI =  $[-.48, -.16]$ ). Consistent with the prior studies, the indirect effect via IMI was significantly larger than that via sympathy ( $C = .22$ , 95% CI =  $[.06, .38]$ ). In contrast, in the low prominence condition, sympathy was a significant mediator ( $B = .04$ , 95% CI =  $[.01, .08]$ ), but IMI was not ( $B = -.14$ , 95% CI =  $[-.29, .01]$ ). Importantly, these two indirect effects were not significantly different in absolute size ( $C = .10$ , 95% CI =  $[-.04, .26]$ ). These mediation patterns for  $A_{\text{ad}}$  are consistent with the prediction that the attenuated negative effect of sad facial expression on  $A_{\text{ad}}$  in the low (vs. high) prominence condition may occur because the indirect effect via IMI ( $B = -.32$  to  $B = -.14$ ) is attenuated more than that via sympathy ( $B = .09$  to  $B = .04$ ).

### 3.5.3 | Discussion

This study showed that the negative effect of sad (vs. happy) facial expression on  $A_{\text{ad}}$  was attenuated when the image was less prominent in the ad. This attenuation occurred because lower prominence attenuated the mediating effect of IMI in explaining the effect of sad (vs. happy) facial expression on  $A_{\text{ad}}$  more than that of sympathy. However, the prominence of the image did not moderate the effect of facial expression on CRM purchase.

## 4 | GENERAL DISCUSSION

The aim of this research was to systematically examine the effect of displaying a sad-faced (vs. happy-faced or neutral-faced) image of a person in need in charitable advertisements on donation and  $A_{\text{ad}}$  by not only focusing on sympathy but also on IMI. In Studies 1, 2, and 3, which focused on the charitable context, we found facial expression did not significantly influence donation. While greater sympathy evoked by sad facial expression led to larger donation, greater IMI led to lower donation. We found a similar pattern of effects of facial expression on CRM purchase in the for-profit context (Studies 1, 4, and 5). The results suggest that the two opposing processes contributed to the null finding on donation and CRM purchase. In contrast, sad facial expression reduced  $A_{\text{ad}}$  across both contexts (except in Study 2) because the negative indirect effect of IMI was larger than the positive indirect effect of sympathy. The negative effect of sad facial expression on  $A_{\text{ad}}$  was attenuated when prominence of the image of the person in need was low (vs. high) (Study 5).

### 4.1 | Theoretical and practical implications

Our findings contribute to the charitable giving literature. While it is often taken as a given that sad facial expression leads to greater



donation, actual support for this result in prior research is inconclusive (Baberini et al., 2015; Cao & Jia, 2017; Small & Verrochi, 2009). Using carefully chosen images of the same child with different facial expressions within each study, we show that sad facial expression does not significantly influence donation but significantly reduces  $A_{ad}$ .

Beyond demonstrating the differential effects on donation and  $A_{ad}$ , we identified a relevant variable that can help to explain why these differential effects emerge. A sad-faced image in charitable advertising triggers two psychological processes: Viewers feel greater sympathy toward *the person in need*, but at the same time infer that *the organization* uses a manipulative tactic in *the advertising*. The results suggest that donation was influenced by sympathy and IMI to a similar extent; however, IMI was a stronger influence than sympathy on  $A_{ad}$ , probably because  $A_{ad}$  is an evaluation of the advertising and not of the person in need.

Note that a closer look at the mean values of IMI ( $M_s$  in the sad condition = 2.62–3.87 on a 7-point scale) and sympathy ( $M_s$  for sympathy in the sad condition = 3.10–4.21 on a 7-point scale) indicates that most values are at about the midpoint or lower end of the scales in the sad condition. This suggests that our operationalization of sad facial expression may not evoke strong IMI and sympathy. Since IMI and sympathy are only moderate, they may have been easily canceled out by the other opposing force. These low values, however, cannot account for the fact that we could not replicate Small and Verrochi's (2009) findings, whose values on sympathy were similarly low ( $M_s$  in the sad condition = 3.17–4.22 on a 7-point scale).

We also show that the effect of sad facial expression holds in charitable ads by nonprofit organizations and CRM ads by for-profit organizations. Prior work tended to focus on identifying differences across organization types (Aaker et al., 2010; Stiegert et al., 2021). We find that people infer manipulative intent from the sad-faced image irrespective of type of organization, suggesting that people view both nonprofit and for-profit organizations as persuasion agents who can utilize manipulative tactics.

Our findings also have practical implications for human services charities. Fundraising professionals working at human services charities tend to assume that images portraying victims as needy are effective in eliciting donations (at least in the short term) because the images “pull at the heartstrings” (Seu & Orgad, 2014, p. 24). Our findings show that this intuition may be incorrect because a sad-faced image also elicits IMI from viewers. Even when positive aspects of the charity (e.g., sincere care for the cause and commitment to transparency) are highlighted, viewers still infer manipulative intent from a sad-faced image (see Appendix SA for the supplemental study). This suggests that the positive reputations of charities do not mitigate IMI.

## 4.2 | Limitations and directions for future research

Prior research showed that both automatic and deliberative processes can affect donation (Dickert et al., 2011). Small and Verrochi (2009) demonstrated that sympathy is a result of an automatic process. A

question that we did not directly address is whether IMI occurs deliberately or automatically. The persuasion knowledge literature suggests that applying persuasion knowledge to interpret advertising messages requires cognitive resources (Campbell & Kirmani, 2000), implying that IMI is a result of deliberative processing. Since deliberative processing is slow and automatic processing is fast (Evans, 2008), sympathy may precede IMI, implying a sequential mediation of sympathy → IMI. On the other hand, prior research has also shown that people feel “upset” from a manipulative tactic (Coulter & Pinto, 1995). This affective reaction may evoke a feeling like “this does not feel good” (Loewenstein et al., 2001), which subsequently could affect sympathy resulting in sequential mediation of IMI → sympathy.

The current set of studies is limited in its ability to answer the questions of whether IMI occurs deliberately or automatically and, relatedly, whether one mediator precedes the other. We tried to explore these questions post hoc by testing for serial mediation and examining the correlations between sympathy and IMI. First, we found that the two serial mediation paths (sympathy → IMI or IMI → sympathy) could not reliably explain the effect of facial expression on either donation or  $A_{ad}$  (see Appendix SH). Second, the correlations between sympathy and IMI did not yield a consistent pattern (Study 1:  $r = .13$ ,  $p = .002$ ; Study 2:  $r = -.01$ ,  $p = .90$ ; Study 3:  $r = .11$ ,  $p = .062$ ; Study 4:  $r = .32$ ,  $p < .001$ ; Study 5:  $r = -.02$ ,  $p = .56$ ). Thus, we cannot provide clear answers about the processing nature of IMI. The focus of our paper was to introduce the mediating role of IMI and demonstrate its opposing process to sympathy. Future research can build upon our findings to study the role of deliberation and affect-as-information.

We note that in Study 2, we did not find a significant negative effect of sad facial expression on  $A_{ad}$ . Moreover, the differences in the indirect effects of sympathy and IMI when explaining the effect of facial expression on  $A_{ad}$  were not significant in Study 2 and in the happy versus strongly sad conditions of Study 3. The insignificant results in Study 2 may be because facial expression became less prominent as the child was situated in a more natural setting, which could have reduced the role of IMI (cf., Study 5). Indeed, we found that although sad facial expression significantly reduced IMI, the effect size was the smallest ( $\eta^2_p = .02$ ) in Study 2 among all studies ( $\eta^2_p = .03$ – $0.20$  in Study 1 and Studies 3–5 [high prominence condition in Study 5]). It is also possible that alternative moderators not considered in the paper explain why the differences in indirect effects were sometimes not significant.

Future research could explore other moderators to better understand when sympathy or IMI is more important. For example, research on the singularity effect suggests that people feel more sympathy toward one single child than for a group of children (Västfjäll et al., 2014). Future research could examine whether this affects IMI. Relatedly, a group of children can display the same facial expression or different expressions. Different children displaying different facial expressions (happy and sad), compared to all children displaying the same sad facial expression, may evoke weaker sympathy because different expressions weaken the emotional contagion process. Different



children displaying different expressions may also weaken IMI because viewers may infer that the organization did not intentionally select the sad-faced image. Moreover, one could argue that IMI will be stronger when the person in need is a child rather than an adult because people may perceive that an organization uses a child because they are more vulnerable and thus more powerful at grabbing audiences' attention. At the same time, sympathy toward a child versus an adult could be stronger because people perceive children as more susceptible to pain than adults (Gray et al., 2007).

### 4.3 | To conclude

By systematically examining not only sympathy but also IMI, and by measuring not only donation and CRM purchase but also attitudes toward the ad, we provide a more complete picture of the face valence effect.

### ACKNOWLEDGMENT

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### DATA AVAILABILITY STATEMENT

The materials and data of the studies reported in this paper can be found on [https://osf.io/2xhxr/?view\\_only=99d623f8460d489d80e2440a976696067](https://osf.io/2xhxr/?view_only=99d623f8460d489d80e2440a976696067).

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## SUPPORTING INFORMATION

Additional supporting information may be found in the online version of the article at the publisher's website.

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## APPENDIX A.

Inference of Manipulative Intent Measure (Campbell, 1995)

Please think about the [organization name]'s campaign shown in the advertisement. Indicate how much you agree with the following statements. (1 = *strongly disagree*, 7 = *strongly agree*)

1. The way this ad tries to persuade people seems acceptable to me. (reverse-coded)
2. [Organization name] tried to manipulate the audience in ways that I do not like.

3. I was annoyed by this ad because [organization name] seemed to be trying to inappropriately manage or control the consumer audience.
4. I did not mind this ad; [Organization name] tried to be persuasive without being excessively manipulative. (reverse-coded)
5. This ad was fair in what was said and shown. (reverse-coded)
6. I think that this advertisement is unfair/fair. (reverse-coded)

## ENDNOTES

- <sup>1</sup> Prior research has also examined the impact of the valence of charitable appeals, including valence of the message (Choi & Park, 2021; Erlandsson et al., 2018) and valence of the image (e.g., the person in need looks healthy versus looks ill and starving; Bagozzi & Moore, 1994; Dyck & Coldevin, 1992).
- <sup>2</sup> We support this expectation in a supplemental study in which we made a charity's other-benefiting goal salient by highlighting the charity's sincere care for children in need and its commitment to accountability and transparency. Even when the other-benefiting goal was salient, participants inferred greater manipulative intent from a sad-faced (vs. happy-faced) image (see Appendix SA).
- <sup>3</sup> We examined, but found no support for, outcome efficacy, perceived stagedness of facial expression, and warm glow as potential mediators (see Appendix SE).
- <sup>4</sup> To ensure data quality, we only recruited participants whose approval rate for all previous HITs is greater than 95%. We used the same criteria in Studies 2 and 5.
- <sup>5</sup> We also measured attitude towards the organization ( $A_{org}$ ) in all studies. We report the results for  $A_{org}$  in Appendix SC.
- <sup>6</sup> In all studies, 14 items taken from Batson et al. (1997) were used to measure sympathy: the eight listed in the main text and six additional items (i.e., sympathetic, warm, compassionate, softhearted, tender, moved). In all studies, a factor analysis on the 14 items identified two distinct factors comprised of the six and eight items. This result is consistent with prior work showing that sympathy encompasses feelings of concern for the victim, such as compassion, and feelings of distress felt for the victim, such as feeling grieved (Kogut & Ritov, 2005). We used the average of the eight items capturing feelings of distress felt for the victim as the measure of sympathy. Feelings of distress, compared to feelings of concern, is positively correlated with the level of neural activity in brain regions related to emotional contagion (Decety & Yoder, 2016). Thus, an emotional contagion process evoked by another's facial expression is more likely to influence feelings of distress than feelings of concern. Indeed, in all studies, we found that facial expression influenced feelings of distress, but not concern (see Appendix SD for results for the six concern items). We note that the eight distress items, in addition to two concern items (sympathetic and compassionate), were the items used by Small and Verrochi (2009) to measure what they labeled as “sympathy.”
- <sup>7</sup> In Studies 2–3, we donated the sum of the donation amounts indicated by winning participants to Helping Children Worldwide.
- <sup>8</sup> Winning participants who indicated that they wanted to receive a \$5 4-pack of granola bars received \$5 in cash. We donated \$2 to Feed the Children for each of these participants.
- <sup>9</sup> Winning participants who indicated that they wanted to receive an Amazon e-coupon received \$4 as a bonus payment. We donated \$4 to Feed the Children for each of these participants.