

SAVING THE WORLD FOR ALL THE WRONG REASONS:
EXTRINSIC MOTIVATION REDUCES FAVORABILITY OF
PROSOCIAL ACTS

by

LAURA JOHNSON-GRAHAM

B.A., University of Southern California, 1989

M.B.A., London Business School, 1999

M.S., London School of Economics, 2004

M.A., University of Colorado, 2008

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written by Laura C. Johnson-Graham
has been approved for the Department of Psychology and Neuroscience

Leaf Van Boven

Bernadette Park

Date

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Johnson-Graham, Laura (PhD, Psychology)

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Abstract

When observing the prosocial acts of others, people tend to be very concerned with the reasons for act. A charitable donation motivated by concern for the charitable cause is seen as noble, while the same donation motivated by image enhancement is seen as disingenuous. In a series of six studies, participants consistently evaluated extrinsically motivated prosocial acts to be subjectively smaller and less impactful than the identical but intrinsically motivated act, and evaluated the extrinsically motivated actors less favorably than intrinsically motivated actors. These effects were robust across different prosocial domains and across different types of acts, including the donation of money and time and for conservation behaviors. These results demonstrate that motivation information causes people to violate strict adherence to principles of fungibility, using contextual information to evaluate equal fungible units differently. Two further studies establish that people will adjust their choices of products and resource allocation to punish extrinsically motivated actors and reward intrinsically motivated actors. The authors discuss these findings relative to formal principles of rationality, and propose an explanation of contextualized rationality. The implications of these findings for policy-making and implementation are discussed.

DEDICATION

This work is dedicated to my son Rowan, a true academic baby born in the second year of my studies, and my husband Tommy. You supported me through this journey and, along the way, helped me truly understand joy and fulfillment.

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Chapter One: Motives Matter, Even When They Don't

The last temptation is the greatest treason:

To do the right deed for the wrong reason.

-- T.S. Eliot, *Murder in the Cathedral*

In his poetic drama, "Murder in the Cathedral," T.S. Eliot provides a glimpse into the fictional musings of Archbishop Thomas Becket as he contemplates his imminent death and probable canonization with a sense of pride. Uncomfortable with his prideful anticipation, he resolves that if he is to become a martyr, it must be for no reason other than the "rightness" of his dedication to God. The moral plight of a 12th century cleric may seem a bit obscure, however we are faced with such dilemmas on a regular basis in guiding our own actions and motives and in judging the actions and motives of others.

A more contemporary example illustrating the influence of motives on particular actions involves the market for hybrid cars. In 2007, Toyota sold over 180,000 Prius Hybrid cars to people who we might assume wished to reduce their carbon emissions to benefit the environment and promote the greater good. A New York Times poll indicated, however, that 57% of people who purchased the Toyota Prius in that year did so primarily because "it makes a statement about me" (Maynard, 2007). The Prius has continually outsold all other hybrid vehicles largely, consumers report, because of its distinctive appearance that others recognize, leaving no doubt as to the owner's environmental ethos and social contribution. The Washington Post opines, "Prius politics are mostly about showing off, not about curbing green house gas emissions" (Samuelson, 2007). This image-based motive has spawned derogatory references in popular media, with the phrase "pious Prius" returning over 95,000 hits when entered as a search term in

Google. Somehow, when associated with a motive to enhance one's image rather than to contribute to environmental protection, the act of buying a hybrid car loses its moral substance and is somehow diminished, much as Becket's martyrdom might have been sullied by the indulgence of personal pride.

Similarly, trends observed in media coverage of philanthropy illustrate typical responses to the complex motives that may underlie prosocial acts. In short, media trends indicate that good deeds are interesting, but good deeds that may have gone bad are irresistible to the news consuming public. Consider the 2010 donation of \$100 million by Facebook founder Mark Zuckerberg to schools in Newark, New Jersey. The media coverage focused not on the impact of that large donation on a troubled school system, but rather on his motives for making the donation (Huessner, 2010). Public opinion questioned whether this act was made out of genuine concern for the state of the New Jersey schools, or whether, in fact, Zuckerberg's donation was made in order to counteract unflattering publicity generated by a biographical film about him which opened in the week following his donation. Speculation about his motives completely overshadowed attention paid to the value of his act, suggesting that people consider such motives to be relevant to their evaluation of a particular action.

The Prius example and the public response to Zuckerberg's donation have two particular features in common: a focus on an act that is prosocial in nature, and a questioning of the motivation underlying the act. In the current research, we evaluate the hypothesis that when an actor's prosocial act is perceived to be extrinsically motivated (by some desired outcome that is separable from the prosocial outcome caused by the act), the act will be evaluated less favorably than an equivalent act that is intrinsically

motivated (by the value or enjoyment inherent in the prosocial outcome). This proposal gives rise to two specific hypotheses; the first hypothesis is that extrinsically motivated actors are evaluated less favorably than intrinsically motivated actors. The second hypothesis is that the relatively negative impression of the extrinsically motivated actor results in a corresponding negative evaluation of the prosocial act, relative to the same act performed by an intrinsically motivated actor.

In support of these two hypotheses, we present existing theoretical foundations and evidence for proposed underlying patterns of association in the remainder of Chapter 1, followed by a series of studies establishing new evidence for the two hypotheses in Chapters 2 through 4. Chapter 5 presents two further studies indicating that motivation influences choice behavior. A general discussion of the findings follows in Chapter 6.

The Role of Motives in Evaluative Judgment

Motivation is particularly important to evaluative judgment in the context of acts that are prosocial in nature, due in part to the utility of motivation information in predicting future behavior. Prosocial acts are defined as acts that benefit others, or society in general, often at a cost to the actor (Twenge et al, 2007). Though prosocial acts benefit others, such acts can be motivated by altruistic considerations or by self-interest, or both (Batson, 2003). In social living situations, it has long been advantageous to be able to predict the prosocial or antisocial behaviors of others in order to manage one's own wellbeing and maintain social equilibrium in situations of indirect reciprocity (Batson, 2003, Fehr & Gächter, 2002). Motivation provides a basis for making such predictions.

Attention to the motivation of others is fundamental to our understanding of others' behavior. Once intentionality of an act is recognized, a person's reasons for acting

are of primary concern (Malle & Holbrook, 2012). If a person performs a prosocial act to achieve extrinsically motivated outcomes, such as personal status or material rewards, it is reasonable to predict that when the interests of that person diverge from the interests of society as a whole, the person may cease to act prosocially and may in fact act antisocially in pursuit of those extrinsic goals. If a person performs a prosocial act based on intrinsic motivations, such as the betterment of society or the maintenance of social equilibrium, their future behavior is likely to continue to be aligned with the interests of society as a whole and thus is likely to continue to be prosocial in nature. Either of these conclusions has a logical place in determining how positively or negatively we evaluate the actor, how much we trust the actor, and the extent to which we desire further affiliation with the actor.

When attending to the motives of others, people are suspicious of and negatively evaluate extrinsic motives (Fein & Hilton, 1994; Van Boven, 2010). As a species, we tend to be particularly sensitive to, and are highly skilled in discerning when someone in a social living situation is not fulfilling a normative social contract, such as reciprocity in resource allocation. We are able to identify and categorize a wide range of subtle forms of social cheating, from minor disingenuity and passive free-riding to active stealing and withholding of resources (Delton et al, 2012). At its most extreme, this ability is generally known as “cheater detection” (Cosmides, 1992, Delton, 2012). For example, people may perceive that a political candidate whose decision to run for office is motivated by increasing personal status may not always represent the interests of the people if the interests of the people diverge from the politician’s personal aspirations for status. The motives in this case may rationally influence the decision to affiliate with, and

therefore vote for, the political candidate or not. Often, extrinsic motivation is not cheating in the material sense, in that no resources are being misallocated or withheld. The extrinsic motivation may, however, be seen as manipulative and disingenuous, representing a misallocation of social capital by accepting praise or esteem for a good act that was performed for self interested outcomes. This misallocation of intangibles may arouse some of the same responses as the misallocation of tangible resources.

The motives underlying a concrete prosocial act are often, but not always, orthogonal to the rationality of those actions. There are many situations, such as Zukerberg's donation, in which motivation does not change the impact of the act, because prediction of future behavior is not the primary objective. In many cases, we are judging the impact of a discrete act that can be uncoupled from past or future behaviors by the actor, either because the act is unlikely to recur or because we have no immediate contact with the person such that our wellbeing could be affected by their future acts. In these discrete cases, the judgment of the actor and of the act should be separable. The act should, according to formal principles of rationality, be judged on its utility, in terms of the fungible units, e.g. number of dollars donated (Keys & Schwartz, 2009). One hundred million dollars has the same impact on the Newark school system whether Zukerberg was motivated by a desire to improve the school system or by a desire to improve his public image. Yet in these cases, motivations still enter and sometimes dominate the social discourse. The present research examines how people use this motivation information in evaluating the actor and the prosocial act.

Prosocial actions activate global motive evaluations. We propose that when people observe others engaging in prosocial actions, they are prompted to construct a

global evaluation of the actor, composed of closely correlated judgments of perceived motivations of the actor and of likeability of the actor. There is evidence that people seek to reconcile traits and motives into a coherent dispositional evaluation of the actor (Reeder et al, 2004). We believe that the trigger for this integrative evaluation is the presence of an act that is open to interpretation and requires explanation. Person perception and attribution research has historically been concerned with a person taking action. Why might the presence of an intentional act call motives into question? Prior research suggests a number of reasons: an intentional act draws the attention of the observer, the act is often presented with alternative possible motivators, raising suspicion and requiring interpretation, and the act, once interpreted, provides information that is predictive of future behavior. Malle and colleagues propose that observers tend to pay more attention to observable and intentional actions than to unobservable or unintentional acts (Malle & Pearce, 2001; Malle & Holbrook, 2012). The fact that a person chooses to take action attracts attention and causes observers to question why. Even the simplest intentional act can require interpretation when possible alternative reasons for the act are present. Fein and colleagues propose that the introduction of a feasible ulterior motive, prompted by some ambiguity in the reasons for the action, causes people to become suspicious and to actively consider the person's motives relative to external factors when evaluating their action. For instance, in one study, participants read a speech given by a fictional person. In the constrained condition, participants were told that the person was instructed by a supervisor to adopt a particular position on the issue as part of his job. In the free choice condition, participants were told that the person was allowed to choose his position on the issue, and his supervisor shared that the position he chose to support in

the speech. Even with the choice constraint, people demonstrated the correspondence bias, judging the speech to reflect the speaker's true views. In the free choice condition, the introduction of an extrinsic motivator that may have influenced the person's choice was sufficient to cause people to judge that the argument in the speech did not reflect the speaker's true beliefs and to actively consider the ulterior motive as an explanation for the action (Fein & Hilton, 1994).

We propose that the presence of an observable, intentional act by a person results in greater coherence of liking and motivation variables, causing these two separate constructs to merge into a single construct related to the global evaluation of the actor. This is important for our hypotheses, and our chosen approach to exploring them in the current research, in that we focus on a relatively primary network of associations rather than any possible higher order sequential process, as the mechanism underlying the proposed effects of motivation on evaluation.

The following pilot study provides preliminary evidence that the presence of an intentional act does indeed increase coherence of these variables as a single construct. A total of 143 people read a description of a person, either with or without a specific action taken by the person:

In the No Act condition, the person was described neutrally, with general facts about the person's life and no mention of any act:

John is a 32-year old man who lives in Denver. He works in sales for a medium-sized technology company, making a comfortable salary. He lives in an upscale 2-bedroom apartment a few miles from his office. He has recently gone on a few

dates with a woman who lives in his building. John enjoys football and watches games at a local sports bar with friends from work.

In the Act condition, the person was described exactly the same way, followed by additional information about an act performed by the person, with ambiguous information that could lead to questions about the person’s motives for the act:

Recently John made a large donation to a charity. He learned about the charity from the woman he has been dating. Why do you think John would have done this? What motivated him to make the donation? Think about this as you answer the following questions.

After reading the vignette, participants responded to a series of questions about the person, reporting their judgments of his likeability, admirability and trustworthiness (summarized as likeability), and the extent to which he was intrinsically motivated and extrinsically motivated (summarized as motivation). Participants’ ratings of the three likeability variables were significantly correlated in both the no act condition and the act condition (average $r = 0.56$ and 0.59 respectively, see Table 1.1).

Table 1.1
Pilot Study: Act vs No Act

condition		Correlations				
		like	admire	trust	intrinsic	extrinsic rev
No Act	like	1	0.551**	0.577**	0.115	-0.136
	admire	0.551**	1	0.557**	0.314*	-0.104
	trust	0.577**	0.557**	1	0.154	0.061
	intrinsic	0.115	0.314*	0.154	1	-0.043
	extrev	-0.136	-0.104	0.061	-0.043	1
Act	like	1	0.582**	0.531**	0.423**	-0.053
	admire	0.582**	1	0.654**	0.498**	0.118
	trust	0.531**	0.654**	1	0.537**	0.117
	intrinsic	0.423**	0.498**	0.537**	1	0.387**
	extrev	-0.053	0.118	0.117	0.387**	1

* significant at $p < 0.05$
** significant at $p < 0.01$

The intrinsic and extrinsic motivation variables were not correlated in the no act condition ($r = 0.043$), but with the introduction of an act, the two motivation variables were significantly correlated ($r = 0.387$). Similarly, intrinsic motivation was not significantly correlated with the likeability variables in the no act condition ($r = 0.19$), but with the introduction of an act, intrinsic motivation was highly correlated with likeability (average $r = 0.49$).

To test the hypothesis that introduction of an act will result in increased coherence of likeability and motivation as a single construct, we combined the five likeability and motivation variables into a scale and tested the Chronbach's alpha by condition. The scale in the no act condition was less coherent as a single construct (Chronbach's alpha = 0.54) than in the act condition (Chronbach's alpha = 0.74). This finding suggests that an initiating act can cause judgments of liking and motivation to organize into a single construct, suggesting that observers of the act may experience liking and motivation as closely related parts of the global evaluation of the person observed. Because of this correlation between motivation and liking, we predict that a manipulation that increases perceived intrinsic motivation should produce a correlated judgment of increased liking, and increased extrinsic motivation would produce a correlated judgment of decreased liking. Further, we predict that a manipulation of liking should result in similarly correlated judgments of perceived motivation. We seek to confirm this pattern of association between liking and motivation, and their joint effect on evaluation of prosocial acts, in the current research. First, however, we examine the second key

assumption of our research, that extrinsic motivation is a relatively less favorable construct than intrinsic motivation, resulting in less favorable evaluations of the person.

Extrinsic motivation is a negative construct. People observe in themselves and in others a negative association between extrinsic motives and desirable traits. The negative associations arise from correlations between extrinsic motivation and negative traits and from associations with negative experiences with extrinsic motivation. These associations cause people to make judgments about others based on their motivation.

Existing findings reveal a strong correlation between extrinsic motivation and a variety of negative traits. For example, extrinsically motivated people have been found to be less loving in close relationships (Sheldon et al., 2004), and more selfish and self-centered (Reeder et al, 2004; Kasser & Ryan, 2001). People who report being driven largely by extrinsic rewards also tend to score higher on a scale for Machiavellianism, characterized by high levels of cynicism and interpersonal manipulation, than people who report being driven largely by intrinsic rewards (McHoskey, 1999). To the extent that extrinsic motivation can be equated with materialism, as has been suggested by many researchers (Kasser & Ryan, 2004; Sheldon et al., 2004; Van Boven et al., 2010) materialistic tendencies have been shown to be associated with significantly less favorable traits (such as being trendy, self-centered, and insecure) than those associated with experiential tendencies (including being open-minded, intelligent, and outgoing). Further, there is evidence of a causal link between extrinsic motivation and evaluative judgments about the person. Additionally, people observing an actor with extrinsic motivations judge that actor as less likeable, desired less as a friend, and as possessing less desirable personality traits than a person who is seen to be acting based on intrinsic

motivations (Sheldon, et al, 2004; Kasser & Ryan, 1996, 2001). Work on affective responses to motivation tendencies showed that intrinsically motivated tasks are accompanied by reports of sustained higher levels of happiness, interest and surprise occurring before, during and after the task is performed, while extrinsically motivated tasks are accompanied by an increase in negative emotions during the task, and increased happiness upon completion of the task, indicating relief that the experience is over (Matsumoto & Saunders, 1988).

What might be the source of these relatively negative associations with extrinsic motivation? There is evidence that people have affective experiences of their own motivations, which we believe they may apply to their perceptions of others' motivations and associated traits. Overjustification provides an explanation for negative associations with extrinsic motivation. When reflecting on their own actions or observing others' actions, people assume that an actor is acting based upon intrinsic motivation in the absence of any extrinsic motivator to provide justification for the act (Lepper, Greene & Nisbett, 1973). The presence or introduction of any extrinsic motivator that appears sufficient to justify the act, however, is understood as more likely to be the motivator than the intrinsic value of the activity alone, and is said to overjustify the act. The introduction of extrinsic motivators has been shown to reduce the actor's intrinsic motivation to engage in an activity, the actual time spent engaged in the activity, and her intentions to engage in the activity in the future (Deci, 1971; Lepper et al., 1973). This effect is robust across a wide range of activities, from puzzle completion to writing newspaper headlines, and has been demonstrated in both children and adults (Lepper et al., 1973; Kunda & Schwartz, 1983, Pretty & Seligman, 1984).

Motivational crowding is another body of research that provides evidence that extrinsic motivation undermines intrinsic motivation, influencing our experience of the motivation act. Motivational crowding theory is based on the overjustification effect, relying similarly on self-determination theory for definitions, underlying mechanisms and organizing framework (Fehr & Gächter, 2002a; Fehr & Schmidt, 1999). This body of research provides an economic perspective that also suggests that extrinsic motivators such as financial rewards and punishments crowd out intrinsic motivation, resulting in relatively more negative experiences and outcomes. This crowding effect is important in that it runs contrary to the economic principle that increasing incentives increases the supply of the behavior being incentivized (Frey & Jegen, 2001; Fehr & Fishbacher, 2002). The crowding effect is attributed to the process by which an extrinsic intervention reduces self-determination and/or self-esteem due to a shift in locus of control from the internal to the external. The effect is illustrated in a number of contexts. In one study of prosocial acts, volunteers who were not offered any extrinsic reward worked for approximately four hours longer than volunteers who were paid for their efforts (Frey & Gotte, 1999). In the domain of common resources, compensation has been shown to create, not prevent, the tragedy of the commons by encouraging self-interested use of common resources to the detriment of the community. In a study examining the impact of regulation in Columbia to incentivize preservation of local forests, regulation-based compensation prompted an increase in destructive action by compensated actors (Cardenas, Stranlund & Willis, 1999). Related crowding out of intrinsic motivation to engage in prosocial acts has been demonstrated in domains of taxation compliance (Chan, Godby, Mestelman & Muller, 2002), reciprocal commercial relationships (Fehr &

Gachter, 2002) and operational performance (Austin & Gittel, 1999), among others. These findings extend overjustification to a broad set of economic contexts, and reinforce the idea that extrinsic motivators reduce intrinsic motivation and produce negative outcomes that may contribute to the negative valence associated with extrinsic motives.

In related work, the introduction of an extrinsic motivator has been shown to produce negative affect that becomes associated with the experience of performing the act. In two studies, researchers demonstrated that extrinsic motivators induce negative schema such as bribery and “selling out”, and that the negative affect associated with these schema produce a reduction in intrinsic motivation (Pretty & Seligman, 1984).

Finally, the correlations of extrinsic motivation with negative traits and experience have a causal effect on judgment of motivated others. Upon learning that a person makes materialistic choices (correlated with extrinsic motivation), people judge that actor to be significantly less likeable and as possessing less desirable traits than experiential-oriented people (correlated with intrinsic motivation) (Van Boven, et al, 2010). Mediation analysis indicates that the less favorable impressions arise from inferences that the materialistic person is less intrinsically motivated. Similarly, Fein (1996) showed that the introduction of suspicion of an ulterior (extrinsic) motive resulted in active consideration of affectively negative concepts such as dishonesty and discredited reputation, resulting in influence on judgments of motivated others.

Evaluation of an Actor Affects Evaluation of the Prosocial Act

We next examine evidence for the second hypothesis, which holds that people’s positive or negative evaluation of an actor, drawn from the actor’s perceived motives and likeability, influences their evaluation of a given prosocial act. The influence of these

perceived motives drives people to form quite different opinions of the relative merit of identical acts, depending on the motives they attribute to the actor. This process of using information such as perceived motives to evaluate acts is particularly important in situations where people must form judgments based on inadequate or ambiguous information. We believe that this tendency can, however, be overextended into judgments about relatively unambiguous situations in which formal rules of rationality are generally considered the guiding principles.

When we are faced with genuinely ambiguous information, we use related contextual information, which provides context and points of reference to interpret the information and assist in forming a meaningful judgment or preference (Asch, 1946; Tversky & Kahnemann, 1974; Kahnemann, Knetsch & Thaler, 1991). Clearly, context is useful in many situations. Asch (1946) showed that a positively regarded trait, such as intelligence, can be made to seem more or less favorable when paired with other traits with valenced interpretations, such as “warm” and “cold.” In his classic study, impressions of a person described as “intelligent, skillful, industrious, warm, determined, practical, cautious” were significantly more positive than a person described in identical terms except for the substitution of “cold” in place of “warm.” Our reliance on contextual information can result in predictable influences on judgments, and arguably, over reliance can extend that influence into judgments that should not be influenced by context, according to formal principles of rationality.

Just as motivation information is useful for predicting future behavior but not in evaluating the effect of a discrete act, contextual information is useful in situations involving subjective judgments, but it is less useful and should be relied upon less in

objective, unambiguous situations, such as those involving fixed amounts of money or time, for example. Dollar amounts or amounts of time are concrete and normatively objective, and thus should be less influenced by contextual information. This rational view of money, however, has been shown to fail in many circumstances. Rules governing the use of money represent an interesting class of contextual influences on decisions, particularly as the construct of money is simultaneously concrete and abstract (Belk, 1996). For example, one dollar is the same as every other dollar, able to buy exactly the same amount of goods, and is thus very concrete in its magnitude and meaning. At the same time, money is highly symbolic, is valuable only due to consensual assignment of value within economic systems, and is of relative value (e.g. is \$100 a lot or a little?). There is, therefore, a tension between the economic construct of money, as fungible and subject to transaction costs, and the psychological construct of money that is imbued with meaning derived from the social context and from exogenous factors that should not exert influence (Frisch, 1993; Keys & Schwartz, 2009).

Emotional accounting is a phenomenon in which people routinely violate principles of fungibility and apply contextual information to distinguish between identical units. This occurs when money is given a valenced emotional tag based on the circumstances of its acquisition, later governing its acceptable use of the tagged money (Levav & McGraw, 2009). The source and circumstances of acquisition of money can contaminate the money with an affective tag such that people view it as sacred or profane, clean or dirty (Belk, 1996; Levav & McGraw, 2009). Money received under negative circumstances, such as the death of a family member, will more likely be spent on virtuous rather than hedonic purchases, effectively “laundering” the negative

emotional content of the money with the positive emotional content of the expenditure. Likewise, money can be affectively tagged by the circumstances of its acquisition (exemplary performance versus chance) (Loewenstein & Issacharoff, 1994), and by how the money is framed and described (Epley & Gneezy, 2005). Emotional content imbues the money in question with valence, and by extension, the purchasing behavior becomes valenced. Emotional content can cause people to violate the principles of fungibility in cases of money, time and other fungible units (Kahneman et al., 1991; McGraw, Tetlock & Kristel, 2003). Each of these examples illustrates the tendency of people to manipulate normatively objective information by applying related, but not necessarily informative, contextual information.

We have acknowledged that motivation information is useful in many situations, and is important enough to our survival that we develop high levels of sensitivity to motives that are deemed undesirable. Why, however, might we routinely ignore fungibility and extend our reliance on motives to a class of judgments of objective information in which they are not directly informative? Recall the furor over the motives underlying Zuckerberg's generous donation to a school district, as previously described. The value and impact of that donation is completely separable from his motives, but the public debate clearly demonstrated its perceived relevance to the public understanding of that prosocial act. Our judgments are routinely influenced by factors that should not influence them; these influences are often unwanted and usually uncontrollable (Wilson & Brekke, 1994; Wilson, Centerbar & Brekke, 2002). The evidence that people use of motives when not relevant to the judgment represents an overextension of the informational value of motives. This is one of several questions we consider as we

develop and understanding of how people use motivation information to judge actor and act in the current research.

We tested in six studies the hypotheses that extrinsically motivated actors are evaluated less favorably than intrinsically motivated actors and that the relatively negative impression of the extrinsically motivated actor results in a corresponding negative evaluation of the prosocial act, relative to the same act performed by an intrinsically motivated actor. In Chapter Two, the first two studies examined the effect of extrinsic vs. intrinsic motivation on evaluative judgments of monetary donations (Study 1) and donations of time (Study 2) to humanitarian causes. In Chapter 3, we then tested whether motivation information would produce the same pattern of evaluation for monetary donations (Study 3) and a “green” purchase (Study 4) in the more controversial prosocial domain of environmental conservation. In Chapter 4, we explored the underlying mechanism, first testing whether the manipulation of likeability of the prosocial actor resulted in corresponding changes in judgment of the actor’s motivation and the evaluation of the prosocial act (Study 5), and then examining motivation inferences in the absence of motivation information, using a free vs. forced choice paradigm (Study 6). Additionally, we explored the boundaries of the motivation effect by manipulating the objective size of the prosocial act (Study 7). Finally, in Chapter 5, we tested whether participants would alter their product choice behavior (Study 8) and their resource allocation behavior (Study 9) to punish extrinsic motivation and/or reward intrinsic motivation in response to motivation information. In Chapter 6, we discuss the findings of these studies relative to formal principles of rationality, and propose an explanation of contextualized rationality. The studies we have conducted extend the

theoretical understanding of motivation on judgment by establishing a causal relationship between motives and evaluative judgments of the actor and the act, where previously only correlational evidence was available. Additionally, the studies explore the application of motivation theory to practical choices and decisions that occur in daily life, as well as important policy and program questions. Thus, a range of implications of these findings for policy-making and implementation are discussed.

Chapter Two: Motivation in Evaluation of Humanitarian Acts

Perhaps the simplest, most straightforward prosocial act is the donation of one's money to a worthy cause. The money, once donated, is generally unfettered by the donor's influence and can be spent for greatest impact by the recipient charitable organization. From a rational perspective, the dollars should be judged consistently, without reference to the person who made the donation. The benefit to the given charity does not vary based on the source or the motivation of that source (Keys & Schwartz, 2009; Fehr & Gächter, 2009). We know, however, that this rational perspective does not always prevail. Instead, dollars can be accounted for and spent differently based on their source and the circumstances of their acquisition (Levav & McGraw, 2010). We explore in the first two studies whether the evaluation of the person performing the prosocial act can cause differences in evaluation of fungible units (dollars and time). These studies compare judgments of an extrinsically motivated act relative to intrinsic motivation and a control condition in which no motive information is provided. This comparison reflects our expectation that the negatively valenced extrinsic motivation will exert a stronger influence on evaluation than the intrinsic and control conditions, consistent with the negativity bias (Baumeister et al.). The studies also compare intrinsic motivation to the control condition with the expectation that explicit intrinsic motivation may exert a positive influence of evaluation of the act, but the effect is likely to be weaker due to the positive valence and the tendency of people to infer intrinsic motives in the absence of extrinsic motivators.

Study 1: Humanitarian Donation

For our initial exploration of evaluative judgments of prosocial acts, we selected a prototypical charitable act that tends to be generally accepted as a worthy cause without any obvious political or religious implications – that of helping disadvantaged children. The first study involves a humanitarian donation focused on improving the health of impoverished African children. This type of prosocial act taps into a number of cultural frameworks encouraging people to help other people in need. Participants were asked to read a vignette about a donation of money to a charity, including information about the actor’s intrinsic or extrinsic motives for making the donation. After reading the vignette, participants responded to a series of questions about the actor and about the charitable donation. We predicted that participants who read about an extrinsically motivated actor would judge the actor to be less likable and the donation to be less impactful and smaller than those who read about an intrinsically motivated actor who made the identical donation.

Method. Members of the public (N = 95) participated in the study on the internet through Amazon Mechanical Turk and were paid compensation of \$0.50. The average age of participants was 33 (SD=12.7), and the sample was 55% female, 44% male, with 1% unreported. Participants were randomly assigned to read one of three vignettes about a person, Joe, who made a \$100 donation to a fictional charity called Malaria Action. The three conditions were operationalized as follows:

In the intrinsic condition, Joe was moved to act by the plight of children with malaria:

Joe is a financial advisor who works for a bank in Boulder. He makes a salary of \$70K per year. Joe runs into Jessica, a woman who works at his office and also serves as a volunteer for a charity called Malaria Action. Jessica describes the

effects of malaria in Africa and explains how her charity raises money to buy mosquito nets to protect African children. Joe is moved by the plight of African children and wants to help prevent malaria. He cares deeply about helping disadvantaged people. He donates \$100 to Malaria Action.

In the extrinsic condition, Joe wanted to impress the woman who asked for the donation:

Joe is a financial advisor who works for a bank in Boulder. He makes a salary of \$70K per year. Joe runs into Jessica, a woman who works at his office and also serves as a volunteer for a charity called Malaria Action. Jessica describes the effects of malaria in Africa and explains how her charity raises money to buy mosquito nets to protect African children. Joe is attracted to Jessica and would like to ask her out to dinner. He wants to impress her, so he praises her volunteer work and donates \$100 to Malaria Action.

In the control condition, no information on motives was provided in the vignette:

Joe is a financial advisor who works for a bank in Boulder. He makes a salary of \$70K per year. Joe runs into Jessica, a woman who works at his office and also serves as a volunteer for a charity called Malaria Action. Jessica describes the effects of malaria in Africa and explains how her charity raises money to buy mosquito nets to protect African children. Joe donates \$100 to Malaria Action.

The manipulation was designed to ensure that the extrinsically motivated donation remained essentially a beneficial act, and that the extrinsic motivator for the act, even if somewhat disingenuous, was essentially harmless and not overtly negative. After reading the vignette, participants were asked to write about Joe's motivations for making the donation. Following the writing task, they were asked to judge how large Joe's donation

was and how much good it would do to combat malaria, measured on a 7-point scale (1 = Virtually No Impact, 7 = Very Large Impact). They were also asked to judge how admirable and likeable Joe is, also on a 7-point scale (1 = Not At All Likeable, 7 = Extremely Likeable). Judgments of the act and the actor were counterbalanced. They finally judged the extent to which the actor was intrinsically motivated to perform the prosocial act, on a 7-point scale (1 = Not At All Intrinsically Motivated, 7 = Completely Intrinsically Motivated), followed by a similar judgment regarding extrinsic motivation, which in combination provide a manipulation check. Upon completion of the questionnaire, the participants were thanked and debriefed.

Participants' ratings of variables relating to the donation (size of donation and how much good it will do) were averaged to form a single measure labeled act evaluation ($r = 0.429$). The ratings of variables relating to judgments of the actor (like, admire and trust) were averaged to form a single measure labeled actor evaluation (Cronbach's $\alpha = 0.90$). A new variable called perceived motivation was calculated by subtracting the judgment of extrinsic motivation from the judgment of intrinsic motivation, such that positive values of perceived motivation indicate greater intrinsic motivation and negative values indicate greater extrinsic motivation ($r = -0.823$). The variables relating to likeability of the actor and those relating to the perceived motivation of the actor are, we propose, closely associated parts of the global evaluation of the actor, and according to our assumption and associated pilot study discussed in Chapter 1, should cohere as a single construct when evaluated in response to a motivated act. To test this assumption, we conducted a scale reliability analysis of the five variables: liking, admirability, trustworthiness, intrinsic motivation and a reverse-scored extrinsic motivation. The scale

reliability analysis for these five variables returned a Chronbach's alpha of .927, indicating a high degree of coherence. The alpha did not vary by condition in this study or subsequent studies, so it is not reported separately by condition.

We selected a set of planned contrast codes to compare the extrinsic condition to the intrinsic and control then to compare intrinsic motivation with the control condition. This set of comparisons was selected specifically because we expected negative motives to have a stronger effect than intrinsic motives on the judgment and that judgments in the intrinsic and control conditions will tend to be similar. This expectation is based on work in overjustification, which has shown that in the absence of an extrinsic motivator, people assume the act is intrinsically motivated. This suggests that in the control condition, when no motivation information is provided, people will infer intrinsic motives and the judgments in the control condition will be similar to judgments in the intrinsic condition. We also draw upon established evidence that bad is stronger than good, as is demonstrated in the negativity bias (Baumeister et al, 2001). Further, we expect people to assume in the control condition with no motive information that the act was intrinsically motivated.

Results. We conducted a manipulation check followed by a series of primary analyses examining the planned contrasts between motivation conditions.

Manipulation check. In the extrinsic condition, the mean perceived motivation

Table 2.1a
Study 1: Humanitarian Monetary Donation

Judgment	Extrinsic			Control			Intrinsic			
	n	M	SD	n	M	SD	n	M	SD	
Motivation ^a	33	-3.67	1.76	33	0.24	2.91	29	3.10	2.09	
Liking	33	3.34	1.12	33	4.55	1.22	29	5.57	1.07	
Act Evaluation	33	4.25	0.83	23	33	4.52	1.09	29	5.09	1.18

^aMotivation serves as a manipulation check in this study

was -3.67 ($SD = 1.76$), indicating greater extrinsic motivation. In the intrinsic condition, the mean perceived motivation was 3.10 ($SD = 2.09$), indicating greater intrinsic motivation, and in the control condition, the mean was 0.24 ($SD = 2.91$), indicating roughly equal intrinsic and extrinsic motivation. The mean differences of the perceived motivation judgments were significant ($F(2,92) = 67.25, p < 0.0001$) (See Table 2.1a).

With the planned set of contrast codes, we confirmed that the mean of the extrinsic condition was significantly lower than intrinsic and control as expected ($t(92) = -10.71, p < 0.001$) and the means of intrinsic and control were significantly different from each other ($t(92) = 4.86, p < 0.001$) (See Table 2.1b).

Table 2.1b

Judgment	Contrast (EvsIC)		Contrast (IvsC)	
	t	p	t	p
Motivation	-10.71	0.00	4.86	0.00
Liking	-6.98	0.00	3.54	0.00
Act Evaluation	-2.46	0.02	2.18	0.03

Primary analyses. The mean evaluation of the prosocial act varied by condition. In the extrinsic condition, the mean evaluation was 4.25 ($SD = 0.83$). In the intrinsic condition, the mean act evaluation was 5.09 ($SD = 1.19$), and in the control condition, the mean was 4.52 ($SD = 1.09$). The mean differences of the act evaluation judgments were significant ($F(2,92) = 5.19, p = 0.007$). With the contrast codes, we confirmed that the mean of the extrinsic condition was significantly lower than intrinsic and control as expected ($t(92) = -10.71, p < 0.001$) and the means of intrinsic and control were significantly different from each other ($t(92) = 4.86, p < 0.001$).

Likewise, the actor was judged to be less likable when he was extrinsically motivated ($M = 3.34$, $SD = 1.12$) than when he was intrinsically motivated ($M = 5.58$, $SD = 1.07$), or when no motivation information was provided ($M = 4.55$, $SD = 1.22$), and the mean differences were significant ($F(2,94) = 29.71$, $p < 0.0001$). The planned contrasts allowed us to establish that the mean evaluation of the act performed by the extrinsically motivated actor was significantly lower than the evaluation of the act performed by the intrinsically motivated actor and the actor with no motivational information ($t(92) = -2.46$, $p = 0.02$). Further, the evaluation of the act by the intrinsically motivated actor was significantly higher than that of the control condition ($t(92) = 2.18$, $p = 0.03$). There was a significant positive partial correlation between actor evaluation and act evaluation after controlling for motivation condition ($r(92) = 0.586$). This strong relationship when controlling for motive condition supports our contention that evaluations of the act and actor are closely associated constructs that we predict will respond similarly to a motive manipulation. The order of evaluation of actor and act had no significant effect on any results and was not analyzed further.

These results support the hypothesis that extrinsic motivation produces the change in judgment relative to intrinsic motivation and control, reducing liking of the actor relative to liking in the intrinsic and control conditions and reducing the favorability of evaluation of the prosocial act.

Discussion. This study was designed to provide initial evidence of the effect of motivation information on evaluations of the actor and the act. In the context of a highly evaluable donation of a set amount of money, it might have been reasonable to see no difference in the evaluation of the donation. All dollars have equivalent power to

achieve a desired outcome in support of a particular charitable cause. However, depending on the motive underlying the donation, the evaluations are significantly different. Extrinsic motivation reduces the likeability of the actor, consistent with the halo effect (Asch, 1946) and the negative associations explored in Chapter 1. As predicted, extrinsic motivation also appears to contaminate the donated dollars, reducing their expected impact and subjective size, relative to intrinsically motivated donations and to donations with no motivation information. This finding suggests that motivation information produces a systematic influence on people's evaluation of a prosocial act, and further, that people appear to be derogating extrinsic motivation rather than rewarding intrinsic motivation in their judgments. Motivation influences judgments even though the motivation information is arguably not relevant to the rational evaluation of a donation of a fixed amount of money.

Study 2: Humanitarian Donation of Time

Motivation had the predicted effect in the case of monetary donations. We designed the second study to examine whether this effect extends to non-monetary donations such as personal time that are arguably more concrete than money. The amount of work done by the volunteer was held constant to mitigate the possibility that one volunteer might be more productive than another.

Participants were asked to read a vignette about a donation of a specific number of volunteer hours to a charity, during which the volunteer performed a fixed amount of work that was held constant across conditions. The vignette included information about the actor's intrinsic or extrinsic motives for volunteering. After reading the vignette, participants responded to a series of questions about the actor and about the volunteer's

donated time. I predicted that participants who read about an extrinsically motivated actor would judge the actor to be less likable and the donation of time to be less impactful and smaller than those who read about an intrinsically motivated actor who volunteered for the identical amount of time.

Method. Students in the Psychology Department (N = 100) participated in the study through the student subject pool, in exchange for partial course credit. The sample was 67% female and 33% male. Participants were randomly assigned to read one of two vignettes about a person, Dan, who volunteered for 6 hours per week, packing snack packs for underprivileged children in a fictional after-school program. The two vignettes read as follows:

Intrinsic

Dan is a senior at a University in the West. He is a fulltime student with a job at a local coffee shop. One day Dan sees an ad on campus looking for volunteers to prepare snack packs at an after-school program an elementary school in a poor neighborhood. The after-school program offers children a safe and fun environment with structured activities in the underserved community. Dan had spare time and was looking for a way to give back to the community. Dan knew that many of the children don't have people to look up to and he desperately wanted to make a positive impact in any possible way. Dan was moved to act because the program would allow him to devote himself toward helping the children in the community. Dan worked two days a week for a total of 6 hours, putting together the 100 snack packs. The snack packs were assembled from individually pre-packaged crackers, fruits, and vegetables.

Extrinsic

Dan is a senior at a University in the West. He is a fulltime student with a job at a local coffee shop. One day Dan sees an ad on campus looking for volunteers to help prepare snack packs at an after-school program an elementary school in a poor neighborhood. The after-school program offers children a safe and fun environment with structured activities in the underserved community. Dan was going to start looking for a job after graduation and knew that employers like to see job candidates with volunteer experience. Dan really doesn't like children and has always felt awkward around them. Dan had looked into other programs where he could volunteer, but the after-school program was the only place that was currently hiring. By volunteering for the program, Dan knew he could put on his resume that he volunteered to help underprivileged children. Dan worked two days a week for a total of 6 hours, putting together the 100 snack packs. The snack packs were assembled from individually pre-packaged crackers, fruits, and vegetables.

After reading the vignette, participants were asked to judge how large Dan's volunteer time was and how much good it would do to help underprivileged children, measured on a 7-point scale. They were also asked to judge how admirable and likeable Dan is, also on a 7-point scale. Judgments of the act and the actor were counterbalanced. Upon completion of the questionnaire, the participants were thanked and debriefed.

Participants' ratings of variables relating to the donation (size and impact) were averaged to form a single measure labeled act evaluation ($r = 0.43$). The ratings of variables relating to judgments of the actor (like and admire) were averaged to form a

single measure labeled actor evaluation ($r = 0.57$). Perceived motivation was not measured in this study, so there is no manipulation check reported, and no scale reliability analysis was conducted for the combined actor evaluation variables.

Results. The evaluation of the act was judged significantly less favorably when the actor was extrinsically motivated ($M = 3.73$, $SD = 1.02$) than when he was intrinsically motivated ($M = 4.47$, $SD = 0.86$), ($t(99) = 3.90$, $p < 0.0001$). Likewise, the actor was judged to be far less likable when he was extrinsically motivated ($M = 2.76$, $SD = 1.29$) than when he was intrinsically motivated ($M = 5.50$, $SD = 1.09$), ($t(99) = 11.478$, $p < 0.0001$) (see Table 2.2). There was a significant positive correlation between actor evaluation and act evaluation after controlling for motivation condition ($r(97) = 0.391$).

Table 2.2

Study 2: Humanitarian Time Donation

Judgment	Extrinsic			Intrinsic			Mean Difference	
	n	M	SD	n	M	SD	t	p
Liking	50	2.76	1.29	50	5.50	1.09	11.49	<0.0001
Act Evaluation	50	3.73	1.02	50	4.47	0.86	3.90	<0.01

These results confirm the findings of Study 1, replicating the pattern of influence on judgments of monetary donations, extending the evidence to include judgments of donations of time.

Discussion. These results suggest that the effect of motivation on evaluation of prosocial acts is not restricted to the economic domain. While time itself is fungible, arguably effort within a period of time by differently motivated people could be entirely non-fungible. The obvious assumption would be for the intrinsically motivated volunteer

to do a better job than the extrinsically motivated volunteer within the 6 hours. There are many cases, however, when the passionate volunteer is not competent and can do more harm than good, while the paid contractor is highly skilled and delivers the higher quality output in the time. For this reason, we presented a very concrete description of the task (place 7 items in a paper bag, complete 100 bags over the course of the 6 hours), accompanied by a photograph of the items. We believe that increasing the subjectivity of the volunteer effort would likely exacerbate the effect of extrinsic motivation on evaluation of the volunteer and the time spent working for the charity.

We have shown that for both monetary and time donations, extrinsic motivation reduces liking of the actor relative to liking in the intrinsic condition, and extrinsic motivation also reduces the favorability of evaluation of the prosocial act relative to the evaluation of the act performed by the intrinsically motivated actor in the humanitarian realm. We consider now how far this effect extends beyond helping disadvantaged children.

Chapter Three: Motivation in Evaluation of Environmental Prosociality

It is possible that there is something particular about the specific act of helping needy children that produces the effects we have seen thus far. People may view a donation to sick children that is based on a desire for personal gain as a particularly distasteful type of cheating, and helping out of genuine concern to be particularly noble, likely due to the many cultural frameworks that emphasize the importance of selfless giving and helping others. In order to establish whether these results can be generalized to prosocial acts more broadly, we extended the investigation to other categories of prosocial acts. The Environmental Donation Study, described below, provides this broader context, using the same donation paradigm applied to a more controversial cause involving environmental protection.

Study 3: Environmental Donation

There is considerable controversy associated with environmental issues, and radically different views exist pertaining to issues such as the magnitude of environmental damage, the source of that damage, and the consequences involved (Global Warming Seen as a Problem, 2009). For example, perspectives on the existence of global warming vary widely by age group, religiosity and political orientation. Similarly, controversy exists over the extent to which the interests of non-human species should constrain the development of human societies. Views on this topic range from fully human-centric (dominionist) perspectives, in which natural resources are present solely in service of man's needs, to the perspectives of extreme activists who are willing to use deadly force to protect endangered species (Sideris, 2003). As early as the 1960s, environmental scholars were blaming developing environmental damage on a

dominionist approach to natural resources policy and practice (White, 1967). The environmental domain was chosen for this study precisely because this type of prosocial act is more controversial than humanitarian acts. It is possible that the moral ambiguity of acts of environmental conservation could make extrinsic motives more acceptable, reducing or eliminating the effect of motivation on the evaluation of the act. The Environmental Donation Study is designed to test the robustness of our predicted effect in the context of these ambiguities. Donation of money to buy seedlings for reforestation was chosen as the prosocial act, holding dollars constant and varying motivation for the act using the manipulation from Study 1.

Method. Members of the public ($N = 96$) participated in the study on the internet through Amazon Mechanical Turk for compensation of \$0.50. The average age of participants was 31 ($SD = 9.37$), and the sample was 55% female, 44% male and 1% unreported. Participants were randomly assigned to read one of three vignettes about a person, Joe, who made a \$100 donation to a fictional charity called the New Forest Trust. The three conditions presented the actor with different motives for the donation, using the same design as the first humanitarian donation study. The vignettes read as follows:

Intrinsic

Joe is a financial advisor who works for a bank in Boulder. He makes a salary of \$70K per year. Joe runs into Jessica, a woman who works at his office and also serves as a volunteer for a charity called the New Forest Trust. Jessica describes the effects of deforestation on old growth forests and explains how her charity raises money to plant tree seedlings to renew forested ecosystems. Joe is moved by the effects of deforestation on the environment and wants to help repair the

damage. He cares deeply about preserving the natural environment. He donates \$100 to the New Forest Trust.

Extrinsic

Joe is a financial advisor who works for a bank in Boulder. He makes a salary of \$70K per year. Joe runs into Jessica, a woman who works at his office and also serves as a volunteer for a charity called the New Forest Trust. Jessica describes the effects of deforestation on old growth forests and explains how her charity raises money to plant tree seedlings to renew forested ecosystems. Joe is attracted to Jessica and would like to ask her out to dinner. He wants to impress her, so he praises her volunteer work and donates \$100 to the New Forest Trust.

Control

Joe is a financial advisor who works for a bank in Boulder. He makes a salary of \$70K per year. Joe runs into Jessica, a woman who works at his office and also serves as a volunteer for a charity called the New Forest Trust. Jessica describes the effects of deforestation on old growth forests and explains how her charity raises money to plant tree seedlings to renew forested ecosystems. Joe donates \$100 to the New Forest Trust.

After reading the vignette, participants were asked to write about Joe's motivations for the donation. After the writing task, they were asked to judge how large Joe's donation was and how much good it would do to repair deforestation, measured on a 7-point scale. They were also asked to judge how likeable, admirable and trustworthy Joe is, also on a 7-point scale. Judgments of the act and the actor were counterbalanced. Finally, as a manipulation check, participants were asked to judge the extent Joe was

intrinsically motivated, on a 7-point scale, followed by a similar judgment regarding how extrinsically motivated he was. Upon completion of the questionnaire, the participants were thanked and debriefed.

Participants' ratings of variables relating to the donation (size and how much good it will do) were averaged to form a single measure labeled act evaluation ($r = 0.57$). The ratings of variables relating to judgments of the actor were averaged to form a single measure labeled actor evaluation (Cronbach's alpha = 0.88). The correlation between the actor evaluation and the act evaluation was 0.66. The scale reliability analysis for the five variables related to evaluation of the actor returned a Cronbach's alpha of 0.88, indicating a high degree of coherence, consistent with previous studies. The perceived motivation composite variable was calculated by subtracting the judgment of extrinsic motivation from the judgment of intrinsic motivation, such that positive values of perceived motivation indicate greater intrinsic motivation and negative values indicate greater extrinsic motivation. The same planned contrast codes established in Study 1 were used to compare extrinsic vs. intrinsic and control conditions, and intrinsic vs. control, respectively.

Results. We conducted a manipulation check followed by a series of primary analyses examining the planned contrasts between motivation conditions.

Manipulation check. The composite variable of perceived motivation was analyzed as a manipulation check. In the extrinsic condition, the mean perceived motivation was -3.03 ($SD = 2.62$), indicating greater extrinsic motivation. In the intrinsic condition, the mean perceived motivation was 1.26 ($SD = 3.10$), indicating greater intrinsic motivation, and in the control condition, the mean was 0.26 ($SD = 2.24$), (F

(2,93) = 21.79, $p < 0.0001$), indicating greater intrinsic motivation was inferred in the absence of motivation information (See Table 3.1a).

Table 3.1a

Study 3: Environmental Donation

Judgment	Extrinsic			Control			Intrinsic		
	n	M	SD	n	M	SD	n	M	SD
Motivation ^a	30	-3.03	2.62	35	0.26	2.24	31	1.26	3.10
Liking	30	3.24	1.00	35	4.77	1.28	31	4.74	1.20
Act Evaluation	30	3.26	0.90	35	4.34	1.01	31	4.08	1.08

^aMotivation serves as a manipulation check in this study

The mean of the extrinsic condition was significantly lower than intrinsic and control ($t(95) = -6.47, p < 0.001$) and the means of intrinsic and control were not significantly different from each other ($t(95) = 1.53, p = 0.13$) (See Table 3.1b). There was a significant positive correlation between actor evaluation and act evaluation after controlling for motivation condition ($r(93) = 0.659$). The order of evaluation of actor and act had no significant effect on any results and was not analyzed further.

Table 3.1b

Judgment	Contrast (EvsIC)		Contrast (IvsC)	
	t	p	t	p
Motivation	-6.47	0.00	1.53	0.13
Liking	-5.85	0.00	-0.10	0.92
Act Evaluation	-4.32	0.00	-1.08	0.28

Primary analyses. The donation of money to the New Forest Trust was judged significantly less favorably when the actor was extrinsically motivated ($M = 3.26, SD = 0.90$) than when he was intrinsically motivated ($M = 4.08, SD = 1.08$) or when no motivation information was provided ($M = 4.34, SD = 1.01$), $F(2,93) = 10.09, p <$

0.0001. The planned set of contrast codes established that the mean evaluation of the act performed by the extrinsically motivated actor was significantly lower than the evaluation of the act performed by the intrinsically motivated actor and the actor with no motivation information ($t(95) = -4.32, p < 0.001$). The evaluation of the act performed by the intrinsically motivated actor and that of the control condition were not significantly different ($t(95) = -1.08, p = 0.28$).

Likewise, the actor was judged to be far less likable when he was extrinsically motivated ($M = 3.24, SD = 1.00$) than when he was intrinsically motivated ($M = 4.74, SD = 1.20$), or when no motivation information was provided ($M = 4.77, SD = 1.28$), ($F(2,93) = 17.18, p < 0.0001$). The extrinsically motivated act was evaluated significantly less favorably than intrinsic and control ($t(95) = -5.85, p < 0.001$). Intrinsic and control conditions did not differ significantly ($t(95) = -0.10, p = 0.92$). These results replicate the patterns in the humanitarian studies, confirming the effect of extrinsic motivation in reducing liking of the actor and favorability of evaluation of the act.

Discussion. In this study, we examined whether the motivation bias seen in humanitarian settings is robust across different types of prosocial acts. Despite the ambiguity of the environmental conservation domain, extrinsic motivation continues to exert a significant influence on evaluations of the actor and the act. In the environmental domain, a wide variety of opinions and interpretation of the science on environmental damage inform people's views. Given this variety of perspectives, and increased moral ambiguity regarding the imperative to act, it is feasible that many people would believe that they are under no moral obligation to help the environment. They may therefore consider conservation activities to be more a consumer choice than a moral imperative,

resulting in wider acceptance of extrinsic motivations in conservation action.

Additionally, the present reforestation study uses a tragedy of the commons scenario, in which the beneficiaries can be construed as a collective because society at large enjoys the benefits of reforested land and increased oxygen production. This aggregate beneficiary is far less personal, and the impact of the action, and of any cheating, could therefore seem far less direct. We chose environmental causes as a more conservative test of the motivation effect for these reasons. Although these differences could feasibly have reduced or eliminated the effect of motivation, the influence of motivation was consistent in the environmental context, supporting the robustness of the effect of motivation on evaluation, across different charitable focus areas. This generalizability suggests that the effect of motivation is related not to the specific beneficiary or domain of a prosocial act, but to the prosociality of the act and the perception of cheating in that exchange. Our evidence suggests that self-serving motivations would diminish the perceived impact of any such donation, regardless of the particular charitable cause.

Study 4: Environmental Purchase

Donations of money and time represent a particularly discrete form of prosocial act. However, it is important to understand how people would respond to a prosocial act that is less evaluable. Many acts of energy conservation convey both environmental benefits such as reduced energy consumption and personal benefits such as reduced energy bills, tax breaks, and the positive regard of others. This provides an opportunity to examine the effect of motivation in a more ambiguous situation with mixed benefits and multiple possible reasons for the behavior. The opportunity to accrue personal savings is one that few people would condemn, and thus this hybrid scenario provides yet a more

conservative test of the effect. In situations that involve mixed benefits, the effect of motivation may be reduced or eliminated. This study moves from a highly evaluable prosocial act, the donation of dollars, to a more ambiguous act of conservation involving the purchase of a hybrid vehicle like the Prius. It is more difficult for participants to evaluate the actor because reasons for making such a high-value purchase are more complex than reasons for making a one-time small donation. It is also more difficult for participants to evaluate the act itself, since it is less evaluable than a fixed number of dollars, and delivers a mixed set of benefits, including daily transportation, lower fuel cost, and lower pollution. Either of these differences could potentially ameliorate the effect observed in the previous studies.

Method. Members of the public ($N = 57$) participated in the study on the internet through Amazon Mechanical Turk for compensation of \$0.50. The average age of participants was 30 ($SD = 11.27$) and the sample was 68% female and 32% male. Participants were randomly assigned to read one of three vignettes about a person who purchased a hybrid vehicle. The vignettes read as follows:

Intrinsic

Steve recently bought a new car. After comparing style, comfort and fuel efficiency, he chose a hybrid car and has been driving it regularly for 8 weeks. He drives 40 miles per day for his work commute, and 100 miles per weekend for recreation and running errands around town. He routinely gets 45 miles per gallon as promised in the auto company's marketing materials. Steve confided to a close friend that he is very pleased with the purchase of the hybrid car. He told his friend that he purchased the car to reduce his personal carbon footprint and to

improve the local environment. He cares deeply about conservation and his primary aim in making this purchase was to benefit the environment. He believes that each person must do their part to consume less fuel, produce less pollution, and encourage companies that are making investment in greener technology.

Extrinsic

Steve recently bought a new car. After comparing style, comfort and fuel efficiency, he chose a hybrid car and has been driving it regularly for 8 weeks. He drives 40 miles per day for his work commute, and 100 miles per weekend for recreation and running errands around town. He routinely gets 45 miles per gallon as promised in the auto company's marketing materials. Steve confided to a close friend that he is very pleased with the purchase of the hybrid car. He told his friend that he purchased the car to appear more environmentally conscious in order to impress members of an exclusive tennis club. He highly values his social status and his primary aim in making this purchase was to gain membership to the tennis club. He knows that certain influential club members in his neighborhood are very committed to the environment and conservation, and he believes by appearing 'greener', he will soon be able to convince them to sponsor his membership application.

Control

Steve recently bought a new car. After comparing style, comfort and fuel efficiency, he chose a hybrid car and has been driving it regularly for 8 weeks. He drives 40 miles per day for his work commute, and 100 miles per weekend for recreation and running errands around town. He routinely gets 45 miles per gallon

as promised in the auto company's marketing materials. Steve confided to a close friend that he is very pleased with the purchase of the hybrid car.

After reading the vignette, participants were asked to write about Joe's motivations for the purchase of the car. After the writing task, they were asked to judge how large the act of conservation was and how much good it would do to reduce pollution and energy consumption, measured on a 7-point scale. Participants were then asked how effective they thought hybrid vehicles generally are at reducing energy consumption and pollution. They were also asked to judge how much they like, admire and trust the actor, also on a 7-point scale. Judgments of the act and the actor were counterbalanced. Upon completion of the questionnaire, the participants were thanked and debriefed.

Participants' ratings of variables relating to the donation (size of the donation, how much good it will do, and how effective hybrid vehicles are at conserving energy) were averaged to form a single measure labeled act evaluation (Chronbach's alpha = 0.72). The ratings of variables relating to judgments of the actor were averaged to form a single measure labeled actor evaluation (Chronbach's alpha = 0.91). The scale reliability analysis for the five variables related to evaluation of the actor returned a coefficient alpha of 0.89, indicating a high degree of coherence. The correlation between the actor evaluation and the act evaluation was 0.64. The perceived motivation variable was created consistent with earlier studies. Planned contrast codes were established to make the same comparisons of extrinsic vs. intrinsic and control conditions, and intrinsic vs. control. The order of evaluation of actor and act had no significant effect on any results and was not analyzed further.

Results. We conducted a manipulation check followed by a series of primary analyses examining the planned contrasts between motivation conditions.

Manipulation check. The composite variable of perceived motivation was analyzed as a manipulation check. In the extrinsic condition, the mean perceived motivation was -4.42 ($SD = 1.57$), indicating greater extrinsic motivation. In the intrinsic condition, the mean perceived motivation was 2.5 ($SD = 2.31$), indicating greater intrinsic motivation, and in the control condition, the mean was 1.3 ($SD = 2.68$), indicating slightly more intrinsic than extrinsic motivation. The mean differences were significant ($F(2,54) = 51.22, p < 0.0001$) (See Table 3.2a).

Table 3.2a

Study 4: Environmental Purchase

Judgment	Extrinsic			Control			Intrinsic		
	n	M	SD	n	M	SD	n	M	SD
Motivation ^a	19	-4.42	1.57	20	1.30	2.68	18	2.50	2.31
Liking	19	2.82	1.20	20	5.10	1.04	18	5.31	0.99
Act Evaluation	19	4.18	1.05	20	5.00	1.20	18	4.81	1.12

^aMotivation serves as a manipulation check in this study

The mean of the extrinsic condition was significantly lower than intrinsic and control ($t(56) = -10.03, p < 0.001$) and the means of intrinsic and control were not significantly different from each other ($t(56) = -1.65, p = 0.11$) (See Table 3.2b).

Table 3.2b

Judgment	Contrast (EvsIC)		Contrast (IvsC)	
	t	p	t	p
Motivation	-10.03	0.00	-1.65	0.11
Liking	-7.67	0.00	-0.08	0.38
Act Evaluation	-2.31	0.03	0.51	0.62

Primary analyses. The hybrid purchase was judged less favorably when the actor was extrinsically motivated by the pursuit of tennis club membership ($M = 4.18$, $SD = 1.05$) than when he was intrinsically motivated ($M = 4.82$, $SD = 1.12$) or when no motivation information was provided ($M = 5.0$, $SD = 1.20$) ($F(2,54) = 2.84$, $p = 0.067$). Though the overall model was only marginally significant, the planned set of contrast codes established that the mean evaluation of the act performed by the extrinsically motivate actor was significantly lower than the evaluation of the act performed by the intrinsically motivated actor and the actor with no motivation information ($t(56) = -2.31$, $p = 0.03$). The evaluation of the act performed by the intrinsically motivated actor and that of the control condition were not significantly different ($t(56) = 0.51$, $p = 0.62$).

Table 3.2

Study 4: Environmental Purchase

Judgment	Extrinsic			Control			Intrinsic			Contrast (EvsIC)		Contrast (IvsC)	
	n	M	SD	n	M	SD	n	M	SD	t	p	t	p
Motivation ^a	19	-4.42	1.57	20	1.30	2.68	18	2.50	2.31	-10.03	0.00	-1.65	0.11
Liking	19	2.82	1.20	20	5.10	1.04	18	5.31	0.99	-7.67	0.00	-0.08	0.38
Act Evaluation	19	4.18	1.05	20	5.00	1.20	18	4.81	1.12	-2.31	0.03	0.51	0.62

^aMotivation serves as a manipulation check in this study

Likewise, the actor was judged to be less likable when he was extrinsically motivated ($M = 2.83$, $SD = 1.20$) than when he was intrinsically motivated ($M = 5.32$, $SD = .99$), or when no motivation information was provided ($M = 5.10$, $SD = 1.04$), ($F(2,54) = 29.60$, $p < 0.0001$). The likeability judgment was significantly lower in the extrinsic

condition than in the intrinsic and control conditions ($t(56) = -7.67, p < 0.001$) and the intrinsic and control conditions did not differ ($t(56) = -0.08, p = 0.38$). There was a significant positive correlation between actor evaluation and act evaluation after controlling for motivation condition ($r(54) = 0.645$). These results replicate the patterns in the previous donation studies, confirming the effect of extrinsic motivation in reducing liking of the actor and favorability of evaluation of the act when considering acts other than monetary donation.

Discussion. This study investigated the effect of motivation on evaluation of prosocial acts that are more complex in benefits and potential impact, in the area of green consumerism. This study provides evidence that the effect of motivation on evaluations of the actor and the act is robust across different, less evaluable, types of prosocial acts. Despite the ambiguity of a purchase that conveys personal benefits as well as environmental benefits, extrinsic motivation markedly reduces the favorability of evaluation of the actor and the act. This suggests that even when the act produces mixed benefits, and only a portion of the act is actually prosocial, extrinsic motivation can still contaminate the act and reduce the favorability of the evaluation significantly.

This chapter has extended the investigation to the environmental domain in order to test whether more morally ambiguous prosocial acts and acts that are inherently a mixture of prosocial and self-interested outcomes would reduce or eliminate the effect of motivation on evaluative judgments. We found the effect of motivation to be robust in this extension, suggesting that the effect is of broader applicability than a narrow slice of charitable activity. In the next chapter, we explore some aspects of the underlying mechanism.

Chapter Four: Exploring the Underlying Mechanism

Having established the influence of motivation of evaluative judgments in multiple domains, we next explore some aspects of the mechanism. We have proposed that the effect relies upon a coherent evaluation of the actor and upon negative associations with extrinsic motivation. We designed two studies to explore these two aspects of the effect. The pilot study in Chapter 1 suggested that an initiating act can cause judgments of liking and motivation to organize into a single construct. We have demonstrated the coherence of the likeability and motivation variables in the previous studies, supporting the idea of a single construct. We now explore the bidirectional relationship between likeability and motivation by manipulating likeability and examining its effect on perceived motivation. Following this study, we examine both the motivational inferences that result from the absence of motivation information, as well as examining the effect of reduced autonomy as a self determination theory explanation for the effect of extrinsic motivation on judgment.

Study 5: Humanitarian Donation with Liking Manipulation

From prior research, there is evidence that people attempt to create coherence between traits and mental states (Reeder et al, 2002; Malle, 2004) in attributing meaning to others' behavior. For example, an observer may use the logic that if a person is generally a good/bad person, they are likely to do good/bad things for good/bad reasons. Our first four studies have demonstrated one direction of influence, showing that motivation information influences the likeability of the actor. Based on the assumption of a single construct of actor evaluation, we expect that manipulation of the likeability of an actor would similarly influence judgments of the actor's motivations. Initial evidence of

this relationship was reported by Van Boven and colleagues (2010), showing that people judge a likable person to be more likely to make an intrinsically motivated career choice. We approached the relationship between liking and motivation, and a predicted joint effect on evaluation of the act, by seeking to establish a “causal chain.” (Spencer, Zanna & Fong, 2005). This approach is described as using experimental design to directly manipulate one dimension of the non-motivational impression, and then measure the evaluation of the act. This approach allows us to establish relationships between motivation and liking, to test whether that relationship is bidirectional, and to examine the joint effect on act evaluation.

To investigate the relationship between likeability and motivation as part of a causal chain, we used the humanitarian donation paradigm, manipulating the likeability of the actor and measuring judgments of the perceived motivation of the actor. No motivation information was provided.

Method. Members of the public (N = 96) participated in the study on the internet through Mechanical Turk for compensation of \$0.50. The average age of participants was 32 (*SD* – 11.17) and the sample was 52% female, 46% male and 2% unreported. Participants were randomly assigned to read one of three vignettes about a person, Joe, who made a \$100 donation to the charity called Malaria Action. The three conditions manipulated the likeability of an actor, using traits drawn from Anderson’s extensive work on likableness ratings of 555 traits (1968). Three likable traits and three unlikable traits were selected from the Anderson work and incorporated into the descriptions of Joe. In the likable condition, Joe was described as kind (#18 out of 555), friendly (#19) and helpful (#45), with a mean likeability score of 5.10 on a 7-point scale. In the

unlikable condition, Joe was described as obnoxious (#549), opinionated (#294) and insulting (#542), with an average likeability score of 1.25. In the control condition, no information on likeability was provided. The vignettes read as follows:

Likeable

Joe is a financial advisor who works for a bank in Boulder. He makes a salary of \$70K per year. Joe is considered by friends and work colleagues to be a kind, friendly person. He is the helpful one who will always volunteer to help a friend move. Joe runs into Jessica, a woman who works at his office and also serves as a volunteer for a charity called Malaria Action. Jessica describes the effects of malaria in Africa and explains how her charity raises money to buy mosquito nets to protect African children. Joe decides to donate \$100 to Malaria Action.

Unlikable

Joe is a financial advisor who works for a bank in Boulder. He makes a salary of \$70K per year. Joe is considered by friends and work colleagues to be quite obnoxious and opinionated. He is known to be insulting, often embarrassing his friends in front of others. Joe runs into Jessica, a woman who works at his office and also serves as a volunteer for a charity called Malaria Action. Jessica describes the effects of malaria in Africa and explains how her charity raises money to buy mosquito nets to protect African children. Joe decides to donate \$100 to Malaria Action.

Control

Joe is a financial advisor who works for a bank in Boulder. He makes a salary of \$70K per year. Joe runs into Jessica, a woman who works at his office and also

serves as a volunteer for a charity called Malaria Action. Jessica describes the effects of malaria in Africa and explains how her charity raises money to buy mosquito nets to protect African children. Joe decides to donate \$100 to Malaria Action.

After reading the vignette, participants wrote about Joe's character. After the writing task, they were asked to judge how large Joe's donation was and how much good it would do to combat malaria, measured on a 7-point scale, and how intrinsically and extrinsically motivated Joe was. They were also asked to judge how admirable, likeable and trustworthy Joe is, also on a 7-point scale, as a manipulation check. Judgments of the act and the actor were counterbalanced. Upon completion of the questionnaire, the participants were thanked and debriefed.

Participants' ratings of variables relating to the donation (size and impact) were averaged to form a single measure labeled act evaluation ($r = 0.302$). The ratings of variables relating to judgments of the actor were averaged to form a single measure labeled actor evaluation (Chronbach's alpha = 0.87). The scale reliability analysis for the five variables related to evaluation of the actor returned a Chronbach's alpha of 0.891, indicating a high degree of coherence. The correlation between perceived motivation and actor evaluation was 0.75. The correlation between the actor evaluation and the act evaluation was 0.65. A new set of planned contrast codes were established to compare the unlikable condition to likable and control conditions, and likable vs. control, respectively. The order of evaluation of actor and act had no significant effect on any results and was not analyzed further.

Results. We conducted a manipulation check followed by a series of primary analyses examining the planned contrasts between motivation conditions.

Manipulation check. The composite variable of perceived motivation was analyzed as a manipulation check. The actor was judged to be less likable when he was described as having unlikable traits ($M = 3.41$, $SD = 1.3$) than when he was described as having likable traits ($M = 5.66$, $SD = 1.1$), or when no likeability information was provided ($M = 4.89$, $SD = 1.1$), ($F(2,93) = 29.66$, $p < 0.0001$), confirming that the likeability manipulation was effective (See Table 4.1a).

Table 4.1a

Study 5: Humanitarian Donation Liking

Judgment	Unlikable			Control			Likable		
	n	M	SD	n	M	SD	n	M	SD
Motivation	33	-1.88	2.92	32	0.56	2.86	31	2.29	2.67
Liking ^a	33	3.41	1.30	32	4.89	1.15	31	5.66	1.10
Act Evaluation	33	4.13	1.12	32	4.74	1.16	31	4.68	1.12

^aLiking serves as a manipulation check in this study

The mean of the extrinsic condition was significantly lower than intrinsic and control ($t(95) = -7.28$, $p < 0.001$) and the means of intrinsic and control were significantly different from each other ($t(95) = 2.58$, $p = 0.01$) (See Table 4.1b). There was a significant positive correlation between perceived motivation and act evaluation after controlling for liking condition ($r(93) = 0.607$).

Table 4.1b

Judgment	Contrast (UvsLC)		Contrast (LvsC)	
	t	p	t	p
Motivation	-5.45	0.00	2.43	0.02
Liking	-7.28	0.00	2.58	0.01
Act Evaluation	-2.37	0.02	-0.22	0.83

Primary analyses. The evaluation of the donation was judged less favorably when the actor was unlikable ($M = 4.13$, $SD = 1.12$) than when he was likable ($M = 4.68$, $SD = 1.12$) or when no likeability information was provided ($M = 4.74$, $SD = 1.16$), ($F(2,93) = 2.84$, $p = 0.064$). The planned set of contrast codes established that the mean evaluation of the act performed by the unlikable actor was significantly lower than the evaluation of the act performed by the likable actor and the actor with no likeability information ($t(95) = -2.37$, $p = 0.02$). The evaluation of the act performed by the likable actor and that of the control condition were not significantly different ($t(95) = -0.22$, $p = 0.83$).

The less likable actor was judged to be significantly more extrinsically motivated ($M = -1.88$, $SD = 2.92$) than were the likable actor ($M = 2.29$, $SD = 2.67$) and the actor for whom no likeability information was provided ($M = 0.56$, $SD = 2.86$), ($F(2,93) = 17.65$, $p < 0.0001$). These results replicate the patterns established in the motivation studies, and provide evidence that lower likeability reduces the favorability of evaluation of the prosocial act relative to the evaluation of the act in the intrinsic and control conditions. Additionally, the unlikable actor is perceived as being significantly more extrinsically motivated than the likable actor or the neutral actor, confirming a close association between motivation and likeability.

Discussion. By demonstrating parallel effects of motivation and liking, we establish evidence suggesting that people experience motivation and liking as the same construct. People can evaluate an actor using either likeability information or motivation information, producing highly correlated liking and motivation judgments, and producing the same pattern evaluation of the prosocial act. We propose that these findings, in combination with the pilot study and the scale reliability analyses of each of the

foregoing studies provide strong support for our contention that motivation not only influences the evaluation of the actor, but is in fact an integral part of that evaluation.

Study 6: Free vs. Forced Choice

The extrinsic motivations in the previous studies present situations in which the actor freely chooses to engage in an act for reasons that are overtly self-interested. This study is designed to present prosocial acts for which no motive or trait information is provided. Rather, the situation is set up so that intrinsic motives can be inferred from the free choice condition, but not from the forced choice condition.

This study offers the opportunity to examine the effect of a reduction in the autonomy of the actor, and at the same time, examine motivation inferences that are made in conditions where no motivation information is provided. Self determination theory, which underpins overjustification, motivational crowding and other perspectives on motivation, suggests that the exercise of autonomy is a basic human need (Deci & Ryan, 2000). Further, it suggests that a forced choice will be experienced as a reduction in autonomy. The forced choice condition reframes extrinsic motivation from the self-interested act in pursuit of separable outcomes to being compelled by an external force to perform the same act, both of which are on the continuum of extrinsic motivation presented in self determination theory. The purpose of this study is to determine whether previously demonstrated motivation effects are due to the ‘goodness’ or ‘badness’ of the person or act, or if the effect remains in when motivation is presented in the context of locus of control, without clear valence.

Method. The study involved 84 participants who were drawn from an undergraduate subject pool and who participated for course credit. The sample was 61%

female and 39% male. Participants read one of two scenarios describing a person who received an inheritance from a distant relative and subsequently donated some of the inheritance to a cancer research charity. In the free choice condition, the person freely chose to make the donation and in the forced choice condition, the person was directed to make the donation by the terms of the relative's will. The vignettes read as follows:

Free choice

Joe unexpectedly inherits \$5000 from a distant uncle who died of cancer. Joe decides that he wants to donate \$1000 of the inheritance to a charity that funds cancer research. Joe makes the donation to the American Cancer Foundation. An article in the American Cancer Foundation's annual report explains that Joe chose to use some of his inheritance to support cancer research.

Forced choice

Joe unexpectedly inherits \$5000 from a distant uncle who died of cancer. The terms of his uncle's will require that Joe donate \$1000 of the inheritance to a charity that funds cancer research. Joe makes the donation to the American Cancer Foundation. An article in the American Cancer Foundation's annual report explains that Joe carried out the wishes of his uncle to support cancer research.

Participants then answered a series of questions about the person and the action described. The dependent variables drawn from previous studies, regarding the size and impact of the donation and the likeability of the actor. Upon completion of the questionnaire, the participants completed a number of unrelated surveys and were then thanked and debriefed. The actor evaluation and the act evaluation composite variables and the contrast codes were constructed consistent with earlier studies.

Results. Perceived motivation judgments were not collected in this study, so there was no manipulation check to report. Participant judgments of the act and the actor in the free choice condition followed patterns found in the extrinsic condition of earlier studies, though not all comparisons were significant. The composite variable act evaluation was not significant, so the component variables of size and impact are reported separately. Participants judged the freely chosen donation to be significantly larger than the forced donation ($M_s = 4.64$ and 4.07 , and SDs 1.19 and 1.37 , respectively; $t(83) = 2.05$, $p = 0.044$; See Tables 4.2).

Table 4.2

Study 6: Free vs. Forced Choice

Judgment	Free Choice			Forced Choice			Mean Difference	
	n	M	SD	n	M	SD	t	p
Liking	42	5.68	0.89	42	4.43	1.15	5.59	0.00
Act Impact	42	4.05	1.51	42	3.88	1.31	0.54	0.59
Act Size	42	4.64	1.19	42	4.07	1.37	2.05	0.04

The judgment of donation impact for cancer research was not significant but was directional. Likewise, participants judged the actor who freely chose to make the donation more favorably than the actor who complied with the conditions of the will ($M_s = 5.68$ and 4.43 , and SDs 0.89 and 1.15 , respectively; $t(83) = 5.59$, $p < 0.001$). There was a significant positive correlation between actor evaluation and act evaluation after controlling for choice condition ($r(81) = 0.384$).

Discussion. In previous studies, judgments of the act and the actor in the intrinsic and control produce similar results, implying that when no motive information is presented, people assume that the actor is intrinsically motivated. In the studies designed with three motivation conditions, there is no way to compare intrinsic to control, and the

only evidence is the null effect. In the free vs. forced choice study, we introduced a design allowing inferences about the control condition. Behavior is constrained in this design, providing for a situational constant. The results show that when the actor freely chooses to perform a prosocial act, in the absence of motive information (the equivalent of the control condition), people make positive inferences about the person and their motivation. This is consistent with self-focused judgments made in overjustification studies, which suggests that in the absence of an extrinsic motivator, people may draw on own experience to infer that the actor must have been intrinsically motivated.

Additionally, these findings are consistent with the explanation for the negative associations with extrinsic motivation that results from a loss of autonomy. The forced choice condition, a constrained autonomy condition, produced the same pattern of results as extrinsic motivation has produced in the previous studies. Likewise, free exercise of autonomy follows the pattern of intrinsic motivation in its effect on evaluative judgment of the act. Self determination theory places extrinsically motivated acts on a continuum of autonomy, ranging from completely compelled action, which is essentially unintentional, such as acts performed under duress by a prisoner, to intentional and desired actions that are motivated by a separable outcome, such as image management. The extrinsically motivated acts we have chosen for the current research have been freely chosen, intentional acts that are motivated by a separable outcome. These findings demonstrate that a manipulation of the separability of outcome, and manipulation of autonomy of action produce the same pattern of judgments, potentially pointing to further mechanism studies for the future.

Study 7: Manipulation of Time

The effect of extrinsic motivation on evaluations of prosocial acts has been established for constant levels of prosocial contribution. We hypothesized that varying the amount of prosocial contribution may moderate the effect of motivation. Study 7 was designed to examine whether the differences in judgments of extrinsically and intrinsically motivated actors and their acts might be reduced when the actor is making an objectively larger contribution. We manipulated motivation as in previous studies, and in addition, varied the number of hours the volunteer contributed to an after school program. The study was designed to test the hypotheses that participants will evaluate extrinsically motivated Dan and his volunteer time less favorably than for the intrinsically motivated Dan, and to test the effect of magnitude of time donated on evaluations of the act and actor.

Method. Students were approached at the university's student center and were asked to participate in a psychological research study (N=123) for compensation of one dollar. The sample was 59% female and 41% male. The study was a between subjects design that crossed motivation (intrinsic or extrinsic) with hours volunteered (2 hours, 5 hours, or 15 hours, selected using an informal pilot study), with productivity per hour held constant. Participants were randomly assigned to one of the six conditions. Participants read a vignette about Dan, who volunteers to help build snack packs for the students who attend the after school program for disadvantaged youth. The vignettes read as follows with text for different conditions indicated in italics and parentheses:

Dan is a senior at a college in the West. One day Dan sees an ad on campus recruiting students to volunteer for an after school program for disadvantaged youth. The program offers attendees enriching activities to keep them off the

streets and in a safe environment. The program needs volunteers to help prepare snack packs for the students who attend the program.

Dan knew that he had plenty of spare time and was looking for a way to give back to the community. Dan knew that many of the students do not have safe, enriching places to go to after the school day and are likely faced with crime, drugs and violence everyday. Dan hoped that by volunteering for ASOP he would be contributing to the effort to provide the students with enriching programs and a safe environment. *(Dan was starting to think about finding a job after he graduated and knew that having experience in a charitable organization and seeing how the program works would be good for his resume and help him get a job. Dan knew that the volunteering would help develop ties with his boss who would write him a letter of recommendation.)* Dan decided to volunteer for the after school program. At orientation he learned that he must work at least one hour a week, but could work as much as he wanted after that. ASOP volunteers help build the snack packs that are given out to students who attend the program. On average volunteers like Dan are able to build 50 snack packs per hour. The snack packs contain; one piece of fruit, granola bar, fruit snack, juice pack, and a fun puzzle.

The program operates at 15 grade schools in the district and provides after school activities for over 2300 students. Dan volunteers 2 hours a week and builds 100 snack packs *(5 hours a week and builds 250 snack packs), (15 hours a week and builds 750 snack packs).*

After reading the vignette, participants responded to questions regarding the value and size of Dan's prosocial act and about Dan himself. Participants' ratings of the Act Evaluation was created by aggregating their responses to the questions, "how much good will the volunteer time do," and "how significant is the volunteer work," and "how hard does Dan work." Participants responded on a Likert scale from 1 (not much good/ not very significant/ not very hard) to 7 (a lot of good/ very significant/ very hard). The measures were found to be internally consistent, $\alpha = 0.775$. Additionally, participants indicated how admirable they found Dan to be, on a 7-point scale (not at all admirable = 1 to extremely admirable = 7).

Results. The composite measure of Act Evaluation and the Actor admirability measure were tested. The mean values for the evaluation of the prosocial act showed that when the actor was intrinsically motivated, the act was evaluated more favorably as the number of volunteer hours increased ($M = 4.01, 4.58$ and 4.88 for 2 hours, 5 hours and 15 hours, respectively) (See table 4.3). When the actor was extrinsically motivated, however, the evaluation was relatively low for both 2 hours and 5 hours ($M = 3.80$ and 4.03 , respectively), however for 15 hours of volunteer time, the act evaluation for extrinsic motivation ($M = 4.90$) was essentially equal to the intrinsically motivated act evaluation at 15 hours.

Table 4.3
Study 7: Time Manipulation

	Hours Volunteered								
	2 hours			5 hours			15 hours		
	n	M	SD	n	M	SD	n	M	SD
Act Eval									
Intrinsic	22	4.01	1.02	18	4.58	0.95	23	4.88	0.78
Extrinsic		3.80	1.15		4.03	0.94		4.90	1.07
Actor Eval									
Intrinsic	22	5.50	1.10	18	5.35	1.18	23	5.45	1.10
Extrinsic		3.75	1.52		3.50	1.51		4.83	1.40

In a model predicting act evaluation using motivation, linear time, a quadratic coding of time, and the two-way interactions between motivation and linear and quadratic time, we found no significant main effects or interactions (See Table 4.4).

Table 4.4
Study 7: Motivation x Time

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	3.91	0.45		8.80	0.00
Motivation	0.66	0.89	0.30	0.74	0.46
Time Linear	0.06	0.06	0.33	1.08	0.28
Time Quadratic	0.03	0.80	0.01	0.04	0.97
Mot x Tim Lin	-0.07	0.12	-0.30	-0.60	0.55
Mot x Tim Quad	0.74	1.59	0.14	0.47	0.64

Looking at the simple effect of motivation at each time point, there is no significant difference between the participants' responses by motivation condition at the smallest, 2 hours, and largest, 15 hours time periods volunteered per week. There is a significant difference at the 5 hours per week time period between participants who know Dan to be intrinsically motivated ($M = 4.58$, $SD = 0.95$) and those who know him to be extrinsically

motivated ($M = 4.03$, $SD = 0.94$), $t(38) = 2.54$, $p = 0.017$. There was a significant positive partial correlation between actor evaluation and act evaluation after controlling for motivation condition, consistent with previous studies ($r(119) = 0.424$).

There was a main effect of motivation on actor evaluation, with the intrinsically motivated actor evaluated significantly more favorably than the extrinsically motivated actor across time values ($F(1,122) = 35.34$, $p < 0.0001$). There was also a main effect of time on the actor evaluation, with the actor being evaluated more favorably as number of volunteer hours increased ($F(2, 121) = 3.24$, $p = 0.043$). The interaction between motivation and time was marginal in the expected direction ($F(2,121) = 2.81$, $p = 0.064$). Testing for a simple effect of motivation at the 2 hour level shows that participants reported significantly more admiration for the intrinsically motivated Dan ($M = 5.50$, $SD = 1.10$) than for the extrinsically motivated Dan ($M = 3.75$, $SD = 1.52$), $t(40) = 4.31$, $p < 0.001$. There was also a significant difference at the 5 hours level such that participants view the intrinsically motivated Dan as more admirable ($M = 5.35$, $SD = 1.18$) than for the extrinsically motivated Dan ($M = 3.03$, $SD = 1.51$), $t(36) = 4.65$, $p < 0.001$. There was no significant difference between participants who saw Dan as extrinsically motivated or intrinsically motivated at the 15 hour per week time period.

The simple effects of time volunteered on the participants' ratings of admiration for Dan shows that there is no difference between the 2, 5, or 15 hours volunteered per week when Dan is intrinsically motivated. Participants who saw Dan as extrinsically motivated, there was no difference between those who learned Dan volunteered 2 hours and those who learned Dan volunteered 5 hours a week. The simple effects show a

pattern in which participants who see Dan as intrinsically motivated do not change in their admiration for him depending on the amount of time that he volunteers.

Discussion. Participants who see Dan as extrinsically motivated considered him to be significantly less admirable, compare to participants' ratings of the intrinsically motivated Dan only at the low levels of time volunteered, 2 and 5 hours a week. However, once the time donation reaches 15 hours per week, the difference is diminished between participants' ratings depending on whether they see Dan as intrinsically or extrinsically motivated.

Likewise, when the extrinsically motivated actor reaches 15 hours per week of volunteer time, he is evaluated with an equivalent level of favorability as the intrinsic actor, essentially 'buying' positive regard by contributing an indisputably large amount of time to the prosocial cause. Thus, motives matter to observers for low levels of contribution, but as the contribution reaches indisputably large size, observers will adjust their evaluative judgments in spite of the motive information. It is almost as if they are saying "anyone who gives that much time must really care, despite what they say their motives are." Participants who see Dan as intrinsically motivated do not differ in their admiration for him across the different time periods, and though the extrinsically motivated Dan is evaluated less favorably at lower levels of contribution, he is able to recover his image by putting in more hours, essentially 'buying' the positive regard of observers. This result gives us an indication of the boundaries of the motivation effect relative to size, in that while motivation will affect subjective size judgments of the act, the objective size of the act can overcome the effect of motivation.

Chapter Five: Implications for Consumer Behavior

The studies presented thus far have established evidence for the hypothesis that motivation can influence judgments across a number of prosocial contexts. It is not clear, however, that motivation is of sufficient importance and relevance to the observer to cause them to act on the motivation information. In Studies 8 and 9, we wanted to extend the study from judgment to choice. The expression of personal choice, particularly in Study 8, may be a more a conservative test that is less prone to self-presentational concerns.

Study 8: Light Bulb Choice

Earlier studies used a between subjects design, presenting only one motivation condition to each person, so participants had no opportunity to compare alternatives and choose between them. This within subjects design, participants are able to directly compare alternatives presented with equivalent, evaluable acts but with different motivational contexts. The opportunity to make direct comparisons in this within subjects design enables us to rule out pure evaluability as an alternative interpretation. By comparing both versions, one can easily evaluate the relative quality of the products (or donations), which means that the results are not limited to targets that are difficult to evaluate.

In the light bulb study, we chose to present two functionally equivalent energy-efficient compact fluorescent light bulbs that vary in desirability of color and brightness for joint evaluation. Though of the same wattage and life span, one type of bulb emitted a warm, soft light and the other emitted a brighter, blue-tinged light. According to the

Oregon Energy Trust, soft light bulbs tend to be preferred by consumers over bright white. The study was designed to explore whether joint comparison of different motivations would produce an effect strong enough to reverse product preference.

Method. The study was conducted in a busy retail space with 58 members of the public participating in the study in exchange for a small gift of a compact fluorescent light bulb valued at approximately \$5. The average age of participants was 42 ($SD = 9.87$), and the sample was 47% female and 53% male. People were recruited as they circulated through the retail space, by asking them if they would be willing to complete an energy conservation questionnaire in exchange for an energy efficient light bulb. People who approached the table were asked to complete the questionnaire, and in return, were given an opportunity to select one of two CFLs offered as free gifts by two fictional charities. In the control condition, only the name of the charity and product information on the light bulbs was presented, highlighting soft or bright light as the only differences between them, as follows.

A. A Free Gift from the Council for Conservation Education

Compact Fluorescent Light Bulb

- Replaces a 60 watt incandescent bulb
- Bright White light

B. A Free Gift from the Association for Energy Efficiency

Compact Fluorescent Light Bulb

- Replaces a 60 watt incandescent bulb
- Soft White light

In the motivation condition, motivation information was presented with the product information:

A. Council for Conservation Education

The Council for Conservation Education (CCE) is promoting this compact fluorescent product as part of a project to help the environment now and in the future, for the greater good. They are distributing light bulbs as an effective way to introduce consumers to simple, inexpensive conservation measures they can take in their own homes. Many large local retailers have volunteered to support the project by offering rebates for the purchase of this product.

B. Association for Energy Efficiency

The Association for Energy Efficiency (AEE) is promoting this compact fluorescent product as part of an initiative to capitalize on the attention to green initiatives in order to reap greater market share and profit for the founder's local businesses. They chose to distribute light bulbs as free gifts because they can affect purchasing and voting behavior of many individuals. The AEE has negotiated with many large local retailers to offer rebates for the purchase of this product in exchange for promotional consideration.

Once the participants completed the energy conservation questionnaire, they were asked to read the information on the light bulbs and choose the gift offer they wanted to accept. They made their choice by checking a box next to their chosen offer; the two offers were presented side by side on one sheet of paper, counterbalanced in order. They were then given a bag containing their choice of bulb and a variety of conservation pamphlets provided by Oregon Energy Trust, and thanked for their participation. I

predicted that people would be more likely to choose the less desirable light bulb offered by the intrinsically motivated charity than the more desirable light bulb offered by the extrinsically motivated charity.

Results. The control condition provided product information with no motivation information, which provided a baseline for the relative desirability of the two products offered. In this condition, 18 of the 27 people who completed the questionnaire and chose a gift chose the soft light bulb and nine people chose the bright light bulb, confirming the guidance from the Oregon Energy Trust that the soft light bulb is generally the more desirable product. In the motivation condition, 10 of the 31 people who completed the questionnaire and chose a gift chose the soft light bulb, which was offered by the extrinsically motivated charity, and 21 people chose the bright light bulb, offered by the

Table 5.1
Study 8: Light Bulb Field Product Choice Frequencies

Product Offer	Information Condition		Total
	Motivation and Product Info	Product Info Only	
Bright/Intrinsic	21	9	30
Soft/Extrinsic	10	18	28
Total	31	27	58

Fisher's exact $p=0.017$

intrinsically motivated charity (See Table 5.1).

When tested against an expected equal distribution between the two products, the result is marginal ($\chi^2(3) = 7.086, p = 0.069$). When tested against the control condition baseline product preference for our sample, however, the clear preference reversal from the control condition to the motivation condition is significant (Fisher's exact $p = 0.017$).

Discussion. In this field sample, it was clear that motivation is important enough to people to cause them to select a product that is clearly less desirable. This reversal builds on insights from earlier studies to show that not only do people intentionally consider motivation information that is not directly relevant to their judgment, they will also use that information to intentionally choose an inferior product in order to make a statement about the motivations in question.

Study 9: Charity Mountain Climb

A second study was designed to further explore behavioral implications, examining the influence of motivation information on a joint evaluation choice. This study was designed to examine whether people would choose not to maximize a hypothetical donation in order to give more money to an intrinsically motivated volunteer and less money to an extrinsically motivated volunteer. This study offers a more conservative test of the effect.

Method. This study involved 51 participants who were drawn from an undergraduate subject pool and who participated for course credit. The sample was 53% female and 47% male. Participants were presented with descriptions of two volunteers who were both climbing a mountain to raise money for the same charity that funds cancer research. The vignettes read as follows:

Intrinsic

Your friend Joe will camp out on a Saturday night at the base of Long's Peak and will begin the climb at 2am Sunday morning, arriving at the summit around 8am and finishing around 1pm Sunday afternoon. Joe is trying to raise \$1000 for the National Cancer Research Foundation, a highly regarded charity, and he cannot

climb unless he reaches this goal. Joe says he would not normally climb a mountain and is a bit scared, but he is doing the climb because he knows several people who have suffered from cancer and he really wants to help fund research.

Extrinsic

Your friend Pete will stay in a basic hut on Saturday night at the base of Long's Peak and will begin the climb at 2am Sunday morning, arriving at the summit around 8am and finishing around 1pm Sunday afternoon. Pete needs to raise \$1000 for the American Cancer Fund, a highly regarded charity, and he cannot climb unless he reaches this goal. Pete says that he doesn't know anything about the charity, but he and his climbing buddies have been wanting to climb Long's anyway, and this way he gets a free guide and he can get the bragging rights before most of his friends.

In both cases, the climber was required to raise \$1000 to participate in the climb, and all funds raised by both climbers went to the charity. Therefore, a donation of \$20 or \$30, regardless of allocation to climbers, was effectively a donation directly to the charity. Participants were asked to choose one of two donations allocated differently between the two climbers but ultimately going to the same charity. Participants were randomly assigned to one of two conditions. In the control condition, they chose between donating \$30, equally divided between the climbers and donating \$20, equally divided between the climbers. In the unequal distribution condition, they chose between donating \$30, with \$5 going to the intrinsically motivated climber and \$25 to the extrinsically motivated climber, and donating \$20, with \$15 going to the intrinsically motivated

climber and \$5 going to the extrinsically motivated climber. See Table 5.2 for the distributions. Once they had made their choice, they were thanked and debriefed.

Table 5.2

Study 9: Charity Mountain Climb Donation Choices Presented to Participants

Condition	Donation Total	Allocation to Climbers	
		\$ to Intrinsic	\$ to Extrinsic
Unequal	\$30	\$5	\$25
	\$20	\$15	\$5
Control	\$30	\$15	\$15
	\$20	\$10	\$10

Results. In the control condition, in which the \$30 and \$20 donation choices were equally split between the two climbers, 20 participants chose to donate \$30 and three participants chose to donate \$20, demonstrating a clear tendency to maximize their hypothetical donation. In the unequal distribution condition, in which the \$30 donation favored the extrinsically motivated climber and the \$20 donation favored the intrinsically motivated climber, six people chose to donate \$30 and 22 people chose to donate \$20.

Table 5.3

Study 9: Charity Mountain Climb Donation Choice Results

Condition	Donation Decision		
	Donate \$30	Donate \$20	Total
Unequal	6	22	28
Control	20	3	23
Total	26	25	51

Fisher's exact $p < 0.001$

When analyzed using an expected equal distribution across the choice categories, the observed distributions are significantly different from expected ($\chi^2(3) = 21.86, p <$

0.0001). When analyzed using our baseline preferences from the control condition, the preference reversal was significant (Fisher's exact $p < 0.001$).

Discussion. When given the opportunity to reward the intrinsically motivated climber and/or punish the extrinsically motivated climber, people reversed preference dramatically, choosing to donate less to the charity to ensure that more went to the intrinsically motivated climber. This reversal occurred in spite of the participants being made aware that the only real effect of the \$20 uneven allocation was to donate less money to the good cause. This result provides further evidence that people will actively adjust their behavior in response to motivation information.

Chapter Six: General Discussion

Prosocial acts make great news. The media is full of stories, then passed on as Facebook posts, of landmark donations and small acts of kindness alike. Sadly, prosocial acts gone wrong seem to make for even better news. Headlines about the best-selling book on mountaineering feats that led to heroic humanitarian work in Afghanistan, “Three Cups of Tea,” (2007) turned into almost gleeful headlines of “Three Cups of Deceit” when the self-enriching financial misdeeds and blatant fabrications of celebrated humanitarian and author Greg Mortenson were made public by journalist Jon Krakauer (2011). Such attention is clearly warranted in cases of real misdoing, when resources are diverted from the intended beneficiaries, for example. Our interest, however, remains high in cases where no actual misdeeds have taken place, but the reasons for the good deeds raise the specter of wrongdoing through a perceived misallocation of social capital. The abiding interest shown by media and its consumers in prosocial acts and the underlying motives for those acts is consistent with the evolutionary view that detection of a wide variety of social wrongs is a critical activity for us as social animals. The present research indicates that people judge prosocial acts and actors through the lens of motivation, denigrating an actor and her prosocial act because it was performed for extrinsic motives relative to the same act performed for intrinsic motives.

Across the nine studies presented, participants consistently judged the extrinsically motivated actors to be less likable, less admirable and less trustworthy than the intrinsically motivated actor performing the identical act. Likewise, participants judged the extrinsically motivated act to be subjectively smaller and less impactful than the identical act when intrinsically motivated. These findings were consistent across

different prosocial acts, including donations of money and time (Studies 1-2), and across different prosocial domains of humanitarian aid and environmental conservation (Studies 3-4). The evaluation of the actor was equally responsive to manipulations of motives and of likeability, with manipulated extrinsic motives resulting in lower likeability, and manipulations of lower likeability resulting in perceived extrinsic motives (Study 5). Likewise, the manipulation of motivation and of liking in separate studies produced identical patterns of influence on the evaluation of the act. This finding indicates that likeability and perceived motivation are closely and causally associated elements of a single construct related to the global evaluation of the actor. Indeed, in studies 1, 3, 4 and 5, the three liking variables and two motivation variables consistently resulted in high scale reliability (alphas ranged from 0.879 to 0.927). When no motive information is given, freely chosen acts result in inferences of intrinsic motivation, with predicted favorable evaluations of actor and act, relative to a forced-choice act (Study 6). The effect of motivation on evaluative judgment can be reduced or eliminated when the magnitude of the prosocial act becomes large enough (Study 7). When faced with a choice of product offered by an intrinsic or extrinsic actor (Study 8), and of resource allocation between an intrinsic or extrinsic actor (Study 9), people consistently altered their choice behavior from baseline in response to motivation information, tending to favor the intrinsically motivated actor over the extrinsically motivated actor even though this choice meant selecting a less desirable product and a suboptimal donation allocation.

Of the seven studies that examined the effect of motivation on evaluative judgment, there were a number of similarities from one study to the next, and there were some differences of note (See Table 6.1). The Mturk samples tended to be older than

student samples, as expected, with average ages in the early thirties compared to average

Table 6.1 Study Summary

Study #	Domain	Act	Sample	N	Avg Age	Female %	Act Eval	Act Eval	Actor Eval	Actor Eval
							(EvsIC or EvsI) Cohen's d	(IvsC) Cohen's d	(EvsIC or EvsI) Cohen's d	(IvsC) Cohen's d
1	Humanitarian	\$ Donation	MTurk	95	33	55	0.51	0.45	1.45	0.72
2	Humanitarian	Time	Student	100	*	67	0.78	**	2.31	**
3	Environmental	\$ Donation	MTurk	96	31	54	0.90	0.23	1.21	0.02
4	Environmental	Product Purchase	MTurk	57	30	68	0.63	0.14	2.09	0.03
5	Humanitarian	\$ Donation	Mturk	96	32	52	0.49	0.04	1.51	0.54
6	Humanitarian	\$ Donation	Student	84	*	61	0.45	**	1.23	**
7	Humanitarian	Time	Student	123	*	59	0.18	**	1.00	**

* Age data not collected; student sample expected to be approximately 19 - 20 years on average

** No control condition, so only extrinsic vs intrinsic comparisons

student subject pool ages in the late teens to very early twenties. The Mturk participants

tended to be a majority female, but similar to the female composition of student samples.

Across all of the studies, the effect of motivation on evaluation of the actor tended to be

larger than the effect of motivation on evaluation of the act. Where planned contrasts

were performed, the effect size for the extrinsic condition vs. intrinsic and control tended

to be larger than the effect size for intrinsic vs. control, as we predicted, based on the

negativity bias and evidence from overjustification research. Finally, the effect of

extrinsic motivation vs. other motivations is very stable across prosocial domains and

subject populations.

We contend that people respond to motivation information by forming an impression of the person that not only corresponds to the motivation, but also incorporates perceived motivation into the global evaluation of the actor. We believe that the perception of associations between motivation and likeability are part of a relatively basic pattern of associations. Both developmental evidence and evolutionary evidence suggest that inferences about others' intentions and desires are acquired early in human development and happen very quickly and automatically (Malle & Holbrook, 2012). We

have operationalized the motivation conditions to reflect intentional actions that reflect specific desires, either intrinsically or extrinsically motivated, and we believe that the effects we have identified are of the relatively basic type explored by Malle. We are concerned primarily with the lower level associative process, rather than any higher order, linear process that may contribute to the effect. Were we to propose a linear process as the mechanism for the effect of motivation on evaluation of the act, that would suggest that the effect of motivation on the evaluation of the act is mediated by actor evaluation. We could conduct such a mediation analysis, and it would return results suggesting mediation, however we do not believe this is appropriate, given our model of low-level associations. Such an analysis would, we contend, be measuring a construct's mediation of itself. Effectively, we suggest that within the network of associations related to evaluation of the actor, we could manipulate any of the components, activate that network of associations, and produce the effect on evaluation of the prosocial act. We mention this point now, in the first study, as it holds for all of the studies using this design, and underpins the approach that we have taken to analysis in the present research.

This evaluation of the actor results in our two key hypotheses: that extrinsically motivated actors are evaluated less favorably than are intrinsically or neutrally motivated actors, and that the evaluation of the actor then influences evaluation of the prosocial act. The present research demonstrates that in this set of correlated evaluative judgments result from close associations between motivation and liking, initially, and then between the actor and the act.

One might suggest that, even in the absence of financial fraud, seeking to gain personally from a prosocial act through image enhancement or other intangible benefits

that do not disadvantage others may still represent some form of wrongdoing, rightfully causing the differences in evaluation. The wrongdoing in this case may be as simple as being perceived to seek credit for a good act when the actor's intentions and desires were for an outcome that is quite separate from the good outcome. In cases where only good outcomes were realized, people refuse to give credit for good outcomes when the actor did not intend the outcome (Knobe, 2007). In evaluating an extrinsically motivated actor less favorably, people may be demonstrating the Knobe effect, refusing to give credit for the good outcome due to the misaligned intentions and desires of the actor.

Yet we believe the extrinsically motivated actor is only "bad" relative to the intrinsically motivated actor. The extrinsically motivated acts are still beneficial prosocial acts from which real benefit accrues to the charitable causes, and the extrinsic motivations, though possibly disingenuous, are generally harmless. In fact, making a donation to impress a romantic interest or choosing a car that fits in with an aspirational social group could be considered to be highly adaptive behaviors that produce outcomes that enhance the actor's happiness and wellbeing. Therefore the negative valence is unlikely to spring from the act itself or even from the ways in which our extrinsically motivated actors seek to gain personally from the act. We believe that the negative valence attached to extrinsic motivation arises from our evolutionary tendencies to identify cheaters on social contracts, and from our negative affective reactions to being extrinsically motivated.

We have previously acknowledged the rationality of attending to motivation in situations of bilateral long term interactions, where the theory of indirect reciprocity focuses on prediction of future behavior. Cheater detection within indirect reciprocal

arrangements generally operates to predict future behavior, and punishment of cheaters is used to elicit conforming behavior in future interactions between the parties. (Delton et al, 2012; Fehr & Gächter, 2002a). The current research, however, demonstrates that people in discrete, rather than long-term, interactions, attend to motivation and adjust their judgments and behavior to effectively punish extrinsically motivated actors. These adjustments appear to be a form of punishment of extrinsically motivated actors who are performing a beneficial act. They are not cheaters in the strict sense, but extrinsic motivation seems to arouse negative affective responses (Pretty & Seligman, 1984), and attracts treatment from observers that resembles punishment. In particular, the behavior changes in Studies 7 and 8 resemble altruistic punishment, in which punishment is costly to the punisher and, due to the one-shot nature of the interaction, the punisher can derive no future benefit of the punishment. This is consistent with studies by Fehr and Gächter, showing participants in one-shot cooperation games consistently engage in altruistic punishment. They found that negative emotions towards cheaters were the proximate justification for altruistic punishment, with punishers reporting high levels of anger toward the cheater (2002a). These findings suggest a retributive motive in applying punishment to cheating in a discrete interaction. To the extent that observers consider extrinsic motivation for a prosocial act to be akin to cheating, this is a possible explanation for the adjustments to choice behaviors demonstrated by participants in Studies 8 and 9.

It has been clearly established that extrinsic motivations are associated with negative traits behaviors and expectations, as discussed in Chapter 1. We believe that extrinsic motivation itself is a negative construct, based in part on the foregoing

discussion of its negative social implications and the negative emotions aroused.

Motivation is of sufficient relevance and importance to people that they will change their behavior in response to perceived motivations, in ways that resemble punishment of the extrinsically motivated actor. As demonstrated by Fehr and Gächter, taking a punitive action against a social cheater seems to be driven by the negative emotions aroused by the apparent cheating. Similarly, Pretty and Seligman have shown that the negative affective experience of extrinsic motivation causes people to disengage from an activity. Because punishment in a one-shot interaction cannot improve outcomes for the punisher, this could easily be characterized as an error – the application of costly punishment cannot affect the impact of the donation, cannot influence future behavior of the actor to the benefit of the punisher, and so it seems to violate common measures of economic rationality.

There are many examples of people making consistent choices that violate rules of rationality and basic economic principles of utility and dominance, among others. (see summary in Keys & Schwartz, 2009). A number of perspectives on rationality are incorporating the underlying reasons for these errors into more contextualized models of rationality, referring to evolutionary explanations and cognitive and affective mechanisms (Keys & Schwartz, 2007; see also Kenrick, 2009 and Fiedler & Wänke, 2009 for perspectives drawing on bounded and ecological rationality). Keys & Schwartz have introduced the concept of “leaky rationality”, in which contextual information from the framing of a choice “leaks” into the experience of the result of the choice, causing the experience of the result to be consistent with the experience of the choice. He presents people with classic choice problems, including the lost \$20 vs. lost theatre ticket (mental

accounting, e.g., Kahneman & Tversky, 1984; Thaler, 1999,), continuing to watch a bad movie that you have either paid for or not (sunk costs principle, Frisch, 1993), gambles showing violations of dominance (Tversky and Kahneman, 1986), among others, When making the choices, people demonstrated the expected effects of differential framing of the problems. But when presented with both versions of the choice problem and asked to make reflective judgments about the choices, most reported believing that the two formulations of the problem were genuinely different and required differential treatment (Frisch, 1993). Her argument was that framing affects decisions because the decision-maker is anticipating the effect the framing will have on the experience of the result. Keys & Schwartz (2009) take this argument further, arguing that the experience at the moment of decision and the experienced utility of the result of the decision, which have been uncoupled theoretically (see Kahneman 2000), must be reconnected in order to understand the rationality of allowing contextual information to influence judgments and decisions.

The existing evidence for intentional incorporation of contextual information into decision-making has been situated in the domains such as framing and mental accounting. We conducted a pilot study to narrow the focus to the intentionality of use of motivation information in evaluative judgment. In the pilot study, participants were asked the extent to which they should rely on two different types of information when evaluating the prosocial act, with choices of the amount of money donated and the reasons the actor made the donation evaluated on a 7 point scale (1 = not at all, and 7 = to a very great extent). We found that people felt they should rely equally on size of donation and reasons for donation almost equally ($M = 4.65$ and 4.46 , $SD = 1.79$ and

1.49, respectively) This result indicates that people intentionally consider motivation information in evaluation of a prosocial act, and appear to feel justified in doing so. Drawing on the idea of contextual leakage into the experience of decision results, this reliance on motivation information takes on a heightened rationality. Imagine one of the participants in Study 8, who chose a bright white light bulb rather than the preferred soft white bulb because of the motivations of the offering charities. The choice between bulbs is a momentary point in time, but the new efficient light bulb will last for years. Every time they turn on that light bulb and notice the harsh light, they will experience the less desirable trait anew, but they will likely simultaneously be reminded of the noble motivations of the charity, and they will counter the less desirable trait with the ongoing experience of the warm glow of good deeds done.

The current research has focused quite narrowly on the effect of motivation on evaluative judgments in relatively discrete applied domains. This narrow focus was useful in extending our examination of the effect of motivation incrementally into additional domains and types of prosocial acts, but it has limited the contribution of this work to a basic understanding of the effect, with some suggestions for future research. Specifically, the current work did not measure or manipulate a number of potentially interesting individual differences, such as motivational orientation, personal values, religiosity and affluence, among others. Some individual difference variables were measured (political orientation), but were not significant predictors so we have no evidence for individual differences moderating the effects of motives.; these variables should likely be further explored in future work. The gender of the protagonist in the vignettes was held constant (male) in an effort to vary few dimensions with each new

study, however it is likely that responses to a female protagonist would produce different, perhaps more polarized results, making protagonist gender an important area for future manipulation.

The particular way in which we manipulated motivation may have been overly valenced, in that the extrinsic motivation condition tended to be overtly manipulative, and even Machiavellian in the case of the tennis club membership. There are a number of ways to frame an extrinsic motivator that is not overtly negatively valenced, such as making energy conservation improvements to your home to benefit from a government subsidy, or buying a hybrid vehicle primarily for the savings on gas purchase. Self determination theory presents extrinsic motivation as a continuum varying on autonomy, from intentional actions that are goal seeking and aligned to outcomes just separable from the outcome of the act (working in an enjoyable career for the lifestyle it affords), to involuntary actions that are compelled by an outside force (prisoners submitting to a search). This continuum represents an important dimension along which the boundaries of motivation influence can be tested in future work.

In considering future study design, the paradigm of observer and actor could be criticized for being one step removed from the real interests of motivated interactants; Study 8 involved participants who were choosing a product for themselves and therefore had real interests at play in making the judgments. The remainder of the studies involved relatively disinterested observers judging actors. This model, we believe, posed a more conservative test of the effect of motivation on judgments, but more directly interested parties may be of greater practical interest and more representative of real world judgments and decisions for future explorations. Likewise, seeking to manipulate

separately the motivation and likeability of the actor could be helpful in disentangling the relationship between these two constructs. We saw them vary closely in the current work, but did not attempt to manipulate them as orthogonal constructs.

So why does the effect of motivation on evaluation of prosocial acts matter in practice? We believe there are very concrete implications of this effect for the motivated actors, for observers of prosocial activity, and for policy makers. Extrinsically motivated actors may attract unexpected social costs in terms of social perception and evaluation. These actors, and their prosocial acts, are likely to be devalued by others, regardless of actual beneficial impact on society, if their motives are known or suspected. This is likely because extrinsically motivated actors may be perceived to be cheating in seeking to accumulate undeserved social capital, even when their act is beneficial.

Observers may find themselves making choices that favor the intrinsic over extrinsic actor, and these choices may appear to violate rationality, but may be rationally accounting for future affective responses to the decision result. Making such choices that effectively punish or discourage extrinsically motivated prosociality may, in the long run, reduce the amount of prosocial action at a societal level, serving the individual in some way, but reducing overall wellbeing in society; this choice pattern may therefore be something to avoid, potentially with the help of policy makers.

Policy makers should actively consider the role of motives for the institution and the consumer, rather than dismissing such inputs as irrational. They must consider the impact of motives on individual choices, programmatic success and societal wellbeing. Promotion of institutional or institutional extrinsic motivators for a prosocial program is likely to result in lower participation rates among consumers, and thus reduce overall

social benefits of policies in areas such as energy conservation. The use of intrinsic motivators to nudge behaviors toward greater overall wellbeing should be actively incorporated.

We contend that these considerations are of vital importance to practitioners, program designers and policy makers because people's use of motivation in judgment appears to be intentional, they are unlikely to correct their judgments based on arguments of rationality, and they use it to shape their consumer choice behavior. It matters not that by standards of traditional rationality, they shouldn't. The real folly is unlikely to lie in the "flawed judgment" of the consumer evaluating the prosocial act, and deciding to donate to the next big earthquake appeal or to opt in to the new renewable energy plan. It lies, more likely, with the energy policy maker, the humanitarian charity fundraiser, and the public utility implementing a voluntary consumer energy efficiency program in assuming that perceived motivation does not matter because it should not matter. We hasten to point out that our purpose in this proposal is not to suggest that formal rules of rationality are without value. Essential rules provide clarity and structure to a body of knowledge, and serve as instructive prescriptive rules that can support aspirations toward rational action, rather than as normative rules that define rationality (Baron, 1986).

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