

Persuasion and Affect in the Framing of Poverty: An Experiment on Goal Framing

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Persuasión y afecto en el marco de la Pobreza: Un experimento en *goal framing* (enquadre de los resultados)

Persuasão e afeto no quadro da Pobreza: Experimentação em *goal framing* (enquadre dos resultados)

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Origin of the article

Data for this research project was collected in April 2006. The study is part of a larger study that included the two framing conditions here plus a control condition. The project took place with students of the University of Wisconsin-Madison in the United States. Undergraduate students from communications classes across three departments participated in the study in exchange for course credit. This study did not use any financial support.

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Resumen

En respuesta a la enorme y algunas veces conceptualmente inconsistente literatura sobre *valence framing*, Levin y sus colegas (1998) desarrollaron una tipología de encuadre de valencia que organiza los diferentes resultados a partir de elección arriesgada, atributo, y *encuadre de los resultados (goal framing)*. Este estudio favorece la literatura sobre *encuadre de los resultados* mediante (a) su aplicación en el contexto de una cuestión social como la pobreza infantil extrema; y (b) el examen de los mecanismos afectivos sobre el cual el *encuadre de los resultados* es de eficacia persuasiva. Los resultados experimentales (N = 197) mostraron que la exposición al mensaje de encuadre de pérdida permitió un apoyo mayor hacia las políticas públicas que buscan erradicar la pobreza infantil, en comparación con el mensaje de encuadre de ganancia. Los resultados también revelaron que el afecto negativo sirve como herramienta mediadora de apoyo hacia las políticas públicas. Estos hallazgos sugieren que, en el contexto del apoyo social hacia la población pobre, la capacidad de persuasión dentro del encuadre de pérdida se facilita cuando los participantes experimentan afectos negativos.

Palabras clave: encuadre de los resultados (*goal framing*); afecto negativo; publicidad; pobreza infantil extrema; mediación

Abstract

In response to the vast and sometimes conceptually inconsistent literature on *valence framing*, Levin and colleagues (1998) advanced a typology of valence framing that organized the differing results by risky choice, attribute, and goal framing. This study furthers the literature on *goal framing* by (a) applying it to the context of a social issue, extreme child poverty; and (b) examining affective mechanisms under which goal framing is persuasive. Experimental results (N = 197) revealed that exposure to the loss-framed message led to greater willingness to support public policies to eradicate child poverty compared to the gain-framed message. Results also found evidence that negative affect served as the mediator of framing effects on public policy support. These findings suggest that, in the context of social support for aiding the poor, the persuasiveness of the loss frame is facilitated when participants experience negative, but not positive, affect.

Keywords: goal framing; negative affect; advertisement; extreme child poverty; mediation

Resumo

Respondendo à literatura maciça e, as vezes, conceitualmente inconsistente sobre *valence framing*, Levin e colaboradores (1998) desenvolveram tipologia de enquadre de valência que organiza os diferentes resultados a partir da eleição arriscada, atributo, e *enquadre dos resultados (goal framing)*. Este estudo enriquece a literatura sobre *enquadre dos resultados* mediante (a) sua aplicação no contexto de uma questão social tal como a pobreza infantil extrema; e (b) o exame dos mecanismos afetivos sobre que o *enquadre dos resultados* é de eficácia persuasiva. Os resultados experimentais (N = 197) mostraram que a exposição à mensagem de enquadre de perda permitiu um maior apoio para as políticas públicas que visam erradicar a pobreza infantil, em comparação com a mensagem de enquadre de ganho. Os resultados desvendaram também que o afeto negativo serve como ferramenta mediadora de apoio para as políticas públicas. Estes achados sugerem que, no contexto do apoio social para a população pobre, a capacidade de persuasão dentro do enquadre de perda é facilitado quando os participantes experimentam afetos negativos.

Palavras-chave: enquadre dos resultados (*goal framing*); afeto negativo; publicidade; pobreza infantil extrema; mediação

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Persuasion and Affect in the Framing of Poverty: An Experiment on Goal Framing

Persuasion in the area of social causes relies on normative ideas of how society should work and focuses its efforts on changing people's undesirable behaviors while promoting desirable ones (Kotler, Roberto, & Lee, 2002). At the level of individual behavioral change, persuasion may be considered straightforward, with the underlying idea that cumulative change in individuals leads to societal-level difference. Many campaigns have successfully achieved this objective, like the *Pink* product line for breast cancer research or *Product RED* to combat AIDS in Africa (Littler, 2008). However, when it comes to combating societal issues that require going beyond individual behavior change, the mechanisms are rather understudied.

There are few bigger societal issues than poverty, reflected in income inequality, health disparities, educational attainment, and access to resources. For instance, in 2010 The World Bank estimated that 1.22 billion people (one in four in the developing world) lived in *extreme poverty*¹ (The World Bank, 2014). In response to the alarming rate of poverty worldwide, various organizations have launched campaigns aimed at reducing poverty, for instance the *Make Poverty History* campaign. However, few studies have

assessed the effectiveness of anti-poverty messages. To address the issue of poverty, advocacy groups need to balance appeals to both individual behavior (e.g., donating money or food to the poor) and societal-level policy change (e.g., an increase in the allocation of resources for solving poverty-related problems). Ideally, effective anti-poverty messages should elicit both types of responses.

To craft such effective messages, valence framing could be considered a promising approach. Of the many different kinds of framing, valence framing is unique for featuring messages portrayed in terms of losses or gains, but conveying equivalent information (Scheufele & Iyengar, in press). As a persuasive tool, this kind of framing has been used successfully to change individual behavior or policy attitudes in psychology (e.g., Tversky & Kahneman, 1981), decision-making research (e.g., Small, Loewenstein, & Slovic, 2007), health communication (e.g., Meyerowitz & Chaiken, 1987), and political communication (e.g., De Vreese & Bomgaarden, 2003). One main objective of this study is to test the relative persuasiveness of a loss- (avoiding deaths) vs. a gain-framed (saving lives) anti-poverty message in a controlled experiment. Another objective and broader theoretical goal concerns the influence

of intervening affective variables. We argue that affective responses may be an important mechanism for understanding the persuasive effects of framing by accounting for audiences' emotional responses during exposure to the message. To test this, we based our study on a persuasive ad actually used in the *Make Poverty History* campaign worldwide. The ad used celebrities to make young people aware of extreme poverty and to persuade the youth to act in reducing extreme poverty (www.makepovertyhistory.org).

This research builds on the literature of one such type of valence framing, goal framing (Levin, Schneider, & Gaeth, 1998), applied in the context of pro-social persuasive messages, which is a relatively unexplored area of goal framing, albeit having social and public policy implications. Moreover, since the majority of existing research on goal framing outside the realm of health has focused on cognitive effects rather than underlying affective mechanisms,² our investigation of the mediating role of affect brings additional insight to this dynamic area of research. Given the current increase in poverty worldwide due to recovery from the 2007-08 financial crisis, examining pro-social persuasive messages becomes particularly relevant.

Goal Framing and Persuasion

In the context of persuasion, valence framing has been the foundation of much research. Valence framing involves the framing of equivalent information in either positive or negative terms (Levin, Schneider, & Gaeth, 1998). For instance, if a mortality rate were 50%, one could either say “500 lives saved” or 500 lives lost. Levin and his colleagues proposed a typology of valence framing divided into three types of framing that would shed light on the divergence in valence framing results: risky choice framing (the classic loss- versus gain-framed choice set that is the pillar of prospect theory by Tversky and Kahneman, 1981), attribute framing (e. g., “75% lean beef” versus “25% fat beef”), and goal framing (loss- versus gain-framed persuasive messages with the same goal, such as reducing extreme poverty). The main differences between these three types (risky choice, attribute, and goal) lie in what is framed (choices with different risk levels, attributes, or consequences or implied goals), what is affected (the risk preference, the item evaluation, or the impact on persuasion), and how it is measured (comparison of choices comparison of item attractiveness, or comparison of behavior adoption rates), respectively

(Levin et al., 1998). More than a thousand studies have used this typology since the article was published.

Goal framing consists of a pair of persuasive messages that either focus on (1) preventing a potential loss by failing to perform a particular behavior (the loss frame) or (2) attaining a potential benefit by performing that behavior (the gain frame). In both cases, the aim of the message is the same—to encourage the adoption of a behavior or goal, such as supporting policies aiding the poor. The critical aspect in goal framing is *which* frame (loss or gain) has the greatest persuasive impact on achieving the (same) goal.

Hence, goal framing is consistently different from attribute framing, where the gain frame represents a desirable option or attribute and the loss frame represents an undesirable option or attribute. In goal framing, the goal is already set and so is its desirability (from the persuader's perspective); the goal remains the same for either the loss or the gain frame (Levin et al., 1998). Moreover, goal framing is also different from risky choice framing in that individuals make no choices; they are presented with *either* a loss or a gain frame. According to the classification by Levin and colleagues, in the presence of goal framing the loss frame commonly has a *stronger impact* on responses than the gain frame.

A seminal study of the effects of goal framing was an experiment involving a loss- or a gain-framed breast self-examination pamphlet (Meyerowitz & Chaiken, 1987). Results indicated that the loss-framed pamphlet led to greater persuasion than the gain-framed pamphlet—participants who received the loss frame reported more favorable attitudes, behavioral intentions, and behaviors related to breast self-examination than those who received the gain frame. Although the authors of this study suggested that the findings could be explained using the tenets of prospect theory, stressing the riskiness of performing a breast self-examination, their operationalization of the experiment was based upon goal framing (Levin et al., 1998). To be sure, it is unclear which option is riskier: performing (and potentially

detecting a lump) or not performing (and potentially detecting a lump when it is too late) a breast self-examination. Moreover, Meyerowitz and Chaiken's study did not involve a choice of options; participants had no *choice set*, which is a critical element in prospect theory. What participants had was a goal, performing a breast self-examination, and different persuasive appeals (loss or gain frame) to entice them to achieve that goal.

Meyerowitz and Chaiken's results (1987) are therefore better understood in terms of goal framing, as well as negativity bias, wherein the persuasive effect of the loss frame is attributed to the increased salience of potential negative consequences. This idea is rooted in the hypothesis that negative information exerts a greater impact on judgments than objectively equivalent positive information, which has been steadily supported in empirical studies (Chou & Murnighan, 2013; Fiske & Taylor, 1991). We note that this negativity bias should not be confused with the one invoked in prospect theory. In risky choice framing the negativity bias is operationalized with the shape of the value function, which is concave for gains and convex for losses, as well as the slope of the function, which is steeper for losses than for gains (Levin et al., 1998).

Although most valence framing studies in the health realm could be classified as goal framing (Jasper, Woolf, & Christman, 2014; Levin et al., 1998), a different typology is typically used in health behavior (Rothman, Bartels, Wlaschin, & Salovey, 2006). Frames are classified according to whether they are designed to detect or prevent disease (Rothman & Salovey, 1997). Under this literature, framing in terms of gains is more effective when targeting behaviors preventing the onset of disease, whereas framing in terms of losses is more effective when targeting behaviors detecting the presence of a disease (Rothman et al., 2006).

However, two main differences between framing in the health realm and in pro-social causes preclude us from using this standard. First, even though it makes complete sense to treat health promotion in terms of detecting or

preventing a disease, this is not the case for fighting poverty. Poverty is already there, hence no need to detect it. What is needed is its alleviation or elimination. Second, most health studies take audiences as the ultimate subject upon which the behavior, intention, or attitude shall fall. In pro-social behaviors, this is not always the case. Many times, audiences act on behalf of someone else (the poor), thus the effects are rather indirect. Because of these differences, the literature on goal framing is more adequate and pertinent to the study of social issues in general, and child poverty in particular.

In spite of this, goal framing has not received comparable attention in contexts other than health behavior. A notable exception is Davis (1995), who found that *loss-framed* appeals led to more participation in conservation activities to preserve the environment than gain-framed appeals, though the effects were moderated by the target of the problem (when it was geared toward respondents' own generation). However, Hasseldine and Hite (2003) found inconsistent results with tax compliance as the outcome, by persuasion flipping depending on gender. But tax compliance affects individuals directly, and many social causes do not. Still, in terms of pro-social messages, the literature offers little evidence based on goal framing.

One area in which goal framing can have an impact is extreme child poverty awareness and support for change. For instance, the *Make Poverty History* campaign used the *Click* ad precisely to exert pressure on rich country leaders to accomplish the United Nations Millennium Development Goals (Nash, 2008), which listed as its first objective the eradication of extreme poverty and hunger (www.undp.org).

Using the framework of goal framing, the issue of poverty could be framed in terms of gains (e.g., if we help, many lives will be saved) or losses (e.g., if we don't help, many lives will be lost). The question is, which of these two types of messages will be more effective in motivating individual behaviors and fostering support for public poli-

cies addressing poverty issues? Arguably, people's negativity bias (Fiske & Taylor, 1991) may motivate them to take personal actions to help the poor and support public policies to a greater extent when confronted with a loss-framed message rather than when confronted with a gain-framed message.

That the framing of poverty messages could influence audience perceptions and judgment was aptly demonstrated in two studies by Iyengar (1990), even though his use of framing (episodic vs. thematic) was outside the context of valence framing. His studies, conducted under a news-framing paradigm (and not ads), provided indirect support to the notion that framing poverty in different ways could result in differential persuasive outcomes. Similarly, Hannah and Cafferty generalized Iyengar's model through a fully factorial, between-subjects design based on attributes (in their case, race) and responsibility (episodic and thematic frames), using a convenient sample of students (Hannah & Cafferty, 2006). Although these studies on poverty and frames have received major acclaim in the literature, they do not use goal framing, the example of extreme poverty, or test mediational relationships with affect as our study does.

Outcomes

In the field of social marketing, the conceptualization of pro-social behavior is usually derived from the campaign goals (Kotler et al., 2002). In the case of the *Click* ad, the objective was to create awareness of extreme poverty to generate a critical mass of individuals pressuring world leadership. Therefore, one variable we should consider is the way in which individuals can communicate pressure, such as support for different policy measures, to more powerful entities. In addition, the topic of poverty in social marketing usually entails individual actions such as volunteering and giving money or goods, etc. (Kotler, Roberto, & Leisner, 2006; Kotler et al., 2002). Hence, intention to undertake pro-social actions by the individual shall also be considered.

Given the empirical evidence linking negativity bias and goal framing, and the evidence that poverty is susceptible to framing effects, we proposed the following hypotheses.

- *H1*: Exposure to the loss frame will result in greater support for public policies addressing poverty issues (public policy support) than exposure to the gain frame.
- *H2*: Exposure to the loss frame will result in greater intention to engage in personal actions to help the poor (individual behavior intention) than exposure to the gain frame.

Affect as an Intervening Variable

Beyond the goal frame effects, we are interested in explaining the affective process underlying these effects. Despite the amount of research on message framing, especially within the context of health communication, limited attention has been directed to the mechanisms underlying message-framing effects. An exception is Van't Riet, Ruiter, Werrij, Candel, and De Vries (2009), in which the authors examine valence framing and the affective mechanisms of persuasion. However, their study differs from ours in two fundamental aspects. First, they analyze valence framing, not as goal framing, but as an outcome-dependent phenomena. That is, the relative persuasiveness of the loss- vs. gain-frame depends on whether the outcome variable is information acceptance, attitude, or intention. Second, the action of the frames falls on the audience itself (like in most health behavior studies), which is decidedly different from extreme child poverty. Social phenomena like poverty have an audience's actions typically fall on a third party (extreme poor children). Therefore, the research objectives in our study remain original.

Research on affective mechanisms has focused on mood states or discrete emotions and their role in influencing attitude change, and whether or not *message-irrelevant* emotions (e.g., pre-existing mood states) or *message-induced* emotions influence the outcome (Dillard & Meijnders, 2002). Our

focus is on investigating the potential for message-induced affect, elicited by simple affective cues, to mediate the influence of a loss or a gain frame on attitudes. In this study, *affect* refers to "specific feelings of 'goodness' or 'badness' experienced with or without conscious awareness" (Slovic & Västfjäll, 2013, p. 2).

Most individuals process messages using heuristics or cues in messages, such as whether the sender is an expert, demographic characteristics of the sender, or via message-induced emotions. It is rare that people process information systematically (Eagly & Chaiken, 1993). Further, framing works best when processing little; when people use heuristic routes instead of systematic ones (Putrevu, 2014). Given the central place of heuristic cues in the framing literature (e.g., risky choice framing), we view message-induced affect as a potentially promising psychological mechanism underlying the observed message effects of goal framing (Baron, Inman, Kao, & Logan, 1992; Bohner, Chaiken, & Hunyadi, 1994; Nabi, 1999). Our notion of message-induced affect is different from attitude toward the ad (MacKenzie, Lutz, & Belch, 1986). Although attitude toward the ad can also be an affective route, it is only targeted toward affect in the ad itself, and we preferred to include "affect" as a more general notion that would be inclusive of individuals' emotions.

Persuasion scholars increasingly emphasize the fundamental role of affect in the persuasion process (Dillard, 1993; Dillard & Nabi, 2006), although there remains little consensus regarding the precise structure of affect in relationship to various theories of persuasion. The primary tension is between dual-system models of affective structure (i.e., positive versus negative affect) and discrete emotions (i.e., specific and qualitatively different emotions within the broader categories of positive and negative affect; Dillard & Meijnders, 2002; Nabi, 2002). Resolving this debate is beyond the scope of the present paper, but we emphasize the two orientations to situate the findings from past research on affect and persuasion.

Visual persuasive messages such as consumer advertisements and public service announcements

are designed to induce affective responses in the audience. Research in advertising supports the application of a dual-system affective structure to audience responses [cite]. Typically, consumer advertising messages are designed to evoke more positive than negative affect (Dillard & Meijnders, 2002). In the context of PSAs, individuals' affective responses have been linked to attitudes toward the issues advocated. For example, Dillard and Peck found, in their study of cognitive, emotional, and attitudinal responses to PSAs, that each of the seven basic emotions they examined (i.e., surprise, fear, anger, sadness, guilt, happiness, and contentment) produced a "unique and separate effect" on the perception of a PSA's effectiveness. This perception then mediated the viewer's attitude toward the issue presented in the PSA.

Why might affective cues be particularly effective heuristics that guide individuals' responses when they are exposed to a loss- or gain-framed message? The literature points toward two reasons. First, loss- and gain-framed messages typically differ only by a few words, which are enough to distinguish the positive and negative valence of the two messages. This has implications for cognitive processing of the message: "When a person's motivation or ability to process the issue-relevant information is low, persuasion can occur by a peripheral route in which processes invoked by simple cues in the persuasion context influence attitudes" (Petty & Briñol, 2008). Of course, given the ongoing debate over the structure of affect, it is difficult to determine with certainty which discrete emotions might be elicited by the two competing frames, especially to the extent that the results may vary across message contexts. Thus, following a general theoretical proposition, we focus on the potential correspondence between (1) the loss and gain frames and (2) positive and negative affect (i.e., a dual-system conceptualization), other message features being equal.

Second, according to appraisal theories, emotions arise in response to ongoing, implicit appraisals of situations with respect to positive or negative implications for one's goals and concerns. People

experience negative emotions when the environment threatens their goals, but positive emotions when the environment meets their goals. In our study, we examine the role of both positive and negative affect in mediating goal framing effects.

Since Shen and Dillard's (2007) study demonstrating that gain-framed messages led to greater positive emotions, and loss-framed messages led to greater negative emotions, research in the area of health communication has persisted (Chang, 2008; O'Keefe & Nan, 2012; Wong, Harvell, & Harrison, 2013). These findings are consistent with appraisal theories of emotion. Since gain-framed messages highlight the positive outcomes of one's action, they hold positive implications for one's goals. On the other hand, because loss-framed messages highlight the negative outcomes of one's behavior, they signal an environment that threatens one's goals. Consequently, gain frames generally induce positive emotions, whereas loss-framed messages often evoke negative emotions. Similar findings have been obtained in other studies (Millar & Millar, 2000; Schneider et al., 2001).

Ultimately, the *Make Poverty History* campaign had two main objectives: (a) to create strong emotions on audiences, and sustain emotional involvement regarding extreme child poverty; and (b) to make these emotions positive but not negative, in order to empower audiences (Nash, 2008, p. 173). However, given that we manipulated the original *Click* ad in the campaign and that both loss- and gain-framed messages are used, both affective outcomes, negative and positive, should be considered.

Given the above reasoning, we proposed the following hypotheses:

- *H3a*: The loss frame will induce greater negative affect than the gain frame.
- *H3b*: The gain frame will induce greater positive affect than the loss frame.

Finally, to more specifically examine the mediating role of negative and positive affect, we proposed the following hypotheses:

- *H4a*: The differential effect of the loss frame compared to the gain frame on public policy support will be mediated by affect.
- *H4b*: The differential effect of the loss frame compared to the gain frame on individual behavior intention will be mediated by affect.

Methods

Participants and Procedure

A web-based experiment was conducted to test the hypotheses. Undergraduate students from communications classes across three departments at the University of Wisconsin-Madison in the United States were contacted by their instructors and invited to participate in the study in exchange for course credit. The invitation was administered through a class email, which contained an explanation of the study, its duration, and details on how to obtain credit. Students were given 10 days to participate, and e-mail reminders were sent regularly to encourage participation. Those choosing to opt out of the study could receive equivalent course credit for attending an unrelated informal lecture. In the end, a total of 197 students provided usable data (gender: 71% female; age: $M = 19.5$ years, $SD = 1.31$ years). Data was fielded in the month April of 2006.

The experiment employed an independent groups design, with a loss- and a gain-frame group, to which participants were randomly assigned.³ After consenting to participate and answering some pre-test questions, participants in all conditions watched a brief documentary video about fishing in Alaska with an embedded block of commercials, both taken from the Travel Channel. The commercials included the *Click* ad⁴ stimulus from the *Make Poverty History* Campaign. Following the video, participants answered a battery of post-test questions. The study session lasted approximately 30 minutes.

A student sample seemed particularly appropriate for this experimental stimulus for two reasons. First, the campaign to which this PSA

belongs (www.one.org) was largely Internet-based and used social media like Facebook and Myspace, as well as events such as rock concerts—to which college students may be particularly attuned—to promote its anti-poverty message. Second, the campaign used popular celebrities and musicians, such as Brad Pitt or Bono, as spokespeople, and young adults are particularly likely to recognize and respond to these individuals.

Even though students may have preconceived notions about the celebrities presented in the PSA, thus potentially influencing the PSA's effectiveness or the credibility of the endorser (Agostinelli & Grube, 2002; Shead, Walsh, Taylor, Derevensky, & Gupta, 2010; Toncar, Reid, & Anderson, 2007), this seems unlikely to have affected the results of our experiment because we employed random assignment.

Manipulation

The original *Click* ad contained a mixed-frame message, with the first half focusing on losses and the second focusing on gains. This feature made the original ad “as is” inadequate for testing goal framing or loss- vs. gain-frame effectiveness. Therefore, the audible narration from the original PSA was manipulated to create a loss and a gain frame that were equivalent, slightly altering the original text. The manipulated text was then used as the voiceover narration to make two separate, but equivalent versions:

Gain: “A child’s life can be saved from extreme poverty every three seconds...here we go...that’s another one...somebody’s daughter... somebody’s son...the thing is all these lives will be saved if we help.”

Loss: “A child can die from extreme poverty every three seconds...here we go...that’s another one...somebody’s daughter...somebody’s son...the thing is all these lives will be lost if we don’t help.”

Because the only difference between the two versions of the stimulus was the frame in the voiceover narration, we asked two professional broadcasters to assess whether or not they differed

in tone or expressiveness. According to this expert assessment, the audio characteristics of the two versions were identical.

Measurement

Outcome variables. The variable *public policy support* was created to tap an individual's willingness to support public policies to help the poor. An index was constructed by averaging the responses to three questions regarding an individual's willingness to support various policies: an increase in government funding for research regarding poverty, an increase in the allocation of government resources for poor people, and a tax increase to address this issue. All were measured on an 11-point scale from zero ("not at all likely") to 10 ("very likely") ($M = 4.81$, $SD = 2.57$; Cronbach's $\alpha = .89$).

The variable *individual behavior intention* was created to measure an individual's willingness to engage in personal actions to help the poor. An index was calculated by averaging five questions regarding an individual's intention toward these behaviors: donating money to an anti-poverty campaign, volunteering for poverty-related activities, searching for more information about the issue of poverty, paying close attention to news

stories about poverty, and providing food, clothing or other items to low income families in the community. These were measured on an 11-point scale from zero ("not at all likely") to 10 ("very likely") ($M = 5.15$, $SD = 2.30$; Cronbach's $\alpha = .89$).

Affect. Participants were asked to indicate the extent to which they experienced various affective states while watching the video clip. Exploratory factor analysis of emotion items in the questionnaire gave rise to two factors corresponding to negative and positive affect. Based on these factors, an index for *negative affect* was calculated by averaging responses to seven emotions: troubled, distressed, anxious, fearful, afraid, sad, and upset on an 11-point scale ranging from 0 ("not at all") to 10 ("a lot"), ($M = 2.99$, $SD = 1.46$; Cronbach's $\alpha = .89$). Similarly, an index for *positive affect* was calculated using the same scale by averaging responses to the emotions happy and pleased ($M = 1.74$, $SD = 1.62$, Cronbach's $\alpha = .88$, $r = .79$).

Because the theme of the manipulation was sad and serious, we included more negative than positive emotions in the questionnaire. Given the high internal consistency of positive affect, it is unlikely that it could alter the mediating power of the measure. A summary of descriptive statistics can be found in Table 1.

Table 1. Descriptive Statistics and Tests Results for Dependent and Intervening Variables by Treatment Groups

Variable	Condition	
	Loss	Gain
<i>Public Policy Support</i>	5.23** (2.63)	4.29** (2.41)
<i>Individual Behavior Intention</i>	5.22 (2.37)	5.05 (2.22)
<i>Negative Affect</i>	3.39*** (1.41)	2.50*** (1.39)
<i>Positive Affect</i>	1.65 (1.54)	1.85 (1.72)
N	109	88

Note: Means and standard deviations in parenthesis. Significance is reported for results of t-tests comparing loss and gain groups (* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$; one-tail tests); $N = 197$.

Results

Manipulation Check

An index with three items on an 11-point scale from 0 to 10 (“The video addresses the consequences of poverty through” negative – positive outcomes, “The video frames the fight on poverty from the perspective of” life lost – life saved, and “The tone of the message is” mostly negative – positive) ($M = 3.92, SD = 2.87$; Cronbach’s $\alpha = .89$) was significantly different between the loss and the gain conditions (loss: $M = 2.44, SD = 2.14$; gain: $M = 5.74, SD = 2.61$; $t = 9.74, df = 195, p = .00$). This difference confirmed that the framing manipulation (experimental conditions) was successful.

Table 2. provides the zero-order correlations among the variables considered.

Correlation Matrix			
Variable	(1)	(2)	(3)
Public policy support (1)	–	–	–
Individual behavior intention (2)	.762***	–	–
Negative affect (3)	.430***	.427***	–
Positive affect (4)	.078	.077	-.044

Note: * $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. Cell entries are Pearson’s r correlation coefficients. $N = 197$.

Main Effects⁵

Participants who were exposed to the loss frame showed significantly more support for public policies ($M = 5.23, SD = 2.63$) than participants who were exposed the gain frame ($M = 4.29, SD = 2.41, t = 2.57, df = 195, p = .01, h^2 = .03$). Hence, we found support for H1.

Similarly, participants who were exposed to the loss frame did *not* have a significantly higher

intention to help the poor ($M = 5.22, SD = 2.37$) than participants who were exposed the gain frame ($M = 5.05, SD = 2.22$). Thus, we did not find support for H2 (see Table 1).

Mediation Effect

In addition to the treatment effects, we hypothesized that the loss frame and the gain frame would lead to different levels of experienced affect, with the loss frame inducing more negative affect (H3a) and the gain frame inducing more positive affect (H3b). Our analysis showed that negative affect was significantly higher among individuals exposed to the loss frame ($M = 3.39, SD = 1.41$) than among individuals exposed to the gain frame ($M = 2.50, SD = 1.39, t = 4.47, df = 194, p = .00, h^2 = .09$). With regard to positive affect, we found no difference between the loss frame ($M = 1.65, SD = 1.54$) and the gain frame ($M = 1.85, SD = 1.72$). Hence, our results established strong support for hypothesis H3a but no support for H3b (see Table 1).

Since there was no main effect of framing on positive affect or individual behavior intention, there is no effect to be mediated (Baron & Kenny, 1986), and thus H4b was automatically not supported. Moreover, because H3b was not supported, positive affect could not be a potential mediator either, so it was not considered. Hence, we focused on H4a and conducted mediation analysis that examined negative affect as a possible mediator.

In order to determine the mediation of framing effects on public policy support by negative affect (H4a), we used Baron and Kenny’s approach (1986), which has been used extensively in the social sciences. This test is relatively conservative, with low Type I error and power (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002), but it is comparatively easy to apply and interpret when the data are normal (Zu & Yuan, 2010), and was, therefore, chosen.

Table 3 contains a summary of the test results for the mediation role of negative affect.⁶ Condition (i) of the mediation test (Baron & Kenny, 1986,

$p = .1177$) was satisfied since the loss vs. gain frame ($a_1 = .90$) was significant ($p = .00$) when regressed against negative affect. Condition (ii) was also satisfied in that the loss vs. gain frame ($b_1 = .94$) was significant ($p = .01$) when regressed against public policy support. Condition (iii) was also satisfied; when regressing public policy support against the loss vs. gain frame (c_1) and negative affect (c_2), negative affect was significant ($c_2 = .73$, $p = .00$) and c_1 was smaller than b_1 ($.27 < .94$). In addition, condition (iv) was also satisfied in that c_1 was not significant, which means that the effect of the loss vs. gain frame on public policy support was entirely mediated through negative affect. Therefore, H4b was supported with regard to negative affect.

compared whether participants perceived negative and positive affect as different (two-tail test). In both repeated measures tests (for loss and gain) negative affect is significantly larger than positive affect ($F = 59.15$, $df = 106$; and $F = 9.74$, $df = 87$ respectively, compared to FScheffe = 5.99) (see Table 1). Consequently, this confirmed that the two affective states were correctly distinguished among participants.

Discussion

Using goal framing, we examined the relative effects of a loss- versus gain- framed poverty message on motivating individual intentions to engage

Table 3. Mediation Effects of Negative Affect

Tests for Mediation	Coefficient	Unstandardized β	P-value
Condition (i)			
(constant)		1.60	.00
Loss vs. gain frame	a_1	.90	.00
Dep. var: Negative affect			
Condition (ii)			
(constant)		3.36	.00
Loss vs. gain frame	b_1	.94	.01
Dep. var: Public policy support			
Condition (iii) & (iv)			
(constant)		2.20	.00
Loss vs. gain frame	c_1	.27	.45
Negative affect	c_2	.73	.00
Dep. var: Public policy support			

$N = 197$.

To further examine the distinctiveness between negative and positive affect, a post-hoc test using Scheffé's method (Hayes, 2005) was conducted. Within each condition (loss and gain), we

in personal actions to help the poor, as well as support for public policies addressing poverty issues. This study broadens the purview of goal framing by examining it with complex social issues, and, to the best of our knowledge, it constitutes one of the

first experiments testing the efficacy of goal framing in communicating extreme poverty, as well as assessing the mechanism in terms of affective routes.

Our study revealed a series of intriguing findings with regard to the differential persuasiveness of loss and gain frames in the context of extreme poverty and its underlying process. The first contribution is the significant framing effects with regard to support for public policies addressing poverty issues. In the main, exposure to the loss-framed message resulted in significantly greater public policy support than exposure to the gain-framed message. No effects were found for individual behavior intention (e.g., donating money to an anti-poverty campaign, volunteering for poverty-related activities). Four explanations are offered for the discrepancy. First, research has shown that when it comes to donating money to victims (of a natural or man-made tragedy), individuals respond better to a single identifiable victim than to aggregate numbers about them (Small, Loewenstein, & Slovic, 2007). This phenomenon is coined *psychic numbing* (Lifton, 1967). Apparently, large numbers do not have meaning and are underweighted unless they convey affect. Although apparently irrational, this may occur because as numbers get larger and larger, individuals become insensitive to them; numbers fail to trigger emotion, which is necessary to motivate action. However, one way to convey affect is precisely what the producers of the *Make Poverty History* campaign accomplished, to locate in time the singularity effect (i.e., “one life lost every three seconds;” Slovic & Västfjäll, 2013). In other words, the message of the campaign was bulletproofed against psychic numbing so it should have triggered support for public policies as well as individual behavioral intention. Chang and Lee (2009) also found the loss frame to be more persuasive when using a short-term temporal frame (lives per hour vs. lives per year). Hence, this explanation does not suffice.

Second, we considered ceiling or floor effects. The null effects of individual intention could be due to a ceiling effect (i.e., the mean of the depend-

ent variable approached the highest possible score) or a floor effect (i.e., the mean of the dependent variable approached the lowest possible score). However, we ruled out these possibilities since the means of individual behavior intention were in the moderate range (loss: $M = 5.22$, $SD = 2.37$; gain: $M = 5.05$, $SD = 2.22$ on scales from 0 to 10).

Third, we also considered whether defensive avoidance (Janis & Feshbach, 1953) or motivated reasoning (Kunda, 1990) explained the null results on individual intentions. However, there were no accounts of participants explicitly being afraid or trying to avoid thinking about the ad when looking at open-ended responses in the post-test, so this explanation was ruled out. Regarding motivated reasoning, there is a chance that motivations about poverty may have mediated the outcomes, especially dispositional attributions (Binder & Puig-i-Abril, 2007), but, unfortunately, we lack specific measures of the participants' engagement with the ad, which future research will have to tackle.

Fourth, the different result between public policy support and individual intentions may have emerged because thoughts about public policy, unlike individual behavior intention (which has a more complex array of contributing factors), are more susceptible to the influence of the PSA. Presumably, it is easier to influence what one thinks of an issue (attitudes) than what one personally does about the issue (intention or behavior; Eagly & Chaiken, 1993)—especially when individuals may have limited direct experience with extreme poverty. Given the mixed results that have been obtained in the context of health behavior change (O’Keefe & Jensen, 2006), it is not surprising that individual behavior intention was not susceptible to framing effects. Individual behavior or behavior intention are extremely complex and are determined by multiple individual, situational, and social factors. Exposure to a relatively short message may not produce a large effect on behavior intention. Whether one frame is more persuasive than another may ultimately be dependent upon audience characteristics.

Nonetheless, at a theoretical level, these framing results are consistent with the notions of negativity

bias observed in perception research (Fiske, 1980; Taylor, 1991). A more valuable contribution of this study is empirical evidence supporting negative affect as a mediator in the relationship between message framing and public policy support in the context of goal framing. Consistent with previous research (Chang, 2008; Shen & Dillard, 2007), we found that the loss frame induced greater negative affect than the gain frame. More notably, mediation analysis also supported the hypothesis that the impact of goal framing on public policy support was fully mediated by negative affect. These findings further demonstrate the important role of affect in the persuasion process revealed in previous studies (Dillard & Peck, 2000; Nan, 2009; Emery, Szczypka, Abril, Kim, James, 2014), thus adding to the literature by showing an additional persuasion route.

In the literature on discrete emotions, an emphasis is placed on the differential effects that each discrete emotion carries (Dillard & Peck, 2000; Nabi, 1999). Our negative affect measure is composed of the following emotions: troubled, distressed, anxious, fearful, afraid, sad, and upset. In our case, *each* of the effects attributed to negative affect were confirmed by *every* discrete emotion (on a separate analysis). Even though this study did not attempt to test or settle the debate between dual-system models of affective structure and discrete emotions, these results suggest that using one aggregate measure for affective structure (negative affect) can explain the emotional transition from the loss frame to public policy support as good as discrete emotions can.

Nevertheless, positive affect was not differentially influenced by loss and gain frames, and thus was not a significant mediator in the relationship between framing and public policy support. That the loss- and gain-framed messages did not result in different levels of positive affect might be due to the nature of the topic we are investigating. Extreme poverty is considered a serious issue, and even a gain-framed PSA may not evoke much positive affect. Our findings seem to suggest that when it comes to serious social issues, negative

affect, rather than positive affect, is a more relevant mediating factor in the relationship between goal framing and persuasive outcomes. Past research has confirmed that individuals are more likely to help someone in need when they are able to develop affect toward that person (Batson, 1990 p. 339). Our study results confirm this tendency, though not for individual intention.

In sum, our research indicates that framing poverty either in terms of losses or gains could have a significant impact on people's willingness to support public policies addressing poverty issues and that a greater level of negative affect evoked by the loss frame poses as a viable explanation. This project once again demonstrates the power of goal framing in influencing individual perceptions and attitudes. In particular, it shows that goal framing could effectively sway public support for governmental policies, which ultimately may well translate into real changes in public policies.

While our results are encouraging, two limitations with this study need to be acknowledged. Respondents were asked to express their willingness to support policies instead of actually being asked to support policies in a more specific, measurable way (by casting votes, donating money to candidates, signing petitions, etc.). The conclusions of this study must, therefore, rely on the assumption that behavioral intentions are strongly indicative of behaviors themselves (Ajzen & Fishbein, 1970), but do not necessarily lead to that behavior. The conclusions offered are thus in full recognition of this assumption. Second, participants were a convenient university sample. Thus, lack of random sampling limits the ability to generalize beyond university students at a large research university. However, in experimental research the critical consideration is random assignment to the conditions, which in our case was successfully achieved.

On a theoretical level, this study adds to the literature on goal framing by explaining the mechanism through which framing effects occur. Bohner and colleagues (1994) suggest that people in sad moods are persuaded by variations in message

content compared to people in happy moods. Our results imply that a message framed in terms of losses is more persuasive, and that, again, it is the negative affect that channels this persuasion. Hence, not only is affect intrinsic in audiences (i.e., prior to message exposure) responsible for persuasion effects, but so is affect cued in messages. The process is simpler than the one described by Nabi (1999), in that there is no necessary empathy involved in our case. Further, in our case negative affect is the product of framing and not the framing itself as suggested by Nabi (2003), though she employed discrete emotions. Future research in this direction may clarify which discrete emotions, if any, have the greatest persuasive potential as mediators of loss frames.

On a practical level, this study offers a glimpse at the effectiveness of a loss-framed versus a gain-framed message specific to the issue of extreme

poverty. Public campaigns seeking to gain attention from audiences, at least young educated ones, may benefit from focusing on loss-framed messages when presenting a goal, and on evoking negative affect in audiences. In effect, when it comes to social issues like extreme poverty, lack of water, or shelter, for example, our results suggest that campaigns should focus on messages that stress lives lost, water lost, or shelter denied. Similarly, messages should evoke fear, anger, sadness, or guilt—either with sound effects, solemn voices, imagery, or other techniques. We hope that these findings improve message design in the pursuit of more effective campaigns to battle extreme child policy.

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Notas

1. The World Bank (2014) defines extreme poverty as living on less than 1.25 US dollar per day, and moderate poverty at a somewhat higher amount.
2. Though not "affect as information", which has already been explored (McCormick & McElroy, 2009).
3. Data from this study was part of a larger study that included the two framing conditions here plus a control condition.
4. The *Click* ad was kindly provided by the people at Comic Relief (www.comicrelief.com).
5. To tests hypothesis H1-H3, we employed between groups t-tests. The Levene's test for equality of variances was non-significant for each variable, and thus there was no need to adjust the t-tests. For H4, Ordinary Least

Squares regressions were used to test for the mediation role of affect.

6. In recent literature, scholars argue that more sophisticated and powerful techniques should be used instead of the traditional Baron and Kenny approach (Baron & Kenny, 1986). Bootstrapping is particularly appealing given its superior power and type-I error control (Hayes, 2009). Moreover, bootstrapping relaxes normality assumptions as compared to the Sobel test (Sobel, 1982), does not require any further assumptions, and it is easier to use compared to the M-test or the distributions of products approach (Hayes, 2009; MacKinnon, Lockwood, & Hoffman, 1998). Even though it is not the purpose of this paper to sort out which technique one

should use to detect mediation, we tested for mediation using the bootstrapping technique, obtaining the same results as with Baron and Kenny's approach. Specifically, the total indirect effect of the loss vs. gain frame on public policy support through negative affect is non-zero by a 95% bootstrap confidence interval based on 5000 bootstrap samples (.270 to 1.037, with a point estimate of .654), as are the paths from loss vs. gain frame to

negative affect (.509 to 1.292, with a point estimate of .900), and negative affect to public policy support, controlling for loss vs. gain frame (.478 to .974, with a point estimate of .726). Conversely, the direct effect of loss vs. gain frame on public policy support is not significant when negative affect (the mediator) is present (-.429 to .993, with a point estimate of .282).