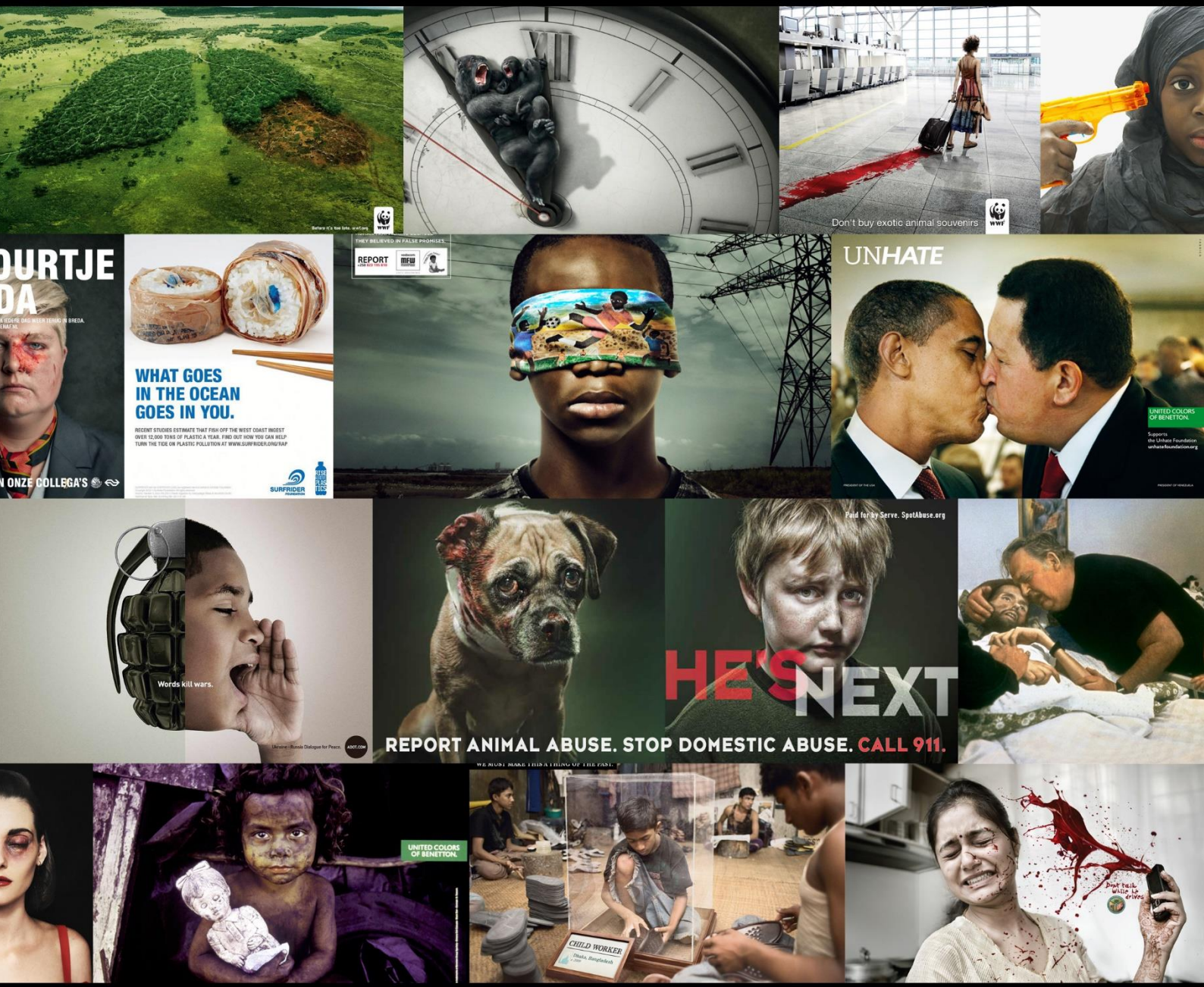
Warning

The following images are shocking in nature and might be disturbing to some viewers.

Charity SHOCK Avertising: Does it pay to SHOCK in a Philanthropic context?



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Abstract

While shock advertising has become a very popular advertising tactic in recent decades, its effectiveness has yet to be proven on a scientific basis. This study wondered whether philanthropic (charity) advertisements can benefit from the tactic of shock. Furthermore, it looked at the role of susceptibility; does it matter whether or not the harm the charity is trying to combat can potentially affect the viewer of the advertisement. The main dependent variables we were interested in were attention, memory and donating behavior. Largely on the basis of the fear appeal literature, we hypothesized a positive effect of shock for insusceptible respondents and a negative effect of shock for susceptible respondents. More specifically, we expected shock to stimulate attention, memory and financial giving when respondents were not at risk, whereas we predicted an opposite effect to occur when viewers could potentially fall victim to the threat portrayed in the shock advertisement. The study employs a 3x2x2 between-subjects experimental design. Advertisements of three levels of shockingness (no shock, medium shock and high shock) were constructed within two charitable contexts (child/animal abuse/cruelty). Susceptibility also encompassed two levels (parents vs. childless individuals, pet owners vs. petless individuals). The results indicate that shock can facilitate the attraction of attention, but has no effect on further processing nor on donating behavior. This might be due to several reasons. Perhaps the stimuli were not shocking enough. But possibly, because of the abundance of gruesome imagery in the media today, people have become desensitized to shocking stimuli. The effect of shock was not dependent on respondents' susceptibility level. Most likely this was because of the fact that not the participants themselves but their pets/children were at risk; the viewers of the advertisements were only at risk in an indirect manner. Furthermore, the participants might not have perceived the threat as highly relevant.
While shock did not appear a good predictor of donating behavior, several other variables did. Parents donated more money than people without children, because they deemed child abuse a more important cause and probably also because they have more money than younger individuals. Furthermore, the effect of shock was fully mediated by arousal and the more people had donated in the last 12 months, the more likely they were to contribute in this study.
In Sum, while shock can capture people's attention, it takes more to keep them interested and persuade them to make a donation. Several other *independent* variables do influence donating behavior. However these variables are not easy to manipulate. Shock might still have the potential to make a difference, however, not likely under conditions similar to those employed in this study.

Content

1. Introduction

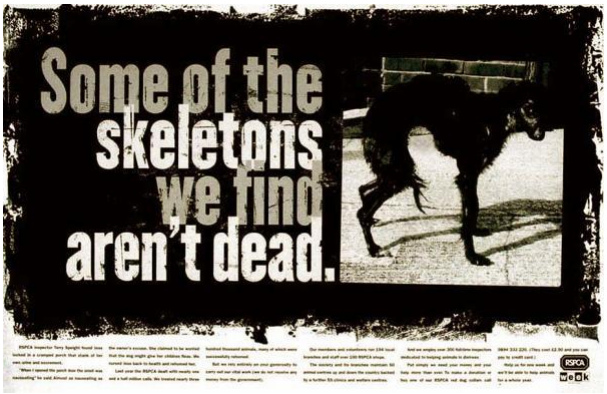
Over the last decade NPOs (nonprofit organizations) have demonstrated an increase in the utilization of shocking content in advertising (Parry, Jones, Stern & Robinson, 2013). For example, charitable organizations in the UK like the National Society for the Prevention of Cruelty to Children and the Royal Society for the Prevention of Cruelty to Animals more frequently display shocking advertisements showing abused children and animal cruelty in an attempt to raise public awareness (Parry et al., 2013)(Pictures 1 and 2). The US-based Breast Cancer Fund created a campaign using posters that resemble sexy lingerie advertisements on all aspects but one, mastectomy scars were revealed instead of breasts (Dahl, Frankenberger & Manchanda, 2003)(Picture 3). Providing some examples from The Netherlands, The Donkey Sanctuary launched a commercial showing donkeys performing forced labor and the severe physical consequences of years of exploitation (The Donkey Sanctuary, 2013) and Samenwerkende Hulporganisaties did not shy away from making use of footage of some of the areas and people worst hit by typhoon Haiyan (Samenwerkende Hulporganisaties, 2013)(Pictures 4 and 5).

Besides the growth in actual offensive advertisements, the development of this practice is also reflected by an increase in criticism/official complaints about advertisements (Christy, 2006; Waller, 2006). For example, a 2008 Barnardo's ad evoked nearly 500 complaints and an earlier campaign by the same organization, displaying a cockroach exiting a baby's body through his mouth, elicited 330 complaints (Parry et al., 2013)(Picture 6). The previously mentioned advertising materials by the Breast Cancer Fund were criticized by the media, one company even refused to place the posters (Dahl et al., 2003).

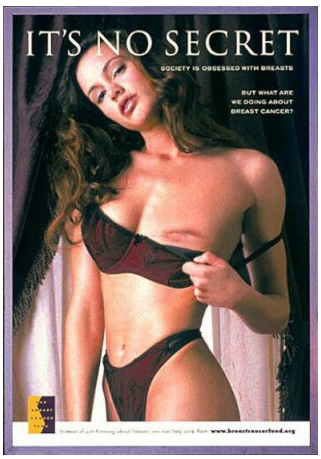
While taking note of 'the rise of shock advertising' (Parry et al, 2013) one of the first questions that comes to mind reads 'shock tactics have been widely adopted by charitable advertisers (Dahl et al., 2003), implying they strongly believe in the benefits of this practice, but are they also able to justify their heavy reliance on the principle?' In other words, does it ultimately pay to employ shock in philanthropic advertising? This is the problem, which solution this study aims to contribute to.

Picture 1. An NSPCC advertisement about child abuse (Sofii, 2010)

Picture 2. An RSPCA advertisement about animal cruelty (Coloribus, 1999)



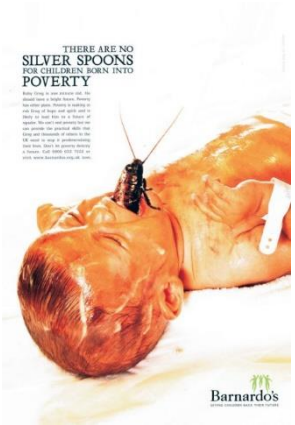
Picture 3. A poster by the Breast Cancer Fund displaying the physical consequences of breast amputation (Coloribus, 2000)



Picture 4. An image used by the Donkey Sanctuary in one of its commercials (The Donkey Sanctuary, 2012)

Picture 5. An advertisement by 'Samenwerkende Hulporganisaties' portraying a wounded boy sitting amongst the ruins left by hurricane Haiyan (Samenwerkende Hulporganisaties, 2013)

Picture 6. Barnardo's highly shocking 'cockroach baby' advertisement (BBC, 2003)



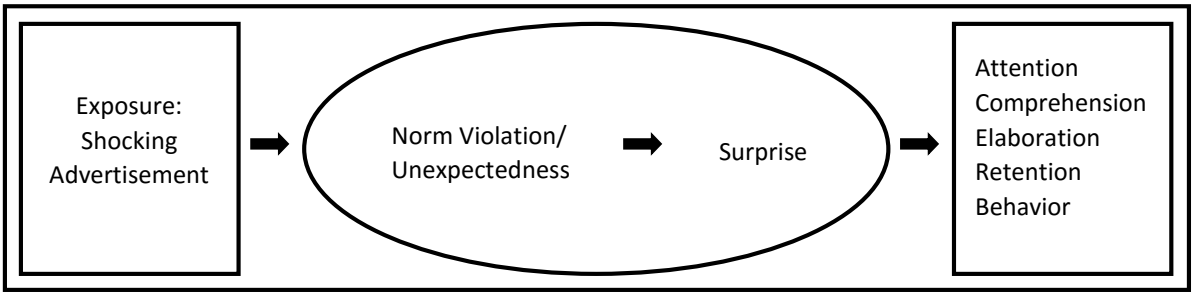
2. A definition of shock advertising

Shock(ing) advertising, or 'shockvertising' as Parry et al. (2013) termed it, is defined as ''an attempt to *surprise* an audience by deliberately *violating norms* for societal values and personal ideals'' (Dahl et al., 2003). Norm violations further concern ''transgression of law or custom (e.g., indecent sexual references, obscenity), breaches of a moral or social code (e.g., profanity, vulgarity), or things that outrage the moral or physical senses (e.g., gratuitous violence, disgusting images)'' (Dahl et al., 2003). Norms prescribe which behaviors are considered acceptable and which are not, and are used to evaluate objects, persons, actions and ideas. Regarded as a social object, advertising is appraised on the basis of norms. When an advertisement contradicts an established expectation or schema (such as a personal norm) - for instance, an advertisement may contain more nudity than an individual deems appropriate – it is considered shocking and causes surprise (Stiensmeier-Pelster, Martini & Reisenzein, 1995). Surprise is a crucial element of the process, because it draws attention to the unexpected stimulus, thereby initiating the processing of information. By drawing people's attention to an advertisement, surprise inspires further processing of advertising content (Dahl et al., 2003). Findings from Expectancy Disconfirmation Theory research support this notion; Pyszczynski and Greenberg (1981) show ''individuals engage in more thorough attributional processing (causal thinking) for unexpected events than they do for expected events''. Thus, surprise triggers individuals to try to comprehend the reason for their amazement, thereby sparking additional cognitive processing.

The same understanding – shocking stimuli motivate cognitive processing – is also upheld by models of advertising information processing (Dahl et al., 2003). According to these models, shocking content should elicit attention, stimulate message comprehension, elaboration and retention and eventually influence behavior.

On the basis of the reasoning above, Dahl et al. (2003) constructed a model of consumer reactions to shock advertisements (Figure 1). In an experimental setting, the authors presented each of their subjects with one of three posters (an information-, fear- or shock appeal) on condom-use and found support for their model: shocking stimuli can significantly affect attention, recall, recognition and behavior. The shock appeal produced superior outcomes regarding attention, recall and recognition and also caused a change in behavior to the same extent as the fear appeal.

Figure 1. A model of consumer reactions to shock appeals (Dahl et al., 2003)



3. Theory and Hypotheses

Research regarding shock appeals actually defined as such is scarce. Most of this research is descriptive, only providing knowledge about which broad types of content individuals consider shocking (Dahl et al., 2003). What's more, Dahl et al. (2003) mention that no academic literature covering responses to actual shock advertisements exists – except their own study -, and this observation appears to still be accurate today. However, this does not mean our reasoning will be solely based on Dahl et al.'s (2003) research, because methodologically, Dahl et al.'s study contains some serious limitations, of which we'll point out the most crucial ones. First off, their manipulation isn't very clean, considering for instance poster color, text placement and font, but more importantly, only their shocking poster contained a graphical image, the informational and fear posters are both text based. Secondly, Dahl et al. (2003) used a shocking *fear appeal* (meaning will be explained below) without sufficiently incorporating relevant literature. Therefore, we resort to an alternative field of research, to base our theoretical reasoning on; the fear appeal literature. Why this field can be considered the most relevant alternative to the shock advertising literature, will become apparent in the next paragraphs.

''Fear appeals are persuasive messages designed to *scare* people by describing the terrible things that will happen to them if they do not do what the message recommends'' (Witte, 1992). More than in any other type of ads, fear appeals are being used in social marketing advertisements (Jäger & Eisend, 2013). A definition of social marketing reads as follows; ''Social marketing employs marketing concepts to influence the voluntary behavior of target audiences to improve their personal welfare and that of the society to which they are a part'' (Shanahan & Hopkins, 2007). In practice, fear appeals are often ''used to promote such social objectives as safe driving, family planning, health awareness and antismoking messages'' (Shanahan & Hopkins, 2007). For example, several countries have recently adopted the placement of graphic warning labels depicting the physical effects of smoking – e.g., polluted lungs, mouth diseases - on cigarette packets (Veer & Rank, 2012)(Picture 7).

Picture 7. Examples of graphic warning labels placed on cigarette packs (CNN, 2013)

Considering The Netherlands, in 1989, the foundation Stichting Ideële Reclame (SIRE) started the ''Je bent een rund als je met vuurwerk stunt'' (roughly translated: you are not in your right mind if you carelessly handle fireworks) campaign aimed at scaring people out of attempting dangerous stunts with fireworks. (SIRE, 2000). In one of their commercials from 1994, a pair of unblemished hands consecutively produces a number of shadow figures on a light background. The last figure that is revealed, does not resemble an identifiable object, and when the figure unfolds, the viewer discovers one of the arms is completely missing its hand (Picture 8). More recently, Veilig Verkeer Nederland (VVN) aired several commercials against the use of a smartphone while driving (Veilig Verkeer

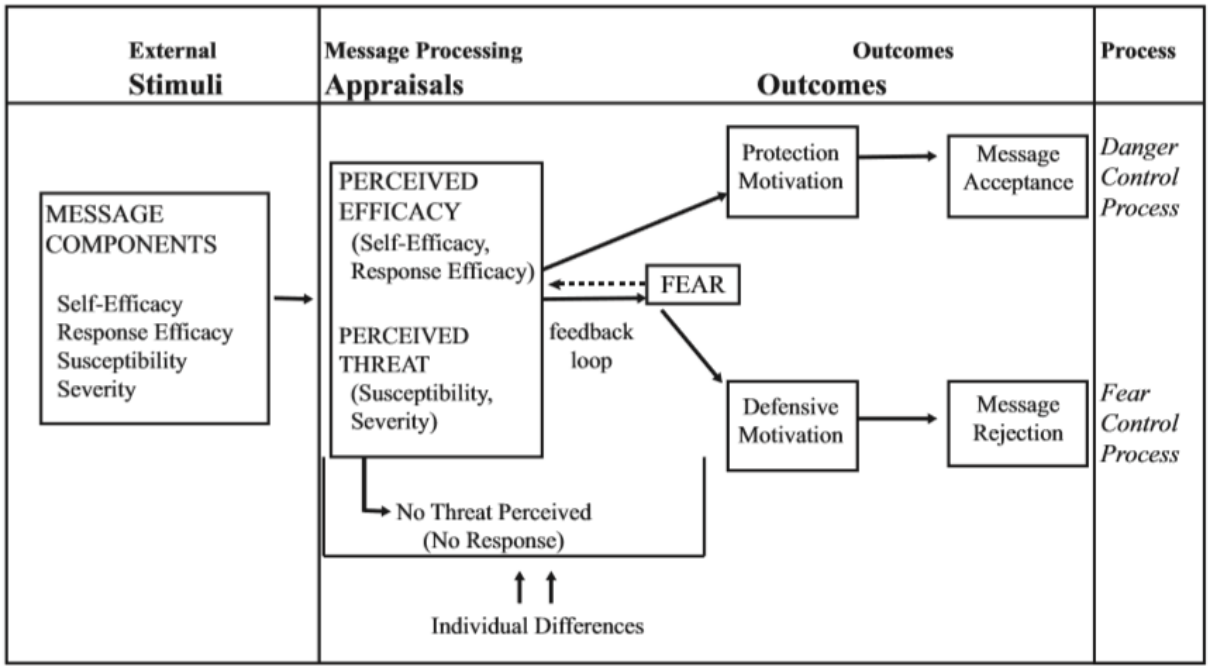
Nederland, 2014). One commercial features a female driver who, after hearing her phone make a sound, discovers a large, scary, white rabbit on her backseat. After having been distracted by this unusual sighting for a couple of seconds, a truck horn shrieks, and the woman is barely able to steer clear of the vehicle approaching her head-on. As it turns out, in reality, she was only looking at a picture of the rabbit on her smartphone. Even though advertisements like the examples above are usually characterized as fear appeals, they often contain vivid and gruesome pictures and therefore fit the definition of shock advertisement as well (Witte & Allen, 2000).

Picture 8. Screenshot of a SIRE commercial, showing the potential consequences of unsafe handling of fireworks (Sire, 2000).

One of the leading models that attempts to explain the workings of the fear appeal is het Extended Parallel Processing Model (Witte, 1992)(Figure 2). The model proposes three central constructs, namely *threat*, *fear* and *efficacy*. *Threat* is an existing external variable (e.g., an environmental or message cue), that may or may not be recognized by an individual. A fear appeal advertisement pictures a threat's severity and the target's susceptibility to it. Consequently, an individual holds his/her own cognitions corresponding to these qualifications. For example, alcohol intoxication poses a treat. A fear appeal focusing on this topic, could display an unconscious teenager by the side of the road with a bottle of alcohol in his/her hand (message severity), accompanied by the text: ''every year … thousand teenagers suffer the consequences of alcohol abuse, often resulting in permanent physical damage or even death'' (message susceptibility). When being confronted with the message, an individual forms his/her own perception about the threat's severity and his/her susceptibility to it. According to the EPPM; the greater the treat observed, the more afraid the target becomes. *Fear* is defined as a negative emotional reaction, characterized by a high level of arousal. Now we arrive at the model's second appraisal, *efficacy,* which is the ability to counteract the threat. A fear appeal advertisement typically offers a recommendation on how to respond to the treat. Again, it is up to the observer to judge whether the advice can effectively tackle the treat (response efficacy), and whether he/she is able to perform the recommendation (self-efficacy). Returning to our example, the appeal might propose moderate alcohol consumption, the target may or may not perceive the solution as helpful and may or may not deem himself/herself capable of executing the behavior. The key predictions of the model read: when no threat is perceived no fear will be aroused and no action will be taken; when perceived threat is high but perceived efficacy low people try to cope with their fear (not the danger) by engaging in maladaptive outcomes/message rejection, for instance denial (e.g., ''I won't get cancer from smoking'') or minimization of the threat (e.g., perceiving the advertisement as highly exaggerated); when both perceived threat and perceived efficacy are high people try to control the danger and think of strategies to avert the threat. The latter outcome is called message acceptance and is defined as attitude (e.g., ''smoking is bad for me, I should try to

quit''), intention (e.g., ''I am planning to quit smoking), or behavior change (e.g., actually quitting smoking)(Witte, 1992).

Figure 2. The Extended Parallel Processing Model (Witte, 1992).



Meta-analysis have not yet reached final consensus concerning the modus operandi of fear-appeals (Carey, McDermott & Sarma, 2013; De Hoog, Stroebe & de Wit, 2007; Peters, Ruiter & Kok, 2013; Witte & Allen, 2000), however, they do tend to acknowledge the importance of both high threat and high efficacy. Probably the most critical analysis has been conducted by Peters, Ruiter & Kok (2013), only six studies met their inclusion criteria, one of which read only 'real behavioral measures' were accepted. In support of the EPPM, they found that threat only has a positive effect on behavior if efficacy is high (not low), and efficacy only has a positive effect on behavior if threat is high (not low). Additionally, a borderline significant negative effect of threat under conditions of low efficacy was found, which is also in line with the EPPM.

Returning to the context of our study, what are the implications of the finding from the fear appeal literature for the use of shock tactics in philanthropic advertising? The central constructs of a fear appeal, are also relevant to philanthropic shock appeals; there exists a threat that can be portrayed and perceived as more or less severe and relevant and recommendations about alleviating the treat can be made which an individual can judge on its potency and practicability.

However, it is the level of one of these elements, which makes philanthropic advertisements in general distinctly different from regular fear appeals; *the target group's susceptibility to the treat*. Whereas the target of a fear appeal is always running the risk of falling victim to the treat, whether he/she recognizes this or not, the target group of a philanthropic appeal is not the entity that is actually at risk. For example, an anti-smoking fear appeal may advise smokers to quit their habit, because if *they* don't, the chance *they* will develop lung cancer remains elevated. A philanthropic appeal on the other hand, may solicit for donations, because the People of South-Sudan, *not the target group of the advertisement*, are threatened by famine.

The fear appeal literature informs us that, if susceptibility is practically nonexistent, perceived threat – the core motivating factor in fear appeals (Peters et al., 2013) – will be considerably low. What's more, in the case of a fear appeal, the advertisement's recommendation becomes completely irrelevant. To exemplify, if a nondrinker encounters an anti-DUI (Driving Under the Influence) fear

appeal, little threat is expected to be evoked, furthermore, the advice may call for moderation while it's impossible for a nondrinker to decrease his/her alcohol intake. When it comes to a charitable shock advertisement, negligible vulnerability is expected to equally inhibit the perceived threat, however, here, the recommended behavior remains relevant. For example, an individual observing a philanthropic appeal about a typhoon that has struck a country in South-East Asia, is not likely to personally feel at risk of the disaster, nevertheless, the advice to contribute financially does not instantly lose its applicability.

Furthermore, we argue a philanthropic shock appeal is unlikely to evoke maladaptive outcomes (backfire), such as avoiding or denying the message (Witte, 1992), because the imminent threat does not have the potential to harm the viewer of the advertisement – which means relatively low levels of perceived threat should emerge. Put simply, people are less likely to panic when (unknown) others are threatened, as opposed to when they themselves are threatened. Findings from Kessler, Ruiter & Jansma (2010) support this notion. The authors presented smoking-related pictures to smokers as well as non-smokers and reported that when a threat is personally relevant (here: the detrimental consequences of smoking are relevant to smokers), increased threat results in increased attention disengagement (looking away from the picture). If, on the other hand, a threat is not personally relevant (here: the detrimental consequences of smoking are not relevant to non-smokers), attentiveness is not affected by increased threat. Admittedly, exceptions exist and there is such a thing as 'too much shock'. Support regarding this understanding is provided by Veer and Rank (2012), who revealed images can reach the point of being perceived as too horrific. However, this research will not focus on such extremities.

Considering the reasoning above, will it pay to increase the shockingness, of a philanthropic advertisement?

As mentioned, Dahl et al. (2003) state surprise caused by the presentation of an unexpected (shocking) stimulus, fosters attention, comprehension, elaboration and retention. Witte and Allen (2000) report (threatening) novel stimuli are attended to more carefully. Similarly Kessler et al. (2010) demonstrate the depiction of a severe threat attracts more attention than the depiction of a less severe threat and According to Witte (1992) the greater the threat, the more attention getting the message and the more involving the message. Thus, according to the cited literature, novel/threatening stimuli can benefit the processing of a *fear appeal.* Because enhanced processing can be triggered by the stimuli alone, and philanthropic shock appeals make use of similar materials, we expect to find the same effect in charitable shock appeals; the more shocking the stimuli, the more extensive the processing of information. What's more, there is reason to assume the tactic of shock can be particularly effective in philanthropic advertisements (as compared to fear appeals), because, as noted, in the absence of self-relevancy, shocking images do not only *attract* people's attention initially, but are also able to *hold* their attention (Kessler et al., 2010). Additional support comes from research on the effects of text-accompanying photographs on selective reading times and the acquisition of textual information of news articles (Zillmann, Knobloch & Yu, 2001). Of all the processing variables cited thus far, we are particularly interested in attention, because it is considered a catalyst for all further processing (Dahl et al., 2003), and memory, because it is known to stimulate numerous subsequent desirable outcomes, amongst which the intention to donate (Zegefka, Noor & Brown, 2013). On account of the reasoning above, we hypothesize:

H1: The more shocking a charitable advertisement, the more attention will be payed to the advertisement and the better it will be remembered.

By increasing the shockingness – in this case of the visual aspect - of a philanthropic advertisement, one aims to increase the severity element of the EPPM (Witte & Allen, 2000). This is not to say shock advertisers try to make things look worse than they actually are, it's a matter of revealing more of an

already atrocious phenomenon. To exemplify, a charity committed to fighting famine could design an advertisement displaying people dressed in blankets standing in a cue for food with a desperate glance in their eyes. Alternatively, the same charity could issue a poster that makes the suffering much more salient, portraying the same people dressed more scarcely, revealing signs of severe starvation, such as extreme depletion of muscle- and fat tissue – skin over bones -, bloated bellies and skin rashes. Viewers will undoubtedly consider the latter advertisement more shocking, and should be able to better grasp the true gravity of the situation after seeing this advertisement, compared to the former. In other words, the latter advertisement makes it more clear a threat is present, and people are in desperate need of help. As threat (especially its severity component) is considered the main motivational force here; if there's no real threat being perceived, it is improbable action will be taken and helping behavior will manifest (Peters et al., 2013). The type of helping behavior we are interested in here concerns monetary given, there the main purpose of charitable advertisements is to generate financial donations. On the basis of the above - also considering the improbableness of maladaptive outcomes -, we hypothesize.

H2: The more shocking a charitable advertisement, the higher (amount and frequency) the financial giving towards the charity will be.

The EPPM assumes perceived efficacy controls the direction of outcomes under levels of high treat (Peters et al., 2013); if threat and efficacy are both high, desirable outcomes result, whereas if threat is high but efficacy is low, undesirable outcomes result. Given that a philanthropic shock appeal is unlikely to backfire, we propose a positive effect of perceived efficacy; the more impactful people estimate their donation, the higher the chance they will actually contribute. This notion is supported by Smith and McSweeney (2007), who found that the more likely people estimate donating will help the needy, the more likely they are to contribute. Therefore, we hypothesize:

H3: the more effective viewers estimate donating will be, the more they will donate (amount and frequency).

When it comes to philanthropic advertising, negligible vulnerability isn't always in effect. Certain atrocities take place in people's direct surroundings. And while some may still not be considered susceptible, to others the treat becomes very real. Taking an advertisement from a charity counteracting child abuse as an example, childless viewers obviously do not run the risk of experiencing the detrimental consequences of their offspring falling victim to this atrocity, parents on the other hand, are not free from risk. A charitable appeal that portrays a relevant threat, possesses characteristics very similar to those of a fear appeal – it should be able to motivate high levels of treat. However, one important difference wilt a regular fear appeal remains; the fact that a standard fear appeal offers advice on how to counteract the threat *to self*, whereas a philanthropic advertisement informs the viewer how he/she can provide help *to others* without offering adequate advice on how to reduce one's own vulnerability. Again focusing on child abuse, the appeal might solicit for donations to help the organization fight this societal problem as a whole. The charity might combat the symptoms of the issue by providing shelter to abused children, or may even try to tackle the roots of the problem through political engagement. Either way, the susceptible viewer will probably not be under the impression that a donation, even a large one, will shortly and significantly decrease his/her personal risk, because the wrongs are simply too complex and too wide-spread. An anti-smoking fear appeal on the other hand, has a much larger potential to comfort its audience, because it can offer helpful advice on how to minimize the threat. For example, research has revealed that in the long term quitting smoking will reduce the risk of lung cancer to non-smoker levels (KWF, 2013). Because the type of advertisement at issue does not present the target with

adequate means to counteract the threat to self, it takes the form of a low-efficacy fear appeal, which means increasing the shockingness (severity) of the advertisement should prove counterproductive in several ways (Peters et al., 2013). First, as mentioned, we expect shocking stimuli to *attract* attention (Dahl et al., 2003; Witte & Allen, 2000), however, in line with Kessler et al. (2010) we expect shock to have a negative effect on attention *holding* when viewers are susceptible, as they will feel the need to distance themselves from the confrontation with the potential catastrophe as soon as they can. Second, we expect shock to similarly inhibit memory under conditions of audience susceptibility, there the literature assumes a causal relationship between attention and memory (Bolls, Lang, & Potter, 2001; Pieters, Warlop & Wedel, 2002), meaning if the attention phase is disrupted, the formation of memories is also hindered. Third, as discussed, the fear appeal literature states that when a communication expression presents someone a threat they are not able to alleviate, the desired behavioral outcomes will not manifest. What's more, increased shock should not only prevent positive outcomes from occurring, it should trigger unwanted reactions in the form of maladaptive outcomes (Witte, 1992). On account of the reasoning above, we hypothesize:

H4: Under conditions of viewer insusceptibility, the more shocking a charitable advertisement, the more it will be able to hold viewers' attention and the better it will be remembered.
H5: Under conditions of viewer susceptibility, the more shocking a charitable advertisement, the less it will be able to hold viewers' attention and the less it will be remembered.
H6: Under conditions of viewer insusceptibility, the more shocking a charitable advertisement, the higher (amount and frequency) the financial giving towards the charity will be.
H7: Under conditions of viewer susceptibility, the more shocking a charitable advertisement, the lower (amount and frequency) the financial giving towards the charity will be and the larger the maladaptive outcomes.

Besides considering the (main) effects of shock, and the interaction between shock and susceptibility, we will concentrate on the consequences of manipulating vulnerability within shock conditions, in other words, we attempt to predict the differences in reactions between susceptible and non-susceptible viewers to the same shock advertisements. The resulting expectations can simply be derived from the hypothesis above. For instance, if shock and susceptibility interact in such a way that an increase in shock causes the insusceptible viewer to better remember the advertisement, while it simultaneously motivates the susceptible viewer to forget, the result is both an interaction-, as well as a main effect for susceptibility. Therefore, it follows that:

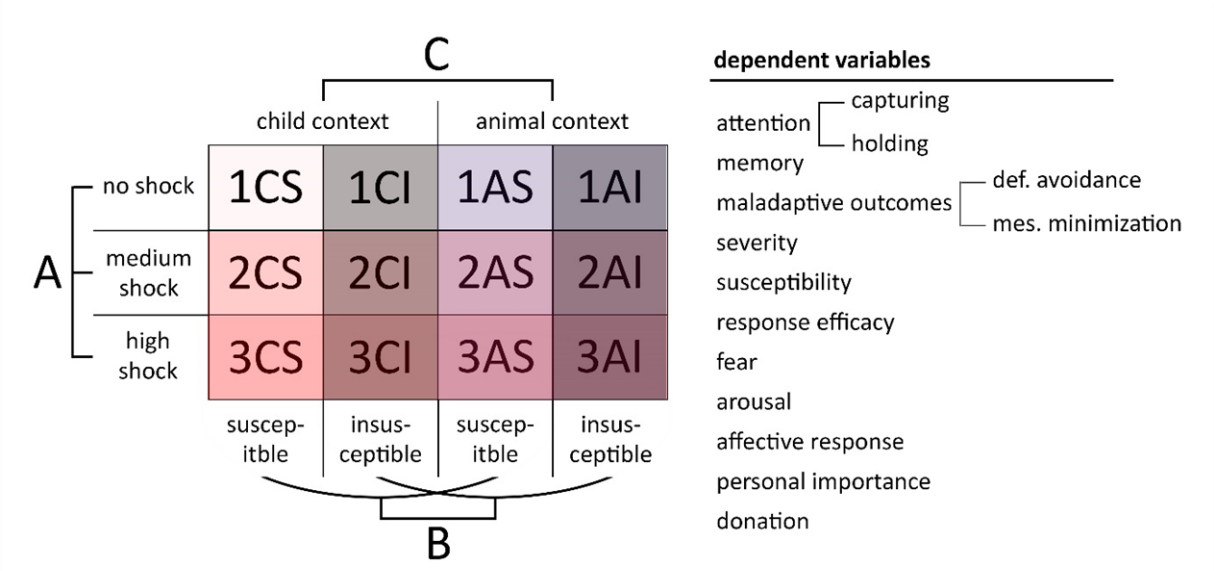
H8: When being confronted with a shocking advertisement (as opposed to a non-shocking advertisement), viewers who are susceptible to the threat will disengage from the advertisement sooner (attention holding), will have a less durable memory of the advertisement, will financially contribute less, and will display more maladaptive reactions, than viewers who are not susceptible to the threat.

4. Methodology

Design

This study employed a 3x2x2 between-subjects experimental design (Figure 3). *Three* levels of shockingness (no shock, medium shock and high shock) we constructed through manipulation of the stimulus materials. In order to improve the external validity of our findings, in other words; in order to be more confident that it doesn't only pay to shock in one specific charitable context, we chose to include *two* different charitable causes in this study (Calder, Phillips & Tybout, 1982); child abuse and animal cruelty. The reason these charities were selected, is because the causes needed to allow for a target audience that could be divided into *two* groups on the basis of their susceptibility to the threat. As mentioned, two levels of respondent susceptibility were realized, not through manipulation, but by measuring respondents' actual (theoretical) vulnerability. People with children are (indirectly) susceptible to child abuse, whereas childless individuals are not. People with animals are (indirectly) susceptible to animal cruelty, whereas 'petless' individuals are not. Participants were randomly assigned to one of the six experimental conditions.

Figure 3. Research design



Note. A = main effect shock. B = main effect susceptibility. C = main effect context.

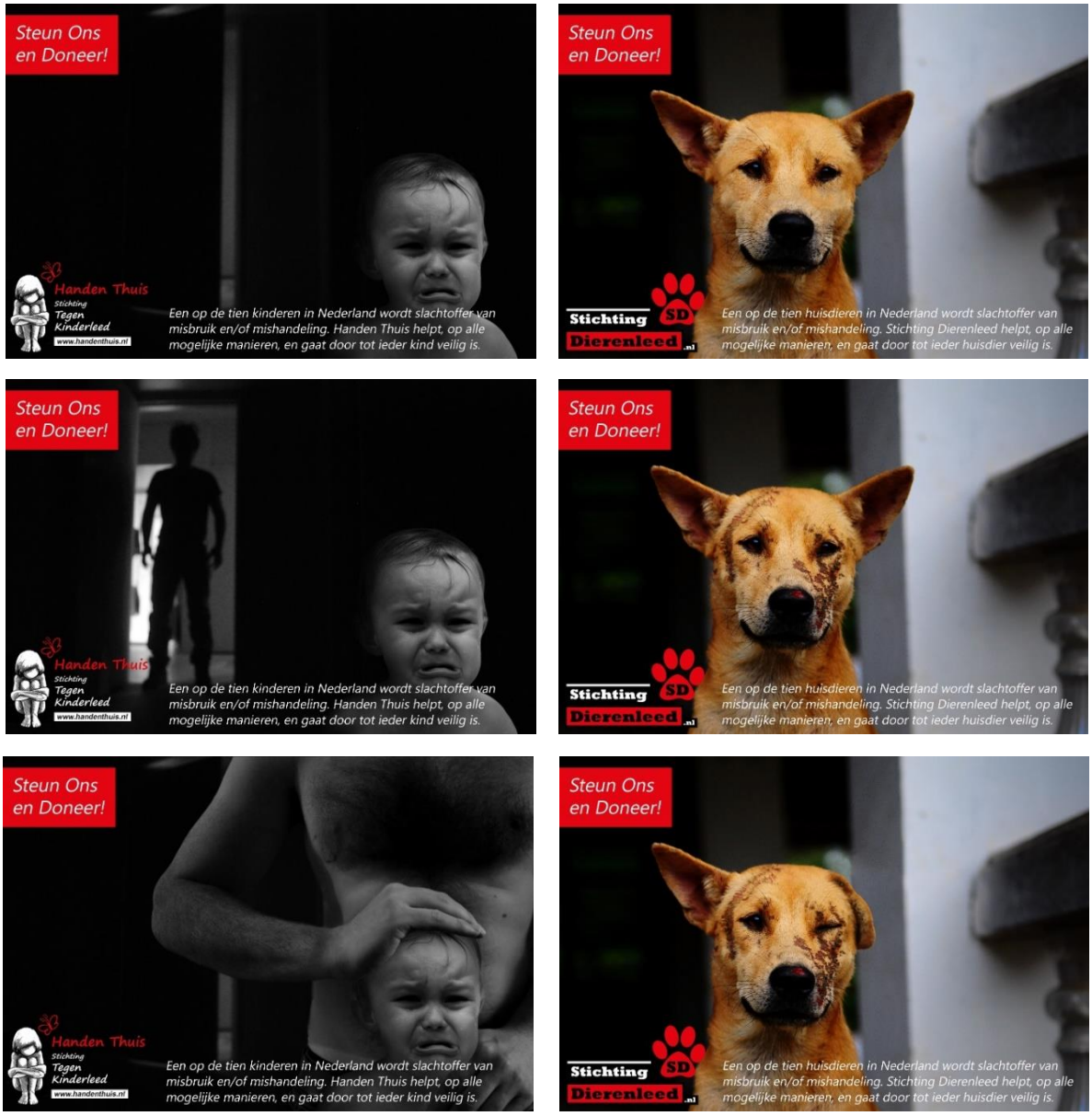
Stimulus materials

Six posters were created using Adobe Photoshop CS6 (Figure 4). Looking at the six images in Figure 3, the two advertisements on the top level represent the non- or least shocking posters for both contexts, below these we find the medium shocking posters for both causes, the bottom level contains the most- or highly shocking posters for both charities.

Focusing on the child posters, the least shocking conditions shows a distressed toddler in a dark room that is illuminated only by a glimmer shining through the doorway in the background. Combined with the topic of the poster, the viewer should be able to infer the ominousness of the situation. Nevertheless, the image itself is not considered norm-breaching, there in essence the advertisement only portrays a sad-looking child. Moving to the medium shocking condition, a male silhouette is visible in the now opened doorway, the source of the child's discomfort. Obviously this not a socially acceptable situation; a troubled-looking child has averted himself/herself from a man, because he/she clearly senses the man's intentions are as dark as the room itself. Put differently, the

advertisement depicts a stage of the abuse process that breaches all norms for societal values and personal ideals. One condition further - the most shocking child abuse advertisement -, the process has continued till the point that the man has (virtually) closed the door behind him, has denuded his torso and has begun to physically harass the child, resulting in a more severe norm breach.
Now focusing on the dog posters, the progression in shockingness is more straight-forward. The non-shocking advertisement displays an physically healthy animal. Viewers might infer the dog has recovered from his/her injuries, or is still at risk of cruelty. Either way the footage itself is non-offensive. Both the medium and highest shocking conditions portray an abused animal - an injustice that is certainly not acceptable in our society. The former picture reveals bloody scratch marks above the dog's right eye and across the left side of his face, plus an open wound on the top of his snout. In the latter image, mutilations of the dog's left eye and ear are added – making this condition the most norm breaching.

Figure 4. Stimulus materials.



Each poster contains a 'call for action' label (top-left corner, translation: ''support us and donate!''), the foundation's logo (bottom-left corner, translations: ''Hands Off, foundation against child suffering'', ''The Animal Suffering Foundation'') and a section of text regarding the threats' actual risk and the organization's intentions (bottom-right/center, translations: ''One in ten children/pets in the Netherlands falls victim to molestation and/or abuse. Handen Thuis/Stichting Dierenleed helps, in every way possible, and will continue to do so until every child/pet is safe.''). Evidently none of these elements changed between the conditions of a context, in order to isolate the effect of shock. Differences between the child abuse and animal cruelty posters were, for the sake of context comparability, minimized as much as possible, by employing the same texts (including font and font size), colors, shapes and placement of elements. However, for the purpose of realism/credibility, we designed the logo's to fit the causes (e.g., a paw print is commonly used by foundations supporting animal rights).

A small but sufficient within-subjects pretest (n = 8) was conducted (Burns & Bush, 2006), in order to detect whether the stimulus materials contained any problematic flaws and test whether a successful manipulation could be expected when using a decent size sample. Each subject was randomly presented with each advertisement to minimize order effects (Babbie, 2007). After each poster, participants rated its shockingness on a 3 item 7-point Likert scale borrowed from Dahl et al. (2003). First looking at the child abuse posters, as expected, the mean shock score was lowest for the non-shocking poster (M = 2.04), followed by the medium (M = 3.42) and high shock (M = 5.54) conditions. The same tendency was found with regard to the animal abuse posters, the non-shocking condition triggered the lowest shock scores (M = 1.50), followed by the medium- (M = 3.39) and highly shocking (M =5.40) advertisements. Next, the respondents were shown all advertisements at once, and asked to elaborate on the differences between ads per charity. In line with the quantitative outcomes, respondents acknowledged the increase in shockingness. 2 Respondents mentioned a slightly larger difference between child abuse posters 2 and 3 than between 1 and 2. 3 Respondents perceived a slightly larger difference between animal cruelty posters 1 and 2 than 2 and 3. The remainder of respondents reported approximately equal differences between conditions. Considering the results of the manipulation were generally satisfying, and the feasibility of creating a perfect ascent between conditions, we decided not to further modify the stimulus materials. Lastly, participants were allowed to comment on shortcomings of the ads. No noteworthy remarks surfaced.

Questionnaire design

Given the sensitivity of the topics used in this study – we could potentially recruit people who had directly/indirectly experienced child abuse/animal cruelty -, we took extra care to formulate clear pre-survey instructions that allowed respondents to abort the session before being confronted with materials they would likely experience as harmful or at any other desired point during the experiment.

As far as possible, existing measurement scales were used, in order to warrant content validity – the quality of a measure to cover all construct relevant content, and exclude irrelevant content (Lynn, 1986). For the same purpose, self-constructed scales/items were reviewed by experts. Our 3-item 7-point Likert scale *shock* measure was borrowed from Dahl et al. (2003). *Attention* was measured based on a self-constructed 7-point 4-item Likert scale, covering two dimensions - inspired by Kessler et al. (2010) -, attention *capturing* (initial attention) and *holding* (lasting attention). Of our 2-item 7-point Likert *memory* scale, one item was borrowed from Wells' (1964) Emotional Quotient Scale and one item was self-constructed (Bruner, Hensel & James, 2001). *Maladaptive outcomes* were measured with a 6-item 7-point Likert scale by Jansen and Verstappen (2014). This scale constitutes a measure from the EPPM (Witte, 1992), and is supposed to measure two underlying dimensions, *Defensive Avoidance* (avoiding the message, 1 item) and *message minimization* (attempting to defuse

the message, 5 items). In order to further analyze the applicability of fear appeal theory within the field of philanthropic shock advertising, we included some additional fear appeal measures, namely *severity, susceptibility and response efficacy* – self-efficacy was left out because we assumed basically all respondents capable of making a donation, adding up to a total of 9-items accompanied by 7-point Likert scales, provided by Witte, Cameron, McKeon and Berkowitz (1996)(Witte, 1994a; Witte 1994b). There the lastly cited authors did not offer a measure of *fear,* a 5 item 7-point Likert scale by Block and Keller (1995) was used to measure this construct. *Arousal*, which we included because of its proven role as a mediator in advertising effectiveness (Singh & Churchill, 1987), was measured using a 6 item 7-point semantic differential scale by Mehrabian and Russell (1974). As a means of acquiring a more general impression of people's reactions toward the advertisements, we included a shortened version of Madden, Allen and Twible's (1988) *affective response* scale, consisting of 8 items accompanied by 7-point Likert scales. A 7-point Likert *personal importance* measure was included as a backup, in case susceptibility was not able to generate reactional differences. Two items, concerning issue importance, were based on a measure by McGraw, Lodge and Stroh (1990). One item was borrowed from the 'reaction profile' scale by Wells (1964). Three items were self-constructed. Finally, we also collected some independent personal data. Most importantly, participants were asked *whether or not they had a child/children or a pet/pets*, in order to produce our susceptibility manipulation. We also inquired about their *philanthropic history*, because this can potentially influence donating behavior (Chang & Lee, 2009). And last but not least, people were asked to report their *age, gender* and *highest completed level of education*.

The original scales were all in English. Dutch being the native tongue of our population, we decided to administer the questionnaire in Dutch. A back translation was used to ensure the meaning of the original items would be preserved as well as possible. After translating the items into Dutch, a Netherlands born, near native English speaker translated the items back to English. A few minor complications were discussed and resolved. After an additional expert evaluation the survey's content was finished (Appendix 1).

The sequence in which questions were presented to the respondents was randomized, to minimize order effects, make it more difficult for respondents to detect the constructs being measured and decrease the chance that respondents would answer overly consistently – because they expect all questions in a section to be similar – or get bored (Babbie, 2007).

The final questionnaire was uploaded to 'Qualtrics Online Survey Software' to be able to collect our data in an efficient manner.

Behavioral measure

Donation behavior was measured by means of an actual donation. Each respondent was presented with a collecting-box of one of the two charities that corresponded with the topic of the poster the subject had been confronted with (Figure 5, next page).

Figure 5. The collecting-boxes of both the animal cruelty (left on the middle and right image) and child abuse (right on the middle and right image) foundations.

Procedure

Respondents were approached (one at a time) and asked whether they would be willing to participate in the study. They were further informed an advertisement would be shown to them, followed by a survey that would take about 5 minutes to complete. If they agreed to participate, the researcher handed over his laptop presenting the survey, informed the participant about his location – in case the subject had any questions or completed the study – left, took place at a nearby table, and waited for the respondent to finish. When the subject eventually approached the researcher to return the laptop, the researcher thanked the respondent for participating, and presented him/her with a collecting-box while informing him/her about the possibility to make a donation. By looking at the first page of the survey, when handing over the laptop, the researcher was able to tell which version of the experiment (child or animal) the subject partook in, and thus which collecting-box to present. The boxes were secretly emptied after each donation in order to count the contributions and eliminate social proof effects (Cialdini, 2007); hearing the coins in the box tinkle indicates one or more previous respondents have already donated, noticing this, whether consciously or not, might increase donating behavior.

Ethical Considerations

As implied, the foundations used in this study were fictitious. There are several reasons why we did not opt for including existing charities. First, when it comes to an established organization, there will be differences in people's familiarity with the charity, which may cause differences in reactions to its advertisement (Lee, 2014; Szper & Prakash, 2011). Second, this choice freed us from any design restrictions (e.g., having to make the ads look like they were developed by a certain organization) and enabled us to make the materials for both causes as comparable as possible. On the downside however, this meant participants' donations could not be delivered to the charities they thought they were contributing to. As an alternative, the proceeds of the collection were donated to well-known foundations who's causes were most similar to the ones used in this study; 'Stichting Geheim Geweld' (translation: secret violence foundation) and 'Dierenbescherming' (translation: animal protection) (Stichting Geheim Geweld, 2015; Dierenbescherming, 2015). We acknowledge the ethical concerns this course of action presents, and will explain why we believe our decision was justified. In the words of Sargeant & Jay, 2004: ''If they are to give, donors must trust that their donations will be applied in accordance with their wishes''. Factors that influence people's believes that their contribution will be well-spent include their perception of the organization's skills, abilities and knowledge for effective task performance (Sargeant, Hudson & West, 2008). In other words, donors want their money to go to a reliable organization. If our respondents were to uncover the deceit,

they would not only learn their contribution went to the exact same cause, it also ended up at a much more dependable organization. Furthermore, their donation was part of the study, and thus, like the survey, contributed to research aiming to benefit charities in general.

Subjects

Because of the fact that this study included a true behavioral measure in the form of monetary donations and data had to be collected face-to-face, convenience sampling - sampling based on the availability of respondents (Babbie, 2007) – was determined the most feasible method of selection. Participants were recruited from various public places at the University of Twente during a two and a half week period. First of all, a University was chosen because it seemed a relatively safe place to collect data – the researcher was not always able to keep his eye on the respondent for the entire duration of the session, so there was some risk of equipment theft. Secondly, our aim was include equal numbers of people with young children/pets and without young children/pets because of the susceptibility differentiation we aimed to realize. On average, Dutch people have children around their 30th birthday (Nationaal Kompas, 2014), and approximately 80 percent of the population older than 30 has children (CBS, 2005). We targeted people aged 18 to 40, hoping to survey comparable numbers of both people under and over 30 years old, in order to achieve the desired distribution. A little over 50 percent of the Dutch households owns pets (Nu.nl, 2015). Therefore, we expected to find broadly equal numbers of pet owners and petless individuals at the University. Thirdly, the age group we focused on is more or less considered a typical age group shock advertisers aim to influence and University students have been used in previous studies on shock advertising (Dahl et al., 2003; Veniza & Paul, 1997). 175 Complete data sets were collected, of which 84 pertained to the child abuse conditions and 91 belonged to the animal cruelty conditions. Unfortunately, only 6 participants indicated being a parent, which means our realized 'parent/childless' distribution did not come close to the desired 50/50. However, this did not mean analyses based on the differentiation were considered insignificant a priori. 47 Respondents stated to own a pet/pets. Approximately equal numbers of males and females participated in this study. Lastly, nearly one-hundred percent of our sample was highly educated.

Preliminary Analyses

Normality tests

The first step we took was checking our data for errors and outliers. Even though a few outliers were discovered, boxplots and 5% trimmed means generated through SPSS indicated they were still within reasonable limits and did not significantly influence our means scores. Therefore, we decided not to manipulate the data (Pallant, 2013).

Next a series of normality tests were performed, because most of our main analyses techniques assume the data to be normally distributed. Usually, normality is tested within every single experimental condition. However, in our case this would result in an excessive number of normality tests - 12 conditions times 12 dependent variables means 144 tests -, based on inadequate sample sizes - 15 or less respondents per condition. Under these circumstances, it is acceptable to conduct the analysis considering each variable as a whole (/including all available responses on a variable)(Gravetter & Wallnau, 2000).

To assess normality the Shapiro-Wilk test was used, there it is considered the most powerful of commonly used measures of normality (Razali & Wah, 2011). As a means of visually evaluating the data, we used histograms (including normality plots) and normal probability plots (Pallant, 2013). The outcomes of the Shapiro-Wilk tests indicated all variables but *attention* and *maladaptive outcomes* reached significance ($p < 0.05$)(Appendix 2, Table 1), meaning only these variables were able to upheld the null-hypothesis; the data are normally distributed. Even though the results did not

look very promising, it is quite common normality tests employing large samples reach significance (Pallant, 2013). In this case, in the opinion of Tabachnick and Fidell (2001), inspecting the shape of the distributions should prove more useful (Appendix 2, Figure 6-17). The distributions of *severity, personal importance, fear* and *donation behavior* were either a bit skewed or leptokurtic, or both. In sum, one-third of the variables exhibited some deviation from normality.
As noted, non-normal distributions are common in research, especially in the social sciences. Fortunately, violations of normality no not necessarily disrupt the statistical analyses. With large enough samples (e.g. over 30) non-normality should not cause any major problems (Pallant, 2013). The explanation behind this can be found in the Central Limit Theorem (Field, 2013). The theorem states that no matter how abnormal the population distribution is, if one keeps taking decent-sized samples from the same population, the sample means will eventually form a normal distribution. Therefore one should not be too concerned about what the population looks like, when employing a decent sized sample. In conclusion, normality was not considered a real threat to our analysis.

Factor analysis

In order to test whether the factor structure intended by the existing scales would resurface in our dataset and test the presumed dimensionality of our self-constructed scales – both described under the heading 'questionnaire design' -, a factor analysis was conducted. The two main issued to consider in determining whether a particular data set is suitable for factor analysis are sample size and the strength of the relationship among the variables (Pallant, 2013). According to Tabachnick and Fidell (2001) a sample of 150 respondents should be sufficient, if factor loadings are generally high. We analyzed the strength of the relationship among variables by inspecting the correlation matrix (R-matrix) and its corresponding significance matrix for items that correlate poorly and multicollinearity/singularity (very high/perfect correlation, in other words, excessive correlation). The latter characteristic was verified on the basis of the determinant of the R-matrix (Field, 2000). Lastly, we included the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity (Beavers et al., 2013).
Even though the determinant of the R-matrix indicated multicollinearity, the matrices themselves did not reveal any deficiencies. All other analyses generated desirable values, thus the data proved suitable for factor analysis.
Next, we ran a principal axis factoring analysis, applying Kaiser's criterion of only retaining factors with an Eigenvalue greater than 1 (DeVellis, 2003). Additionally, a varimax rotation was performed. We opted for an orthogonal rotation – assuming independent factors – there in theory, our dimensions should be largely uncorrelated and this type of rotation represents a simpler model than rotation types that do assume dependent dimensions, which, according to DeVellis (2003) is preferable.
The unrotated factor solution yielded 13 factors before and 9 factors after extraction (Appendix 3, Table 2, Figure 18). A glance at Table 2 immediately made it clear the rotated solution produced a much simpler structure, consisting of 11 factors. For the sake of thoroughness, we decided to rerun the analysis stating a fixed number of factors of 10, 11 and 12. The contribution of the 12th factor did not meet the Eigenvalue criterion, rendering it unusable. Although the difference with the 10 factor option was small, the 11 factor solution produced the most theoretically sensible dimensions and provided a better fit with our theorized dimensionality.
Looking at Table 3 (Appendix 3), factor 1 covered all *affective response* items, and 2 items from the *fear* scale. Plausibly because both measure negative emotions. Factor 2 was identical to the *personal importance* measure. Factor 3 covered all *memory* and *attention* items. Possibly, these variables clustered together because a causal relationship between the two exists (Bolls, Lang, & Potter, 2001). Unfortunately, people did not seem to have noticed the difference between attention *capturing* and

attention *holding*. Factors 4, 5 and 6 were identical to respectively the *arousal, efficacy* and *susceptibility* measures. Factor 7 covered 3 *message minimization* items. It's hard to say why this construct appeared two dimensional. Factor 8 was identical to the *severity* construct. The remaining *fear* items were recovered by factor 9. Factor 10 included our *shock* measure, and for some unknown reason, our 1 item *defensive avoidance* scale. Factor 11 covered the last 2 remaining items which originated from the *message minimization* scale. Some secondary loadings were a bit on the high side, but not high enough to trouble the structure. In conclusion, the factor analysis produced roughly the same structure as theory prescribed, allowing us to uphold the originally hypothesized dimensionality.

Reliability analysis

Table 4
Reliability analysis on the basis of Cronbach's Alpha

Variable	Cronbach's Alpha	Number of items
Shock	.75	3
Severity	.83	3
Susceptibility	.93	3
Efficacy	.86	4
Personal Importance	.88	6
Memory	.76	2
Attention Total	.85	4
Attention Capturing	.84	2
Attention Holding	.74	2
Maladaptive Outcomes	.62	6
Message Minimization	.65	5
Affective Response	.90	8
Fear	.85	5
Arousal	.78	6

Note. To compute Alpha, a minimum of 2 items is required. Therefore, single Item factors were not included.

To examine the reliability/internal consistency - degree to which the items that make up the scale are all measuring the same underlying attribute (Pallant, 2013) - of our scales, we employed the most commonly used statistic for this task, Cronbach's coefficient alpha, and used Devellis' (2003) classification to evaluate the value of Alpha. All values reached respectable levels or above (Table 4). *Susceptibility's* Alpha was a bit on the high side, but still within reason. In all cases, shortening the scale did not significantly improve Alpha. Therefore, there was no reason to exclude any items from further analyses.

5. Results

In order to examine whether all personal characteristics were evenly distributed across experimental conditions, and whether or not it was necessary to account for any covariates, a large series of chi-square tests was ran, none of which reached statistical significance. Therefore, no analyses of covariance were performed.

Manipulation checks

Table 5
Number of respondents, mean score and standard deviation per shock condition, in total and per context (child abuse and animal cruelty)

Dependent	No Shock			Medium Shock			High Shock		
Variable	*n*	*M*	*SD*	*n*	*M*	*SD*	*n*	*M*	*SD*
Shock	58	2.77	.96	57	3.23	1.10	60	3.63	1.27
Shock Child	31	3.00	.86	26	2.95	1.05	27	3.52	1.27
Shock Animal	27	2.51	1.01	31	3.46	1.11	33	3.72	1.28

In order to verify our shock manipulation, several one-way analyses of variance were conducted, first considering the data set as a whole, afterwards differentiating between contexts – child abuse vs. animal cruelty.
Besides the assumption of normality, ANOVA assumes the score-variances between groups to be similar. In SPSS, Levene's test for homogeneity of variances is used to test the null-hypothesis that between-group variances are equal. Fortunately, if the assumption is violated ($p < 0.05$), SPSS offers alternative measures.
The first ANOVA revealed a statistically significant difference [$F(2,172) = 8.667$, $p = 0.000$, $\eta^2 = 0.09$] between the three shock conditions. The (manually calculated) eta squared effect size (η^2; the magnitude of the difference) amounted to 0.09, which, according to Cohen (1988), can be considered moderately large. Post-hoc comparisons were conducted to uncover which groups differed from each other and to reveal the direction of the difference(s). The Bonferroni test was employed, because it controls for type 1 error (false rejection of the null-hypothesis)(Huizingh, 2008). The no shock condition ($M = 2.770$, $SD = 0.956$) significantly differed ($p = 0.000$) from the high shock condition ($M = 3.628$, $SD = 1.270$). The no shock condition almost differed significantly ($p = 0.890$) from the medium shock condition ($M = 3.228$, $SD = 1.104$). In conclusion, the shocking posters were able to generate higher shock scores than the non-shocking posters, while participants did not react differently to the medium shock posters than to the high shock posters.
Focusing on the child posters, the analysis of variance did not reach significance [$F(2,172) = 2.369$, $p = 0.097$, $\eta^2 = 0.06$]. However, the *p*-value was less than 0.10, therefore, further analyses could still prove useful. Unfortunately, post-hoc comparisons did not reach significance. Nevertheless, they did provide some valuable insight. The high shock condition ($M = 3.519$, $SD = 1.269$) evoked noticeably higher shock scores than the no ($M = 3.000$, $SD = 0.856$, $p = 0.068$) and medium ($M = 2.949$, $SD = 1.053$, $p = 0.055$) conditions. In conclusion, judging by the mean scores, respondents seemed to have experienced more shock after seeing the most shocking poster, however, significance failed to surface.
Looking at the animal cruelty posters, the ANOVA reached significance [$F(2,172) = 8.910$, $p = 0.000$, $\eta^2 = 0.17$]. Eta squared amounted to 0.17, which signals a large effect. Post-hoc comparisons revealed the no shock ($M = 2.506$, $SD = 1.010$) condition significantly diverted from both the medium ($M = 3.462$, $SD = 1.108$, $p = 0.006$) and high ($M = 3.717$, $SD = 1.283$, $p = 0.000$) shock conditions. Note

this outcome was similar to the results of the first ANOVA. Again, the shocking posters were rated more shocking than the non-shocking poster, but not as dissimilarly shocking.
As for the susceptibility manipulation, 47 of the 91 respondents – approximately 50 percent - that were confronted with the animal cruelty posters, owned a pet. Thus, the susceptibility manipulation in the animal context was very successful. Considering the child posters however, only 6 of the 84 viewers were parents – about 7 percent -, rendering the outcome of this manipulation quite unfortunate. For the complete distribution of respondents across conditions see Table 9.

Manova

As the starting point of the analysis, a comprehensive MANOVA was performed which encapsulated the entire research design (Figure 3). Every possible main- and interaction effect was calculated for every available dependent variable (Table 6). In other words, the MANOVA considered the effects of shock, susceptibility and context, both individually and combined, on all outcome variables. Mean scores for the dependent variables - per shock condition, per susceptibility level and per context - can be found in Table 8.
Some additional assumptions - besides the ones already discussed - regarding a multivariate analysis of variance had yet to be verified, namely the assumptions of linearity and homogeneity of variance (Allen & Bennett, 2012). A large series of scatter plots was generated, in order to test whether a linear relationship existed between the dependent variables. The analysis revealed the assumption of linearity was met.
SPSS did not generate an outcome for Box's test of equality of covariance matrices, because 'there were fewer than two nonsingular cell covariance matrices'. However, in the case of approximately equal sample sizes, Box's test may be ignored, there a robust Pillai's statistic – the test that indicated the significance of the MANOVA results - can be assumed (Field, 2013). Therefore, the assumption could be considered met.

Table 6
Multivariate (MANOVA) main and interaction effects for all independent variables

Independent Variable	Value	*F*	Hypothesis *df*	Error *df*	Sig.	Partial Eta Squared
Shock	.30	2.10	26.00	304.00	.00	.15
Susceptibility	.29	4.79	13.00	151.00	.00	.29
Context	.30	5.06	13.00	151.00	.00	.30
Shock x Susceptibility	.22	1.45	26.00	304.00	.08	.11
Shock x Context	.21	1.40	26.00	304.00	.10	.11
Susceptibility x Context	.19	2.74	13.00	151.00	.00	.19
Shock x Susceptibility x Context	.22	1.41	26.00	304.00	.09	.11

Note. Pillai's Trace multivariate test was used.

A glance at the significance column of Table 6, indicated all effects were significant at the α = 0.10 level – which is an acceptable alpha value to employ when conducting multivariate tests (Field, 2013). Setting a more stringent Alpha (α = 0.05), the main effects of shock [$F(26,304) = 2.099$, $p = 0.002$, $\eta^2 = 0.152$] , susceptibility [$F(13,151) = 4.788$, $p = 0.000$, $\eta^2 = 0.292$] and context [$F(13,151) = 5.057$, $p = 0.000$, $\eta^2 = 0.303$] remained intact, as well as the interaction effect between susceptibility

and context [$F(13,151) = 2.739$, $p = 0.002$, $\eta^2 = 0.919$]. In sum, when bundling all dependent variables together – which is essentially how a MANOVA operates (Field, 2000) -, the independent variables were able exert a certain degree of influence on them, both independently as well as combined. Although we did not explicitly predict any specific context effects – an additional charitable cause was included only to improve the generalizability of the results -, the multivariate analysis did indicate context mattered and even interacted with the other independent variables. However, the magnitude of its influence was yet to be determined by further analyses.
The next question to be answered concerned which dependent variables were affected by which independent variables and in what way. To this end, SPSS repeated the same series of analyses for each dependent variable separately. Given there were 15 dependent variables, this meant a total of 105 ANOVAs were computed. Those that tested significant at the α = 0.10 level can be found in Table 7, on the basis of which the hypotheses are discussed.

Table 7
Univariate (ANOVA) main and interaction effects for all independent variables

Independent Variable	Dependent Variable	Sum of Squares	*df*	Mean Square	*F*	Sig.	Partial Eta Squared
Shock	Attention	6.95	2	3.48	2.46	.09	.03
	Capture	13.17	2	6.59	4.19	.02	.05
	Def. Av.	14.57	2	7.28	2.89	.06	.03
	Donation	5.38	2	2.69	7.51	.00	.08
Susceptibility	Susceptibility*	9.23	1	9.23	4.81	.03	.03
	Efficacy	7.78	1	7.78	6.35	.01	.04
	Pers. Imp.	23.71	1	23.71	25.65	.00	.14
	Memory	6.80	1	6.80	4.25	.04	.03
	Arousal	3.26	1	3.26	3.85	.05	.02
	Donation	4.99	1	4.99	13.93	.00	.08
Context	Severity	24.23	1	24.23	26.16	.00	.14
	Pers. Imp.	13.67	1	13.67	14.78	.00	.03
	Memory	4.80	1	4.80	3.00	.09	.02
	Arousal	3.27	1	3.27	3.87	.05	.02
	Donation	6.62	1	6.62	18.49	.00	.10
Shock x Susceptibility	Def. Avoid.	12.28	2	6.14	2.44	.09	.03
	Donation	3.86	2	1.93	5.39	.01	.06
Shock x Context	Memory	7.73	2	3.87	2.42	.09	.03
	Def. Avoid.	13.20	2	6.59	2.61	.08	.03
	Donation	4.43	2	2.22	6.20	.00	.07
Susceptibility x Context	Efficacy	8.41	1	8.41	6.89	.01	.04
	Maladaptive	5.11	1	5.11	7.30	.01	.04
	Mes. Min.	7.04	1	7.04	8.65	.00	.05
	Donation	6.23	1	6.23	17.41	.00	.10
Shock x Susceptibility x Context	Donation	3.74	2	1.87	5.22	.01	.06

Note. *As noted in the methodology section, susceptibility was included as a manipulation variable as well as in the form of a (self-report) dependent measure.

Table 8 (part 1)

Means score and standard deviation per shock condition, per susceptibility level and per context

Dependent Variable	No Shock *n* = 58		Medium Shock *n* = 57		High Shock *n* = 60	
	M	*SD*	*M*	*SD*	*M*	*SD*
Severity	5.93	.99	5.88	1.04	5.89	1.15
Susceptibility	4.37	1.32	4.29	1.27	4.53	1.60
Resp. Effic.	3.46	1.16	3.81	1.03	3.59	1.15
Pers. Import.	4.90	1.16	5.02	.86	4.95	1.12
Memory	3.12	1.18	3.54	1.39	3.47	1.26
Att. Total	3.62	1.13	4.06	1.072	3.97	1.33
Att. Capture	3.88	1.26	4.39	1.15	4.28	1.40
Att. Hold	3.35	1.28	3.73	1.25	3.67	1.44
Maladaptive	3.31	.90	3.46	.80	3.47	.84
Def. Avoid.	3.36	1.63	3.65	1.62	3.72	1.51
Mess. Min.	3.30	.95	3.43	.84	3.42	.94
Affect. Resp.	2.78	1.21	3.00	1.30	3.24	1.23
Fear	2.21	1.13	2.63	1.10	2.56	1.17
Arousal	3.86	1.01	3.92	.76	3.84	.98
Donation (€)	.30	.85	.13	.36	.34	.63

Table 8 (part 2)

Dependent Variable	Susceptible *n* = 53		Insusceptible *n* = 122		Child Posters *n* = 84		Animal Posters *n* = 91	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Severity	5.57	1.15	6.04	0.99	6.41	.70	5.43	1.13
Susceptibility	3.90	1.53	4.62	1.29	4.64	1.39	4.18	1.43
Resp. Effic.	3.86	1.22	3.51	1.07	3.49	1.08	3.74	1.16
Pers. Import.	5.42	0.92	4.76	1.05	5.11	.78	4.82	1.24
Memory	3.56	1.36	3.30	1.24	3.39	1.27	3.36	1.30
Att. Total	3.90	1.19	3.87	1.20	3.94	1.26	3.83	1.13
Att. Capture	4.32	1.33	4.12	1.27	4.20	1.36	4.17	1.22
Att. Hold	3.48	1.30	3.63	1.35	3.68	1.37	3.50	1.29
Maladaptive	3.49	0.84	3.38	0.85	3.43	.89	3.40	.81
Def. Avoid.	3.57	1.79	3.58	1.50	3.55	1.56	3.60	1.63
Mess. Min.	3.48	0.87	3.34	0.93	3.41	.96	3.36	.87
Affect. Resp.	3.22	1.39	2.92	1.19	2.85	1.16	3.16	1.33
Fear	2.38	1.14	2.38	1.14	2.35	1.21	2.40	1.07
Arousal	3.97	0.87	3.83	0.94	3.93	.92	3.82	.93
Donation (€)	0.30	0.85	0.24	0.54	.33	.79	.20	.47

Table 9

Number of respondents (n) per condition

Shock Level	Child Context		Animal Context	
	Susceptible	Insusceptible	Susceptible	Insusceptible
No Shock	2	29	13	14
Medium Shock	2	24	18	13
High Shock	2	25	16	17

Before processing the results of the ANOVAs, the following issue required addressing: performing multiple tests on the same data increases the chance of the already discussed type 1 error. To control for this, a Bonferroni adjusted alpha needed to be employed. This meant the standard alpha level - α = 0.05 or α = 0.10 – needed to be divided by the number of dependent variables in the MANOVA, in this case 15. This resulted in an adjusted alpha level of 0.003/0.007. Even though any fixed level of alpha is debatable (Field, 2000), needless to say a more stringent level than the typical needed to be practiced.

H1: The more shocking a charitable advertisement, the more attention will be payed to the advertisement and the better it will be remembered.

Starting with the *attention* variable, which, as mentioned, was subdivided into a *capturing* (the attraction of attention) and a *holding* (the attention span) dimension, the ANOVA demonstrated shock significantly affected both the overall *attention* variable [$F(2,163) = 2.457$, $p = 0.089$, $\eta^2 = 0.029$], as well as its *capturing* component [$F(2,163) = 4.186$, $p = 0.017$, $\eta^2 = 0.049$] at the α = 0.10 level. Unfortunately, the ANOVA focusing on the latter variable did not pass Levene's test of equal variances, which again meant - as was the case with the Bonferroni adjustment – a reduction of the alpha level was advised. There the shock manipulation included more than two levels (no shock, medium shock and high shock) Bonferroni Post Hoc tests were conducted to retrieve descriptives for each level and uncover which shock conditions differed from each other on the dependent variables. No significant differences were found regarding overall *attention*. The second Post Hoc test indicated the medium shocking posters ($M = 4.386$, $SD = 1.146$) *captured* significantly more ($p = 0.095$) attention than the non-shocking posters ($M = 3.879$, $SD = 1.258$). It is worth noting the high shock condition evoked a *capturing* score ($M = 4.275$, $SD = 1.400$) closest to that of the medium shock condition (Figure 19).

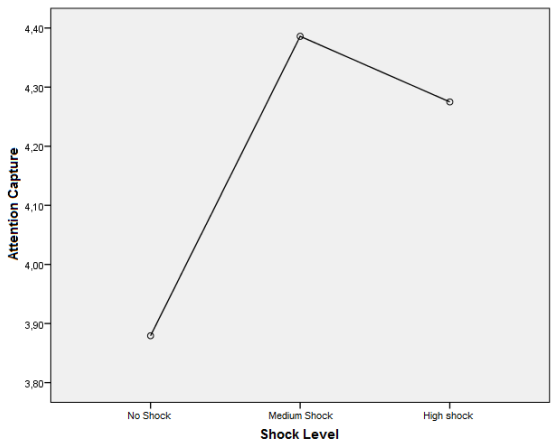


Figure 19. Means plot of attention capturing per shock condition (from left to right; no to high shock)

In sum, it appears the shocking stimuli were more effective at attracting people's attention than the non-shocking stimuli, while the exact level of shock did not seem to make a difference. Just because the respondent's attention was captured, did not mean they also continued to pay attention to the shocking posters. Furthermore, the fact that no effect on memory was found implies attraction also doesn't guarantee the source of interest will automatically be remembered. To conclude, hypothesis 1 was only partially confirmed. Unlike Dahl et al. (2003) suggested, shock did not foster further processing after the attraction of attention.

H2: The more shocking a charitable advertisement, the higher (amount and frequency) the financial giving towards the charity will be.

In total, 40 participants contributed €43,53 (of which €27,6 to the child abuse foundation) to the charitable organizations.
The ANOVA revealed shock successfully influenced the *donation amount* [$F(2,163) = 7.512$, $p = 0.001$, $\eta^2 = 0.084$] at the $\alpha = 0.05$ level. Equal variances could not be assumed, but given the low *p*-value (0.001), the significance of the test was not jeopardized. Unexpectedly, the Post Hoc test did not yield any significant differences. Judging from Figure 20, respondents who viewed the most shocking posters ($M = 0.344$, $SD = 0.630$) seemed to have *donated* more than participants that encountered the medium shocking advertisements ($M = 0.130$, $SD = 0.316$). Oddly, the average donation amount in the non-shocking condition ($M = 0.302$, $SD = 0.858$) was closest to that in the top shock condition. As the hypothesis indicated, the donation frequency was also included in the analysis. A cross tabulation table informed us that in the no shock condition, 11 (19%) respondents had donated while 47 (81%) had not, in the medium shock condition 10 (17,5%) respondents had contributed whereas 47 (82,5%) had not and in the high shock condition 20 (33,3%) participants had given money whereas 40 (66,7%) had not. For a visual representation of the distributions see Figure 21. In order to analyze between group differences a non-parametric chi-square test was performed – there a parametric alternative does not exist (Pallant, 2013) -, which almost reached significance [$X^2(2) = 5.025$, $p = 0.081$]. It appeared participants who saw the most shocking posters were almost more inclined to make a donation than the other respondents.

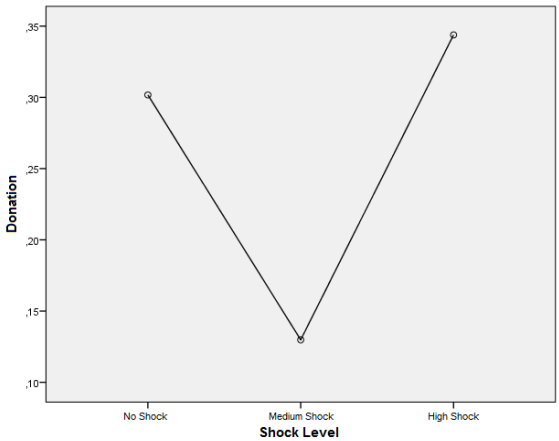


Figure 20. Means plot of donations per shock condition (from left to right; no to high shock)

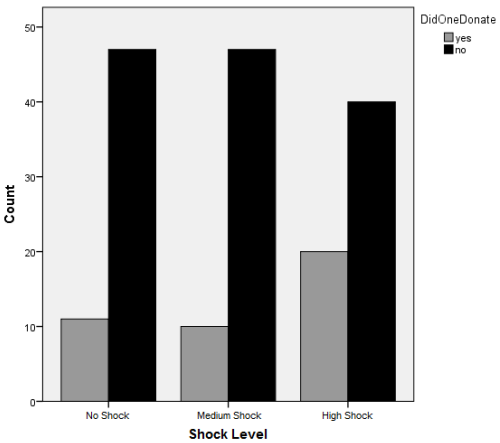


Figure 21. Distribution of respondents that donated versus respondents that did not donate per shock condition (from left to right; no to high shock)

The outcomes of the ANOVA didn't seem logical – referring to the fact that the average donation amount triggered by the non-shocking condition was higher than the amount generated by the medium shock condition. The frequency distributions seemed more plausible. However, when combining the two analyses, we discovered the average donation amount 'per donor' was higher in the non-shocking condition (M = 1.591, SD = 1.358) than in the highest shock condition (M = 1.032, SD = 0.696). This only added to the confusion. Additionally, no clear link between the results of Hypotheses 1 and 2 could be found – between attention and donating behavior. At this point, shock did not appear to be a suitable factor to explain donating behavior.
In conclusion, the analysis led to the rejection of hypothesis two.

H3: the more effective viewers estimate donating will be, the more they will donate (amount and frequency).

In order to test this hypothesis, a median split was performed on the *efficacy* variable, creating a low and a high efficacy group. The analysis of variance reached significance [$F(1,173) = 8.256$, $p = 0.005$, $\eta^2 = 0.046$). Equal variances could not be assumed, but given the low p-value (0.005), the significance of the test was not jeopardized. Respondents in the high efficacy condition (n = 93, M = 0.390, SD = 0.800), donated a significantly higher amount than people in the low efficacy condition (n = 82, M = 0.113, SD = 0.364). A Chi-square test, corrected for continuity, indicated efficacy also improved the *frequency of giving* [$X^2(1) = 7.607$, $p = 0.006$]. In the high efficacy condition 30 (32,3%) people donated whereas 63 (67,7%) did not, in the low efficacy these numbers were respectively 11 (13,3%) and 72 (86,7%). H3 was fully confirmed and efficacy proved a decent predictor of *giving*.

H4: Under conditions of viewer insusceptibility, the more shocking a charitable advertisement, the more it will be able to hold viewers' attention and the better it will be remembered.
H5: Under conditions of viewer susceptibility, the more shocking a charitable advertisement, the less it will be able to hold viewers' attention and the less it will be remembered.

The careful observant could have noticed the two hypotheses above could be combined into a single interaction effect; the effect of shock on *attention holding* and *memory* is de pendent on a person's susceptibility level, such that we presumed shock to increase scores on the dependent variables under conditions of insusceptibility – the absence of children/pets -, while an opposite reaction was expected from parents and pet owners. Even though the MANOVA indicated a significant interaction effect on the dependent variables combined [$F(26,304) = 1.452$, $p = 0.075$, $\eta^2 = 0.110$], the effect did not resurface on any of the individual dependent variables concerning the hypotheses in question. Thus, hypotheses four and five were rejected. Apparently, susceptibility did not control the direction of the shock pattern. An elaboration upon these findings is presented in the discussion chapter.

H6: Under conditions of viewer insusceptibility, the more shocking a charitable advertisement, the higher (amount and frequency) the financial giving towards the charity will be.
H7: Under conditions of viewer susceptibility, the more shocking a charitable advertisement, the lower (amount and frequency) the financial giving towards the charity will be and the larger the maladaptive outcomes.

Like with the previous two hypotheses, these hypotheses could also be combined into a single interaction effect; the effect of shock on *financial giving* is de pendent on a person's susceptibility level, such that we presumed shock to increase scores on the dependent variables under conditions of insusceptibility – the absence of children/pets -, while an opposite reaction was expected from

parents and pet owners. The outcome of the MANOVA was already presented under hypotheses four and five - [$F(26,304) = 1.452$, $p = 0.075$, $\eta^2 = 0.110$]. This time however, the interaction effect also resurfaced on the dependent variable relevant to the hypotheses [$F(2,163) = 5.392$, $p = 0.005$, $\eta^2 = 0.062$]. Equal variances could not be assumed, but given the low *p*-value (0.005), the significance of the test was not jeopardized. A visual representation of the interaction can be found in Figure 22. Pairwise comparisons were used to unravel the exact structure of the interaction effect. Shock had no effect on the *donation behavior* of child- and petless individuals. However, parents and pet owners donated a significantly higher amount after seeing the non- ($M = 0.467$, $SD = 1.356$) and highly shocking ($M = 0.384$, $SD = 0.738$) posters, than they did after encountering the medium shock posters ($M = 0.100$, $SD = 0.249$) – *p*-values of the differences were respectively 0.000 and 0.016.

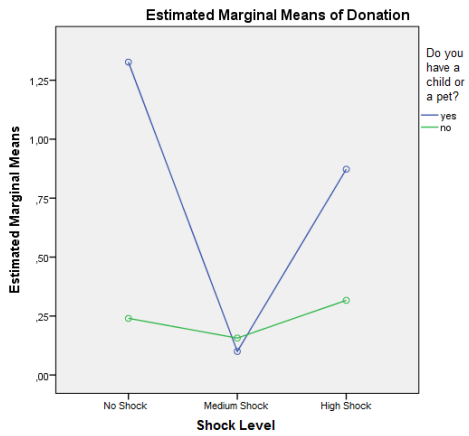


Figure 22. Means plot of donation amount with shock condition and susceptibility level as the independent variables (blue line; susceptible respondents, from left to right; no to high shock)

Next, we looked at the *frequency of giving* using cross tabulations, on which shock had no significant effect, neither for the insusceptible group, nor for the susceptible group. However, both the bar chart concerning the parents and pet owners, as well as the bar chart considering the child- and petless individuals, looked very similar to Figure 21 – the bar chart that did not distinguish on the basis of susceptibility. Again respondents appeared most tempted to donate after seeing the most shocking posters.

Lastly, the *maladaptive outcomes* variable was also included in hypothesis seven. While parents and pet owners did not feel a stronger urge to deny or avert themselves from the advertisement as the posters got more shocking - we did not find a significant difference between shock conditions -, the generated means plot pattern coincided with our expectations – the higher the shock, the larger the *maladaptive outcomes* (Figure 23).

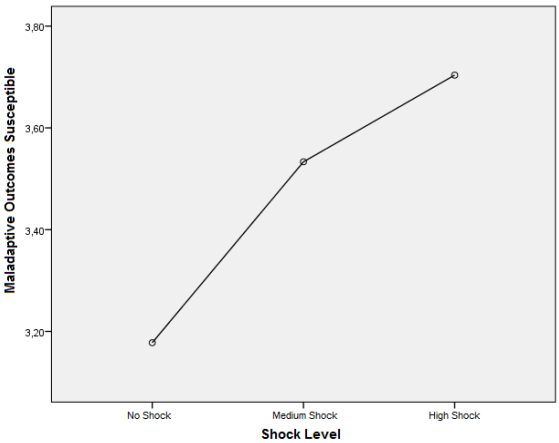


Figure 23. Means plot of maladaptive outcomes per shock condition focusing on susceptible respondents (from left to right; no to high shock)

Even though a significant interaction effect was discovered, it did not fit our theoretical predictions. Our best guess is there may exists a main effect of susceptibility, which remained absent in the medium shock condition, because the limited sample sizes – only 2 susceptible respondents donated after seeing the non-shocking posters, 4 after the medium shock posters and 6 after the high shock posters. A different sample could have easily yielded a slightly different outcome. Additionally, the availability of change/coins could have played an important role; perhaps, by chance, the 4 susceptible respondents who saw the medium shock posters did not carry any more cash with them. In sum, shock did not significantly influence the frequency of giving, nor the size of the maladaptive outcomes. Therefore, both hypotheses were rejected.

H8: When being confronted with a shocking advertisement, viewers who are susceptible to the threat will disengage from the advertisement sooner (attention holding), will have a less durable memory of the advertisement, will financially contribute less, and will display more maladaptive reactions, than viewers who are not susceptible to the threat.

The ANOVAs yielded two significant effects; susceptibility affected both *memory* [$F(1,163) = 4.254$, $p = 0.041$, $\eta^2 = 0.025$] and *donating behavior* [$F(1,163) = 3.925$, $p = 0.000$, $\eta^2 = 0.079$]. As mentioned previously, the *donation* variable did not pass Levene's Test, however given the low *p*-value (0.000), the significance of the test was not jeopardized. Susceptible respondents demonstrated a more durable *memory* ($M = 3.557$, $SD = 1.361$) than their insusceptible counterparts ($M = 3.295$, $SD = 1.244$). Additionally, parents and pet owners realized a higher *financial contribution* ($M = 0.300$, $SD = 0.894$) than childless and petless participants ($M = 0.243$, $SD = 0.540$), as was expected on the basis of hypotheses six and seven.
Hypothesis eight was rejected, there not all dependent variables were affected, and the ones that did were influenced in a direction opposite to our expectation.
A possible explanation for the *memory* outcome lies in the fact that susceptible viewers deemed the causes more important [$F(1,163) = 25.647$, $p = 0.000$, $\eta^2 = 0.136$], because people are better at remembering things that are relatively important to them (Kliegel, Martin, McCaniel & Einstein, 2004). Caring is also know to stimulate prosocial behavior (Gini, Albiero, Benelli & Altoe, 2008). This finding could be applied to the *donating outcome* – people who care more, give more. Another possible explanation for the *donation* outcome lies in the fact that susceptible viewers deemed contributing more effective [$F(1,163) = 6.348$, $p = 0.013$, $\eta^2 = 0.037$], and hypotheses three demonstrated perceived efficacy stimulates *giving*.

Context effects

As noted, two different contexts/topics – child abuse and animal cruelty – were included in this study with the sole purpose of improving the generalizability of our results. Nevertheless, it was necessary to check whether or not this variable had influenced the results. Some dependent variables included in the hypotheses were affected by the specific context, namely *memory* and *donating amount.* The child posters were better remembered (M = 3.861, SD = 1.301) than the animal posters (M = 3.342, SD = 1.269)[$F(1,163) = 3.002$, $p = 0.083$, $\eta^2 = 0.018$]. The most obvious explanation – also mentioned in the previous paragraph - is the simple notion that children are generally considered more important than animals – this was also suggested by our results (Table 7)[$F(1,163) = 14.783$, $p = 0.000$, $\eta^2 = 0.033$](M = 4.819, SD = 1.236; M = 5.109, SD = 0.782) -, and importance improves memory (Kliegel et al., 2004). Respondents donated more money to the child foundation (M = 0.329, SD = 0.791) than to the animal foundation (M = 0.197, SD = 0.474)[$F(1,163) = 18.493$, $p = 0.000$, $\eta^2 = 0.102$], possibly for the same reason.

Even though the ANOVA also indicated a significant interaction between context and shock on *memory* [$F(2,163) = 0.092$, $p = 0.092$, $\eta^2 = 0.029$], pairwise comparisons did not pinpoint any significant differences. However, ANOVA indicated another interaction between context and shock, considering *donating behavior* [$F(2,163) = 6.197$, $p = 0.003$, $\eta^2 = 0.071$]. While shock had no effect in the animal context, in the child context, the medium shocking poster evoked a lower average donation amount (M = 0.199, SD = 0.288) than the no- and high shock conditions (M = 0.397, SD = 1.044; M = 0.452, SD = 0.733). This resulted in a pattern very similar to Figure 22. Hypotheses six and seven led us to assume susceptible respondents we most inclined to contribute. The latest analysis suggested viewers of the child abuse posters were most generous. Combining these two results, it seemed plausible that parents were the most significant donors. The following analysis confirmed our suspicions. Another significant and interesting interaction was found between context and susceptibility [$F(1,163) = 17.409$, $p = 0.000$, $\eta^2 = 0.096$]. While the donations of insusceptible respondents did not depend on the cause at issue, parents contributed significantly more money than pet owners (M = 1.367, SD = 2.016; M = 0.164, SD = 0.454)(Figure 24).

Lastly, there was a significant interaction between all dependent variables on the donating variable [$F(2,163) = 17.409$, $p = 0.000$, $\eta^2 = 0.096$]. This effect again demonstrated only the susceptible reacted to the context at issue. In the no shock condition, susceptible respondents donated significantly more ($p = 0.000$) to the child foundation (M = 2.500, SD = 3.536) than to the animal cause (M = 0.154, SD = 0.555). In the high shock condition, parents (M = 1.500, SD = 1.414) contributed significantly more ($p = 0.000$) than pet owners (M = 0.245, SD = 0.546).

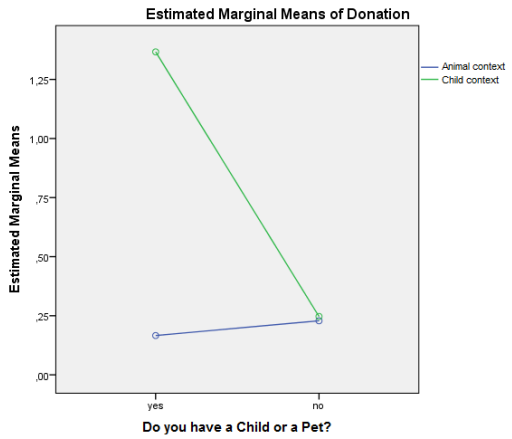


Figure 24. Means plot of donation amount with susceptibility level and context as the independent variables (blue line; animal context, left; susceptible respondents)

Additional Findings

There shock did not prove a solid predictor of donating behavior, some additional variables were considered, the first of which was *personal importance.* A median split was performed on this variable. The accompanying univariate analysis of variance reached significance [$F(1,163) = 4.986$, $p = 0.027$, $\eta^2 = 0.028$]. In line with Kliegel et al. (2004), respondents who considered the cause relatively important ($n = 101$, $M = 0.353$, $SD = 0.774$) donated a significantly higher amount than people who considered the cause less important ($n = 74$, $M = 0.134$, $SD = 0.389$).

Secondly, as mentioned, *arousal* has played a proven role as a mediator in advertising effectiveness (Singh & Churchill, 1987). Therefore, we predicted it to mediate the effect of *shock* on *donating behavior* and conducted a regression analysis to test the assumption. The regression of *shock* on *donations* tested significant ($t = 2.580$, $p = 0.011$). The same was true for the regression of *shock* on *arousal* ($t = 4.081$, $p = 0.000$) and the regression of *arousal* on *donations* ($t = 3.557$, $p = 0.000$). Lastly, we looked at the regression of both *shock* and *arousal* on *donations* and found that only our presumed mediator variable, not our presumed independent variable ($t = 1.650$, $p = 0.101$) had a significant effect on donations ($t = 2.925$, $p = 0.004$). In this case we say arousal fully mediated the relationship between shock and financial giving.

Effects of demographic variables

Out of all dependent variables included in this study, only previous donating behavior had an effect on current donating behavior [$F(1,163) = 2.796$, $p = 0.028$, $\eta^2 = 0.062$]. Equal variances could not be assumed, but given the low p-value (0.028), this did not necessarily jeopardize the significance of the outcome. Post Hoc tests showed respondents that hadn't made a donation in the past twelve months ($M = 0.040$, $SD = 0.131$), donated significantly ($p = 0.062$) less than participants who donated between one and four times ($M = 0.342$, $SD = 0.778$). While the means plot indicated a positive relationship between donating history and current donating behavior (Figure 25), no further differences surfaced, due to low sample sizes. The frequency of giving was also considered. A Chi-square test reached significance [$X^2(4) = 8.944$, $p = 0.063$] - at the $\alpha = 0.10$ level. Given the unequal distribution of respondents it made more sense to present the categorical frequencies than to display a chart.

In the first category (zero donations in the past year) 10,5% of respondents donated whereas 89,5% did not. This ratio was 28,6%-71,4% in the next two categories, 26,7%-73,3% in the fourth category and 41,7%-58,3% in the last category. These results were similar to the ANOVA outcomes, and suggest non-donors are relatively unlikely to donate, whereas high frequency donors are most likely to donate.

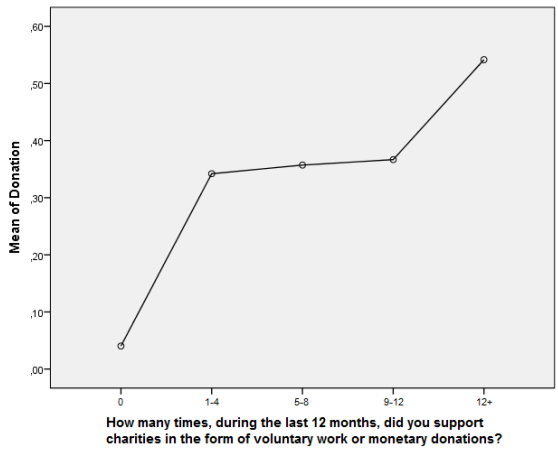


Figure 25. Means plot of donations per frequency of past donations (from left to right; less to more frequent past giving)

6. Conclusion/Discussion

Going back to the very beginning, Dahl et al. (2003) understand shock to draw attention, facilitate memory and even trigger actual behavior, solely because of the nature of the stimuli themselves. We propose the authors are able to demonstrate these effects, not just because they employ shocking stimuli, but because of the specific circumstances of their operationalization. Their experiment includes a severe and relevant threat – students run a relatively high risk of contracting an STD -; and the appropriate response to counteract the threat – using a condom – communicated by the advertisement can be considered both effective as well as workable. Hence, technically, Dahl et al. (2003) present their subjects with a high threat, high efficacy *fear appeal*, a widely used and proven advertising tactic (Carey, 2013; Witte & Allen, 2000). Furthermore, they do not measure actual condom use, rather, they observe whether or not subjects make use of a free STD information brochure. Thus, in our opinion, Dahl et al. (2003) do not provide a strong argument that shock alone can accomplish all these cognitive and behavioral effects.

Based on the same fear appeal literature we propose shock to have the following effects in a philanthropic context: without presenting an effective and feasible solution to a threat, it should prove counterproductive to shock people. More specifically, one shouldn't shock parents and pet owners by presenting them with gruesome imagery of child abuse and animal cruelty, without offering them some kind of reassurance. Such an advertisement is bound to backfire, resulting in attention disengagement, low recall and low financial contributions. People without children or pets on the other hand, people who are not susceptible to the threats, are not expected to react in an evasive manner, because the threat is not relevant to them. Shock ought to increase their awareness of the severity of the situation, causing them to pay more attention to the advertisement, better remember it and donate more money to the charitable cause (Witte, 1994a; Witte 1994b).

In line with theory (Kessler et al., 2010), we find shock is able to attract people's attention. The shocking posters employed in this study evoke higher attention scores than the non-shocking posters, while the medium and high shocking posters do not generate dissimilar reaction. The latter observation is most likely due to the results of the manipulation, which display a similar outcome. Contrary to our predictions, shock does not influence *attention holding* or memory. One possible explanation is the notion that we have become desensitized to shocking stimuli, given their omnipresence in today's media landscape (Urwin & Venter, 2014). Our biological sensitivity to threats may still be active (Williams, Stein & Galguera, 2014), but, for the same reason, is less potent at maintaining our interest. Perhaps the stimuli should be more gruesome, like the graphic warning labels commonly placed on cigarette packages plausibly are (Veer & Rank, 2012). Another possibility lies in the measurement instrument of choice. A more sensitive instrument than a self-report scale, for instance a neuroscientific measure, might yield significant results (Kessler et al., 2010).

Still focusing on attention holding and memory, whether or not respondents are susceptible to the threat does make a difference in our study, potentially because of the same reasons mentioned before. One plausible reason the advertisements do not backfire, might be due to the fact that our study includes threats that viewers are susceptible to in an *indirect manner.* The advertisements communicate pets and children run the risk of falling victim to abuse/cruelty, *not* the receivers of the message. They will be affected indirectly: if a child is hurt, their parents are hurt, if an animal gets hurt, their owners are hurt. This notion might render the advertisements less powerful, but, on the other hand, what's could be more important to a parent than his/her own flesh and blood? Another interpretation could be that the susceptible participants did not experience enough risk. Considering a regular fear appeal, the immanency of the threat is more obvious: a smoker who encounters an anti-smoking fear appeal surly is aware of the detrimental consequences of his/her behavior. In our case, while parents and pet owners are aware of the severity of the crimes on display, they do not make the connection between the causes and their own personal situations.

Logically, there the cognitive effects of shock are limited, and cognition precedes behavior (Zegefka et al., 2013), the same must be true for the behavioral effects in the form of *donating behavior*, which is what our study demonstrates. For all the reasons mentioned above, shock does not influence monetary giving, neither is this relationship dependent on the susceptibility of the viewers. While shock does not influence giving directly, it does so in an indirect fashion. This study confirms the frequently demonstrated mediating role of *arousal* (Singh & Churchill, 1987), there it forms a bridge between shock and donating behavior.

Still focusing on donating behavior, our data presents both interaction effects between shock and susceptibility, shock and context, shock and context and susceptibility, and main effects for susceptibility and context. Combining all these analyses together, we find that, while the donating behavior of pet owners and petless individuals does not differ, parents donate significantly more money than people without children. This could be due to the fact that parents consider the cause more important than pet owners, and caring stimulates giving (Gini et al., 2008). Also, parents deem giving more effective, and, as our results indicate, *perceived efficacy* also motivates giving. Lastly, it seems quite plausible that, because, in general, parents possess more financial wealth than younger individuals, they also contribute higher amounts of money.

Additionally, current donating behavior is influenced by previous donating behavior (Chang & Lee, 2009) – the frequency of one's donation behavior in the past twelve months – in such a way that people who didn't donate before are the least likely to contribute, and people who donate more than once a month are most likely to make a donation.

In Sum, while shock can capture people's attention, it takes more to keep them interested and persuade them to make a donation. Several other *independent* variables do influence donating behavior. However these variables are not easy to manipulate. Shock might still have the potential to make a difference, however, not likely under conditions similar to those employed in this study.

Limitations

This study knows several limitations that challenge the credibility of the results. However, at the same time they should prove insightful to future shock advertising research, there this study concerns one of the few attempts to compare reactions to actual shock advertisements (Dahl et al., 2003) while also including different levels of shockingness.

The manipulation check is successful, when considering the dataset as a whole, however, when viewing the two context separately, different patterns reveal themselves. Only the most shocking child abuse poster is deemed more shocking. Focusing on the animal abuse posters, only a difference between non-shocking and shocking is noticed. While equal numbers of pet owners and petless individuals are included in this study, the distribution of parents and petless people is highly skewed – very few parents are present in the sample.

As mentioned, even the most shocking stimuli used in this study, may not be shocking enough to generate the hypothesized patterns. For a shock advertisement to truly backfire, a higher level of shock might be required.

Even though this study includes a true behavioral measure, other variables are not measured in the most optimal of ways. For instance, an eye tracking measure of attention, is obviously superior to a self-reported measure of the same variable.

Given that the total sample includes roughly 200 participants, and there are 12 experimental conditions (3x2x2), analysis including all independent variables are not as powerful as desired, because of the small number of participants in each condition. Given the results of the manipulation, this is especially true for comparisons based on the distinction between parents and childless participants.

Implications

The advice we'd like to offer doesn't so much concern 'what' to research, but much more 'how' the research should be conducted. First, definitional issues need to be addressed. The current definition of shock as a 'norm breach' allows for way too many different forms of norm breach. As mentioned, looking at our study, the manipulation in the child context is less simple than the animal context's manipulation. Unlike in the animal context, it does not center around the level of harm inflicted, instead, the immanency of the threat is altered between posters. Witch each consecutive poster, the threat becomes more real. While the shocking child abuse posters equally meet the definition of shock we employed, their workings might differ from the manipulation of a manifested threat. Even though Zillman et al. (2001) consider impending- and manifest victimization comparable, their dynamics might significantly differ from each other. With such a broad definition it cannot come as a surprise different studies about shock will produce incompatible results. Thus it is essential a distinction will be made between the different types of shock. Furthermore, many more definitions besides shock advertising are in use, of which 'offensive advertising' and 'controversial advertising' appear to be the most common (Prendergast et al., 2002; Waller, 2006). Needless to say the only purpose this redundancy serves is confusion.

Second, research focusing on actual reactions to shock advertisements appears to be rare. If we are even to understand fully the workings of shock appeals, much more experimental research is needed. Thereby, it is essential 'clean' manipulations are constructed, whereby only the element of shock is altered between conditions. We understand it is easier to use existing materials, and it might be graphically challenging to create sophisticated stimuli, but we strongly urge future research to take full account of this advice.

Third, a simple 'yes or no' will obviously not suffice to answer the question of whether shock works. The question is, as always, *how* does shock behave under different circumstances. For instance, research has revealed people are more tolerant of the tactic in a philanthropic context as opposed to a commercial context, arguing that when it comes to charity ''the end justifies the means'' (Parry et al., 2013). Furthermore, the level of tolerance might also differ per cause, reactions depend on certain characteristics of the viewer, and so on. It is up to future researchers to determine which circumstances will be most interesting to consider.

As a practical consideration, the issue surrounding soliciting for 'cash' donations is the fact that many people simply do not carry around cash money any more. With the recent introduction of wireless payment, future researchers that want to include a donation measure in their study should consider offering their target group to pay by card in some form or another.

Lastly, on a personal note, we'd like to see more research centering around philanthropic communication. It's great to see many of studies are devoted to helping people improve their own behavior (social marketing), but let's not forget there are many others that need help too.

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Appendices

Appendix 1: Questionnaire

Let op: Het onderzoek waar u aan wilt gaan deelnemen betreft het onderwerp kindermishandeling/-misbruik / dierenmishandeling/-misbruik. Mocht dit onderwerp gevoelig liggen, het staat u volkomen vrij om alsnog, zonder enige verklaring, af te zien van deelname.

Introductie: Hartelijk dank voor uw deelname aan dit onderzoek!
Tijdens dit onderzoek worden u een aantal advertenties getoond. **Let op**: De beelden en/of inhoud kunnen als schokkend worden ervaren. Voorzichtigheid is geboden. Het staat u volkomen vrij om op ieder gewenst moment, zonder enige verklaring, uw deelname te beëindigen.

Daarnaast wordt u verzocht een vragenlijst in te vullen. Uw antwoorden zijn volledig anoniem en zullen slechts worden geopenbaard in de vorm van gemiddeldes op basis waarvan het niet mogelijk is om individuele antwoorden te identificeren.

Het onderzoek zal ongeveer 10 minuten van uw tijd in beslag nemen.

Instructie: Het eerste deel van de vragenlijst bestaat uit een verzameling stellingen. Bij iedere stelling geeft u aan in hoeverre u het eens/oneens bent met de stelling. U doet dit door op een schaal van 1 (Helemaal mee oneens) tot 7 (Helemaal mee eens) het nummer te selecteren dat uw mening het beste weergeeft. **Let op**: Kiest u de middelste antwoordoptie (4), dan betekent dit niet dat u geen mening heeft, maar dit betekent dat u het niet oneens maar ook niet eens bent met de stelling, met andere woorden, u kiest positie in het midden.
Nieuwe instructies volgen wanneer er zich veranderingen voordoen in de antwoordschalen.

Shock						
Instructie: Geef aan in hoeverre u het eens of oneens bent met de volgende stellingen. **Schaal:** Helemaal mee oneens — Niet mee oneens, Niet mee eens — Helemaal mee eens						
1	2	3	4	5	6	7
1. Ik was geschokt door de advertentie.						
2. Ik vind de advertentie aanstootgevend.						
3. Ik was geschrokken van de advertentie.						

Risk Behavior Diagnosis Scale						
Severity of Threat						
Instructie: Geef aan in hoeverre u het eens of oneens bent met de volgende stellingen. **Schaal:** Helemaal mee oneens — Niet mee oneens, Niet mee eens — Helemaal mee eens						
1	2	3	4	5	6	7
4. Ik denk dat kindermishandeling ernstig is. **4. Ik denk dat dierenmishandeling ernstig is.**						

5. Ik denk dat kindermishandeling zeer negatieve gevolgen heeft. **5. Ik denk dat dierenmishandeling zeer negatieve gevolgen heeft.**
6. Ik denk dat kindermishandeling extreem schadelijk is. **6. Ik denk dat dierenmishandeling extreem schadelijk is.**
Susceptibility to Threat
7. Het is waarschijnlijk dat een kind uit mijn omgeving mishandeld zal worden. **7. Het is waarschijnlijk dat een dier uit mijn omgeving mishandeld zal worden.**
8. Een kind uit mijn omgeving loopt het risico te worden mishandeld. **8. Een dier uit mijn omgeving loopt het risico te worden mishandeld.**
9. Het is mogelijk dat een kind uit mijn omgeving mishandeld zal worden. **9. Het is mogelijk dat een dier uit mijn omgeving mishandeld zal worden.**
Response efficacy
10. Doneren aan het goede doel is een effectieve manier om kindermishandeling terug te dringen. **10. Doneren aan het goede doel is een effectieve manier om dierenmishandeling terug te dringen.**
11. Doneren aan het goede doel werkt bij the terugdringen van kindermishandeling. **11. Doneren aan het goede doel werkt bij the terugdringen van dierenmishandeling.**
12. Als ik doneer aan het goede doel, lopen kinderen minder kans om mishandeld te worden. **12. Als ik doneer aan het goede doel, lopen dieren minder kans om mishandeld te worden.**
13. Als ik doneer aan het goede doel, is het minder waarschijnlijk dat een kind uit mijn omgeving mishandeld zal worden. **13. Als ik doneer aan het goede doel, is het minder waarschijnlijk dat een dier uit mijn omgeving mishandeld zal worden.**

Personal Importance						
Instructie: Geef aan in hoeverre u het eens of oneens bent met de volgende stellingen. **Schaal:**						
Helemaal mee oneens		Niet mee oneens, Niet mee eens				Helemaal mee eens
1	2	3	4	5	6	7
14. Ik geef om het welzijn van kinderen. **14. Ik geef om het welzijn van dieren.**						
15. Het welzijn van kinderen is belangrijk voor mij. **15. Het welzijn van dieren is belangrijk voor mij.**						
16. Het welzijn van kinderen betekent veel voor mij. **16. Het welzijn van dieren betekent veel voor mij.**						
17. Het welzijn van kinderen ligt mij nauw aan het hart. **17. Het welzijn van dieren ligt mij nauw aan het hart.**						
18. Ik houd me bezig met het welzijn van kinderen. **18. Ik houd me bezig met het welzijn van dieren.**						
19. Ik ben bereid om grote offers te brengen voor het welzijn van kinderen. **19. Ik ben bereid om grote offers te brengen voor het welzijn van dieren.**						

Memory

Instructie: Geef aan in hoeverre u het eens of oneens bent met de volgende stellingen. **Schaal:** Helemaal mee oneens		Niet mee oneens, Niet mee eens				Helemaal mee eens
1	2	3	4	5	6	7
20. Dit is het soort advertentie dat je makkelijk vergeet.						
21. Ik zal deze advertentie lang onthouden.						

Attention						
Instructie: Geef aan in hoeverre u het eens of oneens bent met de volgende stellingen. **Schaal:** Helemaal mee oneens		Niet mee oneens, Niet mee eens				Helemaal mee eens
1	2	3	4	5	6	7
22. Toen ik de advertentie zag, trok hij gelijk mijn aandacht.						
23. De advertentie ving direct mijn blik.						
24. De advertentie was in staat om mijn aandacht vast te houden.						
25. Ik bleef naar de advertentie kijken.						

Defensive Avoidance						
Instructie: Geef aan in hoeverre u het eens of oneens bent met de volgende stellingen. **Schaal:** Helemaal mee oneens		Niet mee oneens, Niet mee eens				Helemaal mee eens
1	2	3	4	5	6	7
26. Ik wil niet denken aan kindermishandeling. **26. Ik wil niet denken aan dierenmishandeling.**						
Message Minimization						
27. Deze advertentie probeerde mij te manipuleren.						
28. Deze advertentie was overdreven.						
29. Deze advertentie was misleidend.						
30. Deze advertentie gaf geen correcte vertegenwoordiging van kindermishandeling. **30. Deze advertentie gaf geen correcte vertegenwoordiging van dierenmishandeling.**						
31. Deze advertentie geeft geen objectieve vertegenwoordiging van kindermishandeling. **31. Deze advertentie geeft geen objectieve vertegenwoordiging van dierenmishandeling.**						

Instructie: Het volgende deel van de vragenlijst bestaat uit een verzameling gevoelens. Bij ieder gevoel geeft u aan in hoeverre u het ervoer. U doet dit door op een schaal van 1 (Helemaal niet) tot 7 (Heel erg veel) het nummer te selecteren dat de intensiteit van uw gevoel het beste weergeeft. **Let op:** Kiest u de middelste antwoordoptie (4), dan betekent dit niet dat u geen mening heeft, maar dit betekent dat de sterkte van uw gevoel tussen helemaal niet voelen en heel erg veel voelen in zit.

Nieuwe instructies volgen wanneer er zich veranderingen voordoen in de antwoordschalen.

Affective Response to Ad (negative feelings)

Instructie: Geef aan in hoeverre u de hieronder opgesomde gevoelens voelde, terwijl u de advertentie bekeek. Terwijl ik de advertentie bekeek voelde ik mij..... **Schaal:** Helemaal niet 1 2 3 4 5 6 7 Heel erg veel
32. Depressief.
33. Verontwaardigd
34. Droevig.
35. Boos.
36. Geërgerd.
37. Slecht.
38. Beledigd.
39. Geïrriteerd.

Fear
Instructie: Geef aan in hoeverre u de hieronder opgesomde gevoelens voelde, terwijl u de advertentie bekeek. Terwijl ik de advertentie bekeek voelde ik mij..... **Schaal:** Helemaal niet 1 2 3 4 5 6 7 Heel erg veel
40. Angstig.
41. Nerveus.
42. Bang.
43. Misselijk.
44. Ongemakkelijk.

Instructie: Het volgende gedeelte van de vragenlijst bestaat uit een verzameling tegengestelde gevoelens, die samen een bepaald bereik afbakenen (bv., van slaperig tot klaarwakker). Bij ieder paar geeft u aan waar uw gevoel zich binnen het bereik bevindt. Selecteert u een punt aan de linker kant van het 7-punts bereik dan neigt u meer naar het gevoel aan de linkerkant (bv., slaperig). Selecteert u een punt aan de rechterkant, dan neigt u meer naar het tegengestelde gevoel (bv., klaarwakker). **Let op:** Kiest u de middelste antwoordoptie (4), dan betekent dit niet dat u geen mening heeft, maar dit betekent dat uw gevoel tussen de twee gevoelens in zit (bv., tussen slaperig en klaarwakker zit normale wakkerheid).

Arousal								
Instructie: Kies telkens het punt tussen de twee gevoelens dat het beste weergeeft hoe u zich voelde, terwijl u de advertentie bekeek. Terwijl ik de advertentie bekeek voelde ik mij.....								
45. Ontspannen	O	O	O	O	O	O	O	**Gestimuleerd**
46. Kalm	O	O	O	O	O	O	O	**Opgewonden**
47. Vredig	O	O	O	O	O	O	O	**Uitzinnig**

48. Lusteloos	O	O	O	O	O	O	O	**Gespannen**
49. Slaperig	O	O	O	O	O	O	O	**Klaarwakker**
50. Niet opgewekt	O	O	O	O	O	O	O	**Opgewekt**

Philanthropic Behavior				
51. Hoe vaak heeft u, gedurende de afgelopen 12 maanden, goede doelen gesteund in de vorm van vrijwilligerswerk of geld donaties?				
☐ 0 Keer	☐ 1-4 Keer	☐ 5-8 keer	☐ 9-12 keer	☐ Meer dan 12 keer

Dog/Child yes/no	
52. Heeft u een kind/kinderen?	**Ja / Nee**
52. Heeft u een huisdier/huisdieren?	
53. Hebben mensen uit uw naaste familie- en/of vriendenkring een kind/kinderen?	**Ja / Nee**
53. Hebben mensen uit uw naaste familie- en/of vriendenkring een huisdier/huisdieren?	**Ja / Nee**

Demographics		
54. Noteer uw leeftijd.		**……**
55. Omcirkel uw geslacht.		**M / V**
56. Wat is uw hoogst genoten (afgeronde) opleidingsniveau?		
☐ **Basisonderwijs**	☐ **MBO**	**Anders, namelijk:**
☐ **Praktijkonderwijs**	☐ **Associate Degree**	……
☐ **VMBO**	☐ **HBO Bachelor**	……
☐ **HAVO**	☐ **WO Bachelor**	……
☐ **VWO**	☐ **WO Master**	

Appendix 2: Normality tests

Table 1
Shapiro-Wilk tests of normality

Variable	Statistic	df	Sig.
Shock	.98	175	.02
Severity	.88	175	.00
Susceptibility	.95	175	.00
Efficacy	.98	175	.04
Personal Importance	.95	175	.00
Memory	.97	175	.00
Attention	.99	175	.27
Maladaptive	.99	175	.07
Affective Response	.97	175	.00
Fear	.93	175	.00
Arousal	.98	175	.02
Donating Behavior	.46	175	.00

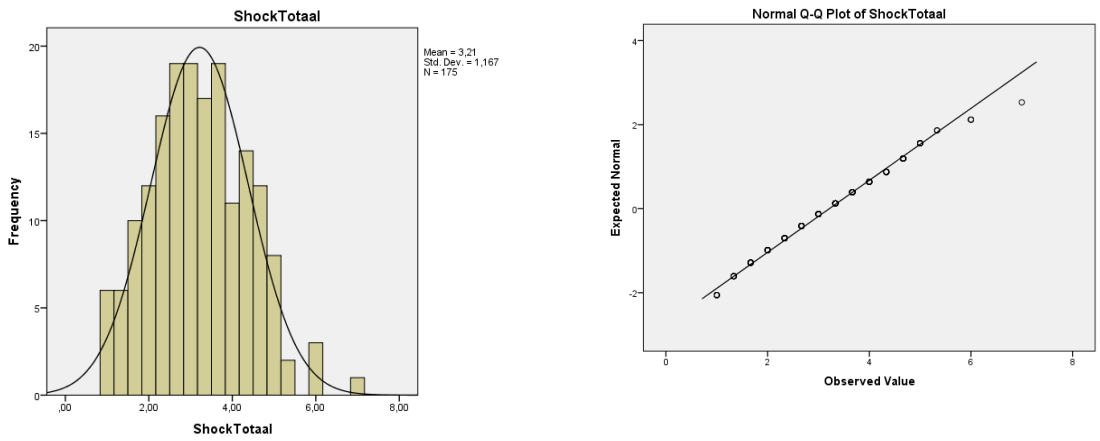

Figure 6. Histogram with normality plot and normal probability plot of Shock.

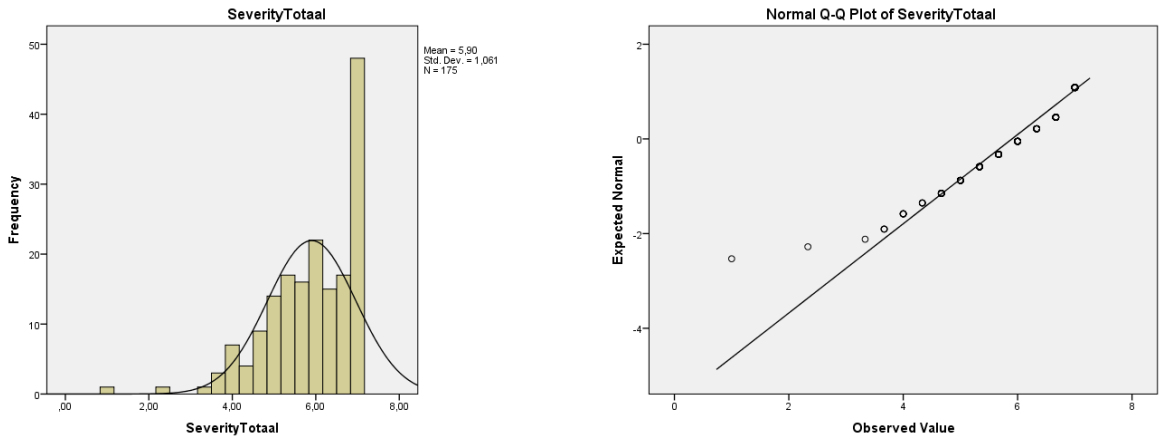

Figure 7. Histogram with normality plot and normal probability plot of Severity.

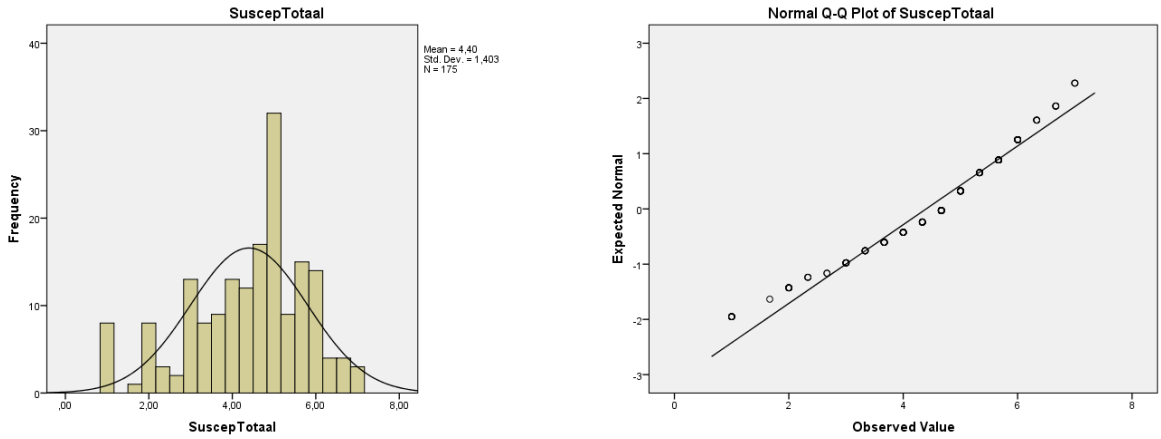

Figure 8. Histogram with normality plot and normal probability plot of Susceptibility.

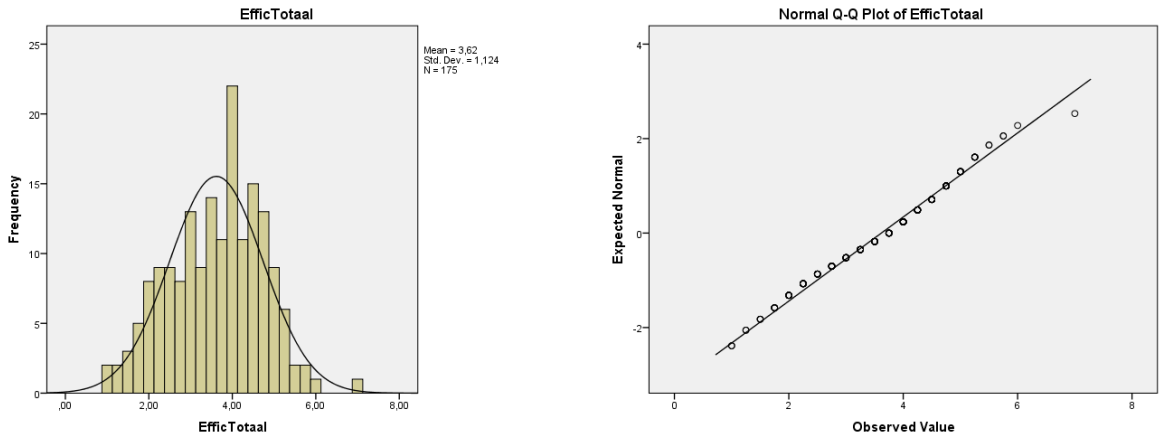

Figure 9. Histogram with normality plot and normal probability plot of Efficacy.

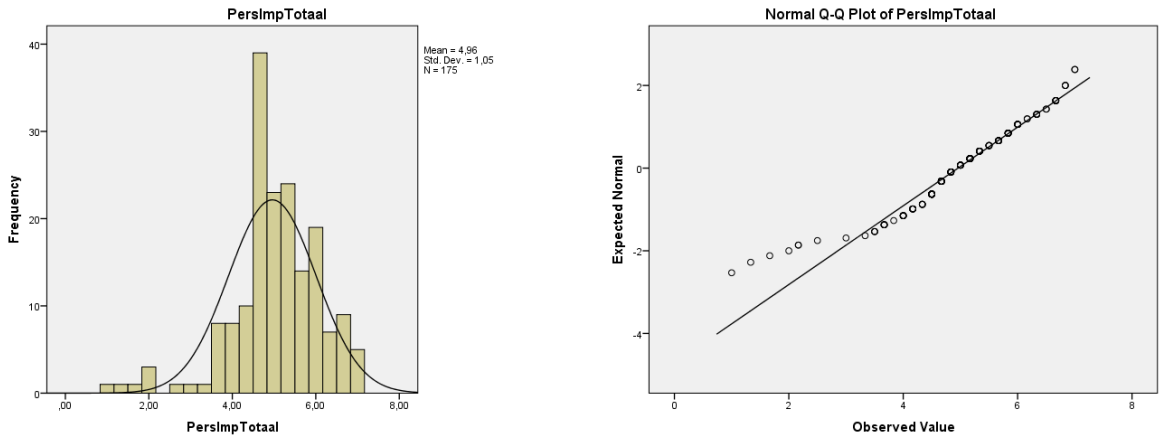

Figure 10. Histogram with normality plot and normal probability plot of Personal Importance.

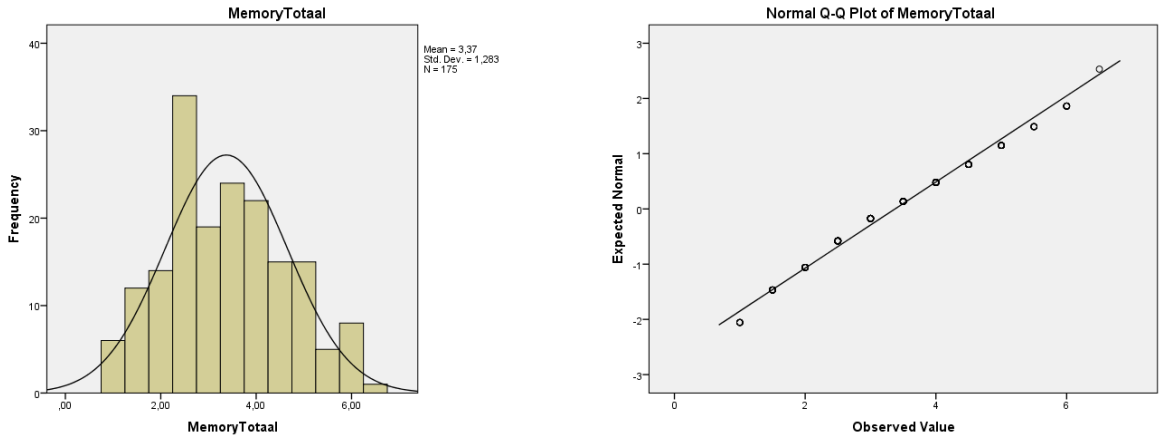

Figure 11. Histogram with normality plot and normal probability plot of Memory.

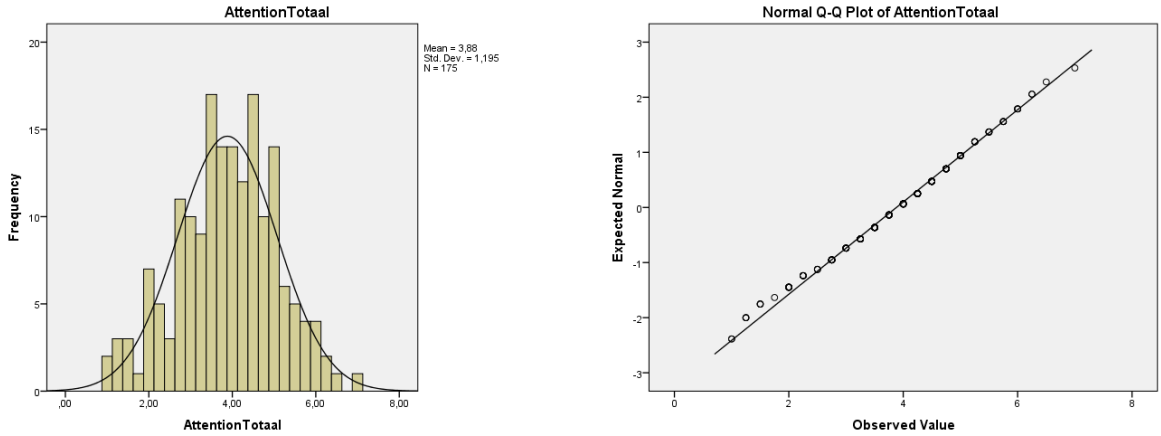

Figure 12. Histogram with normality plot and normal probability plot of Attention.

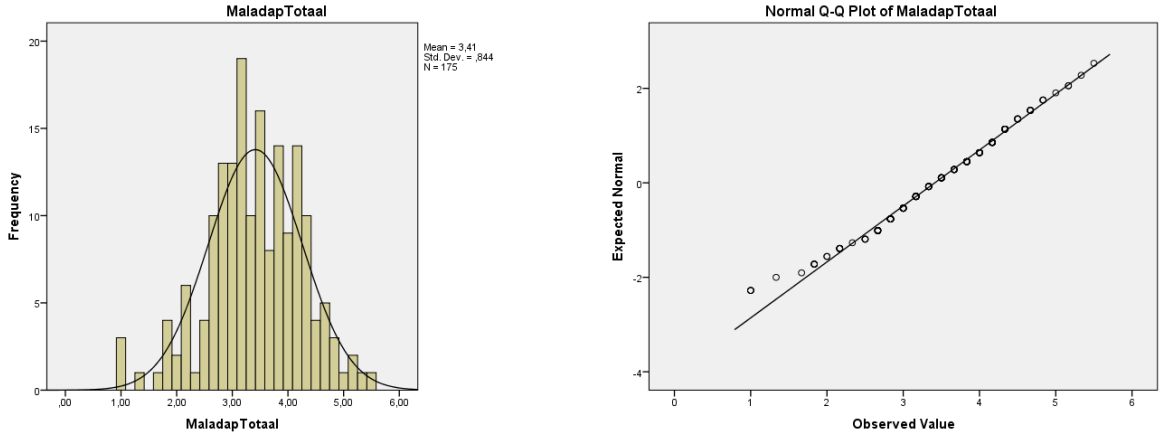

Figure 13. Histogram with normality plot and normal probability plot of Maladaptive Outcomes.

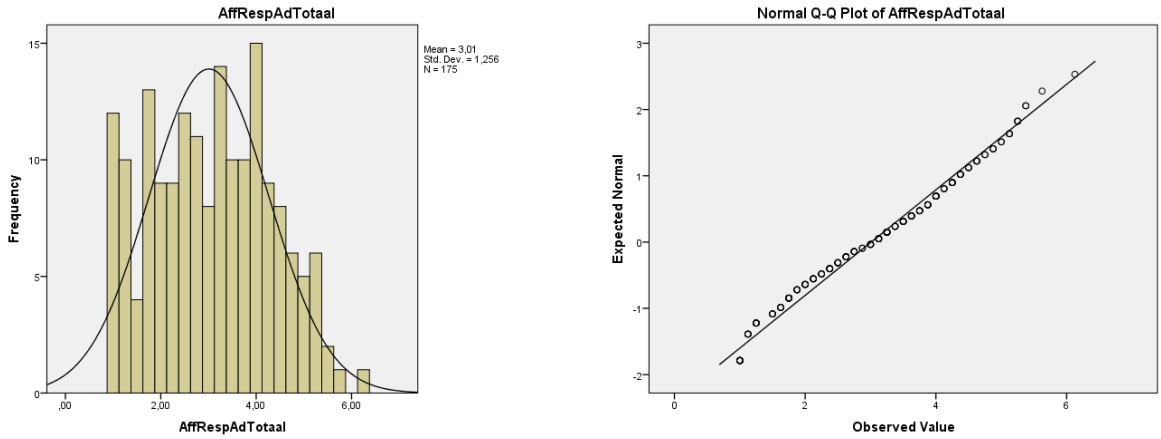

Figure 14. Histogram with normality plot and normal probability plot of Affective Response.

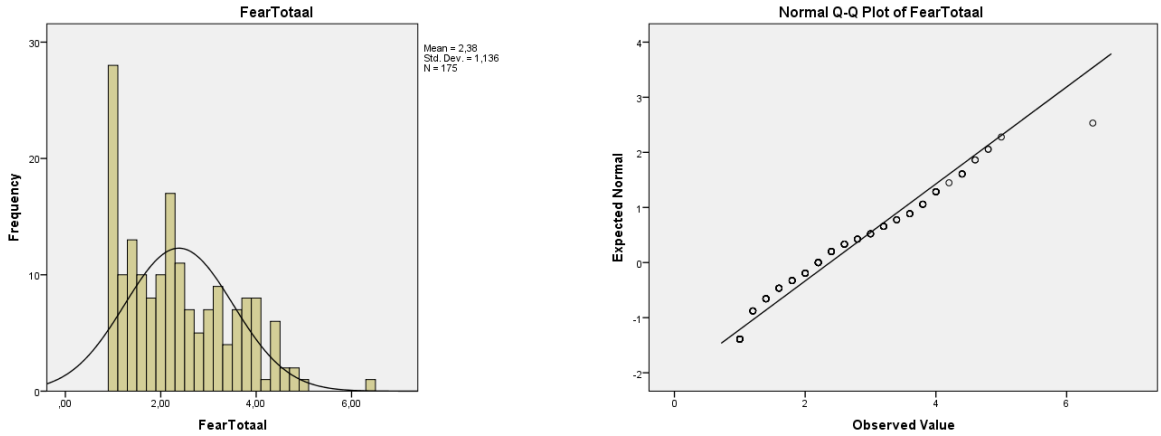

Figure 15. Histogram with normality plot and normal probability plot of Fear.

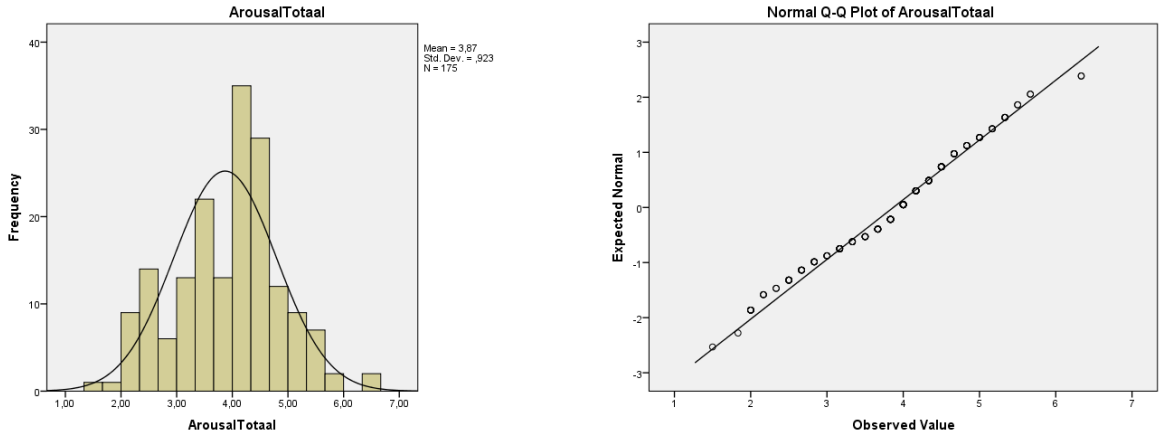

Figure 16. Histogram with normality plot and normal probability plot of Arousal.

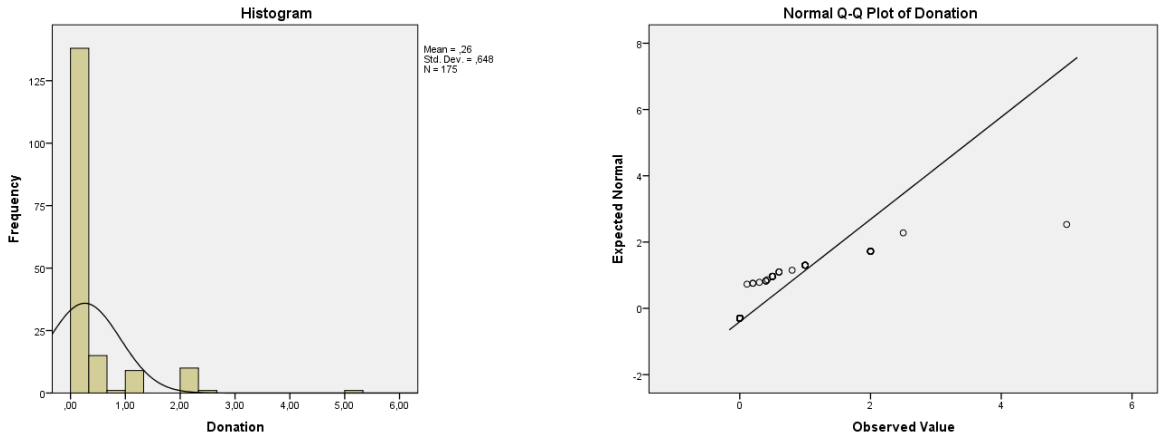

Figure 17. Histogram with normality plot and normal probability plot of Donating Behavior.

Appendix 3: Factor analysis

Table 2

Variance per factor and cumulative variance, initially, after extraction and after varimax rotation

	Initial Eigenvalues			Eigenvalues after extraction			Eigenvalues after rotation		
Factor	Total	% of variance	Added %	Total	% of variance	Added %	Total	% of variance	Added %
1	11.39	22.78	22.78	11.05	22.10	22.10	6.18	12.35	12.35
2	4.71	9.41	32.19	4.37	8.74	30.84	4.12	8.25	20.60
3	3.63	7.27	39.46	3.37	6.73	37.57	4.00	8.00	28.60
4	2.62	5.24	44.70	2.28	4.56	42.13	2.72	5.44	34.05
5	2.48	4.97	49.66	2.14	4.27	46.40	2.72	5.44	39.48
6	2.23	4.46	54.13	1.90	3.80	50.20	2.59	5.17	44.66
7	1.88	3.76	57.88	1.49	2.98	53.19	1.92	3.84	48.50
8	1.56	3.11	60.99	1.18	2.36	55.55	1.83	3.66	52.16
9	1.52	3.03	64.03	1.14	2.28	57.83	1.79	3.58	55.74
10	1.27	2.54	66.57	.89	1.66	59.49	1.18	2.36	58.09
11	1.10	2.21	68.78	.69	1.39	60.88	1.14	2.28	60.37
12	1.06	2.12	70.89	.64	1.27	62.15	.75	1.49	61.86
13	1.03	2.05	72.94	.59	1.19	63.33	.74	1.47	63.33

Note. For the purpose of brevity, not all 50 possible initial factor solutions (equal to the number of items) were displayed, but only those with an Eigenvalue greater than one.

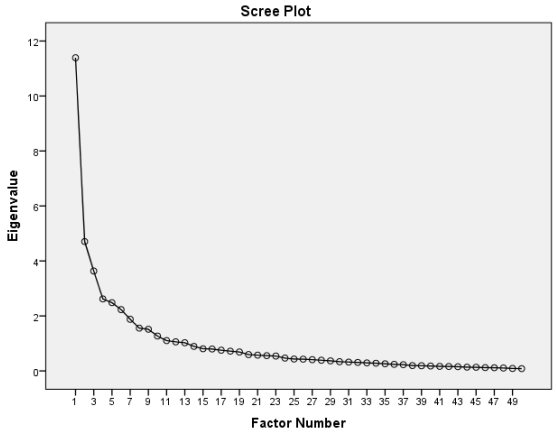

Figure 18. Scree plot of the Eigenvalue per factor.

Table 3

Rotated factor matrix produced by a fixed factors (11) varimax rotation

Item	Factor										
	1	2	3	4	5	6	7	8	9	10	11
Geërgerd	**.80**										
Geïrriteerd	**.74**										
Boos	**.68**										
Depressief	**.68**										
Verontwaardigd	**.67**										
Misselijk	**.67**										
Slecht	**.66**										
Beledigd	**.65**										
Ongemakkelijk	**.62**										
Droevig	**.62**		.31								
Het welzijn van kinderen ligt mij nauw aan het hart.		**.86**									
Het welzijn van kinderen is belangrijk voor mij.		**.84**									
Het welzijn van kinderen betekent veel voor mij.		**.80**									
Ik geef om het welzijn van kinderen.		**.68**									
Ik houd me bezig met het welzijn van kinderen.		**.65**									
Ik ben bereid om grote offers te brengen voor het welzijn van kinderen.		**.52**									
De advertentie was in staat om mijn aandacht vast te houden.			**.83**								
Toen ik de advertentie zag, trok hij gelijk mijn aandacht.			**.75**								
De advertentie ving direct mijn blik.			**.70**								
Ik bleef naar de advertentie kijken.			**.62**								
Dit is het soort advertentie dat je makkelijk vergeet.			**.52**								
Ik zal deze advertentie lang onthouden.			**.51**						.35		
Kalm-Opgewonden	.32			**.73**							
Vredig-Uitzinnig				**.72**							
Ontspannen-Gestimuleerd				**.72**							
Lusteloos-Gespannen				**.58**							
Slaperig-Klaarwakker				**.36**							
Niet opgewekt-Opgewekt											
Doneren aan het goede doel is een effectieve manier om kindermishandeling terug te dringen.					**.84**						

Doneren aan het goede doel werkt bij het terugdringen van kindermishandeling.					**.84**						
Als ik doneer aan het goede doel, lopen kinderen minder kans om mishandeld te worden.					**.78**						
Als ik doneer aan het goede doel, is het minder waarschijnlijk dat kinderen uit mijn eigen omgeving mishandeld zullen worden.					**.63**						
Het is mogelijk dat zelfs kinderen uit mijn eigen omgeving mishandeld zullen worden.						**.90**					
Zelfs kinderen uit mijn eigen omgeving lopen het risico te worden mishandeld.						**.90**					
Het is waarschijnlijk dat zelfs kinderen uit mijn eigen omgeving mishandeld zullen worden.						**.85**					
Deze advertentie was overdreven.							**.76**				
Deze advertentie was misleidend.							**.75**				
Deze advertentie probeerde mij te manipuleren.							**.55**				
Ik denk dat kindermishandeling extreem schadelijk is.		.30						**.79**			
Ik denk dat kindermishandeling zeer negatieve gevolgen heeft.		.34						**.67**			
Ik denk dat kindermishandeling ernstig is.		.44						**.52**			
Nerveus	.43								**.63**		
Angstig	.53								**.63**		
Bang	.55								**.55**		
Ik was geschokt door de advertentie.			.39							**.65**	
Ik was geschrokken van de advertentie.	.32		.44							**.57**	
Ik wil niet denken aan kindermishandeling.										**.36**	
Ik vind de advertentie aanstootgevend.										**.32**	
Deze advertentie geeft geen objectieve afspiegeling van kindermishandeling.											**.73**
Deze advertentie gaf geen correcte afspiegeling van kindermishandeling.											**.47**

Note. The highest loading of each item is presented in cursive. Each color marking represents a different factor.