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Melanie J. Randle

University of Wollongong, mrandle@uow.edu.au

Leonie M. Miller

University of Wollongong, leoniem@uow.edu.au

Joanna Stirling

University of Wollongong, jos@uow.edu.au

Sara Dolnicar

University Of Queensland, s.dolnicar@uq.edu.au

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Abstract

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**Framing advertisements to elicit positive emotions and attract foster carers:
An investigation of high cognitive elaboration donations**

Melanie Randle¹

School of Management, Operations and Marketing
Faculty of Business
University of Wollongong NSW 2529 Australia

Leonie Miller

School of Psychology
Faculty of Social Sciences
University of Wollongong NSW 2529 Australia

Joanna Stirling

School of The Arts, English and Media
Faculty of Law, Humanities and the Arts
University of Wollongong NSW 2529 Australia

Sara Dolnicar

Department of Tourism
Faculty of Business, Economics and Law
The University of Queensland
St Lucia Brisbane QLD 4072 Australia

Abstract

Advertisements that elicit negative emotions have been found to be effective in prompting socially desirable behaviours, such as making monetary donations to charity. This study investigates whether this principle generalises to a specific case of high cognitive elaboration donations: fostering a child. Results from an advertising experiment conducted with 470 respondents indicate that this is not the case. Rather, positive emotions cause stronger reactions to the ads, with processing motivation and pre-existing attitudes playing a critical role. Implications for marketing foster care – and possibly other similar high cognitive elaboration donations – include that ongoing communication and elicitation of positive emotions is essential to first form the right processing motivations and attitudes, which are then more likely to lead to behavioural change on later advertising exposures.

¹ Contact author

Introduction

Foster children are removed by public or legal authorities from their biological parents and homes, usually due to serious concerns for their safety and wellbeing. Their placement into out-of-home care relies on community members volunteering to nurture these children for periods varying from a few days to years, a task requiring considerable effort and commitment, because these children often have backgrounds of disadvantage and associated complex health and behavioural issues (Australian Institute of Health and Welfare, 2013). Recent figures reveal that more than 17,000 children are in foster care in Australia (Australian Institute of Health and Welfare, 2013), more than 51,000 in the UK (British Association for Adoption and Fostering, 2014) and over 400,000 in the US (US Department of Health and Human Services, 2014).

Attracting enough volunteers to fill the roles of foster carers is a major issue in many countries, with many experiencing “an urgent need for more foster carers” (Fostering NSW, 2013, p. 1). Advertising is recognised as an effective way of communicating this need to the general population (McGuinness and Arney, 2012; Fergeus *et al.*, 2013). However, to this point the success of advertisements in increasing actual numbers of foster carers has been limited (Delfabbro *et al.*, 2008), which is partly due to a lack of scientific evidence to inform effective campaign development (Randle *et al.*, 2014). This lack of knowledge includes how information in advertisements should be presented or framed such that they prompt the desired response from individuals likely to be well suited to the role of foster carer.

The existing literature offers partial insight towards the fulfilment of this marketing objective. Prospect theory postulates that individuals respond differently to the same information, depending on whether it is presented (framed) in positive terms (emphasising potential gains) or negative terms (emphasising potential losses) (Tversky and Kahneman, 1979; 1981). This phenomenon, known as the message framing effect, is based on the view that individuals respond to positive scenarios by minimising risk, and to negative scenarios by seeking risk. In a commercial marketing context, positively framed advertisements emphasise the benefits gained from product use, while negatively framed advertisements underscore benefits lost by non-use (Maheswaran and Meyers-Levy, 1990).

In social marketing, the concept of message framing has guided the development of a broad range of public health communications that encourage specific behaviours, including physical exercise (Jones *et al.*, 2003), smoking cessation (Kim, 2006) and sunscreen use (Detweiler *et al.*, 1999). A recent meta-review of health communication research found that positive framing tends to be more effective than negative framing for the promotion of *preventative* health behaviours (Gallagher and Updegraff, 2012). In contrast, the presentation for early detection breast screening is argued to be better served by negative rather than positive framing (Cox and Cox, 2001), a finding consistent with the conclusion of a review of *disease detection* behaviours, namely that negative appeals are marginally more persuasive than positive appeals (O’Keefe and Jensen, 2009).

These contrary findings reflect the earlier observations of Maheswaran and Meyers-Levy (1990), who found that the persuasiveness of different message frames varies according to an individual’s level of personal involvement an issue. For example, for cholesterol screening, negative framing was persuasive for highly involved individuals, while positive framing was more persuasive for less involved individuals. Later, Rothman and Salovey (1997) also noted that the persuasiveness of message framing seemed to vary according to whether the target

behaviour was one of prevention or disease detection, and was potentially influenced by the degree of alignment between the message and the individual's prior perceptions of the target behaviour.

Message framing, emotions and donation behaviour

In many countries, the non-profit or third sector plays an important role in providing social and community services that would otherwise be unaffordable for government. Consequently, governments and non-profit agencies increasingly encourage individuals to donate their money, time or other resources in an effort to ensure such services continue. In this context, negative framing is more effective than positive framing in generating intention to donate money, and the impact of negative images can be magnified if presented vividly and with an equally negatively framed verbal message (Chang and Lee, 2010).

The success of different message frames has been attributed to the specific emotions they generate within the viewer (Homer and Yoon, 1992). Furthermore, it is well recognised that emotional appeals can prompt prosocial behaviour (Bagozzi and Moore, 1994). Experimental studies using message framing have targeted the generation of specific emotions such as empathy, that in turn have prompted helping behaviour (Coke *et al.*, 1978). Advertisements which evoke negative emotions produce more and larger donations than those that evoke positive emotions, and the stronger the negative emotion the greater the intention to donate (Burt and Strongman, 2005). Consequently, it has been recommended that charities use images that generate negative emotions, specifically sadness. These findings are supported by studies of other charitable contexts (such as disability services), which have concluded that the ads most successful in eliciting donations are those that generate feelings of guilt, pity and sympathy (Eayrs and Ellis, 1990). Recently, Kemp *et al.* (2013) demonstrated that emotion-generating advertisements are more or less successful, depending on the target audience. Specifically, sympathy was effective in prompting pro-social behaviours in women; whereas pride was more effective for men.

The emotion of guilt is commonly used in the non-profit sector to tap into people's desire to help those in need via the social norm that those more fortunate should help the less fortunate in society. However, the success of this approach also depends on an advertisement's capacity to generate a feeling of personal responsibility (Basil *et al.*, 2006). Guilt-inducing messages have also been more persuasive than non-guilt appeals in cause-related marketing, where product purchases are believed to result in a charitable donation by a company (Chang, 2011).

However, within this body of evidence there are recurring methodological issues that question the generalisability of findings to the general population and in real-life settings. These include the use of small samples (e.g., Eayrs and Ellis, 1990); non-representative, student samples (e.g., Coke *et al.* 1978; Basil *et al.*, 2006); use of artificial experimental settings (e.g., Chang and Lee, 2010; Kemp *et al.*, 2013); participant exposure to multiple messages (ads) and the associated potential for cumulative effects (e.g., Eayrs and Ellis, 1990; Burt and Strongman, 2005; Basil *et al.*, 2006); or testing in front of others or the researchers, which may result in a social desirability bias (e.g., Coke *et al.*, 1978). Further, while the published literature provides wide support for the use of negative framing for soliciting donations, there is not universal agreement. For example, in the context of direct marketing for monetary donations, individuals are more likely to respond to positive than negative appeals, although positive appeals do not result in larger donations (Smith and Berger, 1996). Similarly, the difference in intended donation amount does not vary with the

type of photograph used in advertisement appeals for disaster relief (Dekker, 2011). Nonetheless, in this context, appeals that generate feelings of guilt and empathy produce increased donations.

High cognitive elaboration donations

The generalisability of findings to more extreme donation behaviours like foster caring, which generally involve greater personal investment and typically follow an extended period of consideration, is unclear. Relevant here is the literature relating to message framing and the degree of cognitive elaboration required for a particular decision. Numerous early researchers (e.g., Maheswaran and Meyers-Levy, 1990; Rothman *et al.*, 1993; Block and Keller, 1995) suggest an advantage for negative framing when cognitive elaboration is high. However, this position is challenged by Shiv and colleagues (1997), who determined that under conditions involving high processing, positive framing is more likely to elicit brand selection. They recommend that negative framing is most effective when consumers choose “without much thought” (p. 293), and that the effectiveness of negative framing is significantly reduced when the decision is more elaborate and requires careful consideration. How these findings relate to other relevant factors, such as the level of personal involvement (examined by Maheswaran and Meyers-Levy, 1990) remains unknown. It may be that individuals who are highly personally involved with an issue are more likely to engage in high levels of processing because of that involvement, or it may be that because they are highly personally involved, little processing is needed to reach a decision. The implications of these relationships, in terms of the effectiveness of different message framing strategies, remains unexplored.

Given the above findings, which highlight the importance of cognitive elaboration in responses to different advertising frames, it is important to consider donation behaviour beyond the context of simple monetary donations. Research in this area is scant; however, preliminary insight can be drawn from a study of organ and tissue donation by Reinhart *et al.* (2007). Positively and negatively framed messages were tested with student samples, with results indicating more favourable reactions to positively (gain) framed messages than negatively (loss) framed messages. Positively framed messages produced lower psychological reactance and lower perceived manipulative intent, and thus more positive reactions. However, the scenario presented to participants was entirely hypothetical, because the donation of organ and tissues required no action, only a stated commitment to act in the future with a consequence that would occur after the individual died.

Parallels can be drawn between the significance of donating bodily organs and the high level emotional and time donations of foster carers, and it could therefore be hypothesised that positively framed messages would be most effective in both contexts. Alternatively, if foster caring is viewed as a way of preventing harm being done to a foster child, then parallels could perhaps be drawn between this behaviour and the other preventative health behaviours outlined earlier; although, as discussed, findings regarding the most effective framing for prevention behaviours have been inconsistent (Gallagher and Updegraff, 2012; Rothman and Salovey, 1997).

The lack of available evidence regarding high cognitive elaboration donation decisions leaves the generalisability of findings relating to other charitable behaviours in question. The purpose of this study is to conduct a differentiated replication study (Uncles and Wright, 2004) that investigates whether message framing produces the desired emotions, and whether negative emotions (specifically sadness and guilt) are effective in producing positive

reactions to ads for a specific case of high cognitive elaboration donations (foster caring). Sadness and guilt were specifically selected for testing because they are suggested to be most effective for other donation behaviours (Burt and Strongman, 2005; Basil *et al.*, 2006), and in practice are two of the most commonly used themes in advertisements for charitable donations.

While the use of negative framing to elicit negative emotions is a common strategy for other charitable donations, advertising for foster care is less consistent. Examples of negative framing can be easily found; for example, advertisements on the front page of the FosterCareUK website currently include one picture of a child with a black eye and bruises on her body and another with a girl with the word “help” written on her hand (FosterCareUK, 2015). Examples of positive framing are also readily available; for example, the Fostering NSW advertising campaign includes pictures of happy children with short vignettes focusing on how much their lives have improved since entering foster care (Fostering NSW, 2015). The wide range of creative design and framing is likely a reflection of the lack of evidence or agreed optimal strategy for framing of foster care advertisements.

Method

Data collection

Data were collected in 2014 from 470 members of an online research panel. Panel members who meet specific screening criteria receive points for completing online questionnaires, which can then be redeemed for products and services offered by the panel company. This method was chosen because it enabled the inclusion of a national sample within the time and cost constraints of the project, and allowed high quality advertisements to be presented to participants before measuring reactions to them.

Often, advertising campaigns target both current consumers and potential consumers of a product category who may not have purchased the specific brand or product being advertised (foster care), but who could potentially buy the product (become foster carers) in future. Hence, participants were screened to include individuals who had either previously considered becoming a foster carer or would consider foster caring in the future. This sampling strategy is supported by cognitive response theory, which posits that for an individual to be influenced by a message, they must first be sufficiently engaged with the content to make an evaluation of its strength (Petty *et al.*, 1981). The sample frame deliberately excluded that proportion of the population that has no interest, nor is likely to ever have an interest in, performing the role of foster carer (which is around 55 per cent of the Australian population – Ciarrochi *et al.*, 2012), but still seeks to “maximise inclusion” (Romaniuk 2012, p. 288) for the target market of potential foster carers. Participants were presented with one of four advertisements for foster care and then asked a number of questions.

Stimuli

The creative design for the ads was originally developed by undergraduate creative arts students as part of their subject assessment. The specific advertisements used for the purposes of this study were further developed and modified by the design lecturer. The ads included a fictional foster care agency (Fostering Australia) and four print advertisements. A weakness

in experimental design was the inclusion of a single content example (ad message) to represent a message category (positive/negative framing), because it is unknown whether results are attributable to the specific features of that one example or to the salient message category features (Jackson and Jacobs, 1983). Therefore, two ads were included to represent each of the positively and negatively framed message categories.

The two positively framed ads communicated the benefits to the carer of fostering a child (Figure 1). The key message of Ad #1 was that foster caring is a personally rewarding role, and the key message of Ad #2 was that foster children appreciate and admire their foster carers.

Figure 1: Positively framed advertisements

<p>Ad #1 (Fishing)</p>  <p>It feels good to create these moments</p> <p>Fostering Australia is an agency dedicated to finding suitable carers for disadvantaged children of all ages.</p> <p>These children are in need of a caring and loving home, and with the right training and guidance, you will be able to support them in the childhood they deserve.</p> <p>Act today. Call us or visit our website. 1300 678 389 fosteringaus.org.au</p> <p>FOSTERING AUSTRALIA</p>	<p>Ad #2 (Superman)</p>  <p>I can be someone to look up to.</p> <p>Fostering Australia is an agency dedicated to finding suitable carers for disadvantaged children of all ages.</p> <p>These children are in need of a caring and loving home, and with the right training and guidance, you will be able to support them in the childhood they deserve.</p> <p>Act today. Call us or visit our website. 1300 678 389 fosteringaus.org.au</p> <p>FOSTERING AUSTRALIA</p>
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The negatively framed ads focused on the negative consequences for foster children if they are not cared for (Figure 2). The key message of Ad #3 was that without a carer, foster children will continue to be miserable and unhappy; and the key message of Ad #4 was that without foster carers, the future for foster children is bleak.

Figure 2: Negatively framed advertisements

Ad #3 (Sad girl)

Ad #4 (Neglected boy)

Without a foster family, she will only know sadness & despair.

Without a foster home, he has no future.

Fostering Australia is an agency dedicated to finding suitable carers for disadvantaged children of all ages.

These children are in need of a caring and loving home, and with the right training and guidance, you will be able to support them in the childhood they deserve.

Act today.
Call us or visit our website.
1300 678 389
fosteringaus.org.au

FOSTERING AUSTRALIA

All other aspects of the advertisements were kept as similar as possible, including the layout, colours and informational text. Drawn advertisements were used to avoid introducing other factors that might influence participant reactions to the advertisements, such as age and cultural background of the child. The use of drawn stick figures also eliminated the possibility of variation in the perceived attractiveness of different children.

Measures

Emotional response to the ad

Participants were presented with a list of ten emotions and asked to indicate the extent to which they felt each emotion after seeing the ad. The list of emotions was derived following a review of pre-developed measures of emotional response to advertisements (Edell and Burke, 1987; Holbrook and Batra, 1987; Eayrs and Ellis, 1990; Burt and Strongman, 2005; Basil, Ridgeway *et al.*, 2006; Chang and Lee, 2010; Kemp *et al.*, 2013). Many scales were discounted because of their excessive length or because the emotions were irrelevant in the context of the ads shown in this study (e.g., scales developed for use with television advertisements). Instead, the research team reviewed the scales and selected a range of positive and negative emotions that were considered most relevant to foster care (happy, empowered, admiration, compassionate, proud, sympathetic, guilty, sad, pity and annoyed). This scale was pretested to ensure all emotions applied to the context of the ads utilised in this study. Participants answered on a unipolar seven-point answer scale with end points labelled “I didn’t feel this at all” and “I felt this strongly”.

Reaction to the ad

Given the high cognitive elaboration involved in the decision to become a foster carer, it is unlikely that exposure to a single ad would prompt a decision to become a foster carer. For this form of donation, behaviour typically occurs following considerable thought and repeated exposure to various information sources. Therefore, the objective of foster care advertisements is not only to prompt donation behaviour for those who have given it the required thought, but also to produce a positive reaction among those who are still in the contemplation phase, such that, after repeated positive reactions, an eventual decision to foster care will occur. Thus, reaction to the ad was considered more suitable as the dependent variable in this instance than behavioural intention.

Reaction to the ad was measured using six items taken from the emotional quotient scale (Wells, 1964). The items were selected from the original 12 following pretesting to identify those items that were context appropriate. The six items selected for inclusion (and modified for foster care where required) were: (1) This ad makes me feel good; (2) This ad makes me want to become a foster carer; (3) I would probably skip this ad if I saw it in a magazine; (4) This is the kind of ad you forget easily; (5) I'm tired of this kind of advertising; and (6) This ad leaves me cold. Participants indicated their answer on a seven-point scale from "strongly disagree" to "strongly agree". Items were summed, with higher scores indicating the desired (stronger positive) reaction to the ad. Items were presented in random order to avoid order bias and negative items were reverse scored. This measure was considered reliable (Cronbach's alpha = .82).

Covariates

Socio-demographic characteristics. Age and gender have been shown to be factors determining interest in the role of foster carer (Whenan *et al.*, 2009; Randle *et al.*, 2012); therefore, participants were asked to provide this information.

Prior perceptions. Numerous researchers have acknowledged the importance of accounting for pre-existing perceptions when testing alternative message frames (e.g., Reinhart *et al.*, 2007; Abhyankar *et al.*, 2008). Studies of other high cognitive elaboration donations have found that positive pre-attitudes on the topic predicted positive message reactions (Feeley and Servoss, 2005). Consequently, pre-ad perception of foster caring was included as a covariate. Baseline perceptions of foster caring were measured by asking participants to complete the sentence "Being a foster carer would be..." five times on semantic differential scales labelled enjoyable/not enjoyable, boring/fun, not satisfying/satisfying, fulfilling/frustrating, worthless/worthwhile. Each item was given a score from 1–100 as a function of the position of the dropped cursor on the line. An average of these items produced an overall score of positivity towards foster caring. Items were presented in random order, and positive and negative ends of the scale alternated between the left and right. Reliability was considered good (Cronbach's alpha = .77).

Personal involvement. Prior research has found that the persuasiveness of different message frames varies according to an individual's personal involvement the issue (Maheswaran and Meyers-Levy, 1990). It is likely that an individual's level of involvement in the prospect of becoming a foster carer will influence the strength of their reaction to the ad, and was therefore added as a covariate to the model. To measure personal involvement, participants were asked whether they would consider becoming a foster carer in future and could answer "yes" or "no".

Results

Manipulation check

All statistical tests performed were subject to the control of the familywise error rate of ($\alpha = .05$). To verify that ad perception varied according to the intended message framing, participants indicated ad pleasantness on a semantic differential scale labelled unpleasant/pleasant yielding a score from 1–100. The pleasantness ratings of each ad are presented in Table 1. Data were analysed using a one-way ANOVA, revealing that significant differences between ads were present, $F(3,466) = 30.20$, $p < .001$. Post-hoc comparisons (Tukey’s HSD) identified that the *Sad girl* ad was significantly less pleasant than the *Neglected boy* ad, that was in turn significantly less pleasant than either the *Fishing* or *Superman* ads. Therefore, negatively framed ads were regarded as less pleasant than positively framed ads, and consequently, data for each ad framing was combined in the following analyses.

Table 1. Pleasantness ratings for the four foster care ads

Ad	Framing	N	Mean	Std. deviation
#1 Fishing	Positive	133	73.74	16.74
#2 Superman	Positive	124	73.98	17.02
#3 Sad girl	Negative	104	53.56	22.56
#4 Neglected boy	Negative	109	60.72	22.49

As an additional manipulation check, we compared the emotional responses to ad framing according to 10 emotions (Table 2). The ads produced the expected responses, with positive framing eliciting significantly more positive emotions (admiration, happiness and pride), and negative framing eliciting significantly more negative emotions (guilt, sadness and pity).

Table 2. Emotional response to the ad

Emotion	Positive framing		Negative framing		<i>t</i>	<i>p</i>
	Mean	SD	Mean	SD		
Happy	4.14	1.58	3.06	1.66	7.21	<.001 *
Empowered	3.89	1.71	3.59	1.61	1.97	.049
Admiration	4.75	1.59	4.22	1.77	3.42	.001 *
Compassionate	5.02	1.43	5.17	1.38	-1.15	.251
Proud	3.84	1.86	3.24	1.73	3.58	<.001 *
Sympathetic	4.88	1.48	5.22	1.43	-2.47	.014
Guilty	2.85	1.67	3.69	1.74	-5.32	<.001 *
Sad	3.46	1.80	4.72	1.66	-7.94	<.001 *
Pity	3.18	1.63	4.22	1.62	-6.89	<.001 *

<u>Annoyed</u>	2.22	1.59	2.49	1.65	-1.80	.072
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Notes: $\alpha = .005$. *significant with Bonferroni adjustment.

Positive and negative ads also differed in the strength of reactions they generated. Specifically, positively framed ads ($M = 29.37$, $SD = 6.42$) produced a stronger reaction than negatively framed ads ($M = 27.47$, $SD = 6.58$), $t(468) = 1.89$, $p = .002$, suggesting that positively framed ads are more appropriate to elicit positive reactions in the context of foster caring.

Guilt and sadness

First, the relationships between the emotional responses of guilt and sadness and the reaction to the ad were examined for each message framing (significance criterion was set to .0125). For the negatively framed ads there was no relationship between guilt and reaction to the ad: $r(213) = .045$, *ns*, but there was a significant relationship between sadness and reaction to the ad: $r(213) = .185$, $p = .007$. That is, for these ads, a stronger reaction to the ad corresponded to greater levels of sadness, but not guilt. The reactions to positive ads were significantly positively related to both guilt: $r(257) = .171$, $p = .006$ and sadness: $r(257) = .163$, $p = .009$. Therefore, higher levels of guilt and sadness co-occurred with stronger reactions in respondents viewing the positive ads. Accordingly, there was weak evidence that guilt and sadness were emotions that contribute to generating a positive reaction to foster care.

Second, to determine whether the nature of relationships between message framing, emotional response to the ad and reaction to the ad were consistent with a theoretical model where guilt and sadness are intervening variables in the direct relationship between message framing and reaction to the ad, a multiple mediation analysis was performed (see Figure 3). In this model, a_1 and a_2 are the coefficients of message framing in the prediction of the emotions of guilt and sadness. Similarly, b_1 and b_2 reflect the coefficients of guilt and sadness in the prediction of reaction to the ad. Therefore, the paths a_1b_1 and a_2b_2 form indirect means by which the relationship between message framing and reaction to the ad may be explained, corresponding to the theoretical argument that effects of message framing on ad reaction are driven by emotions generated in response to the ad. In order to control for the influences of age, gender, prior perceptions of foster caring and personal involvement in future foster caring, variance associated with these variables was identified in the emotional response and ad reaction data in the analysis.

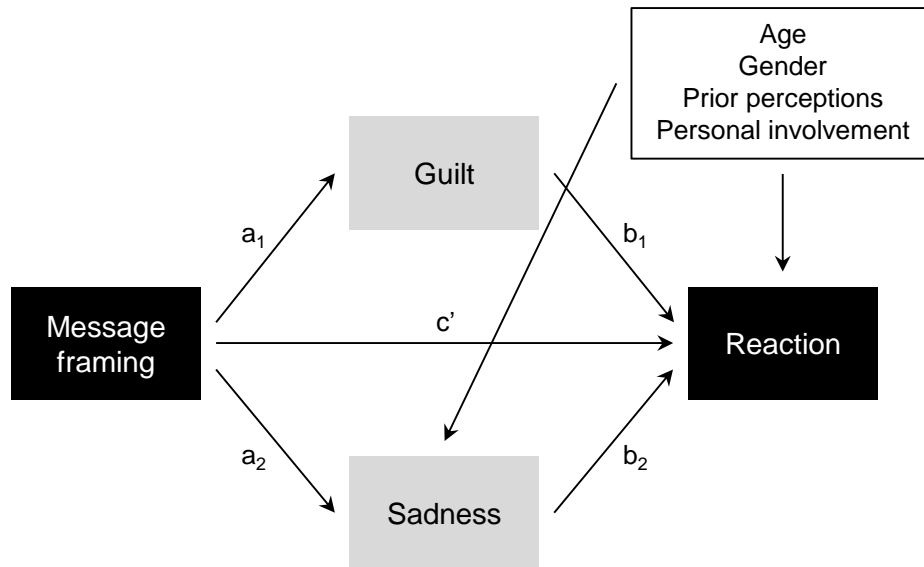


Figure 3. A theoretical model of the relationship between message framing and reaction to the ad – guilt and sadness are proposed as intervening variables

Mediation analysis was conducted using PROCESS (Hayes, 2012). This approach uses bias-corrected bootstrapping to determine the significance of the indirect effects in the model; that is, the effects a_1b_1 and a_2b_2 , respectively (Figure 3). All bootstrapped confidence intervals were based on 10,000 bootstrap samples. The results of the path analyses are summarised in Table 3 and support the preliminary correlation and group comparison analyses; namely that message framing was a significant predictor of both the level of guilt ($a_1 = -0.83$) and sadness ($a_2 = -1.30$) experienced by participants, with positively framed ads associated with less negative emotion than the negatively framed ads. However, while the level of sadness predicted reaction to the ad ($b_2 = 0.51$), the level of guilt did not ($b_1 = 0.27$). Message framing was also a significant predictor of reaction to the ad ($c' = 2.73$), such that positive framing was associated with a stronger reaction than negative framing.

Table 3. Mediation model 1: Guilt and sadness as mediators between message framing and reaction to the ad

Antecedent		Consequent										
		M_1 (Guilt)			M_2 (Sadness)			Y (Reaction to the ad)				
		Coeff.	SE	<i>p</i>		Coeff.	SE	<i>p</i>		Coeff.	SE	<i>p</i>
<i>X</i> (Ad valence)	a_1	-0.827	.158	<.001	a_2	-1.296	.162	<.001	c'	2.726	.601	<.001
M_1 (Guilt)		-	-	-		-	-	-	b_1	0.271	.176	.125
M_2 (Sadness)		-	-	-		-	-	-	b_2	0.514	.173	.003
Prior perceptions		0.002	.006	.720		0.010	.006	.111		0.145	.021	<.001
Personal involvement		-0.129	.209	.536		-0.306	.213	.152		2.241	.710	.003
Age		-0.014	.006	.031		-0.091	.007	.164		0.074	.023	.011
Gender		-0.163	.158	.303		0.089	.161	.581		0.147	.559	.793
Constant	i_{M1}	3.993	.572	<.001	i_{M2}	3.751	.585	<.001	i_Y	13.872	2.162	<.001
		$R^2 = .068$				$R^2 = .127$				$R^2 = .173$		
		$F(5, 464) = 6.814, p <.001$				$F(5,464) = 13.522, p <.001$				$F(5,464) = 13.516, p <.001$		

Table 4. Summary of effects in mediation model 1

Effect	Estimate	95% confidence interval
Total effect		
<i>Ad framing c</i>	1.836*	[0.719, 2.953]
Direct effect		
<i>Ad framing c'</i>	2.726*	[1.546, 3.906]
Indirect effects		
Total	-0.890*	[-1.493, -0.401] [†]
<i>Guilt a₁b₁</i>	-0.225	[-0.581, 0.059] [†]
<i>Sadness a₂b₂</i>	-0.666*	[-1.285, -0.183] [†]

* Significant at $p < .05$. [†] Bias corrected bootstrap confidence interval.

A summary of the effects in the model is presented in Table 4. Only the indirect effect of sadness was significant; however, according to the confidence interval for the difference between specific indirect effects [-0.220, 1.183], the indirect effects for both guilt and sadness did not differ in magnitude. The indirect effects explained some variation in reaction to the ad, but R^2 was only 17 per cent, and included the control of age, gender, perceptions of foster care and personal involvement in foster care. Importantly, the indirect paths explain variation that is opposite to the total effect, and consequently strengthen the direct effect in the mediation model (Table 4). This suggests that there are other paths through which message framing influences reaction to the ad. It is possible, therefore, that other emotions elicited by the different message frames also mediate reactions to the ad. These are examined in the next analysis.

Positive emotional response, negative emotional response and intolerance

A factor analysis was conducted on all ten emotions included in the emotional response scale, using principal axis factoring as extraction method and direct oblimin as the rotation method. Bartlett’s test of sphericity identified that the data were suitable for this analysis, $\chi^2(45) = 2071.45, p < .001$. This process yielded three correlated factors that explained 72 per cent of the total variance (see Table 5). Factor loadings of .3 or less were suppressed, and revealed a factor of positive emotional response: $SE = 0.950$ (items *happy, empowered, admiration* and *proud* loading singly on this factor); a factor of negative emotional response: $SE = 0.886$ (items *guilty, sad* and *pity* loading solely on this factor); a factor of intolerance: $SE = 0.876$ (item *compassionate* loading solely on this factor); and the items *sympathetic* and *annoyed* cross-loading on negative emotion and intolerance. Correlations between these factor scores identified a significant positive relationship between positive and negative emotional response, $r(470) = .147, p = .001$, a significant negative relationship between positive emotional response and intolerance $r(470) = -.363, p < .001$, and a significant negative relationship between negative emotional response and intolerance, $r(470) = -.221, p < .001$.

Table 5. Factor analysis pattern matrix weights of emotions on the factors of positive emotional response, negative emotional response and intolerance

	Factor		
	Positive	Negative	Intolerance
Happy	.810		
Empowered	.739		
Admiration	.694		
Compassionate			-.658
Proud	.917		
Sympathetic		.392	-.654
Guilty		.614	
Sad		.710	
Pity		.738	
Annoyed		.415	.436

Factor scores were used as mediators in a second multiple mediation model positing that positive emotions, negative emotions and intolerance are intervening variables in the relationship between message framing and reaction to the ad (see Figure 4). The analysis is

summarised in Table 6, and once more controlled for the influence of age, gender, prior perceptions of foster care and a personal involvement in future foster care on emotional response and reaction to the ad.

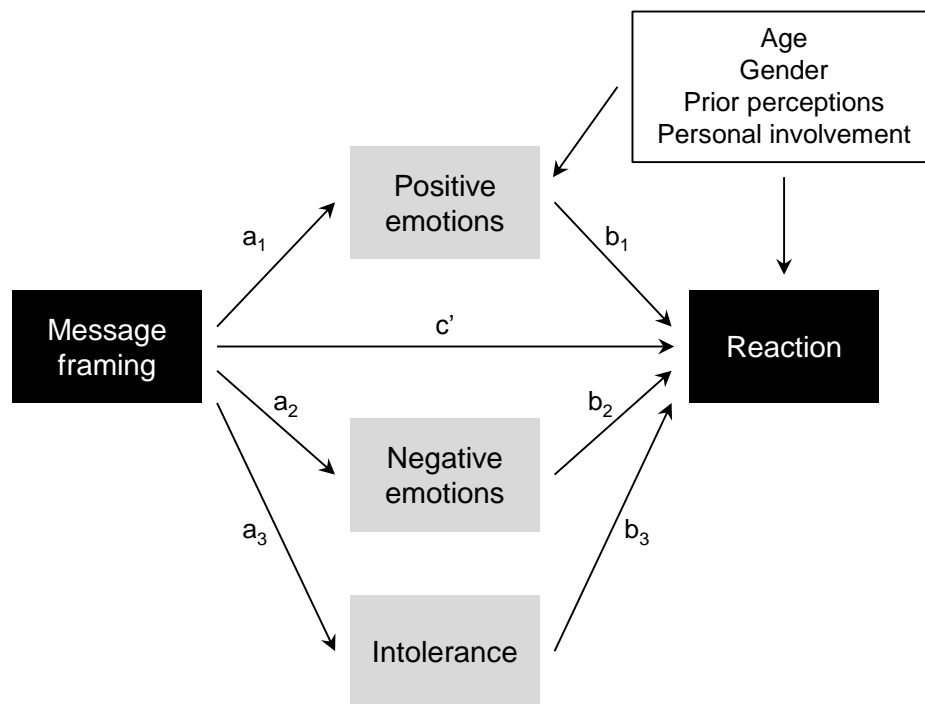


Figure 4. A theoretical model of positive emotional response, negative emotional response and intolerance as intervening variables between message framing and reaction to the ad

In this model, the strength of positive and negative emotions was predicted by message framing (positive: $a_1 = 0.389$, negative: $a_2 = -0.642$). However, intolerance was not related to message framing ($a_3 = 0.060$). The positive emotions and intolerance factors were significant statistical predictors of reaction to the ad (positive: $b_1 = 2.603$, intolerance: $b_3 = -2.638$); however, the negative factor was not significant ($b_2 = -0.089$).

Table 7 summarises the effects reported in this model. Positive emotional response was the only significant mediated effect. Furthermore, bootstrapped confidence intervals testing the difference in effect size between indirect effects suggest that positive emotional responses to a given ad were related more reliably to general positive reaction to the ad, than either negative emotional responses (difference: 0.913, [0.345, 1.604]) or intolerance (difference: 1.171, [0.642, 1.795]). In contrast, the effects for negative emotional response and intolerance were not different (difference: 0.215, [-0.342, 0.847]). The direct effect in the mediation model (c') was marginally significant ($p = .073$) and half that of the total effect (Table 7). Accordingly, there is clear evidence of mediation in this model.

The covariates of prior perceptions of foster care, personal involvement in foster care and age were significant predictors of reaction to the ad. Respondents with more positive perceptions of foster care, stated consideration to care in the future, and older respondents experienced

more positive reactions. Last, by virtue of the broader sampling of emotional response, this model was capable of explaining greater variance in reaction to the ad than model 1 ($R^2 = 45\%$).

In summary, these analyses demonstrate that contrary to the predictions from previous research on message frames and donation behaviours, there is little statistical evidence in this study to suggest that negative emotional response is a potentially effective mechanism to elicit donation in the context of foster caring. In contrast, a measure of positive emotions was found to mediate the direct relationship between message framing and reaction to the ad, and is consistent with a theoretical model that views the generation of positive emotions in response to the ad as a means by which message framing influences ad reaction.

Table 6. Mediation model 2: Positive emotion, negative emotion and intolerance as mediators between message framing and reaction

Antecedent	Consequent															
	M_1 (Positive emotional response)			M_2 (Negative emotional response)			M_3 (Intolerance)			Y (Reaction)						
	Coeff.	SE	<i>p</i>	Coeff.	SE	<i>p</i>	Coeff.	SE	<i>p</i>	Coeff.	SE	<i>p</i>				
X (Message framing)	a_1	0.389	.082	<.001	a_2	-0.642	.077	<.001	a_3	0.059	.077	.438	c'	0.923	.513	.073
M_1 (Positive emotional response)	-	-	-	-	-	-	-	-	-	-	-	-	b_1	2.603	.280	<.001
M_2 (Negative emotional response)	-	-	-	-	-	-	-	-	-	-	-	-	b_2	-0.089	.289	.758
M_3 (Intolerance)	-	-	-	-	-	-	-	-	-	-	-	-	b_3	-2.638	.297	<.001
Prior perceptions		0.020	.003	<.001		0.005	.003	.105		-0.022	.003	<.001		-0.041	.019	.029
Personal involvement		0.091	.108	.400		-0.158	.101	.117		-0.010	.102	.924		-1.773	.607	.004
Age		-0.004	.003	.211		-0.096	.003	.002		-0.007	.003	.812		0.074	.019	<.001
Gender		-0.389	.081	<.001		-0.066	.076	.388		-0.115	.077	.135		0.852	.473	.072
Constant	i_{M1}	-0.866	.295	.004	i_{M2}	0.173	.277	.532	i_{M3}	1.770	.279	<.001	i_Y	23.820	1.737	<.001
		$R^2 = .158$				$R^2 = .152$				$R^2 = .117$				$R^2 = .447$		
		$F(5, 464) = 17.462, p <.001$				$F(5,464) = 16.597, p <.001$				$F(5,464) = 12.317, p <.001$				$F(8, 461) = 46.608, p <.001$		

Table 7. Summary of effects for mediation model 2

Effect	Estimate	95% confidence interval
Total effect		
<i>Ad framing c</i>	1.836*	[0.719, 2.953]
Direct effect		
<i>Ad framing c'</i>	0.923	[-0.085, 2.953]
Indirect effects		
Total	0.913*	[0.010, 1.843]
<i>Positive emotional response a₁b₁</i>	1.013*	[0.560, 1.609] [†]

<i>Negative emotional response</i> a_2b_2	0.057	[-0.399, 0.501] [†]
<i>Intolerance</i> a_3b_3	-0.158	[-0.577, 0.239] [†]

* Significant at $p < .05$. [†] Bias corrected bootstrap confidence interval.

Conclusions and implications

There is an urgent need of more foster carers internationally. Yet little is known about the advertising strategy likely to attract foster carers, and it is unclear whether findings from advertising studies in other behavioural contexts apply to foster care, and — more generally — to the context of high cognitive elaboration donations.

Results from the present study indicate that this is not the case. Moreover, eliciting negative emotions could lead to negative outcomes due to both weaker reactions to the ad upon exposure, and in the formation of base attitudes and processing motivations that negatively affect the reaction to ads when exposed to them. Key findings from this study include that guilt — a negative emotion shown to be highly effective in eliciting monetary donations — has no impact on reaction to the ad in the context of foster care. Sadness has only a small impact. Positive more than negative emotions engender a stronger reaction to the ad. The reaction to the ad is also strongly affected by processing motivation and pre-existing attitudes towards foster care, indicating, in line with the advertising literature more generally (e.g. Jones, 1997), that it is critical not to rely on single ad exposure, but to design longer-term advertising campaigns that ensure the best possible basis for later advertising exposures. Eliciting negative emotions in this context could be detrimental primarily because of the long-term impact on base attitudes people have about foster caring. Negative framing — in the context of high cognitive elaboration donation behaviours — may produce a boomerang effect (Hyland and Birrell, 1979), leading to people reacting in the opposite way to that intended. This form of psychological reactance can occur because the message framing is inconsistent with pre-existing perceptions of the behaviour (Cox and Cox, 2001), or because the individual feels they are being pressured (e.g., through elicited feelings of guilt), in a manner that limits their freedom to choose (Reinhart *et al.* 2007).

A possible theoretical explanation for the findings is offered by Shiv *et al.* (2004), who argue that decisions requiring substantial cognitive processing lead people to engage more in the analysis of advertisement strategies. This evaluation, in turn, influences their decision to adopt or not to adopt the target behaviour. Shiv *et al.*'s explanation accommodates the observations that eliciting negative emotions is effective in low cognitive elaboration donations, such as one-off low-risk behaviours (e.g., monetary donations), while eliciting positive emotions is effective in high cognitive elaboration donations, which are major long-term decisions requiring substantial cognitive processing (e.g., fostering a child).

Nonetheless, this interpretation of the findings assumes that our sample, and the market of potential foster carers more generally, can be influenced by advertising and are not immutable, because they have already decided to, or not to, become a foster carer. The current study included respondents who reported retrospective and/or prospective consideration of foster caring and were chosen because they could be argued to be an approximation of the potential foster carer market. It is possible that at least some of our sample had already made a decision about becoming a foster carer; some had considered the role in the past and decided not to care, and some had decided to foster care in the future when constraints allow. The influence that message frames and contents can have on such individuals may be limited. As such, prior decision making might dampen the strength of reaction as a function of message framing reported here. Accordingly, the results of this study could be an underestimate of ad effectiveness with potential foster carers who have never considered this role prior to exposure. This possibility is underscored by evidence that advertising is a viable means of first contact in foster care. In unpublished data, one-fifth of existing foster carers reported that they first considered the role of foster carer after exposure

to an ad. Alternatively, the appeal of the ads in this study might be interpreted as a reminder to a sympathetic audience that foster carers are needed, rather than a persuasion as such. Determination of either of these possibilities will require additional testing on a larger and broader sample and is beyond the scope of the current study.

Consequently, the findings of the present study may have implications for behaviours beyond foster care that fall into the category of high cognitive elaboration donations. These include engaging in environmental volunteering, social volunteering including driving emergency vehicles, caring for the elderly, distributing meals on wheels or serving as a counsellor on a range of different telephone helplines, all critical contributions to society which are typically provided by volunteers and not paid employees.

The present study overcomes a number of methodological limitations which affect the strength of evidence in previous studies, including availability of a large representative sample, avoidance of cumulative advertising effects by exposing each participant to one ad only, reduction of social desirability bias because the survey was completed by participants in the privacy of their own home, and the use of reaction to the ad as the dependent variable. Reaction to the ad, in contrast to behavioural intention or actual behaviour, occurs immediately after the ad both in real life and in testing environments. Consequently, measuring it immediately after exposure to the ad is not unrealistic.

Future longitudinal research is required to test whether the long-term advertising effects emerging from the present study hold. Optimally, such a longitudinal study would also capture actual fostering decisions as a dependent variable. Also, it would be of great interest to replicate this study in another high cognitive elaboration donation context to determine whether the findings of this study generalise beyond the case of foster care.

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