

NORTHWESTERN UNIVERSITY

An Examination of the Relationship Between Positive Mood and Trust:
A Comparison of Two Theoretical Models

A DISSERTATION

SUBMITTED TO THE GRADUATE SCHOOL IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS

for the degree

DOCTOR OF PHILOSOPHY

Field of Management and Organizations

By

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EVANSTON, ILLINOIS

June 2007

ABSTRACT

An Examination of the Relationship Between Positive Mood and Trust: A Comparison of Two Theoretical Models

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Although recent research has provided some evidence to suggest that positive mood is associated with increased interpersonal trust, our understanding of the underlying explanation for why this occurs is far from complete. The current project presents the results from 4 experiments which were designed to understand both when, and why, being in a positive mood would impact trusting behaviors and attitudes.

Experiments 1 and 2 investigated how in an interpersonal setting, cues about another person's trustworthiness would moderate the relationship between positive mood and trust. For example, Experiment 1 demonstrated that when given explicit information suggesting another party was trustworthy, people in a positive mood made more trusting behaviors (i.e., sent more money in the Trust Game) as compared to people in a neutral mood. This pattern of data reversed when the other party was untrustworthy; positive mood participants trusted less than neutral mood participants. Experiment 2 replicated the findings of Experiment 1 in an interpersonal setting where the cues about the other party's trustworthiness were more subtle. The exact same pattern of data emerged as obtained in Experiment 1, with positive mood accentuating trust when the person appeared trustworthy, but decreasing trust when the person appeared untrustworthy.

Experiments 3 and 4 examined how positive mood would influence trust in an intergroup setting. These two experiments provided behavioral evidence that positive mood could increase

out-group distrust. For example, Experiment 3 found that groups experiencing positive mood trusted other groups less than groups experiencing neutral mood.

The pattern of data obtained in the current paper is argued to be consistent with heuristic-reliance models of decision making, which propose that positive mood increases reliance on available cues. In addition to providing insight into the when and why positive mood will impact trust, the findings of the current project are argued to have implications both for the trust development process, which have traditionally conceptualized trusting actions as being the result of calculated, well-reasoned decisions. Moreover, the current findings shed light into when and why positive mood may help vs. hurt conflict resolution between individuals and groups.

ACKNOWLEDGEMENTS

I am gratefully indebted to many people whose support and assistance have helped me remain healthy and happy throughout the completion of this thesis. First and foremost, I would like to express my deepest gratitude to my dissertation committee, Galen Bodenhausen, J. Keith Murnighan, Katherine Phillips, and Leigh Thompson for providing their critical feedback on this project throughout these last several years.

I am grateful for the supervision given to me by my advisor, Keith Murnighan. Keith's attention toward my progress as a scholar never waned throughout my graduate career, and I feel fortunate to have learned under his guidance. Above teaching me about research methodology and writing skills, I look at Keith as a shining example of how a faculty member can help foster an environment that is conducive for Ph.D student success.

My time at Kellogg would not be complete, nor would my research be what it is today, if it was not for Katherine Phillips, with whom I have worked closely since my first year at Kellogg. As I am scheduled to begin my job as an assistant professor this fall, I feel incredibly grateful that I had the opportunity to learn from Kathy over these past years about what it takes to succeed as an assistant professor.

I am indebted to my graduate student friends for helping make me feel like I was working in a 'laboratory', where scientific findings are produced and discussed, rather than an 'office' where we sit alone at our desks. I am especially grateful for being able to call Sekou Bermiss, Susan Crotty, John Joseph, Jim Oldroyd, & Maxim Sytch, both my colleagues and friends. Their enthusiasm and interest in my work throughout these years has served as a constant source of

motivation, and without them, I certainly would not have experienced as much positive mood as I did.

I am also grateful for the generous support that I received from the Dispute and Resolution Research Center, the Kellogg Teams and Group Research Center, and the State Farm Corporation. The financial support that I received from these groups helped facilitate data collection in several of the experiments conducted for this dissertation.

I am also grateful to my friends and colleagues from the Social Psychology group in the Psychology Department (especially in the Bodenhausen Laboratory) whose frequent discussions with me about research social cognition has undoubtedly benefited this project. Also, I would like to thank Eli Finkel for all of his candid discussions about scientific writing. These discussions, whether they occurred in the classroom, or at the Unicorn Café in Evanston, always seemed to motivate me to keep on writing.

Outside of the Northwestern community, I would like to express my appreciation to my parents, Anna and Robert Lount, who throughout my time as a graduate student, never expressed any doubt in me, or my chosen career. Also, I am deeply appreciative to the support of my godparents, Bianca and Dominic Liburdi, who have always (since my earliest memories) been supportive of my life aspirations. I am also greatly appreciative for the endless support given to me by my fiancé, Natalia, whose presence elicits positive mood better than any video clip or story writing prime ever could.

Lastly, I am indebted to my friends and colleagues that I made while attending Michigan State University. A special thank you goes to Marlone Henderson and Ernest Park, who, in addition to being great friends, served as role models for how to manage the dissertation process.

Furthermore, I am appreciative to the guidance and continued insight of Norbert Kerr, who originally suggested that I look into applying to Kellogg. Finally, I would like to thank Lawrence A. Messé, my undergraduate advisor, who passed away on December 1st, 2004. Larry's belief that I could make a meaningful contribution to science was the impetus behind why I began conducting research. This dissertation is dedicated in his memory.

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CHAPTER 1

Introduction and Overview

Throughout a variety of interactions, social scientists have long argued that trust can facilitate positive outcomes between interdependent parties (Fukuyama, 1995; Gambetta 1988; Kramer & Cook, 2004). For example, in negotiations between conflicting parties, trust has been shown to increase information sharing and increase the frequency of agreements which benefit both parties (e.g., Kimmel, Pruitt, Magenau, Konar-Goldband, & Carnevale, 1980; Kramer & Carnevale, 2001; Thompson, 1991). Furthermore, the presence of trust has been shown to decrease transaction costs, thereby facilitating mutually beneficial intragroup and intergroup relationships (e.g., Gulati, 1995; Uzzi, 1997; Williamson, 1993).

Although theorists have posited that there are both affective and cognitive antecedents to trust (e.g., Lewis & Weigart, 1985; McAllister, 1995; Rempel, Holmes, & Zanna, 1985), the majority of research on this topic has primarily concentrated on understanding the cognitive antecedents (see Kramer, 1999; Lewicki, Tomlinson, & Gillespie, 2006 for reviews). This focus on the cognitive antecedents of trust is not surprising given that the majority of trust development models are based on models of human rationality which predict that the decision to trust others is primarily a rational and calculative decision making process (Blau, 1964; Holmes, 1991; Kelley, 1979; Lewicki & Bunker, 1995; Luhmann, 1979; Rempel et al., 1985). Although research on the cognitive antecedents of trust has provided many useful insights, few investigations have explicitly examined how affective states influence trust (see Dunn &

Schweitzer, 2005; Lount & Murnighan, 2005 for exceptions). Our limited understanding into how our affective states influence trust is unfortunate, especially given that trusting decisions are often made in emotionally charged environments.

Although theorists have posited that the cognitive antecedents of trust produce the affective antecedents of trust (e.g., McAllister, 1995), the current dissertation argues that this relationship can be reversed. More specifically, it is argued that positive mood can encourage reliance on available heuristics which can either *increase* or *decrease* trust. I draw on research which connects positive mood to heuristic-reliance to develop my hypotheses, and apply experimental games from behavioral economics to empirically test these arguments.

In Chapter 2, I discuss relevant theory and research on mood and interpersonal trust. This literature review highlights how mood-congruency based models have made specific predictions which propose that positive mood should increase trust. After providing a review of mood-congruency models, I discuss research which has reliably demonstrated that positive mood can increase the influence of available cues on decision making. Then, after reviewing the literature connecting positive mood to persuasion, stereotyping, and cooperating in small groups, I propose that heuristic-reliance models will predict the relationship between mood and trust better than mood-congruency based models.

Chapter 3 presents the findings from two laboratory experiments which were designed to experimentally test if heuristic-reliance models would explain the relationship between positive mood and trust better than mood-congruency based models. These two experiments examined how positive mood would influence trust in settings where salient cues suggested that the other party was either trustworthy or untrustworthy. These experiments provided a crucial test of the

underlying mechanism behind the relationship of positive mood and trust. Whereas mood-congruency models predict that positive mood should help trust, irrespective of the other party's trustworthiness, heuristic-reliance models predict that the relationship will depend on cues about the other party's trustworthiness. The results from both of these experiments provided support for heuristic-reliance models over mood-congruency models. In both experiments, the relationship between positive mood and trust was moderated by available trustworthiness cues about the other party.

Chapter 4 extends the theory and logic of the relationship between positive mood and interpersonal trust to the intergroup level. Chapter 4 begins with a discussion of relevant theory and research about why and how positive mood may reduce intergroup trust. Building off of theory and findings supporting the relationship between positive mood and heuristic-reliance, the background theory discussed in this chapter proposes that positive mood may lead to increased distrust in intergroup settings.

Chapter 4 presents the findings of two laboratory experiments designed to test the relationship between positive mood and trust in intergroup settings. Consistent with the theoretical predictions based on heuristic-reliance models, these experiments provide evidence that positive mood can increase distrust in intergroup settings. Experiment 4 was designed to tease apart whether in-group favoritism was potentially responsible for the effects obtained in Experiment 3. In this experiment, participants in a positive or neutral mood were asked to play a modified prisoners' dilemma game against an out-group member. In addition to being less likely to cooperate as compared to their neutral mood counterparts, participants in a positive mood were significantly more likely to withdraw. Because withdrawal choices in this game have been

conceptualized as a behavioral indication of distrust, the results of this experiment provided additional support for the expectation that positive mood could increase intergroup distrust.

Chapter 4 also presents the results of several meta-analyses which combine the effects obtained across the experiments conducted in this dissertation. The results of these meta-analyses help demonstrate that across multiple studies, as compared to people in a neutral mood, people in a positive mood were found to increase behaviors of trust when cues about the other party promoted trust. However, the opposite pattern of data occurs when examining how people in a positive mood behave when given the opportunity to trust when cues about the other party promoted distrust, i.e., people in a positive mood distrusted these people more than people in a neutral mood. The pattern of data obtained in these studies is argued to be consistent with heuristic-reliance models which predict that the relationship between positive mood and social judgments will depend on available cues. Moreover, it is argued that mood-congruency models, although intuitively appealing, cannot account for the pattern of data obtained in the current project.

Chapter 5 discusses both the theoretical and practical implications of the findings obtained in the current dissertation. For example, these results are discussed in terms of their potential contribution to trust researchers who have largely ignored the potential influence of affect on the decision to trust. Moreover, the implications of these findings are discussed as being relevant for research related to conflict resolution (e.g., negotiations) which has frequently argued that positive mood is beneficial for conflict resolution.

CHAPTER 2

Positive Mood and Social Judgments

In addition to being a frequently changing part of our daily lives, our mood states have long been recognized as influencing how we interpret the world around us (e.g., Schwarz & Clore, 1983). Forgas (2001) notes that moods are distinct from emotions and describes moods as “relatively low-intensity, diffuse, and enduring affective states that have no salient antecedent cause and therefore little cognitive content....as moods tend to be less subject to conscious monitoring and control, paradoxically their effects on social thinking, memory, and judgments tend to be potentially more insidious, enduring, and stable” (p. 15). The current chapter discusses relevant theory connecting why positive mood should impact our propensities to trust and potentially distrust others.

Bodenhausen (1993) has distinguished between two sources of affective response that can impact our judgments of others. *Integral affect* is affect which has been caused by actual or anticipated contact with a social target (i.e., another person or group); *incidental affect* refers to affective responses that are not caused by contact with the social target but by other factors that are unrelated to one’s interaction with the social target. Experimental research on the influence of affect on evaluative judgments has primarily been concerned with incidental affect (Wilder & Simon, 2001), although some investigations have documented findings for integral affect that mirror those produced by incidental affect (e.g., Wilder & Shapiro, 1989). The current dissertation is focused on understanding how incidental affect will influence trust.

Positive Mood and Mood-Congruency

Mood-congruency models (e.g., Bower, 1991; Bower & Forgas, 2001) predict that, depending on the valence of the mood being experienced (i.e., positive vs. negative), moods will color judgments in the direction of the valence being experienced (Mayer, Gaschke, Braverman, & Evans, 1992). Mood-congruency models make intuitive sense, and have been frequently adopted by theorists to predict the relationship between positive mood and trust (Jones & George, 1998; Olson, 2006; Williams, 2001).

The affect consistency hypothesis proposes that our current mood states influence our social judgments by directly impacting our cognitive processing, acting as an affective-prime which produces mood-congruent thoughts and behaviors. Based on spreading activation models of human memory, Bower (1991) has argued that mood-consistent information will be more likely to be recalled and used when experiencing affect. Research in this domain proposes that when a person experiences positive mood they will be biased to evaluate the social judgment in a positively biased manner (Forgas & Moylan, 1987; Isen, 1987).

The Affect Infusion Model (AIM) has argued that affect impacts the processing strategies used by people when forming a social judgment. Forgas (2001) defines affect infusion as ‘the process whereby affectively loaded information exerts an influence on, and becomes incorporated into, cognitive and judgmental processes entering into a person’s deliberations and eventually coloring the outcome’ (p. 101). Forgas (1995) has specified four judgmental strategies that perceivers use: direct access, motivated processing, heuristic processing, and substantive processing. Similar to the affect consistency hypothesis, the AIM predicts worse outcomes for

social judgment when people experience negative affect at the time of decision. However, the AIM predicts that positive mood will only color the decision-making process when perceivers use heuristic or substantive processing strategies. Although there exist clear distinctions behind the underlying mechanisms and explanations behind various mood-congruency models, they are similar in that they generally anticipate that current mood should bias our judgments in the direction one's feelings (i.e., positive vs. negative).

Although mood-congruency models predict that positive mood should positively bias our judgments of others, researchers have questioned this assumption, and have argued that under certain circumstances, positive mood can actually negatively bias our judgments of others (e.g., Bodenhausen, Kramer, & Susser, 1994; Bless, Schwarz, & Wieland, 1996; Park & Banaji, 2000).

Positive Mood and Heuristic-Reliance

Heuristic-reliance models (see Bodenhausen et al. 2001 for a review) differ from mood-congruency based models by arguing that the relationship between positive mood and social judgments depends on available cues and schemas (see Bless, 2001; Bodenhausen et al., 2001; Clore, Gasper, & Garvin, 2001; Clore, Schwarz, & Conway, 1994; Fiedler, 2001; Schwarz, 2001; Schwarz & Bless, 1991 for reviews). For instance, investigations of the influence of positive mood on persuasion have frequently demonstrated that the quality of an argument tends to impact happy people less than people in a neutral or negative mood; they also tend to use simpler heuristic cues that allow a quick and easy response (Mackie & Worth, 1989; Schwarz, Bless, & Bonner, 1991; Worth & Mackie, 1987). For example, Worth and Mackie (1987) found that people in a positive mood were more affected by cues about the credibility of the source

(i.e., expert vs. non-expert) and less affected by the strength of the argument (i.e., weak vs. strong).

Studies of mood on stereotyping have also found that happy people use stereotypes more than people in a neutral (Bodenhausen et al., 1994; Park & Banaji, 2000) or negative mood (Bless, Schwarz, & Wieland, 1996). Bodenhausen (1993) suggests feelings have a pervasive impact on our judgments of other people, with positive mood affecting the use of stereotypes. Stereotypes can be defined as being knowledge structures about a specific target that serve as energy saving devices (Macrae, Milne, & Bodenhausen, 1994). Stereotype activation has been associated with heuristic-processing strategies (Bodenhausen, Macrae, & Sherman, 1999). If positive mood leads to an increase in heuristic-processing, happy participants should be more prone to engage in stereotypic judgments.

In several experiments, Bodenhausen, Kramer, & Susser (1994) had both participants in a positive or neutral mood judge the guilt of a student who was accused of either assault or cheating. Information about the infraction was manipulated so that it was either congruent or incongruent with participant's stereotypes associated with whom would be likely to commit the infraction (Student athletes and Hispanics were operationalized as stereotypic defendants in cheating and assault cases, respectively). The authors predicted that happy people would respond more to stereotypic cues, augmenting the probability they would assume guilt when information about the defendant was consistent with the stereotype. As predicted, they found that happy participants were significantly more likely to assume guilt when the information about the student (athlete vs. Hispanic) was consistent with the transgression (cheating vs. assault). Bless and colleagues (e.g., Bless, Schwartz, & Weiland, 1996) also found that, compared to

emotionally sad participants, happy participants' judgments were more affected by activated stereotypes. Like Bodenhausen et al. (1994) Bless (2001) argued that happy individuals are more prone to rely on available general knowledge structures, whereas sad individuals examine information more carefully.

Arguments into *why* happy people rely on heuristic processing strategies more than neutral mood people have been primarily concerned with how positive mood impacts an individual's motivation (Bodenhausen, 1993) or processing capacity ability (Mackie & Worth, 1989). The capacity-based explanation proposes that positive mood limits processing capacity due to the large amount of interconnected positive material stored in memory (Mackie & Worth, 1989). The motivational explanation posits that people feeling happy experience less motivation to think deeply about the target (Bodenhausen, 1993). Motivation-based explanations have received support by research demonstrating that under certain conditions, happy decision-makers will not necessarily rely on heuristic processing. For instance, Bodenhausen et al. (1994, exp 3) found that happy people were no longer more likely to stereotype when they informed that they would potentially be held accountable for their responses. Additionally, Bless et al. 1996 found that happy people were no longer likely to stereotype when presented with inconsistent (i.e., non-stereotype congruent) information.

Taken together, research suggests that, in general, people are generally prone to rely on heuristic processing strategies when they are experiencing positive mood (see for reviews: Bodenhausen, Mussweiler, Gabriel, & Moreno, 2001; Clore, Schwartz, & Conway, 1994). For the remainder of the paper, I will refer to the previously mentioned hypotheses and models which predict that positive mood will decrease information processing as 'heuristic-reliance models'.

Positive mood and Cooperation

Heuristic-reliance models have also been used to explain the relationship between positive mood and cooperative behavior (Hertel & Fiedler, 1994; Hertel, Neuhof, Theuer, & Kerr, 2000). In mixed-motive situations, where individuals are given the choice between either cooperating or competing, the decision to act cooperatively or competitively is affected as a function of the expected behavior of the other party(s) (Kelley & Stahelski, 1970), as well as available decision heuristics (Allison & Messick, 1990; see Messick, 1999 for a review). The prisoners' dilemma, a highly interdependent mixed-motive interaction, has been used extensively to study factors that promote cooperation and competition (see Pruitt and Kimmel, 1979 for a review). In a standard prisoners' dilemma game (see Figure 1), two people can choose cooperation or competition. If both parties choose to cooperate, they receive an outcome that is greater (i.e., \$10 a piece) than if both parties compete (i.e., \$2 a piece). However, if one party competes and the other party cooperates, the competitors' payoffs are considerably higher (i.e., \$15) than the cooperators' (i.e., \$0).

Because of the highly interdependent nature of outcome distributions, a perception that the other party is trustworthy is an important precondition of cooperation (Pruitt & Kimmel, 1977; Yamagishi, 1986). Furthermore, the decision to cooperate in mixed-motive interactions has been conceptualized by some researchers as being a measurement of trust (e.g., Bottom, Gibson, Daniels, & Murnighan, 2002; Insko & Scholper, 2001; Lount, Zhong, Sivanathan, & Murnighan, 2004).

Although several theorists have argued that positive affect should increase cooperation (e.g., Baron, 1993; Forgas, 1998; Isen & Baron, 1991), examinations into the relevant literature have argued that the relationship is not so simple (see for a review Hertel, Neuhof, Theuer, & Kerr, 2000). Hertel et al. have argued that available cues must be considered to understand the relationship between cooperation and positive mood. Research on the impact of heuristics on cooperation has found that people tend to imitate the behaviors of others in their group (Allison & Kerr, 1994; Dawes, McTavish, & Shaklee, 1977; Hertel & Fiedler, 1994). The determination of salient norms for competition or cooperation result from a ‘consensus heuristic,’ which argues that when people enter new or novel situations, they tend to act in accordance with how they perceive others would (Chaiken, Liberman, & Eagly, 1989) or do behave (Bettenhausen & Murnighan, 1985). Consistent with Bless (2001) and Bodenhausen (1993), Hertel et al. propose that people experiencing positive affect will rely on heuristics to determine if they should cooperate or compete. If there are salient cues that suggest that others will cooperate, happy people should be more likely to engage in cooperative behavior; whereas when the salient cues suggest that others will behave uncooperative, happy people should be less likely to cooperate. By manipulating information about the normal behavior of others in a social dilemma, Hertel et al. found, as compared to participants not experiencing positive mood, those participants experiencing positive mood were more likely to cooperate when they believed that others would cooperate, and more likely to compete when they believed that others would compete.

CHAPTER 3

The Impact of Positive Mood on Trust in Interpersonal Settings

Chapter 2 discussed the relevant research on how positive mood impacts social judgments. Contrary to the predictions of mood-congruency based-models, heuristic-reliance models suggest that the relationship between positive mood and social judgments depend on available heuristics and cues which guide behavior. Building off of the theory and research discussed in the last chapter which connects positive mood to heuristic reliance, the current chapter presents the main hypothesis of this dissertation; i.e., that available heuristics and cues about the social target will moderate the relationship between positive mood and trust. More specifically, the current chapter presents the underlying logic for this hypothesis and presents the results of two experiments designed to empirically test the relationship between positive mood and trust.

Trust

Kramer's (1999) review of the trust literature noted that "a concise and universally accepted definition has remained elusive" (p. 571). Mayer, Davis, and Schoorman (1995), for instance, defined trust as "the willingness to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (p. 712). Zand's (1997) definition is similar: "a willingness to increase your vulnerability to another person whose

behavior you cannot control, in a situation in which your potential benefit is much less than your potential loss if the other person abuses your vulnerability” (p. 91). Rousseau, Sitkin, Burt, and Camerer’s (1998) review of the trust literature from multiple disciplines led them to define trust as “a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another” (p. 395). Although these definitions vary, they all conceptualize trust as the willingness to make oneself vulnerable to another party combined with a hope or expectation of positive outcomes.

Rational models of trust predict that trust between strangers grows gradually (e.g., Blau, 1964; Holmes, 1991; Kelley, 1979; Lewicki & Bunker, 1995; Luhmann, 1979; Rempel et al., 1985) and, as people repeatedly fulfill each others’ expectations, the accumulation of positive interactions cements their perceptions of an implicit contract (Rousseau & McLean Parks, 1993). These models predict that high levels of trust are only warranted after many positive repeated interactions. Although rational models initially predict minimal trust, several investigations have found initial trust between strangers can be considerable (Berg, Dickhaut, & McCabe, 1995; Kim, Ferrin, Cooper, & Dirks, 2005; Kramer, 1994; McKnight, Cummings, & Chervany, 1998; Meyerson, Weick, & Kramer, 1996; Yamagishi & Yamagishi, 1994). For instance, Kim et al. (2005) found that people reported substantial trust in people whom they had never met, and that allegations of untrustworthy behavior were needed before people would reduce their high expectations. Likewise, participants in economic experiments have engaged in fairly risky trusting behavior even when they are paired with anonymous counterparts whom they have never met (Berg et al., 1995).

Recent trust research suggests that large trusting acts are not necessarily irrational as they can facilitate positive outcomes (Messick & Kramer 2001; Murnighan, Malhotra, & Weber, 2004; Weber, Malhotra, & Murnighan, 2005). Pillutla, Malhotra, and Murnighan (2003), for example, found that people who chose relatively large acts of trust received more reciprocity from unknown others than people who chose smaller acts of initial trust. In an entirely different context, Myerson et al. (1996) noted that members of temporary work groups (e.g., cockpit crews) would find it difficult to complete their tasks efficiently without displaying high levels of initial trust in their new coworkers.

Messick and Kramer's (2001) *shallowness hypothesis* helps explain why people might choose to trust strangers. Building on earlier research on the impact of heuristics on cooperative behavior (Allison & Messick, 1990; cf. Messick, 1999), the shallowness hypothesis suggests that in many situations, a reliance on heuristics will promote trusting behavior. Messick and Kramer suggest that trusting decisions are rarely based on careful or systematic processing. Instead, because people must manage multiple sources of information, they rely on available heuristics to make trusting decisions.

Although a reliance on heuristics may help promote trust when cues about the target promote trusting behaviors (Uzzi, 1997), heuristic-reliance may harm trust development when available cues promote distrust. Processing information heuristically increases the influence of salient and easily comprehended cues on decision making (Chaiken & Trope, 1999), and these cues can activate various interpersonal schemas. Schemas are sets of beliefs that organize and guide memory for past events and expectations regarding future events (Bartlett, 1932).

Although an increased reliance on heuristics can increase trust when the available cues are

associated with trust, heuristic-reliance can also increase the use of negative stereotypes (e.g., Bodenhausen et al., 1999). This increase suggests that trust can also be reduced when people rely on heuristics which promote distrust. A multitude of physical (e.g., someone wearing an eye-patch), informational (e.g., being employed as a used-car salesperson), and categorical cues (e.g., being a member of an opposing political party) are associated with distrust. Thus, when cues are positive, heuristic-reliance should promote trust development; when cues are negative, the same processes should hurt trust development.

Positive Mood and Trust

To date only a few investigations have explicitly examined the link between positive mood and trust. Dunn and Schweitzer (2005, Study 1) induced either the emotion of happiness, sadness, or anger, in people and then had them evaluate trustworthiness of a coworker. Their findings suggested that people expressed significantly greater trusting attitudes when they were experiencing happiness, in comparison to either sadness or anger. Without a control condition (participants experiencing neutral affect), it is possible that sadness and anger reduced interpersonal trust instead of happiness increasing trust.

Lount and Murnighan (2005) examined the effect of positive and negative moods on trusting behaviors. Their participants played the Trust Game first used by Berg, Dickhaut, & McCabe (1995). In recent years, many studies have conceptualized the sending of money to the trustee to be a behavioral act of trust (e.g., Pillutla, Maholtra, & Murnighan, 2003; Malhotra & Murnighan, 2004). In the Trust Game, Player 1s, trustors, decide how much of a \$10 endowment they will send to Player 2s, trustees. Both know that trustees will receive three times the amount

that trustors send, and that trustees can then decide how much of their expanded total (if any) they will return to trustors. For instance, if trustors sent all \$10, trustees would receive \$30; they would decide how much to return to the trustors.

Lount and Murnighan induced positive, negative, or a neutral mood before trustors made their trusting decision, (i.e., how much of \$10 to send to an anonymous, unknown trustee). They found that participants in a positive mood sent significantly more money than participants in a neutral and negative mood. No differences emerged when comparing the amounts sent by neutral and negative mood participants.

To date, the research on the impact of positive mood on interpersonal trust has only studied this relationship in an interindividual (i.e., 2-person) context (Dunn & Schweitzer, 2005; Lount & Murnighan, 2005). When people are in a mixed-motive situation with just one other person, researchers have found that individuals tend to cooperate more frequently than compete (see Wildshut, Pinter, Vevea, Insko & Schopler, 2003 for a review). A commonly observed ‘trust-bias’ suggests that in interpersonal contexts, most people trust rather than distrust each other (e.g., Brewer & Maddux, 2005; Yamagishi & Yamagishi, 1994). For instance, in the Trust Game, the mean dollar amount sent is usually slightly greater than half of the trustor’s endowment, suggesting a bias toward trusting (e.g., Berg et al. 1995; Lount & Murnighan, 2005). Lount and Murnighan (2005) have argued that participants who are experiencing positive mood are more inclined to be afflicted by this bias. Taken together, these findings suggest that, in interindividual settings, the available heuristic promotes trust.

Experiment 1

Although some evidence exists which suggests that positive mood promotes trust, it remains unclear exactly why this occurs. Mood-congruency based models make strong, general predictions that positive mood should augment interpersonal trust by positively biasing our perceptions of others (Jones & George, 1998; Olson, 2006; Williams, 2001). In contrast, heuristic-reliance models make more particular, contingent predictions that happy people will rely on available schemas and cues, resulting in increased distrust when a distrust-schema is associated with the other party and increased trust when a trust-schema is associated with the other party.

Both models predict that positive mood will increase trust when people are initially inclined to trust. The two models make opposite predictions when people are initially inclined *not* to trust: then mood-congruency predicts increased trust; heuristic-reliance predicts decreased trust. Thus, mood-congruency predicts a main effect of positive mood leading to more trust; heuristic-reliance predicts an interaction, whereby positive mood will *increase* trust when the social context signals “trust” and it will *decrease* trust when the social context signals “don’t trust.” For the following studies, it was hypothesized that heuristic-reliance models would better explain the relationship between positive mood and trust. More specifically, it was expected that positive mood would only lead to increase trust when available cues about the other party promoted trust. When these available cues promoted distrust, it was anticipated that positive mood would increase distrust.

In Experiment 1, participants in positive or neutral mood were given the opportunity to trust an ostensibly untrustworthy or trustworthy target. In the context of a Trust Game, heuristic-reliance predicts that, compared to affectively neutral people, happy senders will send more

money when they are paired with a trustworthy party and less when they are paired with an untrustworthy party. In contrast, the mood congruence approach would lead us to expect two orthogonal main effects: greater trust when interacting with a trustworthy vs. untrustworthy counterpart, and greater trust in a positive versus neutral mood. Because the primary interest in the current paper was to understand the impact of positive mood on trust, a neutral mood condition, instead of a negative mood condition, was chosen as an appropriate control condition.

Furthermore, in an attempt to acquire process data (i.e., heuristic processing), decision latency data was measured in the current experiment. Decision making latency has been conceptualized to be a proxy measure of heuristic-processing, and some evidence has been provided that people in a positive mood require less time to make a decision (Forgas & Fiedler, 1996). Presumably, if people in a positive mood are relying on salient cues, they should make quicker decisions than people in a neutral mood. If positive mood causes people to rely more on available cues, thereby resulting in quicker decisions, decision latency may statistically mediate the predicted interaction between positive mood and other party trustworthiness.

Method

Participants and Design

One hundred and thirty-four undergraduate participants (57% Female) at a large Midwestern University were paid \$10 for their time and were informed that their decisions might earn them more money. All participants acted as senders in the Trust Game. They were randomly assigned to one of four conditions: 2(Mood: Positive vs. Neutral) x 2(Other Party: Trustworthy vs. Untrustworthy).

Procedure

Upon arrival, participants were seated at a computer in a private room. After completing a consent form, they were asked to complete a ‘Trustworthiness’ inventory, previously used by Insko, Kirchner, Pinter, Efav, and Wildschut (2005), which was described as a reliable measure of an individual’s trustworthiness. Participants used 7-point rating scales ranging from 1 (feel pretty good) to 7 (feel pretty bad) to estimate how they would feel if they had committed 10 acts (e.g., “stealing something from a store without anyone else finding out,” “revealing something about a person that s/he told you confidentially,” and “winning a prize for a paper that someone else had written”).

Participants were then asked to help another researcher by rating the sound and video quality of a 3-minute video clip. Positive mood was induced by using a video clip of Robin Williams in *Mrs. Doubtfire*; Neutral mood was induced with a video clip describing the history of golf (Halberstadt & Niedenthal, 1997).

The computer then presented the rules of the Trust Game. All participants were senders who were told that they could send as little or as much of their \$10 endowment to a receiver; the money would triple and the ostensible receivers could return as much of the tripled amount as they wished. Participants were informed that all information was fully exchanged between both participants. All participants were informed that they would be completing only one transaction and that they would not meet their counterpart. To motivate full participation, participants were informed that at the end of the study, several participants would be randomly selected and would

be awarded the actual amount that they earned in the task, in addition to their \$10 participation fee.

Prior to their choice, participants were told: “Because some people like to know something about Player 2, we will provide you with their score from the trustworthiness scale. Higher percentage values indicate high levels of trustworthiness. Player 2 will not see any information about you, and they will only receive information about how much money (if any) you choose to send.” Following Insko et al. (2005), participants in the *trustworthy partner* conditions were informed that their partner had an 85% score on the trustworthiness scale; participants in the *untrustworthy partner* conditions were informed that their partner had a 41% score.

After choosing how much money to send to Player 2, participants were checked for suspicion, debriefed, paid, and thanked.

Manipulation Check

A separate, comparable sample of forty participants assessed the effects of the video manipulations of mood. Participants were told that these video clips were being pilot tested to gather information about film and sound quality. Twenty participants viewed each clip; they all rated the clips’ sound and video quality and then reported their current emotional states on a 7-point rating scale. As in Experiment 1, positive mood was measured by averaging the responses for the happy and joyful items ($\alpha = .93$). As anticipated, *Mrs. Doubtfire* led to a more positive mood ($M = 5.08$, $SD = 1.26$) than the golf clip ($M = 3.47$, $SD = .99$), $F(1, 39) = 19.90$, $p < .01$, d

= 1.42. Thus, the video clip manipulations seem to have been effective (cf. Gross & Levenson, 1995).

Results

Money Sent in Trust Game

Amounts sent were analyzed in a 2(Mood: Positive vs. Neutral) x 2(Other Party: Trustworthy vs. Untrustworthy) x 2(Gender: Male vs. Female) between-subjects ANOVA. Although there was an unanticipated main effect for gender, such that male trustors ($M = 5.82$, $SD = 3.40$) tended to send more money than female trustors ($M = 5.04$, $SD = 3.24$), $F(1,129) = 4.20$, $p < .05$, $d = .36$, gender did not interact with either mood $F(1, 126) = 1.29$, $p = .26$, $d = .20$, or other party trustworthiness $F(1,126) = .131$, $p = .78$, $d = .06$. Moreover, the three-way interaction between gender, mood, and other party trustworthiness was not significant, $F(1,126) = .213$, $p = .65$, $d = .08$. Because trustor gender did not interact with any the manipulations, the data from both genders were pooled together and the remainder of analyses were analyzed in a 2(Mood: Positive vs. Neutral) x 2(Other Party: Trustworthy vs. Untrustworthy) between-participants ANOVA.

As anticipated, participants sent more money ($M = \$6.48$, $SD = 3.06$) to a trustworthy versus an untrustworthy coworker ($M = \$4.20$, $SD = 3.20$), $F(1,130) = 18.10$, $p < .01$, $d = .73$. The main effect for mood, predicted by mood-congruency, was not significant, $F(1,130) = .02$, $p = .88$, $d = .05$. The interaction, predicted by heuristic-reliance, however, was significant $F(1,130) = 4.63$, $p < .05$ (see Figure 2). Simple effect tests show that positive mood participants tended to send more money to a trustworthy coworker ($M = \$7.09$, $SD = 2.66$) than emotionally neutral

participants ($M = \$5.85$, $SD = 3.35$), $t(67) = 1.70$, $p < .10$, $d = .41$; they also sent less, but not significantly less money to an untrustworthy coworker ($M = \$3.66$, $SD = 3.01$) than emotionally neutral participants ($M = \$4.72$, $SD = 3.33$), $t(63) = 1.36$, $p < .18$, $d = .33$ (see Table 1 for means and standard deviations).

Decision Making Latency

Decision Latency analyses were analyzed in a 2(Mood: Positive vs. Neutral) x 2(Other Party: Trustworthy vs. Untrustworthy) between-participants ANOVA. Participants in a positive mood ($M_s = 10.69$, $SD = 8.31$) did not differ in their response latency as compared to participants in a neutral mood ($M_s = 913.40$, $SD = 6.76$), $F(1,130) = 1.39$, $p = .24$, $d = .21$. Moreover, latency times did not differ for people paired with a trustworthy ($M_s = 10.24$, $SD = 9.04$) or untrustworthy partner ($M_s = 956$, $SD = 570$), $F(1, 130) = .249$, $p = .62$, $d = .09$. Additionally, the interaction between positive mood and partner trustworthiness did not produce a significant interaction for decision making latency $F(1,130) = .09$, $p = .78$, $d = .05$.

Averaged across all conditions, the amount of time to decide how much money to send to the other party was 9.91s ($SD = 7.59$). Decision latency did not significantly correlate with how much money was sent in the trust game $r(134) = .08$, $p = .34$.

Discussion

The behavioral pattern of data obtained from this experiment clearly favors heuristic-reliance over mood-congruency. Participants in a positive mood trusted a trustworthy partner

more and an untrustworthy partner less than neutral mood participants did. Mood-congruency models predicted that positive mood should have also increased trust with both partners.

Several elements of this study, however, prompt caution in over-interpreting these conclusions. First, the simple effects analyses were not quite statistically significant. Although the behavioral pattern of the data clearly reflects the heuristic-reliance predictions, and they clearly do not reflect those of mood-congruency, the results could be stronger. Also, the trustworthiness manipulation was quite explicit. Realistically, such strong cues may be rare. Thus, reliance on this salient cue may not be indicative of what would happen when the cues were more realistic and more subtle. What may be less serious is the fact that the current data were limited to trusting behaviors rather than the psychological state of trust. Thus, Experiment 2 used less explicit trustworthiness cues and measured their effects on interpersonal judgments of trustworthiness.

The attempt to attain process data by measuring latency in decision making time was unsuccessful. Given that decision making latency is conceptualized to be a proxy of heuristic-processing, Experiment 2 sought to gather self-report process data in an attempt to provide a measure of heuristic-processing.

Experiment 2

In this experiment, participants in either a positive or neutral mood provided their reactions and evaluations of one of two faces, one that was designed to look trustworthy, and the other untrustworthy. Again, mood-congruency predicted a main effect for mood; heuristic-reliance predicted that happy participants would evaluate the trustworthy face as more

trustworthy and the untrustworthy face as more untrustworthy than affectively neutral participants. Moreover, another attempt was made to measure heuristic-processing, and it was expected that these process data would mediate the pattern of data predicted by a heuristic-reliance model.

Method

Participants and Design

One-hundred and twenty-nine undergraduate students (65% Female) were paid \$10 for their time. They were randomly assigned to one of four conditions in a 2(Mood: Positive vs. Neutral) x 2(Other Trustworthiness: Low vs. High) between-subjects factorial design.

Procedure

Participants were informed that they would be working on several unrelated studies on decision-making. They each sat in a private room where the experimenter asked them “to complete a filler task,” which was actually the mood manipulation. In order to manipulate the senders’ mood, these participants were asked to help pre-test materials for another study while waiting for others to arrive. They all agreed and were then asked to write about an experience that made them either happy, sad, or for control participants, ‘what they do in a typical day.’ To reinforce this mood, participants were also asked, after they finished their story, to list 3 things that make a typical student happy or sad or 3 normal things that they do every day.

Then the experimenter presented a packet of questions that were described as “stimuli for a future experiment.” The packet contained a picture of either a trustworthy or an untrustworthy

face; both were created by a computer program called *Faces* (InterQuest Inc). The program allowed us to create faces which varied the degree to which the person appeared trustworthy/untrustworthy. For instance, people tend to perceive round but not narrow eyes as a signal of trustworthiness (Zebrowitz, 1997). Like Schul, Mayo, and Burnstein (2004), I created two faces, one with trustworthy features, and the other with untrustworthy features.

Participants then completed The Specific Interpersonal Trust Scale (Johnson-George & Swap, 1982), as it was adapted by Dunn and Schweitzer (2005). The scale includes 10 items, each with a 9-point scale (ratings ranged from 1 [not at all likely] to 9 [very likely]). Examples include: 1) If he borrowed something of value and returned it broken, he would offer to pay for the repairs; 2) He would never intentionally misrepresent my point of view to others. The items were highly inter-correlated ($\alpha = .85$) and were averaged to form one overall trustworthiness score (see Appendix B for full scale).

After completing the Interpersonal Trust Scale, participants answered three short questions used in prior research (Tiedens & Linton, 2001) to measure certainty in one's decision (i.e., How difficult was it for you to answer these above questions (reverse coded); How certain do you feel about your responses; How confident are you that you answered the above questions correctly?). The items were highly inter-correlated ($\alpha = .77$) and were averaged to form one scale of certainty. Higher ratings of cognitive certainty are argued to be indicative of heuristic-processing (Tiedens & Linton, 2001).

Manipulation Check

Like previous research (Lerner & Keltner, 2001; Dunn & Schweitzer, 2005), I did not want participants to think too much about their affective states during the experiment (see Keltner, Locke, & Audrain, 1993). Thus, as in Experiment 1, the effectiveness of the mood primes were tested on a comparable group of participants who did not participate in the main experiment. Forty undergraduates completed one of the mood primes ($N = 20$ for the positive, and $N = 20$ for neutral prime) as a filler task prior to participating in another experiment. After completing their stories, participants filled out a self-report questionnaire that assessed 13 separate feeling states (*anxious, angry, disgusted, downhearted, engaged, fearful, frustrated, happy, irritated, joyful, mad, nervous, and sad*; see Goldberg, Lerner, & Tetlock, 1999; Gross & Levenson, 1995; Lerner, Goldberg, & Tetlock, 1998; Lerner & Keltner, 2001) on 7-point rating scales from 1 = none at all to 7 = very much so. Responses to the happy and joyful items were averaged to create a composite measure of positive mood ($\alpha = .86$).

Participants who wrote about a happy event reported feeling more positive ($M = 5.35$, $SD = .65$) than participants who wrote about a typical day ($M = 4.65$, $SD = 1.33$), $t(38) = 2.17$, $p < .05$, $d = .67$. Thus, the mood primes were successful.

Results

Interpersonal Trust Scale

Trustworthiness scores were analyzed in a 2(Other Trustworthiness: Low vs. High) x 2(Participant Mood: Positive vs. Neutral) x 2(Gender: Male vs. Female) between-participants ANOVA. Males and female participants did not differ in their ratings of trustworthiness $F(1,121) = .08$, $p = .77$. Moreover, gender did not interact with the trustworthiness of the other party

$F(1,121) = .465, p = .50, d = .12$, or mood $F(1,121) = .01, p = .91, d = .02$. Given that gender did not appear to impact ratings on the Interpersonal Trust Scale, the data from men and women were pooled together and the remaining analyses were conducted within a 2(Other Trustworthiness: Low vs. High) x 2(Participant Mood: Positive vs. Neutral) between-participants ANOVA.

As anticipated, the trustworthy face led to significantly higher ratings ($M = 5.27, SD = 1.05$) than the untrustworthy face ($M = 4.33, SD = 1.04$), $F(1, 125) = 27.19, p < .01, d = .90$. The main effect for mood, predicted by mood-congruency, was not significant, $F(1, 125) = .08, p = .77, d = .07$. The interaction, predicted by heuristic-reliance, however, was significant, $F(1, 125) = 7.25, p < .01$ (see Figure 3). Simple effect tests showed that happy participants evaluated the untrustworthy face as significantly less trustworthy ($M = 4.07, SD = .99$ versus $M = 4.61, SD = 1.03$), $t(63) = 2.13, p < .05, d = .54$, and the trustworthy face as significantly more trustworthy ($M = 5.49, SD = .97$ versus $M = 5.06, SD = 1.09$), $t(62) = 1.68, p < .05$ (one-tailed), $d = .43$, than the neutral mood participants (see Table 2 for means and standard deviations).

Self-Report Decision Certainty

Reports of certainty were analyzed in a 2(Other Trustworthiness: Low vs. High) x 2(Participant Mood: Positive vs. Neutral) between-participants ANOVA. Contrary to the expectation that people in a positive mood would experience more certainty, participants in a positive mood ($M = 4.69, SD = 1.68$) did not differ in their report of decision certainty as compared to participants in a neutral mood ($M = 4.50, SD = 1.67$), $F(1,125) = .01, p = .92, d = .02$. Moreover, participants who evaluated the trustworthy face ($M = 4.57, SD = 1.69$), did not

experience more certainty than participants who evaluated the untrustworthy face ($M = 4.41$, $SD = 1.66$), $F(1,125) = .29$, $p = .59$, $d = .10$. Furthermore, for self-reports of certainty, there was no significant interaction between mood and other party trustworthiness, $F(1,125) = .34$, $p = .56$, $d = .10$.

Discussion

These results are consistent with, but stronger than the results of Experiment 1: participants in a positive mood evaluated a face with trustworthy features (e.g., open round eyes) as being significantly *more* trustworthy and a face with untrustworthy features (e.g., narrow peering eyes) as being significantly *less* trustworthy than neutral mood participants. These data continue to support heuristic-reliance over mood-congruency in the context of individual judgments.

Although the data from the interpersonal trust scale clearly mapped onto the expected pattern of data, the attempt to measure heuristic-processing by asking questions about cognitive certainty did not match the Interpersonal Trust Scale data. Although process data would have enabled mediation analyses (Baron & Kenny, 1986), the lack of these process data should not limit the conclusions made by the studies for several reasons. First, the attempts to measure heuristic-processing (latency in Exp. 1 & self-report certainty in Exp. 2) are conceptualized to be rough estimations of heuristic-processing, and may not necessarily tap into the underlying processes associated with interpersonal trust. Given that theorists have argued that the decision to trust/distrust is expected to occur relatively quickly and be influenced by available heuristics (Messick & Kramer, 2001), it may not be surprising that positive mood did not decrease the

amount of time (Exp. 1) or decision certainty (Exp. 2) associated with making trusting decisions. If people's decisions to trust are already influenced by salient cues, people in a positive mood may simply be influenced more by the most salient cue, rather than multiple cues. For instance, in Experiment 1, people paired with a trustworthy partner in a positive mood may have primarily relied on the information that the other person had a high trustworthiness to inform their decision to trust, whereas people in a neutral mood may have also weighed in other cues (i.e., this is an interpersonal context where the norm is to trust). Future research may wish to provide more sensitive process measures to better understand the impact of positive mood on heuristic-reliance.

CHAPTER 4

The Impact of Positive Mood on Trust in Intergroup Settings

Whereas Experiments 1 & 2 demonstrated that the relationship between positive mood and trust was apparently influenced by cues about one's coworker, Experiments 3 & 4 sought to investigate if intergroup contexts would increase the reliance on distrust heuristics that are frequently present in intergroup settings. This current chapter presents the relevant theory and research relevant to this topic, and discusses the methodology and results of Experiments 3 and 4, which were conducted to test if, in accordance with heuristic-reliance models, positive mood would increase intergroup distrust.

Schema-Based Outgroup Distrust

Hoyle, Pinkley, and Insko (1989) examined expectations people have about anticipated relations in interpersonal versus intergroup contexts. They found that people have a cooperative/trustworthy expectation for interpersonal relations. In contrast, they expect relationships between groups to be competitive and untrustworthy. This suggests that happy people may be less, rather than more, trusting in intergroup rather than interpersonal interactions.

Research on the discontinuity effect has provided evidence that in mixed-motive situations, groups interacting with other groups behave significantly more competitively as compared to individuals who interact with other individuals (see for a review, Insko & Schopler, 1998; Wildschut et al., 2003). In their meta-analysis of 130 studies on the discontinuity effect, Wildschut et al. found that interindividual interactions were often characterized by cooperation

choices whereas intergroup interactions resulted in competitive behaviors. Theorists interested in intergroup relations have characterized relations between groups by increased competitiveness and perceptions of out-group distrust (see further, Brewer & Miller, 1996; Tajfel, 1982). Researchers examining the discontinuity effect have argued that one particular reason groups are more competitive when playing a prisoners' dilemma against another group is because of a salient schema of out-group distrust (fear), that the out-group will behave competitively (see for a review, Insko & Schopler, 1998).

Two alternate explanations for why groups tend to compete more with one another as compared to individuals interacting in mixed-motive contexts are the greed hypothesis and the identifiability hypothesis. The greed hypothesis suggests that members of groups are more likely to receive social support from group members to behave in a self-interested manner, whereas this social support to behave selfishly is not available to individuals. The identifiability hypothesis argues that because group settings are more anonymous, people may be more prone to act self-interestedly because of the shield of anonymity provided by the group. In traditional mixed-motive games where groups must choose between only 2 options (cooperate or compete), it's unclear which of the three possible explanations (i.e., out-group distrust, greed, or identifiability) is responsible for increased intergroup competition. A choice to compete in a prisoners' dilemma could be caused by the desire to protect oneself from the risk of exploitation, or by an attempt to take advantage of the other group's potential cooperativeness.

To examine the degree to which out-group based distrust versus the greed or identifiability hypotheses are attributable to increased competition between groups, Insko, Schopler, Hoyle, Dardis, & Graetz (1990) examined how intergroup behavior changed when

playing a PDG-Alt. The PDG-Alt introduces a third choice to the traditional prisoners' dilemma, the choice to withdraw. If either party chooses to withdraw from play (i.e., not compete or cooperate) both parties receive an outcome between mutual cooperation and mutual competition (see Figure 5). When given the option of withdrawal, if groups are more likely to withdraw (choose Y), as compared to individuals, it would be presumably because they anticipated that the other group would be choosing to compete (choose Z). However, if groups are not more likely to withdraw (choose Y), but instead are more likely to compete (choose Z), this would suggest that group-based distrust is not a plausible explanation for the discontinuity effect.

Research employing the PDG-Alt matrix has demonstrated that groups withdraw *and* compete more as compared to individuals, suggesting that instead of just one mechanism which promotes intergroup competition, multiple mechanisms (i.e., Out-group distrust and Greed) lead to reduced intergroup cooperation (Insko et al. 1990; Schopler et al. 1993, 1995). Schopler et al. (1995) also found that when groups discussed concerns that the other group would behave competitively, they tended to withdraw rather than compete or cooperate. This suggests that the presence of a schema (i.e., that other groups are likely to be competitive), promotes distrust (see for a review Insko & Schopler, 1998).

The tendency for groups to behave competitively, rather than cooperatively, toward one another has long been proposed as an axiom of intergroup behavior (e.g., Brewer, 1979; Brewer & Brown, 1998; Sherif, Harvey, White, Hood, & Sherif, 1961; Sherif 1966; Tajfel, 1982; Tajfel & Turner, 1986). When salient distinctions between groups are established, people begin to view others outside of their own group as being less honest, cooperative, and trustworthy as

compared to members of their own group (Brewer, 1981). Much of the research examining why groups tend to behave competitively toward one another is based on the logic of social categorization and social identification theories (Tajfel & Turner, 1986). The primary empirical basis supporting these theories is the Minimal Group Paradigm (MGP) which uses random assignment ostensibly based on arbitrary characteristics, like over- or underestimation of dots, to establish clear, separate groups (Tajfel, Billig, Bundy, & Flament, 1971). Many MGP studies have measured how participants allocate a fixed quantity of resources between other participants. Results consistently indicate that individuals tend to favor in-group members and discriminate against out-group members (Brewer, 1979; Brewer & Brown, 1998). Furthermore, the impact of mood has been shown to influence this bias in resource allocations. As compared to sad people, happy people have been shown to display more intergroup discrimination in their allocations (Forgas & Fieldler, exp 1, 1996). These results suggest that in settings where previous scripts exist which promote competitive intergroup behavior, positive mood may actually increase these competitive behaviors.

Experiment 3

As noted already, increased distrust of out-groups has been partially attributed to causing the *discontinuity effect* (Insko & Schopler, 1998). Both laboratory and field research has shown that groups express more distrust of other groups as compared to other individuals (Insko et al., 2005) and that people categorize their beliefs and memories of interactions with out-groups as being less trustworthy and more competitive than interactions with other individuals (Hoyle,

Pinkley, & Insko, 1989; Pemberton, Insko, & Schopler, 1996). Thus, the dynamics of in- and out-groups are tightly tied to issues of trust and distrust.

Clearly, individuals' moods might also influence these processes. In particular, heuristic-reliance suggests that positive mood should exacerbate individuals' distrust of out-group members as well as their trust of in-group members. Given that positive mood has been shown to increase heuristic-reliance in small groups (Kelly, 2006), it was expected that groups in a positive mood would be more likely to distrust other groups than neutral mood groups. Thus, in Experiment 3, I adapted the Trust Game for groups so that I could investigate the effects of positive or neutral moods on trusting choices in intergroup as well as interpersonal interactions.

Method

Participants and Design

One-hundred and eighty undergraduates (57% female) participated from a large Midwestern university. They each received \$10 for their time and were informed that their decisions might earn them more. Each was randomly assigned to one of four conditions: 2(Setting: Interpersonal vs. Intergroup) x 2(Mood: Positive vs. Neutral).

Procedure

In a private room, participants completed their consent forms and viewed either *Mrs. Doubtfire* (i.e., positive mood) or a clip on the history of golf (i.e., neutral mood), supposedly for another researcher's future research. Each participant in the *interpersonal* conditions viewed the clip alone; same-gender 3-person groups viewed the clip together in the *intergroup* conditions.

After the video clip, everyone learned that a lottery at the end of the experiment would identify several participants who would receive the actual dollar amounts from their Trust Game in addition to their participation fee. Participants then saw the standard instructions about the Game (i.e., participants could send \$0-\$10; this amount would triple). As in Experiment 2, all participants were senders; in the interpersonal conditions, they were told that the receiver was another participant in a nearby room.

Participants in the intergroup conditions were all members of 3-person sender groups who would choose whether to send money to another 3-person group. They were told that, if their group was selected in the lottery, each of them would receive the amounts at play in the exercise. In other words, they would not split the total; instead, if the group ended up with \$x, each group member would receive \$x.

Participants wrote the amount of money they wished to send (\$0-\$10) on a form and placed it in a sealed envelop for the experimenter to deliver to the receiver (See Appendix D). They then completed a post-task questionnaire, were checked for suspicion, debriefed, and thanked.

Results

As in Experiment 2, initial analyses indicated that gender neither interacted with either of the manipulated variables, nor was gender effect found to have a main effect on the amount of money sent, so data from males and females were pooled together. Amounts sent were analyzed in a 2(Setting: Interpersonal vs. Intergroup) x 2(Mood: Positive vs. Neutral) between-participants ANOVA. As anticipated, individual senders sent significantly more money to individuals ($M =$

\$6.89, $SD = 3.35$) than groups sent to groups ($M = \$5.16$, $SD = 3.53$), $F(1, 84) = 5.46$, $p < .05$, $d = .50$.

The main effect for mood, predicted by mood-congruency, was not significant, $F(1, 84) = .02$, $p = .89$, $d = .04$. The interaction, predicted by heuristic-reliance, however, was significant, $F(1, 84) = 4.03$, $p < .05$ (see Figure 4). Individuals in a positive mood sent more but not significantly more money ($M = \$7.65$, $SD = 3.24$) than individuals in a neutral mood ($M = \$6.09$, $SD = 3.37$), $t(43) = 1.56$, $p < .13$, $d = .47$. In contrast, positive mood groups sent less but not significantly less money ($M = \$4.50$, $SD = 3.32$) than groups in a neutral mood ($M = \$5.86$, $SD = 3.70$), $t(41) = 1.27$, $p < .22$, $d = .39$. Although neutral mood groups sent an average of only 23 cents less than individuals in a neutral mood, individuals in a positive mood sent an average of \$3.15 more than groups in a positive mood $t(43) = 3.22$, $p < .01$, $d = .98$ (see Table 3 for means and standard deviations).

Discussion

The findings of this experiment suggest that, although a positive mood may help to increase trust for individuals' interactions, positive mood may actually harm trust in intergroup interactions. These results are also consistent with the findings of the first three experiments: they continue to support heuristic-reliance over mood-congruency.

Although these findings suggest that positive mood may have accentuated one group's distrust of another, a positive mood might have also accentuated intergroup competition. In other words, groups in a positive mood may have sent less because they wanted to ensure that they would receive more than the other group. This could also be conceptualized as a form of in-

group favoritism. Studies have consistently found, for instance, that people frequently favor in-group members and discriminate against out-group members when they allocate resources (see Brewer, 1979; Brewer & Brown, 1998 for reviews). In addition, research has shown that, compared to people in a negative mood, people in a positive mood display more intergroup discrimination in their allocations (Forgas & Fiedler, 1996; see Wilder & Simon, 2001 for a review). Moreover, supporting this logic is research by Hertel and Kerr (2001) which showed that in-group favoritism is a heuristic that people rely upon in intergroup settings. Thus, Experiment 4 investigated whether positive mood increased intergroup distrust or in-group favoritism (or both).

Experiment 4

A typical discontinuity effect experiment focuses on the frequency of non-cooperative choices by groups and individuals in a prisoners' dilemma game (Wildschut et al., 2003). These non-cooperative choices, however, can be interpreted as either attempts to do better than one's counterpart or as attempts to avoid the lowest possible outcome. To assess the unique impact of out-group distrust, Insko, Schopler, Hoyle, Dardis, and Graetz (1990) examined how intergroup behavior changed when groups interacted in a revised version of the prisoners' dilemma, the PDG-Alt. The PDG-Alt gives each party an additional choice in the game: they can cooperate, compete, or *withdraw*. If either party withdraws, both parties receive a moderate outcome, less than the mutually cooperative but more than the mutually competitive outcome (see Figure 5).

Withdrawal is an excellent choice for a party that expects its counterpart to compete. Thus, it is a clear indication of distrust. (The choice to compete in a PDG-Alt, in contrast,

suggests opportunism or greed.) As noted earlier, research employing the PDG-Alt (Insko et al., 1990; Schopler et al., 1993, 1995) has consistently demonstrated that groups withdraw *and* choose to compete more than individuals, suggesting that two factors, out-group distrust and greed, contribute to the observed reductions in intergroup cooperation.

A heuristic-reliance model, which suggests that happy parties will distrust others more than neutral parties, suggests therefore that happy parties (individuals or groups) who are facing an out-group will withdraw more than neutral parties will in a PDG-Alt. Alternatively, a positive mood might increase feelings of competition, leading to more competitive choices. Experiment 4 explicitly tests these two possibilities by investigating individuals in either positive or neutral moods facing an out-group member in a PDG-Alt.

Method

Participants and Design

Fifty undergraduate participants (82% Female) from a large Midwestern university participated. They each received \$10 for their time and were informed that their decisions might earn them more. Each was randomly assigned to either a positive or neutral mood condition.

Procedure

In a private room each participant completed a consent form and a one-item questionnaire asking them to “circle the political party that you most identify with (Democrat or Republican).” They were then informed that they would be doing several tasks; some concerned with how political attitudes influenced decision-making. Participants then completed an Attitude Survey

measuring how strongly their views aligned with the Democratic or Republican Party as well as their political views on ten issues such as handgun control, affirmative action, and abortion. To accentuate their political identity, each participant was also asked to write a short “political identification” paragraph: “Please take about five minutes to write down why you identify with your political party. Try to describe how you came to your current views and why you support your party, and what you think is the best thing about your party.”

Then they completed several unrelated tasks, the last being the mood manipulation used in Experiment 2, writing about a happy event and then listing 3 things that made them happy or writing about a typical afternoon and then listing 3 things that they typically do each afternoon.

Participants were then introduced to an interactive decision making task (the PDG-Alt). They were told that they would never meet their counterpart (who did not actually exist) and that several people would be randomly selected to receive monetary payoffs based on their decisions. Their counterparts always affiliated with the other political party, which they learned when they were told “You’ve been randomly paired with another student here ID DEM-324 (or ID REP-324).”

They also received the payoff matrix (see Figure 5) and a description of the procedure, i.e., that outcomes depended on both parties’ choices. After participants made their choices, they answered a brief questionnaire, were checked for suspicion, paid, debriefed, and thanked.

Results

The positive mood condition led to significantly fewer cooperative choices than the neutral mood condition (see Table 4), $\chi^2(1, N = 50) = 4.16, p < .05, d = .59$, but significantly

more withdrawals, $\chi^2(1, N = 50) = 3.95, p < .05, d = .57$. No differences emerged when comparing competitive choices. There was neither a main effect for gender nor did gender interact with mood.

Discussion

Happy people paired with an out-group member cooperated less than emotionally neutral participants. More importantly, they also withdrew from the game more than emotionally neutral people. Because withdrawal choices signal distrust (Insko & Schopler, 1998), these data provided additional evidence that positive mood can increase distrust toward out-group members. These findings are consistent with the data obtained in Experiment 3, in which happy groups sent less money than neutral groups. Moreover, these findings suggest that positive mood can increase behavioral distrust in intergroup settings, in addition to increasing intergroup discrimination (e.g., Forgas & Fiedler, 1996).

Meta-Analytic Integration of Findings

Combining the data from multiple experiments allows for more powerful tests (Rosenthal, 1991). Because many of the experiments in the current paper were based on the behaviors of senders in the Trust Game, I analyzed the combined effects of the positive and neutral mood conditions. In both Experiments 1 (i.e., where participants in either a positive or neutral mood played the Trust Game with another person who ostensibly had a high-trustworthiness rating) and 3 (i.e., where participants were simply paired with another individual), participants in either a neutral or positive mood were assigned to the role of sender

in the Trust Game and were asked to send money to an unknown individual. This first meta-analysis compared the data from these two mood conditions to examine if, in interpersonal settings, positive mood increased behavioral acts of trust (i.e., money sent in the Trust Game). Combining data from identical conditions in these two experiments and comparing across mood conditions led to a significant effect, *Stouffer's* $z = 2.29$, $p = .01$, $d = .47$, indicating that when cues existed to promote trust, people in a positive mood displayed more trusting behaviors than people in a neutral mood.

A second meta-analysis added data from Experiment 2 (i.e., where participants evaluated the trustworthiness of a trustworthy looking face in either a positive or neutral mood). The addition of these data from Experiment 2 bolstered the findings of the first meta-analysis, *Stouffer's* $z = 2.80$, $p < .01$, $d = .45$.

A third meta-analysis examined the relationship between positive mood and distrust in the Trust game. In Experiments 1 and 3, participants in either a positive or neutral mood were assigned to the role of sender in the Trust Game, and were asked to send money to another party in a context where the available heuristics encouraged distrust. This meta-analysis yielded a significant finding, *Stouffer's* $z = 1.87$, $p = .03$, $d = .37$, indicating that, as compared to people in a neutral mood, people in a positive mood significantly reduced their trusting behaviors (i.e., money sent in the Trust Game) when paired with a potentially untrustworthy party.

A fourth meta-analysis included data from Experiments 2 & 4 to the data used in the above analysis. Hence, this fourth meta-analysis combined data from all of the experiments in this dissertation to examine if positive mood could increase distrust when various cues about the

target promoted distrust. As anticipated, the combining of these data led to a significant finding, Stouffer's $z = 3.37$, $p < .001$, $d = .47$.

CHAPTER 5

General Discussion

The current findings suggest that the relationship between positive mood and trust is more complicated than the main effect predictions of mood-congruency models. Rather than simply increasing trust, situational factors determined whether positive mood led to increased or decreased trust. In particular, heuristics which encouraged or inhibited trust appear to have influenced trusting behaviors in these studies. When heuristics promoted trust, people in a positive mood *increased* their trusting behavior; when heuristics promoted distrust, people in a positive mood *decreased* their trusting behaviors. These findings are consistent with work that has demonstrated that a positive mood increases the use of negative stereotypes compared to neutral and sad moods (Bless et al., 1996; Bodenhausen et al., 1994), and with work demonstrating that positive mood increases the reliance on the behaviors of others in mixed-motive settings (Hertel et al., 2000). More pointedly, the findings from the four experiments conducted in this dissertation supported the predictions of heuristic-reliance over mood-congruency. This leads to a fairly strong suggestion that the relationship between positive mood and trusting behaviors probably depends, in large part, on available schemas, cues, and stereotypes.

The current findings also suggest how positive mood can influence intergroup relations. Contrary to lay expectations that positive mood should help intergroup relations, people in a positive mood displayed less trust in out-group members than people in a neutral mood. Thus,

behavioral evidence now suggests that positive mood, if managed incorrectly, can actually hurt rather than help intergroup relations.

The current data also contribute to the empirical and theoretical foundations of the discontinuity effect (see Schopler & Insko, 1998; Wildschut et al., 2003 for reviews), showing that positive mood can increase trust in interpersonal settings but decrease trust in intergroup settings. In other words, positive mood exacerbated the magnitude of the discontinuity effect. In line with heuristic-reliance, I conclude that these effects result from increased reliance on a trust bias (trust-schemas) that encourage trust in interpersonal settings and increased reliance on the distrust of out-groups (distrust-schemas) that encourage distrust in intergroup settings. It is also important to note that positive mood does not always increase trust in interpersonal settings: a positive mood led to less trust in interpersonal settings when salient cues were associated with distrust-schemas. For example, as compared to people in a neutral mood, people in a positive mood trusted others less (Experiments 1 & 4) and had reduced propensities to trust (Experiment 2) in other individuals when available cues promoted distrust.

Although none of the current studies showed that positive mood increased trust in intergroup settings, future research might explore whether salient trust-cues can promote trusting behaviors. Research on the Common Ingroup Identity Model (Gaertner, Mann, Murrell, & Dovidio, 1989), for instance, has shown that highlighting a superordinate identity can reduce intergroup bias via recategorization, leading people to view former out-group members as in-group members. Moreover, positive mood has facilitated recategorization when shared group membership cues are available (Dovidio, Gaertner, Isen, & Lowrance, 1995; Dovidio, Gaertner, Isen, Rust, & Guerra, 1998). For example, when a superordinate identity was made salient (i.e.,

university affiliation), Dovidio et al. (1998) found that a positive mood led to reports of less intergroup bias than a neutral mood. When the superordinate identity was not made salient, however, a positive mood still led to greater intergroup bias than a neutral mood. Thus, although positive mood has exacerbated intergroup discrimination (Forgas & Fiedler, 1996) and, in the current research, intergroup distrust, highlighting group members' shared identity could reduce or even eliminate these effects. This is an important question that future research may seek to investigate.

Implications for Conflict Resolution

The current findings also have important implications for understanding the effects of positive mood on conflict resolution. To date, conflict resolution research has examined how positive mood influences cooperative and competitive negotiation strategies (Baron, 1990; Carnevale & Isen, 1986; Forgas, 1998). Although the findings suggest that positive mood increases cooperation (but see Hertel et al., 2000), it's important to note that these studies have exclusively focused on interpersonal interactions, i.e., conditions that promote a trust-bias. This suggests that the results of these investigations might be quite different in the presence of distrust-schemas. This expectation is consistent with Forgas (1998), who found that a positive mood increased cooperative strategies when people worked with an in-group member but not with an out-group member.

Also, consistent with Thompson, Nadler, and Lount's (2006) contention that heuristic-reliance can impede conflict resolution, positive mood could interfere with conflict resolution when parties already distrust each other. Thus, conducting tense peace negotiations between

distrusting parties (e.g., two nations at war with one another) at an excessively comfortable or lavish setting (e.g., Versailles) might inadvertently accentuate available biases present in difficult negotiations (Ross & Stillinger, 1991). One hopes that experienced negotiators could move beyond these effects to make progress, but this also suggests that future research might investigate whether people actually realize how positive mood affects them in tense interactions. It is not yet apparent whether they do.

Professional mediators, then, who often want to improve the relationship between competing, mistrustful disputants, might think twice before inducing positive moods in an effort to improve trust. The findings of this dissertation suggest that third parties who are interested in increasing interpersonal trust between two conflicting parties should pay careful attention to cues which signal trustworthiness/distrust. If, for instance, only one party is experiencing a positive mood, it could be critical to highlight the other party's trustworthy features and simultaneously reduce untrustworthy cues or associations.

Implications for Trust Development

The current findings also contribute to understanding how affect can influence trust development. Because models of trust development have traditionally focused on the cognitive influences on trust (see Kramer, 1999; Lewicki et al., 2006, for reviews), less research has addressed affective influences (see Dunn & Schweitzer, 2005; Lount & Murnighan, 2005 for exceptions). Although prior models suggest that cognitive antecedents can increase affective antecedents (e.g., McAllister, 1995), the current findings suggest that this relationship can be

reversed, with affect (positive mood) accentuating cognitions (e.g., reliance on cues which promote trust/distrust).

Moreover, the current findings provide additional support for recent models which entertain the possibility of strangers trusting each other, quickly (Messick & Kramer, 2001; Meyerson et al., 1996) or precipitously (Weber et al., 2005). Although rational models argue that trusting behaviors should result from careful, deliberative processing, Messick and Kramer's *shallowness hypothesis* argues that trusting decisions are often made quickly as the result of available, trusting cues. The current findings indicate that trusting decisions can be heavily influenced by salient cues about the social target, especially for people in a positive mood. The data also suggest that, although *swift trust* (Jarvenpaa & Leidner, 1999; Meyerson et al., 1996) may occur when a trust-schema is associated with the social target (i.e., in-group members), *swift distrust* may occur when a distrust-schema is associated with the target (i.e., out-group members).

Limitations

Although the current project found behavioral evidence in several studies to suggest that the relationship between positive mood was moderated by trustworthiness cues about the other party, the current project is not without limitations. For example, although these data provide evidence to suggest that mood-congruency models are insufficient to explain the relationship between positive mood and trust, one could suggest that it may be premature to suggest that heuristic-reliance is completely responsible for the effect. Because the measures of heuristic-processing did not statistically mediate the relationship between positive mood and trust/distrust,

one could conceivably argue that the current project has not sufficiently demonstrated that heuristic-reliance is responsible for the effects seen in the current paper. Although the data and theory are consistent with the predictions of heuristic-reliance based models, one could argue that the current findings may be in support of mood-maintenance models, which propose that people desire to maintain their positive mood, and avoid making decisions to reduce their positive mood. For instance, a supporter of mood-maintenance models could argue that people who were in a positive mood sent less money to a potentially untrustworthy partner, because they wanted to minimize the risk of losing their money, which would decrease their positive mood. Although this could have logically occurred, it is unclear why a mood-maintenance model would predict that people in a positive mood would take the risk to lose their money and send more money than neutral mood people to a potentially trustworthy partner. Sending one's money to another unknown person seems like an unnecessary risk if one is primarily motivated to sustain their positive mood.

Conclusion

The current exploration investigated the relationship between positive mood and trust. The findings consistently supported the predictions of heuristic-reliance models (Bless, 2001; Bodenhausen et al., 2001; Fiedler, 2001): as compared to being in a neutral mood, people in a positive mood displayed more trust when available schemas and cues encouraged trust, and less when available schemas and cues encouraged distrust. In a broad sense, the data indicate that trusting or distrusting actions depend not just on affect, but on a rational combination of cognitive and affective information.

Tables

Table 1

Experiment 1: Means and Standard Deviations for Amount of Money Sent in Trust Game

Participant Mood	Other Party Trustworthiness	
	Low	Hi
Positive Mood		
<i>M</i>	3.66	7.09
<i>SD</i>	3.01	2.66
<i>n</i>	32	35
Neutral Mood		
<i>M</i>	4.73	5.85
<i>SD</i>	3.33	3.35
<i>n</i>	33	34

Table 2

Experiment 2: Means and Standard Deviations for Trustworthiness Ratings

Participant Mood	Other Party Trustworthiness	
	Low	Hi
Positive Mood		
<i>M</i>	4.07	5.49
<i>SD</i>	0.99	0.97
<i>n</i>	33	31
Neutral Mood		
<i>M</i>	4.61	5.06
<i>SD</i>	1.04	1.09
<i>n</i>	32	33

Table 3

Experiment 3: Means and Standard Deviations for Amount of Money Sent in Trust Game

Participant Mood	Setting	
	Intergroup	Interpersonal
Positive Mood		
<i>M</i>	4.50	7.65
<i>SD</i>	3.32	3.24
<i>n</i>	22	23
Neutral Mood		
<i>M</i>	5.86	6.09
<i>SD</i>	3.71	3.24
<i>n</i>	21	22

Table 4

The percentages of the three choices in the PDG-Alt for neutral and positive mood participants in Experiment 4 (Standard Deviations in parentheses).

Choice:	Neut. Mood	Pos. Mood	Chi-Square
Cooperate (X)	52% (.51)	24% (.44)	$\chi^2=4.16, p < .05, d = .59$
Withdraw (Y)	32% (.48)	60% (.50)	$\chi^2=3.95, p < .05, d = .57$
Compete (Z)	16% (.37)	16% (.37)	$\chi^2=0.00, p=ns, d = .00$

Figures

Figure 1: The payoff matrix in a standard Prisoners' Dilemma.

(X = Cooperate, Z = Compete)

	X	Z
X	10 10	15 0
Z	0 15	2 2

Figure 2: Mean amounts of money sent (\$) in the Trust Game in Experiment 1

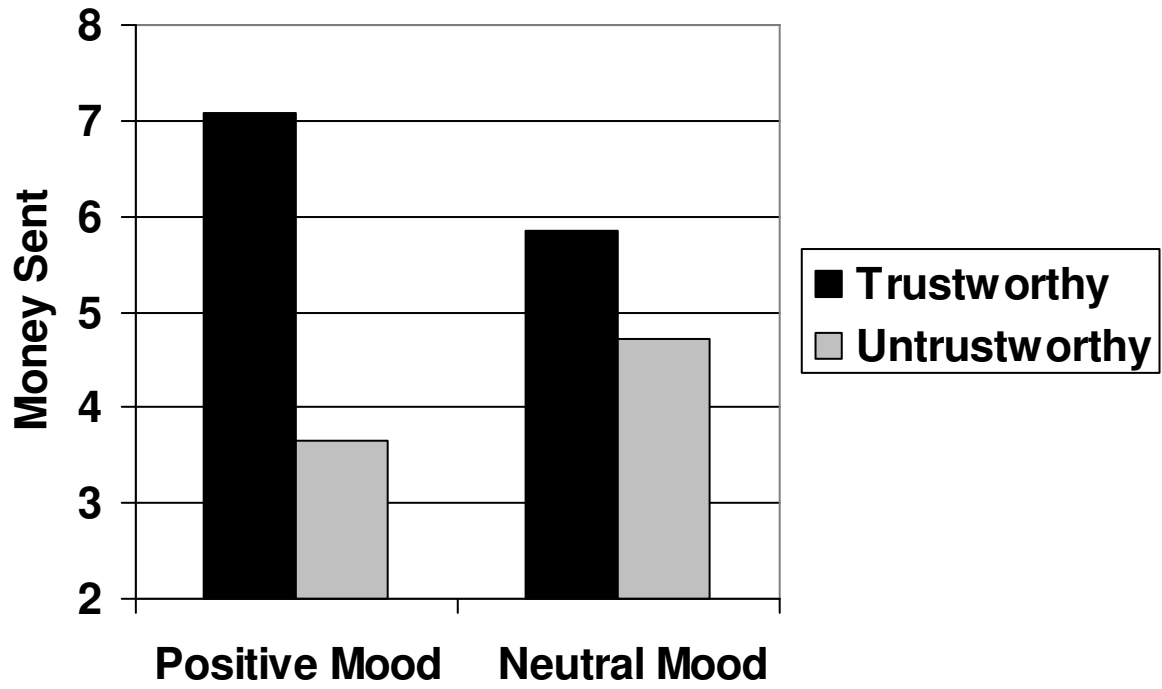


Figure 3: Trustworthiness ratings in Experiment 2

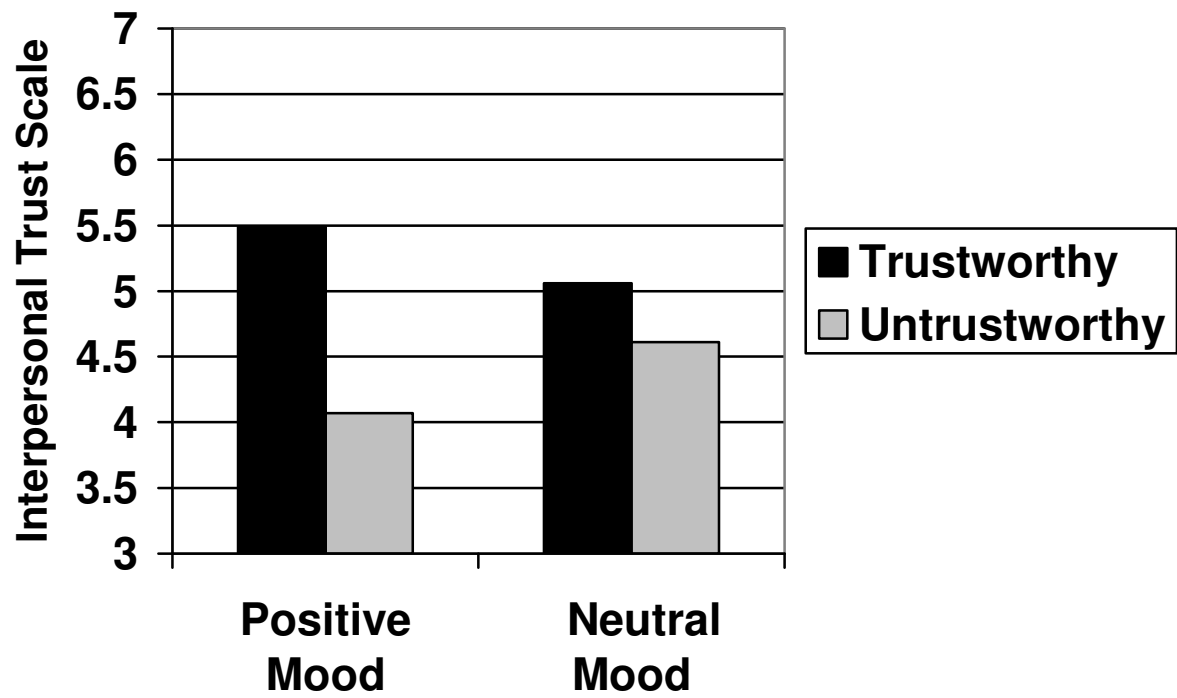


Figure 4: Mean amounts of money sent (\$) in the Trust Game in Experiment 3

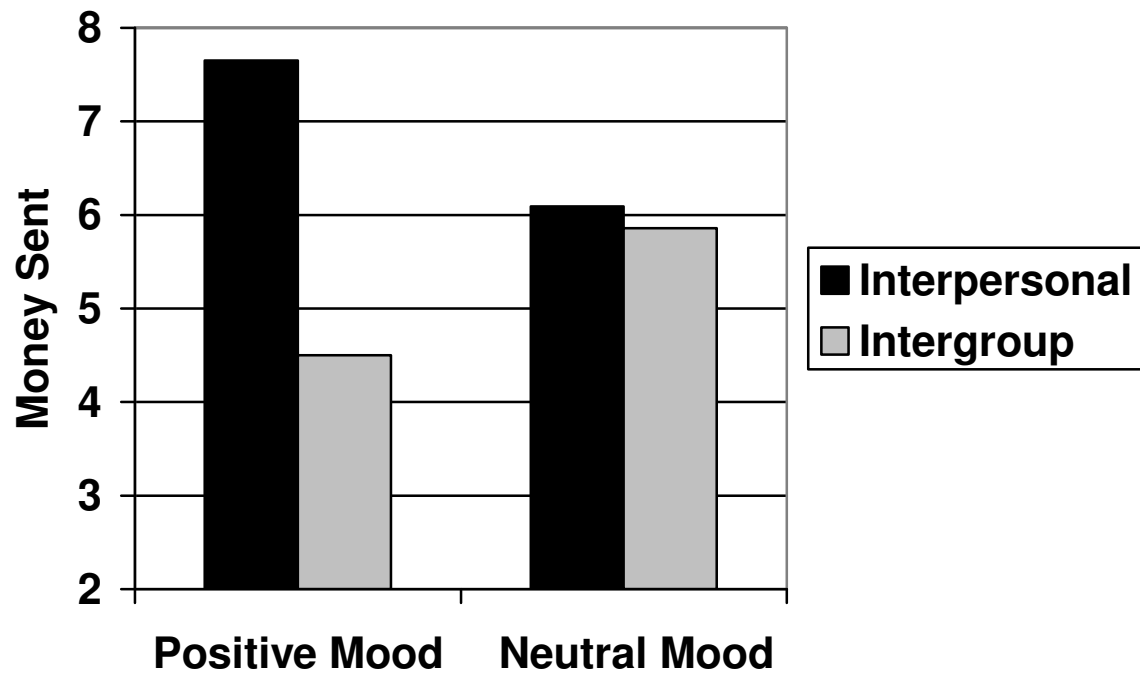


Figure 5: The payoff matrix for the Prisoners' Dilemma ALT.

(X = Cooperate, Y = Withdraw, Z = Compete)

	X	Y	Z
X	10 10	6 6	15 0
Y	6 6	6 6	6 6
Z	0 15	6 6	2 2

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Appendices

APPENDIX A:

Positive Mood Prime used in Experiments 2 and 4

Please take a moment to write about a situation in which you were really happy. Think carefully, and then describe the event that made you happy, and why.

Please list 3 events or things that make you happy:

1) _____

2) _____

3) _____

Neutral Mood Prime used in Experiments 2 and 4

Please take a moment to write about one of your most typical afternoons, and describe the afternoon, and why it's so typical.

Please list 3 afternoon events that are typical for you:

1) _____

2) _____

3) _____

APPENDIX B:

Experimental materials (trustworthy version) used in Experiment 2



Based on the person in the photo above, please answer the following questions:

1) I would give him an important letter to mail after he mentions that he is stopping by the post office today.

1 2 3 4 5 6 7 8 9
Not at all likely Very Likely

2) If he promised to copy a presentation for me, he would follow through.

1 2 3 4 5 6 7 8 9
Not at all likely Very Likely

3) If he and I decided to meet for coffee, I would be certain he would be there.

1 2 3 4 5 6 7 8 9
Not at all likely Very Likely

4) I would expect him to tell me the truth if I asked him for feedback on an idea related to my job.

1 2 3 4 5 6 7 8 9
Not at all likely Very Likely

5) If he was late to a meeting, I would guess there was a good reason for the delay.

1 2 3 4 5 6 7 8 9
Not at all likely Very Likely

6) He would never intentionally misrepresent my point of view to others.

1 2 3 4 5 6 7 8 9
Not at all likely Very Likely

APPENDIX C:

Instructions for Trust Game in Experiment 3 (Interpersonal condition)

Person 1

This is the situation— you will start the experiment with \$10 real money. You will be paired with another participant. Let's call them person 2; you will be called person 1. We won't be telling you who this other person is and we will not tell them who you are. You will never meet or see them or ever find out who they are.

You can send them some, all, or none of the \$10. Each dollar that you send will be tripled. For example, if you send them \$1, it will be tripled and they will receive \$3. If you send \$9, it will be tripled, and they will receive \$27. If you send \$0, then they will receive \$0.

Person 2, in turn will decide how much money to send back to you. They can choose to send some, all, or none of the money that they have received. Remember, they will have three times the amount that you sent them. In the end, you will have (1) what you have retained of the original \$10 plus (2) however much they send back. They will keep what you sent to them, times 3, minus whatever they send back to you. You will not have another opportunity to send any money back to them, nor will you complete any more trials with this other person. At the end of today's experiments, several people will be randomly selected and awarded the actual monetary amount of money earned through this interaction.

The form for making your \$ decision is in this envelope. Please take it out, fill it out, and return it to the envelope. Don't mark the outside of the envelope—this will keep everything anonymous. After placing the form back into the envelope, slide the envelope under the door for the experimenter to pick up and deliver to person 2.

Instructions for Trust Game in Experiment 3 (Intergroup condition)

Group 1

This is the situation— you will start the experiment with \$10 real money. You will be paired with another Group. Let's call them Group 2; you will be called Group 1. We won't be telling you who this other group is and we will not tell them who you are. You will never meet or see them or ever find out who they are.

You can send them some, all, or none of the \$10. Each dollar that you send will be tripled. For example, if you send them \$1, it will be tripled and they will receive \$3. If you send \$9, it will be tripled, and they will receive \$27. If you send \$0, then they will receive \$0.

Group 2, in turn will decide how much money to send back to you. They can choose to send some, all, or none of the money that they have received. Remember, they will have three times the amount that you sent them. In the end, you will have (1) what you have retained of the original \$10 plus (2) however much they send back. They will keep what you sent to them, times 3, minus whatever they send back to you. You will not have another opportunity to send any money back to them, nor will you complete any more trials with this other person.

At the end of today's experiments, several groups will be randomly selected and awarded the actual monetary amount of money that they have earned through this interaction. If your group is picked, each member will receive the exact amount earned in this study. For instance if your group earned \$8, each person would receive \$8. Likewise, if the final outcome was \$15, each member would receive \$15.

The form for making your \$ decision is in this envelope. Please take it out, fill it out, and return it to the envelope. Don't mark the outside of the envelope—this will keep everything anonymous. After placing the form back into the envelope, slide the envelope under the door for the experimenter to pick up and deliver to Group 2.

APPENDIX D:

Monetary exchange form used in Experiment 3 (interpersonal conditions)

Person 1 starts with this form in an unmarked, brown, envelope. S/he will fill in the first two blanks, which identify how much of the original \$10 s/he will send to person 2, and the tripled total.

Person 2 will fill in how much they return.

Note: *Only write in the monetary amounts, please do not write down any thing else.*

Person 1:

You are Person 1. You start with \$10. Remember, you may send as much or as little of this money to Person 2 as you wish. However much you send will be tripled, and Person 2 will then choose how much of that total they will return to you. (Note: however much they return will not be tripled.)

Your decision, i.e., how much you will send to Person 2 \$ _____

Tripled, this will total \$ _____

Person 2:

As you can see, Person 1 has sent you the amount listed above, and it has been tripled.

You now choose how much to send back to them (it will not be tripled as it returns to player 1).

How much do you send back to Person 1 \$ _____

This means that you retain \$ _____ .

(As a check, be sure that these two numbers equal the tripled total listed above.)

Monetary exchange form used in Experiment 3 (intergroup conditions)

Group 1 starts with this form in an unmarked, brown, envelope. They will fill in the first two blanks, which identify how much of the original \$10 they will send to Group 2, and the tripled total.

Group 2 will fill in how much they return.

Note: *Only write in the monetary amounts, please do not write down any thing else.*

Group 1:

You are Group 1. You start with \$10. Remember, you may send as much or as little of this money to Person 2 as you wish. However much you send will be tripled, and Group 2 will then choose how much of that total they will return to you. (Note: however much they return will not be tripled.)

Your decision, i.e., how much you will send to Group 2 \$ _____

Tripled, this will total \$ _____

Group 2:

As you can see, Group 1 has sent you the amount listed above, and it has been tripled.

You now choose how much to send back to them (it will not be tripled as it returns to Group 1).

How much do you send back to Group 1 \$ _____

This means that you retain \$ _____ .

(As a check, be sure that these two numbers equal the tripled total listed above.)

APPENDIX E:

Study Materials used in Experiment 4

Decision Making Exercise

You've been paired with another student here (ID _____), to participate in a decision making exercise. We will randomly be awarding several people the actual dollar amount based on their decisions on the following task, and winners will be notified at the end of this week. You will not be meeting the other person and neither of you will learn about each other's choice. Below are the payoffs and a brief description to show how outcomes can be influenced by the combination of your choice and the other person's choices:

	X	Y	Z
X	10 10	6 6	15 0
Y	6 6	6 6	6 6
Z	0 15	6 6	2 2

Examples of possible outcomes:

1. If both people both choose 'X', each person would receive \$10
2. If both people choose 'Z', each person would receive \$2.
3. If one person chooses 'Z' and the other person chooses 'X', the person who chooses 'Z' would receive \$15 while the person who chooses 'X' would receive \$0.
4. If either person chooses Y, both people would receive \$6.

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PAPERS:**Journal Articles:**

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SELECTED CONFERENCE PRESENTATIONS:

Lount, R. B., Jr., & Murnighan, J. K. "The impact of positive mood on trust in interpersonal and intergroup interactions" Paper to be presented at the Social Dilemmas Conference in Seattle, WA., July, 2007

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*(*Best Paper Finalist & Best Paper Proceedings*)

Lount, R. B., Jr. "Target trustworthiness as a moderator of the relationship between happiness and interpersonal trust" Paper presented at the International Association of Conflict Management, Montreal, Canada, June, 2006.

Phillips, K. W., & Lount, R. B., Jr. "Affective consequences of diversity in groups" Paper presented at the Annual Groups and Teams Conference, Palo Alto, CA., May, 2006.

Lount, R. B., Jr., & Phillips, K. W. "Working harder with the out-group: The impact of coworker similarity on motivation gains." Paper presented at the Academy of Management, Honolulu, HI., Aug, 2005.

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