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### ***published in***

International Journal of Research in Marketing  
2019

### ***DOI (link to publisher)***

[10.1016/j.ijresmar.2018.09.003](https://doi.org/10.1016/j.ijresmar.2018.09.003)

### ***document version***

Publisher's PDF, also known as Version of record

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### ***citation for published version (APA)***

Grinstein, A., Hagtvedt, H., & Kronrod, A. (2019). Aesthetically (Dis)Pleasing Visuals: A Dual Pathway to Empathy and Prosocial Behavior. *International Journal of Research in Marketing*, 36(1), 83-99.  
<https://doi.org/10.1016/j.ijresmar.2018.09.003>

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Contents lists available at ScienceDirect

IJRM

International Journal of Research in Marketing

journal homepage: [www.elsevier.com/locate/ijresmar](http://www.elsevier.com/locate/ijresmar)

Full Length Article

# Aesthetically (dis)pleasing visuals: A dual pathway to empathy and prosocial behavior

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## ARTICLE INFO

### Article history:

First received on May 16, 2017 and was under review for 7 1/2 months  
Available online 28 September 2018

Senior Editor: Cait Lamberton

### Keywords:

Aesthetics  
Prosocial behavior  
Empathy  
Visual images

## ABSTRACT

This research investigates how the combination of aesthetically appealing and unappealing visual elements in marketing communications can motivate prosocial behavior. Prior literature has investigated the effectiveness of aesthetically pleasing or displeasing visuals separately and has reported mixed results. Based on the notion that empathy is a key driver of prosocial behavior, the current work first makes a theoretical distinction between two antecedents of empathy—identification and perceived need—and then illustrates how these antecedents are evoked by pleasing and displeasing visual elements, respectively. The authors show that the combination of a pleasing individual (human or object) and a displeasing group is particularly effective in evoking identification and perceived need, and therefore empathy. The elevated empathy, in turn, motivates prosocial behavior. Five main experiments in the field, lab, and online, as well as a pre-study and two post-studies, provide supportive empirical evidence. Implications for theory and practice are discussed.

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## 1. Introduction

Society is increasingly addressing environmental and social problems such as poverty, pollution, and human rights abuses. Marketers, nonprofits, and public policy makers direct efforts toward motivating people to behave in a socially responsible manner. However, research and practice reveal that achieving this goal can be challenging (Duclos & Barasch, 2014; Kristofferson, White, & Peloza, 2014). Indeed, prosocial marketing campaigns are often ineffective (Evans, 2006; Grinstein & Nisan, 2009; Lefebvre, 2013). This situation highlights the need to examine motivations of prosocial behavior and communication approaches that are effective in encouraging such behavior. The focus of the current research is on visual images, which are typical in prosocial marketing communication. Specifically, we focus on the aesthetics of these visuals and its influence on prosocial behavior.

In a consumption context, aesthetic appeal can be pleasurable and has a favorable influence on consumer evaluations of ads, products, and brands (Bloch, 1995; Hoegg, Alba, & Dahl, 2010; Postrel, 2003). It is therefore unsurprising that marketers often incorporate aesthetic elements into commercial marketing communications. But what is the role of aesthetics in non-commercial contexts, such as communication designed to encourage prosocial behavior? Interestingly, pleasure is not the inevitable or only outcome of aesthetic experience. Indeed, a long tradition of aesthetics theory highlights empathy as a central component of

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aesthetic experience (Dissanayake, 1992; Lipps, 1897; Massey, 2009). As empathy drives helping behavior (Bagozzi & Moore, 1994) and is considered one of the fundamental processes in prosocial behavior (Batson & Powell, 2003), visuals that evoke empathy should be effective in prosocial communication. In light of this, some prior research has examined the benefit of using aesthetic appeals as a means of elevating empathy and encouraging prosocial behavior.

It is unclear from prior work whether visuals should be aesthetically appealing or unappealing to be persuasive in prosocial contexts (Eagly, Ashmore, Makhijani, & Longo, 1991; Fisher & Ma, 2014; Pechmann, Zhao, Goldberg, & Reiblinger, 2003; Townsend, 2017). On the one hand, people often afford attractive individuals more attention and better treatment, which in our view suggests that aesthetics can motivate prosocial behavior via a physical attractiveness stereotype, in line with the beauty-is-good effect (Langlois et al., 2000; Middlewood & Gasper, 2014; Wan, Chen, & Jin, 2017) and the charity beauty premium (Cryder, Botti, & Simonyan, 2017). As long as it does not carry obvious monetary costs, recent work suggests that enhancing aesthetic appeal can help encourage prosocial behavior (Townsend, 2017). On the other hand, Fisher and Ma (2014) find that favorable characteristics associated with aesthetic appeal (e.g., attractive children) may sometimes *reduce* empathy because the positive attributions make aesthetic individuals and objects appear less needy. Further, aesthetically displeasing depictions of poverty may enhance empathy (Nickols & Nielsen, 2011), and disfigured faces can evoke both disgust and empathy (Stone & Potton, 2014). Thus, aesthetically displeasing appeals may also prompt helping behavior.

What, then, is the optimal use of aesthetics to evoke empathy and motivate prosocial behavior? Based on previous literature, we highlight two key antecedents of empathy that complement each other: (1) identification with the target of the prosocial cause and (2) the perceived need of that target. Integrating empathy literature with work on the impact of aesthetics, we theorize that identification with the target is achieved through aesthetically pleasing visuals, whereas perceived need is evoked by aesthetically displeasing visuals. We then propose that a combination of aesthetically pleasing and displeasing appeals should evoke the highest degree of empathy, and consequently greater prosocial behavioral intent, rather than either appeal alone, because this combination triggers both components of empathy simultaneously. Further, we propose that the combination is more effective in evoking perceived need when the aesthetically displeasing elements are presented in larger numbers than the pleasing elements, because a preponderance of displeasing elements may signal that the need is great or widespread. At the same time, pleasing elements are more effective in evoking identification when presented individually, because people tend to identify with individuals rather than with groups. Based on this string of arguments, we conclude that a visual combining an aesthetically pleasing individual and a displeasing group results in a strong empathic response and consequently is particularly effective in encouraging prosocial behavior.

Our theoretical arguments are supported by five experiments (in the field, lab, and online), as well as a pre-study and two post-studies, that demonstrate the positive effect of the pleasing-individual-displeasing-group combination on prosocial behavior, illuminate the underlying process of evoked empathy—which in turn is elicited via identification and perceived need—and rule out multiple alternative explanations. This research offers multiple contributions: First, this is one of very few investigations focused on aesthetics in a prosocial marketing context. Second, we contribute to the conceptualization of empathy, demonstrating the roles of identification and perceived need as key antecedents of this construct. To some extent, we thereby also resolve apparent conflicts between prior findings on the effect of aesthetics on empathy and the role of aesthetics in prosocial marketing (Cryder et al., 2017; Townsend, 2017). Third, we show that identification is greatest when a pleasing appeal is presented as an individual, whereas perceived need is greatest when a displeasing appeal is presented as a group. Fourth, our investigation goes beyond previous work on the role of aesthetics in prosocial marketing (Cryder et al., 2017; Fisher & Ma, 2014), which typically treats aesthetic appeal as present or absent. The current, more nuanced approach focuses on the combination of aesthetically pleasing and displeasing elements within the same visual, which simultaneously evoke different components of empathy. Fifth, whereas previous research has focused on human attractiveness as the source of aesthetic pleasure, we demonstrate our hypothesized effects with both humans and non-human objects. The reported findings bear practical importance for charitable organizations, government agencies, and policy makers, as well as marketers that may utilize the reported insights to overcome some of the challenges involved in using visuals to motivate prosocial behavior (Duclos & Barasch, 2014; Kristofferson et al., 2014).

## 2. Conceptual development

### 2.1. Empathy and prosocial behavior

Empathy is defined as an other-oriented emotional response congruent with the perceived welfare of another person (Batson, Klein, Highberger, & Shaw, 1995). Empathy allows one to place oneself in someone else's shoes and assess a situation as if it were affecting one's own self (Argo, Zhu, & Dahl, 2008). It can be a powerful motivator for action to the benefit of others and a central driver of prosocial behavior (Bagozzi & Moore, 1994; Basil, Ridgway, & Basil, 2008; Batson & Powell, 2003; Schroeder, Dovidio, Sibicky, Matthews, & Allen, 1988). For instance, empathy favorably influences donation behavior (Lee, Winterich, & Ross Jr, 2014) and can even motivate individuals to forsake fairness in the interest of benefitting those with whom they empathize (Batson et al., 1995; see also Lee et al., 2014).

### 2.2. Two antecedents of empathy

Following a review of extant literature, we suggest that there are two central antecedents of empathy: identification and perceived need.

### 2.2.1. Identification

An empathic response is more likely to arise if one is able to identify with someone, and a stream of research on the Identifiable Victim Effect suggests that an individual who faces a problem may evoke more empathy than a large number of people facing a similar problem (Kogut & Ritov, 2005; Small, Loewenstein, & Slovic, 2007). It has also been found that donations to a larger number of victims may increase if these victims are perceived as a coherent unit, such as a family (Smith, Faro, & Burson, 2013). Taken together, the literature indicates that deprived individuals are more easily identifiable than groups are, and we argue that a source of empathy stems from the tendency to identify with identifiable individuals. In other words, singling out individuals facilitates peoples' identification with them, which in turn enhances empathy. This notion aligns fairly well with a famous quote by Mother Teresa: "If I look at the mass, I will never act. If I look at the one, I will." The crux of the matter appears to be that people are more likely to empathize and therefore to display prosocial behavior if they identify with an individual.

### 2.2.2. Perceived need

People are more likely to empathize with those whose need is apparent, and charitable organizations often use appeals designed to emphasize the need of the people they are trying to help. For example, children are frequently featured in visuals in prosocial print materials, as they may be viewed as the most vulnerable (Fisher & Ma, 2014). Negative emotions such as sadness or fear, which tend to indicate need, can also increase empathic response and prosocial behavior (Bagozzi & Moore, 1994; Small & Verrochi, 2009). Further, the larger the group in need of assistance (e.g., the greater the amount of casualties or destruction), the more people are willing to offer aid (Andorfer & Otte, 2013; Vaes, Paladino, & Leyens, 2002). Thus, the literature indicates that empathy and helping behavior arises from a perception of widespread need, and that this perception may be triggered by a group rather than an individual.

In sum, both *identification with an individual* and *the perceived need of a group* are central to the experience of empathy. As we will discuss in the following two sections, the aesthetics of visual images can influence both of these antecedents of empathy.

## 2.3. Aesthetics and empathy

Broadly speaking, aesthetics may be defined as the "study of the feelings, concepts, and judgements arising from our appreciation of the arts or of the wider class of objects considered moving, or beautiful, or sublime" (Blackburn, 2016, 10). Central to aesthetics are principles such as order, symmetry, unity, harmony, or integrity (Berlyne, 1974; Patrick & Hagtvedt, 2011; Reber, Schwarz, & Winkielman, 2004; see also Armstrong & Detweiler-Bedell, 2008).

Prior literature provides mixed findings regarding the influence of aesthetics on empathy. On the one hand, empathy can arise as a response to aesthetically displeasing displays such as disfigurement or decay (Nickols & Nielsen, 2011; Stone & Pottton, 2014). Such depictions may suggest to viewers that there is a need for help, while overly appealing displays can diminish this perception (Fisher & Ma, 2014). This notion fits well with the common observation from evolutionary theory that the perception of beauty may at least in part have evolved as a signal of health or vigor (Averill, Stanat, & More, 1998; Rothenberg, 2011). For example, a symmetrical, well-proportioned body suggests the absence of disease or genetic defects. Based on this literature, we posit that, as a result of our evolutionary heritage, less attractive entities are perceived to be needier than more attractive ones, with or without any visible, explicit signs of need such as disfigurement or decay. In other words, aesthetically displeasing entities evoke empathy via perceived need.

On the other hand, people tend to judge and treat attractive individuals more positively than unattractive ones (Langlois et al., 2000). This tendency may arise because people identify more readily with attractive individuals, which is also consistent with the illusory superiority effect, that is, that people tend to identify with positive traits in general (Alicke, 1985). These latter observations fit well with empathy theory in aesthetics, according to which empathy is a central part of aesthetic experience (Leder, Bär, & Topolinski, 2012; Lipps, 1897; Massey, 2009). This notion is especially relevant for representational depictions, but it applies to humans and non-human objects alike. As stated by Theodor Lipps (1897), who adopted Robert Vischer's notion of aesthetic empathy, "The vigorous curves and spring of [a Doric column] afford me joy by reminding me of those qualities in myself [...] I recognize in it proportions and other relations agreeable to me" (cited in Dissanayake, 1992, 142). More recent neuroscientific research suggests that such a tendency to identify with or empathize with aesthetically appealing stimuli may be tied to the activity of mirror neurons in the viewer (Massey, 2009). In other words, whereas the perceived need suggested by unattractive displays can contribute to empathy, the identification with an attractive entity can also contribute to empathy.

### 2.4. Aesthetics and prosocial behavior — hypothesis development

The above arguments suggest that in prosocial marketing communications, visuals combining aesthetically pleasing and displeasing depictions are particularly successful in generating prosocial behavior, because they stimulate both components of empathy. The question, then, is how these depictions should be combined. As discussed, people are more likely to empathize when they identify with someone. Further, they are more likely to identify with an individual than with a group (Kogut & Ritov, 2005; Small et al., 2007). Combining these insights with the aforementioned empathy theory of aesthetics (Dissanayake, 1992; Lipps, 1897; Massey, 2009), we theorize that a visual highlighting an aesthetically pleasing individual invites especially strong identification, which in turn can effectively contribute to empathy.

At the same time, aesthetically displeasing depictions can contribute to empathy because they suggest that there is a need for help (Fisher & Ma, 2014; Nickols & Nielsen, 2011; Rothenberg, 2011; Stone & Pottton, 2014). Further, as argued above, the larger the group in need, the greater the empathy and willingness to help (Andorfer & Otte, 2013; Vaes et al., 2002). Thus, if people base

their perceptions of need on cues from a visual image, we expect that a visual in which a large proportion of the protagonists is aesthetically displeasing effectively contributes to empathy.

Further, whereas both antecedents can contribute to empathy, we argue that the combination—not just one of the two antecedents alone—is particularly effective in evoking empathy, and hence in encouraging prosocial behavior. People can perceive need without feeling much empathy if they fail to identify with those in need, whereas they can identify with someone without feeling the urge to help if that someone does not appear to be in need. A visual predominantly consisting of aesthetically displeasing elements can signal need, with or without the identification component—in other words, whether or not one or more pleasing elements are present as well. A pleasing individual can prompt identification, but this latter effect relies on the individual being singled out, either by being depicted alone or by being contrasted against a displeasing group, rather than being “hidden” among similarly pleasing elements.

In sum, we propose that strong empathy can arise via a combination of identification and perceived need evoked by a visual image depicting an aesthetically pleasing individual among a displeasing group. This configuration simultaneously encourages identification (via the pleasing individual) and perceived need (via the displeasing group). See Fig. 1 for a conceptual framework. Comparing the various potential constellations of individuals and groups, we therefore expect a visual with an aesthetically pleasing individual among a displeasing group to be more effective than a visual featuring a pleasing individual among a pleasing group, a displeasing individual among a displeasing group, or a displeasing individual among a pleasing group. A pleasing group is not effective in eliciting perceived need, and to some extent also lacks the identification component if the pleasing individual is not singled out, whereas a displeasing individual lacks the identification component, and a displeasing individual situated among a pleasing group evokes neither identification nor a perception of widespread need.

As a final note, for the sake of clarity, we expect the identification, perceived need, and empathy to be associated with the target of the prosocial cause presented in the visual. The objects in the visual, whether human or non-human, represent this target. In some of our empirical investigations, the visuals depict animals (fish) or inanimate objects (cups or sneakers), in part to test whether the hypothesized effect is generalizable beyond human attractiveness. As people are able to anthropomorphize as well as to interpret who is represented by visual communication (Aggarwal & McGill, 2007; Lakoff & Johnson, 1980; Scott, 1994; Wan et al., 2017), we do not necessarily expect that visual images are interpreted literally, but rather that people transfer the meaning of the visuals to the intended human recipients of prosocial help.

Formally stated, we hypothesize that:

**H1.** A visual displaying an aesthetically displeasing (vs. pleasing) group is more effective in eliciting prosocial behavior, but only when it also displays an aesthetically pleasing (vs. displeasing) individual.

**H2.** The favorable influence of the visual on prosocial behavior is mediated by empathy toward the target of the prosocial cause.

**H3.** The influence of the visual on empathy is mediated by two antecedents: identification with the target of the prosocial cause, evoked by the aesthetically pleasing individual, and perceived need of the target of the prosocial cause, evoked by the aesthetically displeasing group.

### 3. Method

#### 3.1. Overview

We investigated our hypotheses with a set of five main experiments (as well as a pre-study and two post-studies) that focused on different prosocial contexts and outcomes, relying on human and non-human objects as stimuli. Study 1a was a field experiment designed to demonstrate the influence of a visual featuring a displeasing group and pleasing individual, as compared with that of a more typical prosocial visual (i.e., all elements aesthetically pleasing), on actual charity donations in a retail setting. Study 1b used the stimuli of Study 1a in a different context and replicated the results in a controlled online setting. Study 2 tested the full interaction of individual and group aesthetics (H1) as well as the mediating role of empathy (H2). Study 3a further investigated the complete conceptual model and included the two antecedents of empathy, that is, identification and perceived need (H3). Study 3b replicated Study 3a using other stimuli.

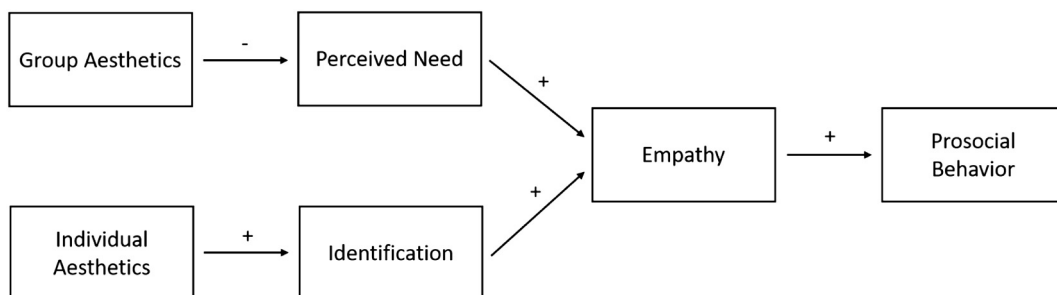


Fig. 1. Process model.

### 3.2. Study 1a

This field study explored the effect of a visual that combines an aesthetically displeasing group and a pleasing individual, versus a visual depicting only aesthetically pleasing elements, on actual charity donations. Donations were solicited from customers at a local grocery store via collection boxes. The solicitations with the visuals were displayed next to the cash registers.

#### 3.2.1. Pretest of materials

A between-subjects pretest was conducted online with 101 adult participants (53% male,  $M_{age} = 35$ ) via Amazon's Mechanical Turk to ensure that the visual stimuli to be used in the experiment differed on aesthetic appeal. Participants were shown one of two visuals to be used in the main study, featuring either five cups with attractive décor or five cups out of which only one displayed attractive décor, whereas the other four featured unattractive décor (see Appendix A.1 for visuals). Participants reported aesthetic appeal of the visual on four seven-point scale items (aesthetically pleasing, attractive, beautiful, and appealing to the senses; 1 = Disagree, 7 = Agree) adopted from Hagtvedt, Hagtvedt, and Patrick (2008). These four items were averaged in an aesthetic appeal scale ( $\alpha = 0.97$ ). As functionality can be hard to distinguish from aesthetics (Chitturi, Raghunathan, & Mahajan, 2007; Hagtvedt & Patrick, 2014, 2016; Hoegg et al., 2010), participants also reported perceived functionality of the cups (1 = Not functional, 7 = Functional). Subsequent ANOVAs revealed the expected difference in aesthetic appeal ( $M_{pleasing} = 4.21$  vs.  $M_{displeasing} = 3.13$ ,  $F(1, 99) = 12.06$ ,  $p = .005$ ,  $\eta_p^2 = 0.11$ ) but no difference in functionality ( $M_{pleasing} = 6.46$  vs.  $M_{displeasing} = 6.51$ ,  $F(1, 99) = 0.09$ ,  $p = .77$ ). We thus concluded that the stimuli were suitable for the main study.

#### 3.2.2. Procedure

Yad Chessed, a nonprofit organization that helps families in need, provided donation boxes for the study. A grocery store agreed to display the donation boxes by the cashiers over a two-day period for a total of 21 h. To minimize complications in the field setting, the experimental design was restricted to two conditions (of those hypothesized in H1): an aesthetically pleasing versus displeasing group combined with a pleasing individual. We focused on this comparison as the first step given the popular use of aesthetically pleasing visuals in prosocial communication (Townsend, 2017). Oval donation boxes were displayed next to three cash registers on a rotating basis. Tagged to each donation box was a sign presenting Yad Chessed, featuring one of the two visuals. All three cash registers displayed boxes with the same visual at the same time. The grocery store employees were directed to display the boxes for one hour and then replace all three with the other set of boxes, thus rotating the visuals every hour. At the end of the 21-h period, the grocery store sent the research team aggregate data on the number of transactions and sales and the sums that were collected in each of the donation boxes.

#### 3.2.3. Results and discussion

Change was donated through 965 transactions over the two-day period, reaching a total of \$34.97 and an average of slightly <4 cents per transaction. (Additionally, one person handed in a \$20 bill that was not included in the study, as this was an extreme outlier; all other donations were small change). Given its aggregate nature, the donation data did not include distribution- or individual-level information. To compare the effectiveness of the two conditions, the donations were divided by the number of transactions. Donations per transaction were approximately double in the condition with an aesthetically pleasing individual cup among a displeasing group of cups (total donations \$20.14,  $M = \$0.049$ ,  $N = 408$ ) compared to the condition with the aesthetically pleasing individual cup among the pleasing group of cups (total donations \$14.83,  $M = \$0.026$ ,  $N = 557$ ,  $Z = 1.90$ ,  $p = .057$ ). These results provide initial evidence—in the context of a retail setting—that consumers respond favorably to a visual that displays a combination of an aesthetically pleasing individual and a displeasing group.

### 3.3. Study 1b

Due to the limited internal validity of the field experiment, we replicated it in an online controlled setting, using similar stimuli in a single-factor design.

#### 3.3.1. Procedure

Sixty-one adult participants from Amazon's Mechanical Turk (50% male,  $M_{age} = 32$ ) saw ads featuring the visuals from Study 1a; see Appendix A.2) and answered a few questions pertaining to their prosocial behavioral intent for The Reading People, a nonprofit organization helping illiterate adults in the US to learn to read. Specifically, participants reported, on six seven-point scale items (1 = strongly disagree, 7 = strongly agree) adopted from Cleveland, Kalamas, and Laroche (2005) and Mittal (1995), the extent to which they agreed that seeing the visual in an ad would make them more willing to talk with friends and family about The Reading People, bring volunteering for The Reading People closer to the top of their priority list, think that the cause The Reading People promotes is important, donate their time to The Reading People, want to volunteer for The Reading People, and donate money to The Reading People. These items were averaged to form a prosocial intent scale ( $\alpha = 0.93$ ).

#### 3.3.2. Results and discussion

ANOVA results revealed a significantly higher prosocial intent in the pleasing-individual-displeasing-group condition ( $M = 4.61$ ) than in the pleasing-individual-pleasing-group condition ( $M = 3.81$ ,  $t(1, 59) = 2.41$ ,  $p = .019$ ). This test provides additional support for the initial finding of the field study, using a different prosocial context and different dependent variable in a laboratory

setting. Taken together, studies 1a and 1b indicate that a visual with a group of aesthetically displeasing objects (given the additional presence of a pleasing individual) has a more favorable influence on prosocial behavior than does a visual with a pleasing group. The following study was designed to replicate these results, as well as to test the moderating role of individual aesthetics and the mediating role of empathy.

### 3.4. Study 2

#### 3.4.1. Pretests of materials

In this study, we employed images of sneakers. In a pretest, 63 participants (sourced via Amazon's Mechanical Turk; 45% male,  $M_{\text{age}} = 36$  years) reported, using three scale items (aesthetically pleasing, attractive, pleasant to look at; 1 = Definitely Not, 7 = Definitely Yes), the perceived aesthetic appeal of a pile of plain, drab sneakers ( $\alpha = 0.94$ ) and a pile of shiny, colorful sneakers ( $\alpha = 0.97$ ). See Appendix B for stimuli. Repeated-measures results revealed that the former sneakers were perceived as less aesthetically appealing ( $M = 2.31$ ) than the latter sneakers ( $M = 5.38$ ,  $F(1, 62) = 243.01$ ,  $p < .0005$ ).

In another pretest, 100 participants (sourced via Mechanical Turk; 57.5% male,  $M_{\text{age}} = 36.3$  years) assessed the functionality and aesthetics of the two piles of shoes. Half of the participants viewed the aesthetically pleasing group and half of them viewed the displeasing group, in a between-subjects test. Functionality was reported using three seven-point scale items (1 = Definitely Not, 7 = Definitely Yes): *These shoes are functional*; *In general, these shoes are suitable to wear*; *These shoes can be used* ( $\alpha = 0.91$ ). Aesthetic appeal was measured using the same four seven-point scale items from the Study 1a pretest ( $\alpha = 0.97$ ). A similar group of 100 participants assessed a single drab sneaker or a single colorful sneaker, also in a between-subjects test. One-way ANOVA showed no differences in functionality between the sneaker groups ( $M_{\text{pleasing}} = 4.31$  vs.  $M_{\text{displeasing}} = 3.93$ ,  $F(1, 96) = 0.22$ ,  $p = .643$ ) or between the individual sneakers ( $M_{\text{pleasing}} = 5.02$  vs.  $M_{\text{displeasing}} = 5.16$ ,  $F(1, 96) = 1.04$ ,  $p = .310$ ). However, there was a significant difference in aesthetic appeal between the groups ( $M_{\text{pleasing}} = 3.53$  vs.  $M_{\text{displeasing}} = 2.01$ ,  $F(1, 96) = 28.38$ ,  $p < .0005$ ) and between the individual sneakers ( $M_{\text{pleasing}} = 3.67$  vs.  $M_{\text{displeasing}} = 1.74$ ,  $F(1, 96) = 44.66$ ,  $p < .0005$ ). We thus concluded that the stimuli were suitable for the main study.

#### 3.4.2. Main study procedure

One hundred eleven male undergraduate students at a large Midwestern university ( $M_{\text{age}} = 21$ ) participated in this 2(group aesthetics: pleasing vs. displeasing)  $\times$  2(individual aesthetics: pleasing vs. displeasing) between-subjects online study. They were introduced to an on-campus nonprofit organization called H.A.W.K., which focuses on the empowerment of disadvantaged boys through boxing and other sports activities. After this introduction, participants viewed one of four ads featuring a visual and a call to volunteer for the organization. The visual depicted one of four piles of sneakers, with an aesthetically pleasing or displeasing individual sneaker among a group of pleasing or displeasing ones. Participants reported prosocial intent on the same six seven-point scales ( $\alpha = 0.96$ ) used in Study 1b (adapted to the H.A.W.K. organization). Next, participants reported evoked empathy on three seven-point scale items ( $\alpha = 0.94$ ) adapted from Bagozzi and Moore (1994) and Basil et al. (2008): *The ad makes me empathize with the kids supported by H.A.W.K./Looking at the ad, I feel I can better understand the condition of these kids/I feel I can 'get into the shoes' of these kids.*

### 3.4.3. Results and discussion

**3.4.3.1. Prosocial intent.** Two-way ANOVA revealed a significant group aesthetics  $\times$  individual aesthetics interaction in their influence on prosocial intent ( $F(1, 107) = 5.47$ ,  $p = .021$ ). Planned contrasts showed that when the individual object was aesthetically displeasing, prosocial intent was equally low for the pleasing ( $M = 2.99$ ) and the displeasing group ( $M = 2.63$ ,  $F(1, 107) = 1.09$ ,  $p = .298$ ). However, when the individual object was aesthetically pleasing, prosocial intent was significantly higher for the displeasing group ( $M = 4.24$ ) than for the pleasing group ( $M = 3.32$ ,  $F(1, 107) = 12.47$ ,  $p = .001$ ). See Fig. 2. These results support hypothesis 1.

**3.4.3.2. Empathy.** A similar ANOVA on empathy revealed a significant interaction ( $F(1, 107) = 7.45$ ,  $p = .007$ ). Planned contrasts showed that when the individual object was aesthetically displeasing, empathy was lower for the pleasing ( $M = 3.22$ ) versus displeasing group ( $M = 3.57$ ,  $F(1, 107) = 7.45$ ,  $p = .007$ ). When the individual object was aesthetically pleasing, empathy was higher for the displeasing group ( $M = 5.15$ ) than for the pleasing group ( $M = 3.76$ ,  $F(1, 107) = 11.03$ ,  $p < .0005$ ).

**3.4.3.3. Mediation analysis.** To test the mediating role of empathy in the influence of group and individual aesthetics on prosocial intent, we employed PROCESS Model 8 (Hayes, 2013), with 5000 resamples, which revealed a significant indirect effect of the highest-order interaction ( $B = 0.505$ ,  $SE = 0.068$ , 95% CI: [0.371, 0.639]), indicating mediation. Conditional indirect effects indicated that empathy mediated when the individual was pleasing ( $B = -0.797$ ,  $SE = 0.248$ , 95% CI: [-1.384, -0.358]), but not when the individual was displeasing ( $B = -0.273$ ,  $SE = 0.250$ , 95% CI: [-0.796, 0.216]). These results support hypothesis 2.

The findings of Study 2 demonstrated the moderating role of individual aesthetics (H1), and showed that the effect on prosocial intent is mediated by empathy (H2). The following set of studies was designed to implicate the two hypothesized antecedents of empathy, namely, identification with and perceived need of the intended recipient of the prosocial behavior.

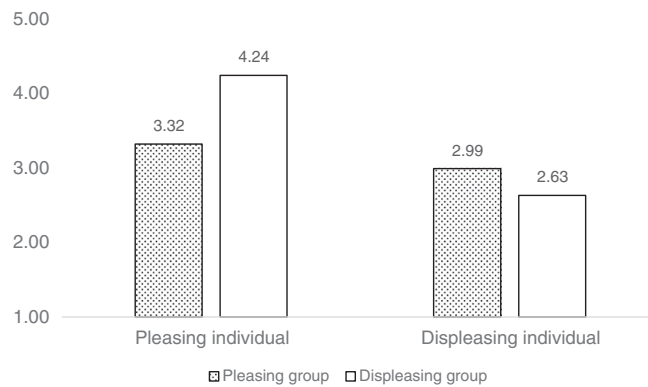


Fig. 2. The Effect of Individual and Group Aesthetics on Prosocial Intent (Study 2).

### 3.5. Study 3a

Study 3a was designed to demonstrate the full theorized process: Empathy explains the influence of the visual on prosocial intent through increased identification with and perceived need of the intended recipient. In addition, this study extends the type of stimuli to human faces, which may increase empathy and identification (Cole, 2001; Iacoboni, 2007), and which is managerially important given the common use of human presenters in visuals for prosocial campaigns. Theoretically, the use of human images can further help distinguish between aesthetics and functionality, as an aesthetically displeasing face is not necessarily a dysfunctional one. Before testing the full process, a pre-study was designed to test the identification and perceived need encouraged by the individuals and groups to be used as stimuli in the main study.

#### 3.5.1. Pre-Study Procedure

Two hundred three adult participants from Mechanical Turk (56% male,  $M_{\text{age}} = 36$ ) viewed ads for a charitable organization in a 2(visual element: group vs. individual)  $\times$  2(aesthetics: pleasing vs. displeasing) between-subjects experiment.<sup>2</sup> To gauge identification, participants reported the extent to which they *identify with* and *feel similar to* the beneficiaries of the charity on 7-point scales (1 = Not at all, 7 = Definitely;  $r = 0.74$ ). To measure perceived need, participants reported how *vulnerable* the beneficiaries are and how *severe* their state is (1 = Not at all vulnerable/severe, 7 = Extremely vulnerable/severe;  $r = 0.73$ ). As a manipulation check, participants reported how aesthetic the ad was (1 = Not at all, 7 = Extremely).

#### 3.5.2. Pre-study results

**3.5.2.1. Manipulation check.** An ANOVA with visual element and aesthetics as the independent variables revealed a successful manipulation, with only a main effect of aesthetics ( $M_{\text{pleasing}} = 4.17$  vs.  $M_{\text{displeasing}} = 2.96$ ,  $F(1, 199) = 28.84$ ,  $p < .0005$ ).

**3.5.2.2. Identification.** A similar ANOVA on identification revealed a main effect of visual element ( $M_{\text{group}} = 3.24$  vs.  $M_{\text{individual}} = 3.81$ ,  $F(1, 199) = 5.20$ ,  $p = .024$ ), a main effect of aesthetics ( $M_{\text{pleasing}} = 4.27$  vs.  $M_{\text{displeasing}} = 2.75$ ,  $F(1, 199) = 39.38$ ,  $p < .0005$ ), and a visual element  $\times$  aesthetics interaction ( $M_{\text{group, pleasing}} = 3.74$  vs.  $M_{\text{individual, pleasing}} = 4.81$  vs.  $M_{\text{group, displeasing}} = 2.73$  vs.  $M_{\text{individual, displeasing}} = 2.77$ ,  $F(1, 199) = 4.48$ ,  $p = .035$ ). Post-hoc analysis revealed that both pleasing conditions were more effective than both displeasing conditions in eliciting identification, whereas the individual pleasing condition was more effective than the group pleasing condition ( $ps < 0.05$ ). There were no other significant effects. These results support our expectations that both aesthetic appeal and isolated individuals elicit identification, with the strongest identification therefore arising from aesthetically pleasing individuals.

**3.5.2.3. Perceived need.** A similar ANOVA on perceived need revealed only a main effect of aesthetics ( $M_{\text{pleasing}} = 4.60$  vs.  $M_{\text{displeasing}} = 5.37$ ,  $F(1, 199) = 19.67$ ,  $p < .0005$ ). This result conforms to our expectation that perceived need is determined by the overall impression of aesthetic appeal among visual elements in the stimulus; recall that in this study, both displeasing conditions included only displeasing elements, so in this case our theory does not predict a difference between a group and an individual in terms of perceived need.

#### 3.5.3. Main study procedure

One hundred twenty undergraduates (51% male) at a large East-Coast university participated in a 2(group aesthetics: pleasing vs. displeasing)  $\times$  2(individual aesthetics: pleasing vs. displeasing) between-subjects lab experiment. Participants were handed an ad for the charitable organization Habitat for Humanity. Depending on randomly assigned condition, they viewed one of four ads,

<sup>2</sup> To protect the anonymity of people presented as aesthetically pleasing versus displeasing, the stimuli for this and all studies containing human faces are not included in the appendix but they are available from the authors upon request.



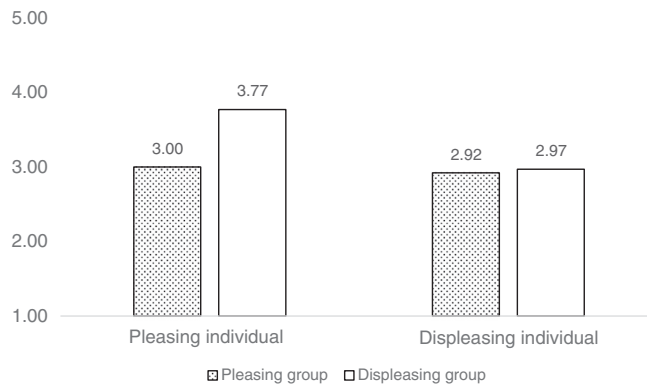


Fig. 3. The Effect of Individual and Group Aesthetics on Prosocial Intent (Study 3a).

which were identical except for the visual depicting five women: an aesthetically pleasing face among a group of displeasing ones, a displeasing face among a group of pleasing ones, a pleasing face among a group of pleasing ones, or a displeasing face among a group of displeasing ones. All females were of similar age, although physically attractive individuals often appear youthful.<sup>3</sup>

Participants reported prosocial intent on two seven-point items (1 = Not at all likely, 7 = Very likely): *How likely would you be to donate to this cause if you had received this solicitation?*; *How likely would you be to volunteer for this charity?* ( $r = 0.39$ ). Next, participants rated their empathy toward the homeless on three items (1 = Not at all, 7 = Definitely): *The ad makes me empathize with people who have become homeless*; *Seeing this ad, I can imagine being 'in the shoes' of someone who has become homeless*; *This ad helps me understand what it must feel like to become homeless*. ( $\alpha = 0.75$ ). Participants then reported their identification with homeless people on two items (1 = Not at all, 7 = Definitely): *Seeing this ad, I can identify with/feel similar to people who have become homeless* ( $r = 0.66$ ). Participants next reported their perceived need on two items: *How severe is the need of the people who have become homeless?* (1 = Not at all severe, 7 = The most severe imaginable); *How vulnerable are the people who have become homeless?* (1 = Not at all vulnerable, 7 = The most vulnerable imaginable;  $r = 0.74$ ).

### 3.5.4. Results and discussion

Before proceeding with the full model, planned contrast analysis showed that the ad with the pleasing-individual-displeasing-group visual elicited significantly higher prosocial intent, compared with the other three ads ( $p < 0.02$ ). Fig. 3 portrays these results, which support hypothesis 1.

To examine the complete process we used AMOS structural equation model (SEM) software. See Fig. 1. Our model included empathy and its two antecedents, identification and need, which are linked to individual and group aesthetics in the ad. The model showed good properties (CFI = 0.914, NFI = 0.834, RMSEA = 0.085). The effect of individual aesthetics on identification was significant and positive ( $B = 1.12, p < .0005$ ), whereas the impact of group aesthetics on perceived need was significant and negative ( $B = -1.09, p < .0005$ ). Both identification and perceived need had a positive influence on empathy ( $B = 0.72, p < .0005$  and  $B = 0.41, p < .0005$ , respectively). Finally, empathy showed a positive effect on prosocial intent ( $B = 0.58, p < .0005$ ). These results support hypotheses 2 and 3.<sup>4</sup>

The results of Study 3a replicated those of Study 2 and demonstrated the mediating role of empathy and its antecedents: identification and perceived need. As Study 3a utilized human faces with no apparent functionality issues as stimuli, it does not seem feasible that the results were driven by error signals or differences in perceived functionality.

### 3.6. Study 3b

Study 3b was designed to demonstrate the full theorized process, thus replicating Study 3a, with different, error-free stimuli and with a different prosocial cause.

#### 3.6.1. Procedure

Two hundred nine undergraduates (54% male) participated in a 2(group aesthetics: pleasing vs. displeasing)  $\times$  2(individual aesthetics: pleasing vs. displeasing) between-subjects lab experiment. They were each shown one of four ads similar to the ones used in Study 3a, except that the visuals depicted fish rather than humans and the charity was Global Witness, an organization described as helping to protect victims of poverty, environmental damage, and human rights abuses. See Appendix C for stimuli. Participants responded to the same questions as in Study 3a, albeit pertaining to victims of poverty, environmental damage,

<sup>3</sup> See footnote 1.

<sup>4</sup> As identification can be viewed as conceptually close to empathy, we ran two SEM measurement models to examine whether a model with empathy and its two antecedents, identification and perceived need, is better than a model involving only empathy and perceived need. Indeed, the first model's properties were superior to the latter model's properties (CFI = 0.978 > 0.958, NFI = 0.950 > 0.943, and RMSEA = 0.077 < 0.140), suggesting that there is both conceptual and empirical reason to separate empathy from identification.

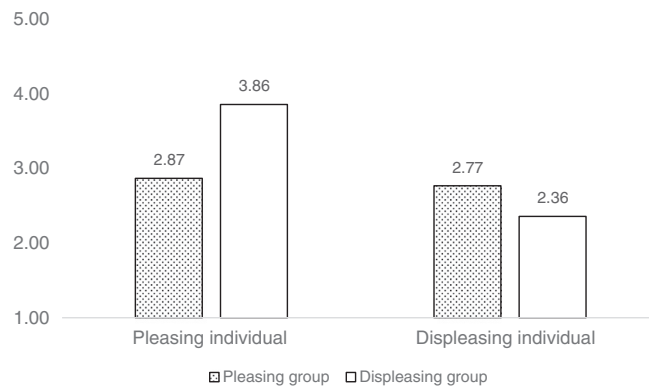


Fig. 4. The Effect of Individual and Group Aesthetics on Prosocial Intent (Study 3b).

and human rights abuses, to fit with the relevant charity: prosocial intent ( $r = 0.80$ ), empathy ( $\alpha = 0.97$ ), identification ( $r = 0.81$ ), and perceived need ( $r = 0.88$ ).

### 3.6.2. Results and discussion

Before proceeding with the full model, planned contrasts revealed that the ad with the pleasing-individual-displeasing-group visual elicited significantly higher prosocial intent, compared with the other three ads ( $p$ 's < 0.005). Fig. 4 portrays these results, which support hypothesis 1.

To examine the complete process, we used the SEM software AMOS. See Fig. 1. Our model included empathy and its two antecedents, which are linked to individual and group aesthetics in the ad. The model showed good properties (CFI = 0.984, NFI = 0.967, RMSEA = 0.066). The effect of individual aesthetics on identification was significant and positive ( $B = 0.666$ ,  $p < .0005$ ), whereas the impact of group aesthetics on perceived need was significant and negative ( $B = -0.593$ ,  $p = .001$ ). Both identification and perceived need had a positive influence on empathy ( $B = 0.842$ ,  $p < .0005$  and  $B = 0.208$ ,  $p < .0005$ , respectively). Finally, empathy showed a positive effect on prosocial intent ( $B = 1.615$ ,  $p < .0005$ ). These results support hypotheses 2 and 3.

These results replicated those from Study 3a, this time using fish as the visual elements in the ads. Nonetheless, two questions arise that have not yet been tested in the main studies: First, do the effects—especially the effect on identification—rely on the aesthetic contrast between a pleasing individual and a displeasing group, or would a pleasing individual alone have the same effect? Second, how do the effects stemming from an ad with the combined visual compare with those stemming from an ad without any visual at all? The following post-study was designed to investigate these questions.

## 3.7. Post-Study 1

### 3.7.1. Procedure

One hundred fifty-two adults (51% male,  $M_{\text{age}} = 36$ ) participated in a three-condition between-subjects experiment via Amazon's Mechanical Turk for a small payment. Participants viewed one of three ads (adopted from Study 3a) featuring either a pleasing individual among a displeasing group, a pleasing individual alone, or no visual at all.<sup>5</sup> Using the same items as in Study 3a, participants reported prosocial intent ( $r = 0.59$ ), empathy ( $\alpha = 0.91$ ), identification ( $r = 0.83$ ), and need ( $r = 0.89$ ).

### 3.7.2. Results and discussion

ANOVAs revealed a main effect on prosocial intent ( $F(2, 149) = 10.63$ ,  $p < .0005$ ), empathy ( $F(2, 149) = 18.20$ ,  $p < .0005$ ), identification ( $F(2, 149) = 6.36$ ,  $p = .002$ ), and perceived need ( $F(2, 149) = 5.51$ ,  $p = .005$ ). See Table 1 for means.

Other than for empathy, the results did not reveal differences between the ad with an individual and the ad with no visual, although one should not over-interpret a null effect, especially given the ample prior research that demonstrates favorable effects stemming from pleasing individuals. More importantly, as expected, the ad with a pleasing-individual-displeasing-group visual resulted in higher need, empathy, and prosocial intent than the other two ads, providing additional evidence of the favorable effects stemming from this combination of visual elements. Further, the results revealed the same pattern for identification. This latter finding suggests that aesthetic contrast may play a role in the observed effects. Given this finding, and because the presence of contrast between pleasing and displeasing elements is inherent in our theorizing, a final post-study was designed to further investigate the role of aesthetic contrast.

<sup>5</sup> See footnote 1.

**Table 1**  
Post-Study 1 means.

Condition	Intent	Empathy	Identification	Need
Mixed	5.05 <sup>a</sup>	5.14 <sup>a</sup>	3.85 <sup>a</sup>	5.10 <sup>a</sup>
Individual	3.89 <sup>b</sup>	4.04 <sup>b</sup>	2.97 <sup>b</sup>	4.41 <sup>b</sup>
No Visual	3.70 <sup>b</sup>	3.13 <sup>c</sup>	2.64 <sup>b</sup>	4.01 <sup>b</sup>

Note: Mixed = pleasing individual, displeasing group. Within a column, different superscript letters indicates different means at  $p < .05$ .

### 3.8. Post-Study 2

#### 3.8.1. Procedure

Two hundred ten adults (57% male,  $M_{age} = 32$ ) participated in a three-condition between-subjects experiment via Amazon's Mechanical Turk for a small payment. They were each shown an ad for the same charity as in Study 3b with one of three visuals, featuring a single aesthetically pleasing fish and a group of five displeasing ones, two equal groups of three pleasing and three displeasing fish, or a single pleasing and a single displeasing fish. See Appendix D for stimuli. The rationale for this manipulation was twofold: First, it enabled us to test whether, in a visual with a mix of pleasing and displeasing elements, the need conveyed is highest when the majority of elements is displeasing. Second, it enabled us to probe for the potential role of contrast between pleasing and displeasing elements.

After viewing the ad, participants responded to the same questions as in Study 3b. Participants reported prosocial intent ( $r = 0.86$ ), empathy ( $\alpha = 0.97$ ), identification ( $r = 0.94$ ), and perceived need ( $r = 0.89$ ). Additionally, to check that perceived contrast was similar between conditions, participants reported the extent to which the ad emphasized a contrast (i.e., comparing objects that are different.) As a final behavioral measure, participants were asked to click on a link if they wanted more information about the charity and wanted to find out how they can help.

#### 3.8.2. Results and discussion

An ANOVA revealed no differences in perceived contrast across the three conditions ( $F(2, 207) = 2.20, p = .113$ ), whereas similar ANOVAs revealed a main effect on prosocial intent ( $F(2, 207) = 12.73, p < .0005$ ), empathy ( $F(2, 207) = 8.27, p < .0005$ ), identification ( $F(2, 207) = 8.27, p < .0005$ ), and perceived need ( $F(2, 207) = 10.77, p < .0005$ ). See Table 2 for means. Finally, a higher percentage of participants clicked on the link for more information after viewing the visual with a pleasing individual and a displeasing group (90.4%) as compared with the visual with two groups (47.7%) or two individuals (52.1%;  $\chi^2(2) = 34.12, p < .0005$ ).

These results rule out the notion that aesthetic contrast suffices to explain our documented effects. In this study, all conditions entailed similar aesthetic contrast, but the results still revealed that the condition with a pleasing individual and a displeasing group resulted in higher need, empathy, and prosocial intent than the other two conditions. Identification is lower only in the condition with no individual singled out, but in line with our theorization, empathy and prosocial intent also rely on perceived need. These results do not rule out a role for aesthetic contrast: People are likely to identify with an individual, and aesthetic contrast can single out such an individual, whereas if that individual is "hidden" in a pleasing group, then that individual is not singled out. It should also be noted that although there was not a significant difference in identification between the pleasing-individual-displeasing-group condition and the pleasing-individual-displeasing-individual condition, that difference was approaching significance (and would in fact be significant if planned contrasts rather than post-hoc analysis were used to analyze the data). This observation suggests an added nuance: that an individual may stand out more starkly when contrasted against a group rather than contrasted against another individual.

## 4. General Discussion

The current research is one of the few investigations into the role of aesthetics in prosocial marketing. In this research, we propose and demonstrate the effectiveness of visuals that simultaneously display aesthetically pleasing individuals and aesthetically displeasing groups. Further, we show when and why these elements are effective: Aesthetically pleasing individuals are effective because they encourage identification, whereas displeasing groups are effective because they evoke a sense of need. Both identification and perceived need elicit empathy and consequently encourage prosocial behavior.

**Table 2**  
Post-Study 2 Means.

Condition	Contrast	Intent	Empathy	Identification	Need
Mixed	3.95 <sup>a</sup>	4.01 <sup>a</sup>	3.66 <sup>a</sup>	3.40 <sup>a</sup>	4.20 <sup>a</sup>
Groups	4.33 <sup>a</sup>	2.39 <sup>b</sup>	2.35 <sup>b</sup>	2.09 <sup>b</sup>	2.95 <sup>b</sup>
Individuals	3.64 <sup>a</sup>	3.12 <sup>b</sup>	2.90 <sup>b</sup>	2.75 <sup>a</sup>	3.27 <sup>b</sup>

Note: Mixed = one pleasing, five displeasing; Groups = three pleasing, three displeasing; Individuals = one pleasing, one displeasing. Within a column, different superscripts indicates different means at  $p < .05$  using post-hoc analysis.

Our empirical investigation consisted of five experiments in the field, lab, and online, as well as a pre-study and two post-studies. Study 1a demonstrated our main effect (i.e., the favorable effect of displeasing group aesthetics on prosocial behavior, given an aesthetically pleasing individual) in a field experiment with actual donations, and Study 1b replicated it in an online setting. Study 2 replicated these results while also demonstrating the moderating role of individual aesthetics and the mediating role of empathy. Study 3a and 3b provided evidence for the full underlying process, including the antecedents of empathy: identification and perceived need. Finally, whereas a pre-study clarified the roles of individuals and groups in eliciting identification and perceived need, two post-studies shed additional light on the potential role of contrast. The latter results indicated that although contrast could not explain our findings, it could nonetheless play a role (e.g., in isolating an individual from a group).

#### 4.1. Theoretical and managerial implications

Although there is much evidence that aesthetic appeals play a positive role in consumption contexts (Bloch, 1995; Hoegg et al., 2010; Townsend & Sood, 2012), prior research on the role of aesthetics in a prosocial marketing context is scarce and offers mixed findings (Townsend, 2017). We argue that a key reason for this is consumers' emotional response to aesthetic displays. The pleasure associated with aesthetic appeal is effective in promoting consumption, but empathy is more likely than pleasure to drive prosocial behavior (Bagozzi & Moore, 1994). The current research helps clarify the different roles of aesthetics within these two domains, and it also helps resolve apparent discrepancies in prior findings within the latter domain: We show that both aesthetically pleasing and aesthetically displeasing displays may contribute to empathy.

Our theoretical conceptualization is based on two important notions: First, pleasure is not the inevitable or only outcome of aesthetic experience; this experience may also result in other feelings, such as empathy. Second, the influence of aesthetics is not as simple as the pleasing being good or the displeasing being bad; aesthetics can entail a complex experience, as illustrated in the current research by visuals featuring the combination of pleasing and displeasing elements.

This research contributes to the conceptualization of empathy by identifying and investigating its two antecedents: identification and perceived need. We propose and find that aesthetically pleasing individuals are effective because they encourage identification, whereas displeasing groups are effective because they elicit a sense of need. This exposition contributes to the empathy literature (e.g., Bagozzi & Moore, 1994; Basil et al., 2008; Batson & Powell, 2003) while also offering practical insights into the role of empathy in prosocial marketing contexts.

The demonstrated effects have clear implications for marketers, nonprofits, and public policy makers who face challenges in motivating prosocial behavior (Duclos & Barasch, 2014; Kristofferson et al., 2014). Many prosocial marketing ads highlight only aesthetically pleasing visuals or only aesthetically displeasing ones. Perhaps this corresponds with social marketers' belief that positive behavior can be encouraged via the beauty-is-good effect (Eagly et al., 1991; Langlois et al., 2000) or by emphasizing the weakness of those in need (Nickols & Nielsen, 2011; Stone & Potton, 2014). Across our studies, the appeals relying on only aesthetically pleasing or only aesthetically displeasing visuals resulted in lower prosocial intent and behavior, relative to combined visuals. Thus, a clear recommendation for practice would be to consider visuals with an aesthetic structure juxtaposing a pleasing individual with a displeasing group.

The use of human and non-human objects in our experiments bears important implications for the choice of visuals in prosocial marketing messages, from both a theoretical and a practical standpoint. Whereas prior work in this vein has relied on human stimuli, the current work shows that the influence of aesthetics on prosocial behavior generalizes beyond human attractiveness. By using objects, one may also avoid potential uncontrolled influences stemming from differences between individual humans (i.e., idiosyncratic physical features), while nonetheless evoking aesthetic responses similar to the ones arising from depictions of humans. Previous research suggests that people tend to anthropomorphize objects, allowing them to interpret metaphorically presented objects as humans (Aggarwal & McGill, 2007; Lakoff & Johnson, 1980). In a prosocial marketing context (e.g., a flier for a specific cause), we further expect that viewers can typically interpret who or what the objects represent, rather than relying on a literal interpretation (Scott, 1994), and that depictions of objects can therefore encourage empathy with the target of the prosocial cause. Consequently, marketers can use the aesthetic-combination approach whether or not they depict actual humans in the message, as demonstrated by the use of cups, sneakers, and fish in some of the current studies. We did not systematically test for participants' potential confusion or related negative responses to the experimental stimuli, although future research may do more to uncover such limitations. Whereas few observers would be surprised when children watching cartoons empathize with inanimate objects that magically spring to life, adults could be more critical in this regard, especially when the context is serious rather than whimsical. Further, such cartoons typically provide cues to aid anthropomorphization, such as features resembling eyes and a mouth. When consumers have been shown to anthropomorphize objects in the marketplace, those objects have typically included similar markers, such as an automobile's front grille appearing to smile or frown (Aggarwal & McGill, 2007). In the current work, ordinary cups and sneakers were presented, without features emulating facial lineaments, so the mental leap between depicted object and target of the prosocial cause appears larger. Whereas this finding represents an exploratory contribution of the current research, future work may systematically investigate when, how, and why such mental leaps occur.

When attempting to evoke empathy in a target audience, it may also behoove marketers to keep in mind the mechanisms of identification and need. Activating both mechanisms simultaneously may be challenging, but the current findings indicate that doing so can be particularly effective in generating empathy and encouraging prosocial behavior.

#### 4.2. Limitations and future research directions

Future research could do more to investigate the boundaries and scope of the role of aesthetics in prosocial contexts. For instance, an aesthetically pleasing individual depicted in a displeasing environment (e.g., a polluted landscape, or a war-torn or poverty-stricken

cityscape) might have an effect on prosocial behavior similar to one stemming from a pleasing individual among a displeasing group. In other words, the current findings may extend to other forms of aesthetic contrast and hence also be more broadly relevant to prosocial marketing efforts than a narrow interpretation of the current findings might suggest. On the other hand, aesthetically displeasing groups are not necessarily needy, as illustrated by stereotypical movie villains, who are often simultaneously strong and aesthetically displeasing and who seldom evoke perceived need or empathy. Further, an individual or group might display a mixture of aesthetics or other visual aspects. For example, a cute child (eliciting identification) could be depicted with bloody limbs or with clothes in shreds (suggesting need). Our theory does not take such nuances into consideration. Future research could also do more to explore changes in consumer response that may occur as a result of changes in numbers of visual elements. For example, whereas our results indicate that an aesthetically pleasing individual elicits identification, it is possible that a small pleasing group could similarly do so if juxtaposed with a much larger displeasing group. A related question is whether increasing the displeasing group size would further increase the perceived need. An additional complication might arise if groups consist of diverse objects. In our studies, the constellations of individuals and groups consisted of the same visual elements (e.g., faces, fish, or cups). If visuals were instead composed of diverse objects (e.g., a group consisting of faces, fish, and cups), then this might confuse viewers and complicate their responses.

Future work could also explore similar influences of aesthetics in other domains than prosocial behavior and with other stimuli than visual images. For example, literature on the persuasiveness of textual aesthetics (e.g., Kronrod & Danziger, 2013; Sopory & Dillard, 2002) considers only its effects on pleasure and processing depth, but it seems feasible that textual aesthetics may influence empathy as well. If so, the current findings could help broaden the scope of research in textual as well as visual aesthetics. It may also be fruitful to examine aesthetic constellations across sensory modalities, such as with combinations of music and visuals (Hagtvedt & Brasel, 2016). For example, one might envision an aesthetically pleasing visual engulfed in a cacophony of displeasing sounds, or a single instrument playing beautifully alongside a collection of gruesome images.

In general, within the realm of aesthetics, there is a dearth of research on how people respond to combined influences. In the marketplace, however, isolated aesthetic cues are the exception rather than the rule. A great deal of research is needed to explore how various elements might interact to encourage prosocial behavior and other marketing outcomes. However, conducting such research can be complicated. In most domains, consumer research tends to be focused on influences arising from specific, isolated stimuli. Under many circumstances, this approach reflects good experimental design, although isolated stimuli are the exception rather than the norm in the marketplace. In the current context, for example, it would seem reasonable for researchers to focus exclusively on aesthetically pleasing versus displeasing visuals, which would facilitate clear hypotheses and clean manipulations. However, it appears that a specific combination elicits a particularly favorable response in terms of empathy and prosocial behavior, and to investigate that phenomenon we needed to combine pleasing and displeasing objects in the same visual, although doing so complicated experimental design as well as theoretical exposition to some extent. Similarly, future research may need to balance the tradeoffs between clean experimental design, stimuli development, and relevance to real marketplace phenomena.

A related area in need of further investigation pertains to how a consumer response to images of objects translates to empathy for human beneficiaries of prosocial behavior. The current work relied on empathy theory in aesthetics, but to the extent that that theory is based on philosophy and anecdotal evidence, the present research may be viewed as one of the preliminary efforts to subject the theory to scientific scrutiny. The current studies did not go far enough in ruling out potential confounding influences or in fully elucidating how the object-to-person leap occurs. Notably, we do not believe that consumers are necessarily aware of how specific elements of visual stimuli influence their identification and empathy, so providing direct evidence of this process will be challenging. Direct measures, such as eye-tracking combined with brain scans, could conceivably be employed, but this would entail practical hurdles; brain scans tend to involve shortcomings in terms of both timing precision and interpretation of scan results.

Future work could also investigate differences in aesthetic response between customer segments. For example, gender is a common basis for segmentation in prosocial organizations because of its relevance to empathic behavior; women tend to be more empathic than men (Willer, Wimer, & Owens, 2015). We found no support for a moderating effect of gender in our studies, but future work may more closely examine gender differences, as well as other individual and cultural differences, in consumer responses to visuals in general and to aesthetic appeals in specific.

Future research might also expand on the current findings by providing insights into the potential roles of specific formal qualities in visuals. For example, some shapes may elicit sadness, some colors may inspire hope, and various combinations may produce emotional and behavioral responses that have not yet been documented. Prior research indicates that emotions such as sadness enhance emotional contagion among viewers, thereby increasing empathy and prosocial behavior (Small & Verrochi, 2009). Future work may consider the implications of combining various aesthetic structures with emotionally laden depictions. Further, prior research has focused on a number of other motivations for prosocial behavior, including what one might broadly categorize as egoistic and altruistic motivations (Batson & Shaw, 1991; Cialdini, Brown, Lewis, Luce, & Neuberg, 1997; Dunn, Aknin, & Norton, 2008), as well as emotions such as guilt (Hagtvedt & Patrick, 2016). Future research could explore whether and how aesthetic manipulations affect any of these documented motivations.

Another viable avenue for investigation is the influence of aesthetic appeal on helping behavior toward the self. The current work emphasized the role of empathy, which is central in prosocial behavior but which may be less relevant in self-help areas such as efforts to improve nutrition or reduce smoking. Perhaps there are aesthetic displays that can encourage willpower or discipline. Alternatively, there might be aesthetic displays that impair self-control, which might hinder self-improvement but encourage donations to charity (Fennis, Janssen, & Vohs, 2009). In general, mechanisms with potentially conflicting outcomes for the self versus others pose dilemmas of both a moral and a practical nature. Further, research in this vein may illuminate interactions with other influences, such as the use of social norms to promote prosocial behavior (White & Simpson, 2013). For instance, a complex visual display might deplete processing resources, which may in turn influence consumer responses to normative appeals. Prior research has also

demonstrated that different mindsets affect consumers' tendency to engage in prosocial behavior (White, MacDonnell, & Dahl, 2011). To the extent that aesthetics can influence mindsets, this also remains a viable topic for further exploration.

## Appendix A

### A.1 Stimuli for Study 1a



Pleasing individual, displeasing group



Pleasing individual, pleasing group

### A.2 Stimuli for Study 1b

 **The Reading People**



**Help one person learn to read,  
A whole generation will succeed**

Like us at: <https://www.facebook.com/pages/The-Reading-People/203153203211>  
Join us at: <http://therreadingpeople.wordpress.com/>

Pleasing individual, displeasing group

# The Reading People



**Help one person learn to read,  
A whole generation will succeed**

Like us at: <https://www.facebook.com/pages/The-Reading-People/203153203211>  
Join us at: <http://theresolvingpeople.wmepress.com/>

Pleasing individual, pleasing group

## Appendix B. Stimuli for Study 2



Pleasing individual, displeasing group



Displeasing individual, pleasing group



Pleasing individual, pleasing group



Displeasing individual, displeasing group

**Appendix C. Stimuli for Study 3b**



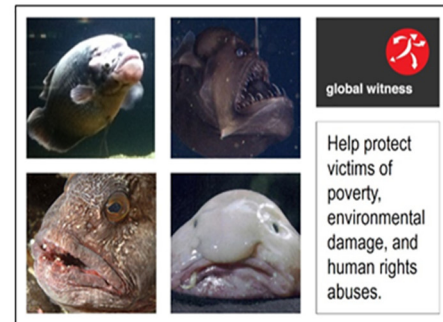
Pleasing individual, displeasing group



Displeasing individual, pleasing group

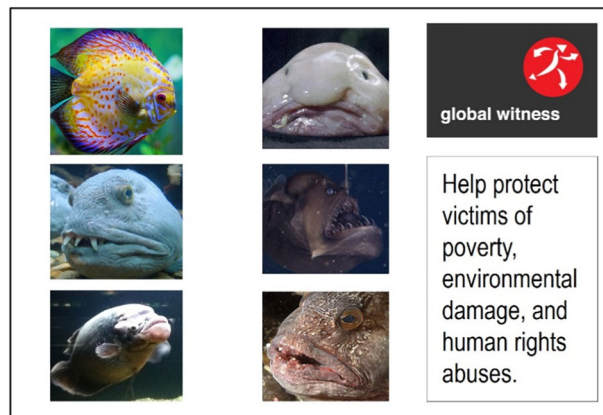


Pleasing individual, pleasing group



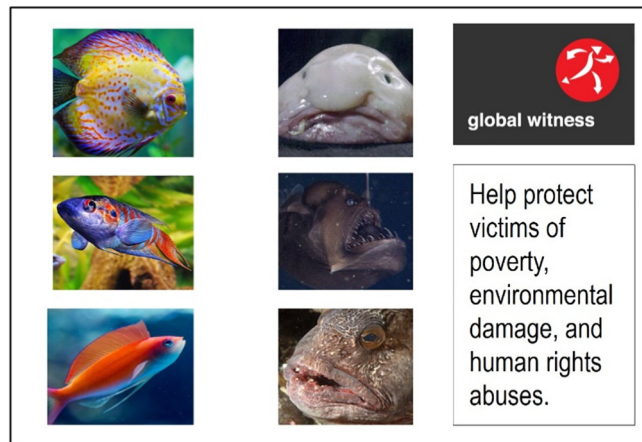
Displeasing individual, displeasing group

**Appendix D. Stimuli for Post-Study 2**



One pleasing, five displeasing





Three pleasing, three displeasing



One pleasing, one displeasing

## Appendix E. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ijresmar.2018.09.003>.

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