

ABSTRACT

Title of dissertation: FACTORS AFFECTING ENTRAPMENT BIAS:
JUSTIFICATION NEEDS, FACE CONCERNS
AND PERSONAL NETWORKS

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This study explores the link between the entrapment bias and the concept of face (self- and other-positive) and internal and external justification processes. It examines how face-saving concerns and justification needs moderate the entrapment bias in accountability condition (i.e., presence of constituencies and reporting requirements). In addition, this research examines whether the size and influence of personal networks is associated with face-saving behaviors that, in turn, affect entrapment. The research also explores whether overall face concerns have an effect on internal and external self-justification. Finally, the study explored messages used by individuals in a scenario potentially leading to entrapment.

Respondents in the study were 236 undergraduate students majoring in communication enrolled in a large East Coast university. Study participants were assigned to one of the four conditions: (1) constituency, reporting; (2) constituency, no reporting; (3) no constituency; reporting; (4) no constituency; no reporting.

The current investigation did not support the findings from previous studies that suggest that justification processes and face concerns lead to entrapment. This study

found that only internal self-justification and other-positive face concerns are related to entrapment, but instead of contributing to entrapment, these aspects prevent individuals from becoming entrapped. Personal networks were demonstrated to have positive effect on both self- and other-positive face concerns, providing empirical support for the value of using personal networks as a predictor of face goals. However, personal networks did not contribute to entrapment. Finally, the study examined messages used by individuals in a situation leading to entrapment, suggesting that when individuals try to explain their behavior, they tend to use causal accounts.

Overall, this study has made a contribution to the field of communication by identifying processes and conditions (e.g., concern for other-positive face, internal self-justification, reporting requirement, no direct observation by constituency, keeping clear record of performance success or failure) that may prevent entrapment bias from occurring. These processes and conditions could potentially improve the outcomes of negotiation with the use of effective communication strategies.

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CONCERNS AND PERSONAL NETWORKS

by

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DEDICATION

This dissertation is dedicated to the memory of my father, Alexander Karavanov.

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As with any milestone, there are always many people who make the accomplishment possible. It is unlikely that I can name all of the people who have contributed to the accomplishment. Thank you. As this experience comes to an end, I'm amazed that I still have a husband, family and friends who are all still talking to me. Thank you for seeing me through endless frustrations, grumpiness and bouts of irritability. And a very special "thank you" to Dr. Deborah Cai, my advisor. Thank you so much for your support and guidance.

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CHAPTER 1

Overview

A woman decides to wait for a bus rather than walk. With the decision to wait for the bus and time invested in doing so, the woman waits for such a long time that she could have walked to the destination and back again by the time the bus finally arrives. This situation exemplifies the entrapment bias, when individuals continue to incur costs to achieve their objectives instead of changing their behavior.

The entrapment bias is the tendency of people to assume that the more resources are expended, the closer they are to attaining their desired goal (Rubin, Kim, & Peretz, 1990). In research, this phenomenon is referred to as sunk cost (Arkes & Blumer, 1985), entrapment or entrapment bias (Brockner, 1977), concord fallacy (Arkes & Ayton, 1999), and escalation of commitment (Staw, 1976, 1981). All of these terms refer to the same phenomenon, and in the research literature they are used interchangeably.

The phenomenon of entrapment has been observed and studied by scholars on different levels (i.e., macro, interpersonal and intrapersonal) and in different types of situations (e.g., waiting, bidding at an auction, gambling, decision making) to uncover variables and circumstances underlying the entrapment (Brockner, 1977; Schelling, 1960; Shubik, 1971; Staw, 1976). Responsibility levels, social motivations, information ambiguity, and observed rate of loss have been identified as some of the variables influencing conflict escalation (Rubin & Brockner, 1975; Staw, 1981; Teger, 1980).

The entrapment bias has been studied predominantly within business decision-making and organizational contexts, including negotiation (Neale & Bazerman, 1985). Negotiation is used in a wide variety of settings: policy and law formulation, fiscal

budgets and salary discussions, house settlements and establishment of children's curfews (Wall & Blum, 1991; Ways, 1979). Although many negotiators are able to achieve their desired outcomes, others fail to do so even when the parties involved have a *zone of agreement*; that is, when the maximum price the buyer is willing to offer is larger than the minimum price acceptable to the seller (Raiffa, 1982). This logic is applicable to a wide variety of negotiation contexts—not just buyer-seller interactions (Neale & Bazerman, 1985). Bazerman (1986) suggests that the entrapment bias could be one of the reasons why negotiators fail to achieve settlements.

This dissertation examines the link between the entrapment bias and the concept of face—the desire to create and sustain positive identity in front of others (Goffman, 1955)—and internal and external justification processes. Because negotiation often involves the presence of other people (i.e., constituency) who influence negotiators' performance (Gelfand & Realo, 1999), this dissertation explores how face-saving concerns and justification needs moderate the entrapment bias in the presence of constituencies. In addition, this research examines whether the size and influence of personal networks is associated with face-saving behaviors that, in turn, affect entrapment.

In this chapter the theoretical rationale for the study is provided and research hypotheses are outlined. Chapter 2 provides an overview of the research methods employed in the study. Chapter 3 presents the study results. The summary of the study, chapter 4 discusses the results and their implications, and identifies limitations of the research. In addition, directions for future research and its significance are provided in chapter 4.

Theoretical Rationale

Entrapment Bias

Theoretical Frameworks

Brockner (1992) defines escalation as “the tendency for decision makers to persist with failing courses of action” (p. 39). Fox and Hoffman (2002) outline five common characteristics that all escalation situations share. First, an individual is engaged in a goal-directed activity (e.g., problem-solving). Second, some type of resources (e.g., money, time, effort, or emotion) has been expended to achieve the goal. Third, expenditures have not brought the desired results. Fourth, a decision has to be made whether to continue or quit investing in the same course of action. And fifth, future prospects seem unlikely for making gains or even covering losses by continuing in the same path, yet the person continues the original course of action.

A number of explanations have been provided for the escalation of commitment, such as self-justification, prospect theory, decision dilemma and persistence. Staw (1976, 1981) used Festinger’s (1957) and Aronson’s (1968) theories of cognitive dissonance to suggest that individuals become entrapped because they feel the need to provide justification for their actions. The sources of justification could be either internal or external. With internal justification, the decision maker justifies to himself or herself that the decision to pursue the course of action was rational; withdrawal would indicate that the decision was inappropriate. With external self-justification, individuals want to appear rational or do not want to expose their mistakes to others, such as bosses or stakeholders.

Empirical evidence supports the self-justification explanation of entrapment. For example, studies conducted by Staw (1976), Staw and Ross (1987), Brockner and Rubin (1985), and Arkes and Blumer (1985) suggest that individuals tend to make investment decisions and stick to the chosen course of action so as not to appear wasteful and to appear consistent in their decisions. For example, Arkes and Blumer (1985) conducted a study in which they manipulated the cost of theater tickets for season subscribers. Some subscribers received discounts and others did not, and the tickets they received were discretely marked accordingly. The researchers counted ticket stubs after performances and the results showed that those individuals who paid full price were more likely to attend all of the plays or at least more plays than those individuals who purchased the discounted tickets.

Another theory used to explain the entrapment phenomenon is Kahneman and Tversky's (1979) prospect theory, applied to escalation by Whyte (1986). The theory suggests that a biasing effect occurs when individuals frame situations as losses or gains relative to some neutral reference point. The value function (or utility), which is in a shape of "S," is convex and steep in the domain of losses and concave in the domain of gains (see Figure 1). In other words, individuals are expected to be risk averse when they consider the situation (prospect) from the point of view of maximizing gains and risk-taking when they view the situation from the frame of minimizing losses. According to Whyte (1986), when using a loss frame, individuals feel compelled to recover the cost that they have lost even at the risk of losing more, thus becoming entrapped.

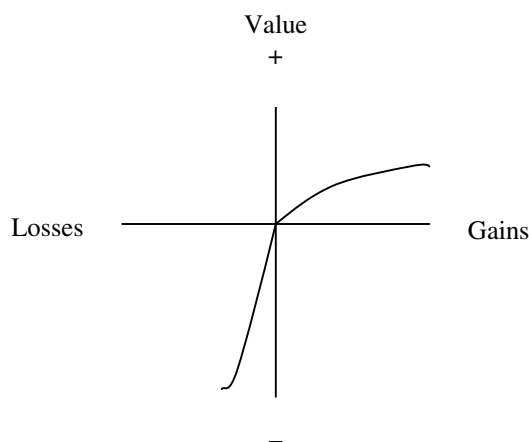


Figure 1. The proposed value function from prospect theory (Kahneman & Tversky, 1979).

Bazerman (1984) added responsibility to the prospect theory explanations of escalation. He indicated that individuals responsible for making an original decision that led to failure have a different frame of mind than those who are not responsible for the decision. The nonresponsible decision makers are at a neutral reference point of the curve, because they have not experienced any sunk costs. In contrast, the responsible decision makers tend to be on the losing end of the curve because they have expended resources with no return and must decide whether to withdraw or continue by risking further. The failure to reinvest is perceived as certain loss, therefore, the decision makers feel pressured to re-invest to try to avoid such certain loss.

Davis and Bobko (1986) conducted a study in which 50% of the participants were personally responsible for the initial funding decision and 50% were not. The researchers then manipulated the decision-making frame by providing the participants with information about a program that either was framed negatively as failing (i.e., “after 2 years of operation the program has failed to place 60.1% of all participants in either part-

time or full-time jobs”), or framed positively as a success (i.e., “after 2 years of operation the program has placed 39.9% of all participants in either part-time or full-time jobs”). Participants were then asked to make a decision to continue or terminate the program. The results of the study indicated that participants in the negative frame with personal responsibility for initial allocation conditions were more prone to entrapment than participants in the other three conditions. In other words, those participants both in the negative frame and personally responsible made the decision to continue with the program.

Bowen (1987) proposed that the entrapment phenomenon could be explained by the framework called *difficult business decision dilemma*. He suggested that because many studies do not provide clear negative feedback about initial allocation of resources (e.g., the project is a failure), the escalation demonstrated by research participants could be explained by a variety of motives such as their curiosity, desire to bring a project to fruition, or desire to learn about the problem. However, Brockner (1992) argued that some research that used self-report measures has shown that the research participants did think the feedback they received about the project was indeed negative (Brockner & Rubin, 1985).

Fox and Hoffman (2002) used motivation theories developed by Lewin (1935) and Atkinson and Raynor (1974) to offer another explanation of the escalation: that individuals desire to be persistent. In other words, people are goal driven and are motivated to accomplish their goals. Lewin’s theory involves psychological regions of tension, goal valence, or desirability, and psychological distance of the path to goal obtainment (how long or difficult is it to achieve the goal). The interaction between these

elements is used to explain the strength of motivational force driving the individual to achieve a goal. Achievement motivation theory, suggested by Atkinson and Raynor, involves goal desirability (i.e., expectancy to achieve the goal) and movement by inertia (i.e., individuals continue to pursue goals just because this is what they have been doing). An individual's persistence to attain a goal will be determined by the combination of inertial tendencies resulting from past experiences and the strength of current goal desirability.

Some empirical evidence provides support for the persistence or goal-driven explanation. For example, Garland and Conlon (1998) manipulated investment decision and project completion by telling some participants that a project designed to revamp a company's manufacturing capabilities was 20% complete and others that a project was 80% complete. Participants in the 80% completion cell were more likely to allocate more resources to the project, leading the researchers to conclude that the participants did so just to get the project over with. Those individuals in the 20% completion preferred withdrawal. Similar studies have been carried out by Garland (1990) and Arkes and Blum (1985). However, no self-reported data studies explain that persistence is in fact behind the cognitive processes that lead to escalation. Furthermore, if persistence by itself is an explanation for escalation, it is not clear why individuals who are not responsible for the original allocation decision, but given the task of making a follow-up allocation decision (i.e., are given a set goal), refuse to allocate further resources to a given project and thus do not become entrapped.

Brockner (1992) argued that none of the theories presented (e.g., self-justification, decision dilemma, or prospect theory) could explain the escalation phenomena in its

entirety. All of them provide explanations of entrapment in some circumstances.

However, because the self-justification explanation has received most support in past research, the current study will focus on the self-justification explanation of escalation phenomenon as it relates to the desire to save face and the need to justify one's actions.

Self-justification

Self-justification has been systematically explored in compliance-gaining research. According to Kelman (1961), compliance can occur when a person accepts influence from another individual or from a group in hopes to achieve a favorable reaction from others. The individual is willing to be influenced because he or she wants to receive certain awards or avoid punishment that the other individual or group controls. Compliance gaining has been extensively studied using forced compliance experiments in which participants are induced to advocate a counter-attitudinal position to motivate them to advocate views that violate their own attitudes (Eagley & Chaiken, 1993). For example, Festinger and Carlsmith (1959) conducted an experiment in which participants were asked to complete a boring task. Afterward, half of the participants were offered \$1 and the other half were offered \$20 to mislead a confederate that the task was enjoyable and interesting. Those participants offered higher incentives did not change their attitudes, whereas, the participants paid just \$1 came to believe that the boring task they completed was indeed enjoyable. In other words, participants offered low incentives had to justify spending time completing a boring task by perceptually biasing the task as enjoyable.

Other experiments on self-justification have included writing attitude-discrepant essays (Scheier & Carver, 1980) and eating a disliked food (Zimbardo, Weisenberg,

Firestone, & Levy, 1965). These experiments have shown that individuals faced with personal negative consequences—such as engaging in a task they do not want to perform—as a result of counter-attitudinal acts, with no external rewards to compensate for the dissatisfying nature of the experimental task, tend to change their opinions on an attitudinal issue to cognitively reduce any negative outcomes resulting from their behavior. In short, people feel compelled to justify their previous behavior and defend themselves from negative consequences through the perceptual biasing of behavioral outcomes.

In addition to negative consequences, two other factors affect the biasing of outcomes within forced-compliance situations. The first factor is the commitment to behavioral consequences, which are irrevocable or not easily changed (Brehm & Cohen, 1962). The second factor is a sense of having at least a moderate degree of choice in one's behavior. In other words, an individual should feel personally responsible for the negative consequences of his or her behavior (Cooper, 1971).

A number of studies have investigated factors influencing the nonrational escalation of commitment to a previous action. For example, Staw (1976) examined how responsibility for negative consequences affects nonrational escalation of commitment. The author examines the process of escalating commitment through conducting the simulation of making a business investment decision. The participants were divided into two groups, one with high responsibility and one with low. Those participants in the group with high responsibility were asked to allocate funds to one of two corporate divisions of an organization. The participants were then told that, after 5 years of the initial allocation of funds, their investment turned out to be either successful or

unsuccessful. Subsequently, the participants were asked to make a second allocation to either one of the divisions. The low-responsibility group did not have to make a prior decision as to which corporate division was most deserving of the funds. This group was presented with the entire financial decision case, including successful or unsuccessful results of the first allocation. The low-responsibility participants were then asked to make the second allocation decision. The study results indicate that participants in the high-responsibility condition, who were told their first allocation was unsuccessful, committed a significantly higher amount to the original division in the second allocation than the participants in the low-responsibility group. Thus, Staw concluded that personal responsibility for negative consequences leads to increased investment of resources in a previously chosen course of action.

In another study, Rubin and Brockner (1975) investigated the passage of time as a factor influencing the entrapment bias. They demonstrated how closeness to achieving a goal affects escalation of commitment to the futile investment of resources. The scholars conducted an experiment in which the passage of time could be viewed as an investment or as an expense. The experiment participants were given an initial sum of money (the “initial stake”) and an opportunity to win a bigger sum of money (the “jackpot”). To win the jackpot, the participants had to solve a series of crossword puzzles. Some of the crossword puzzles were so difficult that they required the use of a dictionary. To obtain the dictionary (i.e., scarce resource), participants had to wait in line until the resource became available, which it never did. As the time passed, the amount of money in both the jackpot and initial stake decreased. Thus, the longer the time spent waiting for the dictionary, the greater the expense to the participants, and the greater the investment.

The authors manipulated three variables: rate of decrease of the jackpot, availability of a chart providing information about the decrease (i.e., length of waiting time), and information concerning participants' illusory position in line for the dictionary. The study results showed that entrapment in the waiting condition was high overall. Entrapment was particularly high when the jackpot decreased slowly, when the decrease chart was not available, and when participants thought that they were first in line for the dictionary instead of third. This study illustrates that goal completion could be used as a reason to self-justify a commitment to failing action.

Overall, the discussion of self-justification research illustrates that there are five conditions that could lead to an entrapment bias: negative consequences (i.e., failure of the original decision), commitment to behavior, perceived degree of freedom in commitment to this behavior, responsibility for the negative consequences, and desire for goal completion.

Gaps in Self-Justification and Entrapment Research

Although a number of studies have provided support for self-justification theory (see Brockner [1992] for review), only a few studies take into consideration social factors and the way these social factors could affect escalation. Brockner and Rubin (1985) identify four types of social variables that can influence escalation: group influence, behavioral modeling, presence of an audience, and competition against a social (labor vs. management) or nonsocial (waiting for a bus) entity in an attempt to achieve the goal. One factor of particular interest to the current research is the presence of an external audience, but only a few studies (Brockner, Rubin, Fine, et al., 1982; Brockner, Rubin, & Lang, 1981; Fox & Staw, 1979; Staw & Hoang, 1995) have examined the presence of an

audience and its effect on entrapment. Further, no studies have explored the role of cultural variables (e.g., distinguishing between dimensions of face, personal networks) in entrapment situations.

Another gap in entrapment research and the self-justification explanation of the escalation phenomena, is a lack of studies that examine cognitive processes that may explain escalation. Three types of research have been conducted to provide support for the self-justification explanation of the escalation phenomena. The most popular type includes studies that “operationalize feedback from prior resource allocations and decision makers’ needs to justify those prior resource allocations; the typical finding is that escalation is greatest when both feedback is negative and justification needs are high” (Brockner, 1992, p. 49). But these studies do not examine cognitive processes—that is, what led the participants to make the decision. These studies measure commitment to a previous decision, which is often operationalized as the amount of money allocated to the previously chosen course of action. In addition to the study described earlier by Staw (1976), studies by Davis and Bobko (1986), Fox and Staw (1979) and Schoorman, Mayer, Douglas, and Hetrick (1994) also operationalized entrapment as the amount of money invested and did not examine cognitive processes leading to the decision.

The second type of research providing support for the self-justification explanation of entrapment explores other manifestations of behaviors (i.e., besides escalated commitment) resulting from the self-justification motive (Brockner, 1992). For example, Conlon and Parks (1987) found that individuals, to provide self-justification, tend to look for retrospectively focused information to make a decision regarding

subsequent reallocation. The researchers argue that retrospective focusing results, in part, because exoneration and justification necessitate a plausible explanation of how and why a negative consequence occurred.

The third type of studies uses self-report data of psychological states to establish that behavioral escalation is indeed related to individuals' self-justification needs (Brockner & Rubin, 1985; Strube & Lott, 1984). For example, findings from the study by Brockner and Rubin suggest that individuals who manifest escalation behavior also produce self-reports that indicate a need for justification of prior allocation (e. g., "I had already invested so much, it seemed foolish not to continue," or "Once I had invested a certain amount, I had to keep going; otherwise all of that previous investment would have been a waste" [p. 148]). Ross and Staw (1986) cite the results of an unpublished study by Bazerman, Schoorman, and Goodman (1980) who investigated the relationship between participants' behavioral manifestation of escalation and self-reports of other measures related to self-justification. The findings indicated that escalation was "associated with the perceived importance of a decision, the extent of disappointment with initial losses, and the perceived interconnectedness of current and past decisions in the situation" (Ross & Staw, 1986, p. 276). These studies focus on psychological states, not cognitive processes associated with escalation. None of the escalation studies examined focused specifically on cognitive processes.

In addition, no studies have examined the escalation of commitment phenomenon from a communication point of view, namely focusing on messages used in situations in which individuals persist with continued commitment to the failing course of action. Drummond (1994) analyzed a case study of hiring an incompetent manager. The author

used case study research by participant observation that employed “direct observation, questioning, diary keeping and unobtrusive methods” (Drummond, 1994, p. 46). The scholar used quotes to document the case study, however, no systematic analysis of the messages was employed.

Overall, the discussion above illustrates four gaps and weaknesses in the study of the entrapment phenomenon that the current research will address. First, there are only a few studies that examine the presence of external audience and its potential to affect entrapment. Second, there are no studies that have examined cultural variables and their potential influence on the commitment to the failing course of action. Third, there are no studies that have analyzed the cognitive processes involved in an escalation of commitment. Fourth, there is no research that analyzes messages communicated in an escalation situation. This research will address these four gaps: audience effect, cultural variables (i.e., types of face concern and personal networks), cognitive processes (i.e., internal and external justification needs), and messages used to justify one’s decision to escalate.

Entrapment and Negotiation

Entrapment is a cognitive bias that can have a have direct effect on negotiation. According to Putnam and Jones (1982), negotiation is a process in which two or more parties that hold or believe they hold incompatible goals try to reach a mutually acceptable solution by engaging in a give and take interaction. Neale and Bazerman (1985) argue that adopting a view of negotiation as a business decision-making process could help explain failure to reach agreements. The authors propose that cognitive or judgment biases result in reduced negotiator effectiveness in reaching best outcomes and

reduced likelihood of attaining agreement. The authors refer to cognitive biases (including entrapment bias) as heuristics that are helpful as shortcuts in an effort to reduce the amount of information to be processed. At the same time, these heuristics can also bias outcomes in systematic ways. In the case of entrapment bias, negotiators tend to escalate their commitment to justify their earlier bids, offers, and proposals, and to avoid the financial and ego losses of coming in second.

Neale and Bazerman (1985) provide a specific discussion outlining ways in which escalation and negotiation are related. The scholars suggest that escalation is likely to lead negotiators “to stand firm on their initial offers through the course of successive negotiations” (p. 48). One reason for development of such rigid negotiation positions is the presence of an external audience or constituency. The researchers maintain:

The pressure from the constituency may lead to the escalation of commitment [entrapment bias], which impedes the ability of the negotiator to represent their best interests. Further, as both sides accrue losses (e.g., during a strike), both sides are likely to increase their propensity to “hold out” in order to justify their initial positions. (p. 48)

Bazerman (1986) offers three additional reasons for the entrapment bias in negotiation. The first reason is that negotiators tend to look for information that is salient with their initial commitment to a position. The second reason is that the negotiators’ judgment is biased to interpret what they observe at the negotiation table in a way that justifies or supports their initial position. The third reason is that the competitive context of a negotiation situation fuels the likelihood of entrapment. The negotiators perceive the notion of unilateral surrendering of a previously stated position or even making smaller

demands as defeat; on the other hand, escalation of commitment or entrapment “leaves the future uncertain” (p. 57). Consistent with prospect theory, Bazerman argues that this uncertain future is perceived as more desirable by negotiators than a prospect of certain loss.

Bazerman (1986) recommends that, to avoid an entrapment bias in a negotiation context, negotiators have to realize their tendency to justify past actions. They have to remember to evaluate the benefits and costs of persisting with a chosen course of action. He also suggests that awareness of the tendency to escalate can help predict the opponents’ actions and thought processes. When individuals are too psychologically invested in their positions, they tend to increase their demands or hold out on making the concessions for too long. As a result, “a negotiator should avoid pushing opponents into a corner, getting them angry or otherwise making them feel that they can’t afford to give up the struggle” (p. 57). Other approaches to reducing cognitive biases in a negotiation include providing unequivocal feedback regarding one’s performance, improving negotiator selection criteria (i.e., identifying an individual’s tendency to be vulnerable to decisional biases), and developing training protocols to help negotiators eliminate decisional biases.

Because the entrapment bias in a negotiation can lead to failure to achieve desired outcomes, this issue is important to understand and empirically explore by examining how entrapment can occur during negotiation. The next sections examine variables (i.e., accountability and face) that may affect entrapment in a negotiation situation.

Accountability and Constituency

Normative social influence describes the force that compels people to conform to the positive expectations of another. Normative influence implies “real or imagined group pressure, and a person may conform to avoid sanctions, to gain approval or simply to avoid the embarrassment of being different” (Nail, 1986, p. 202). The desire for social approval is related to social normative influence that is associated with compliance (Asch, 1951) and consequently with the self-justification process. One condition that demonstrates normative influence is accountability, or “the extent to which representatives are required to justify their actions, and are going to be evaluated and rewarded by their constituents” (Gelfand & Realo, 1999, p. 721). A constituency can exert normative influence, which can lead to entrapment bias.

Accountability and Constituencies in Negotiation Context

According to Gelfand and Realo (1999), within a context of negotiation, accountability is activated when negotiators have to provide justification for their actions after the negotiation. Lewicki, Saunders, and Minton (1985) maintain that constituencies control individuals by administering rewards and punishments. Wall and Blum (1991) argue that constituencies tend to exert as strong an influence on negotiators as opponents do. These researchers explain, “The reasons are quite clear; constituents are powerful and will use their power, bringing pressures to bear that keep the negotiator committed to the constituents’—group’s or organization’s position” (p. 282). Lewicki, Saunders, and Minton (1985) posit that accountability occurs under two conditions: (a) when the constituency can observe and judge the individual’s performance, and (b) when the

individual is aware that the constituency depends on him or her to achieve positive outcomes.

Research suggests that accountability to a constituency significantly influences negotiators' behaviors; negotiators accountable to a constituency tend to behave more competitively and bargain tougher than those in low- or no-accountability conditions (Bartunek, Benton, & Keys, 1975; Carnevale, Pruitt, & Britton, 1979; Gruder, 1971; Gruder & Rosen, 1971; Organ, 1971). For example, findings from Neale (1984) indicate that when constituents evaluate negotiators' bargaining and determine payoffs, the negotiators are more likely to reach impasses and less likely to concede.

Lewicki, Saunders, and Minton (1985) maintain that the individual's desire for consistency is often amplified by a desire to save face and maintain an illusion that he or she is in control in front of an audience. The authors suggest that such behavior is a result of unwillingness on the part of the individuals to admit an error or failure, particularly when the other party might interpret doing so as a weakness. They state, "The mere presence of an audience, particularly one that can easily observe the negotiator, motivates a negotiator to seek a favorable evaluation from that audience and to avoid an unfavorable evaluation" (p. 295).

Neale and Bazerman (1985) and Rubin, Kim, and Peretz (1990) argue that the pressure from the audience may lead to the escalation of conflict (entrapment) and impede the negotiator's ability to represent the best interests of this audience. Furthermore, they state that the pressure generated by constituencies toward adherence to a certain position may not be in the best interest of either the constituency or the

negotiator and may impede the negotiators' ability to represent the constituency's best interests.

Accountability, Constituency, and Entrapment Bias

A number of studies suggest that accountability contributes significantly to entrapment (Fox & Staw, 1979; Staw & Hoang, 1995). Staw (1981) attributes this effect to external justification. For example, Staw and Hoang (1995) studied National Basketball Association (NBA) draft choices and found that coaches gave greater playing time to players who were selected earlier in the draft and who were paid more money independent of the individual's performance. In this case, owners, fans, and media could be considered as the external audiences to whom coaches are responsible.

In another study, Fox and Staw (1979) conducted a simulation in which business students played the role of business executives who had to make funding allocation decisions under high or low conditions of job security. The scholars manipulated the popularity of a recently implemented policy at the time that the initial allocation decision was made. Fox and Staw hypothesized that those participants whose job was threatened or who implemented an unpopular policy would be motivated to protect themselves against failure. Judgment by the board of directors regarding allocation simulated the accountability condition. The participants in the job insecurity condition were informed that they were temporarily assigned the role of a vice president; those participants in the job security condition were told that their job was permanent. Half of the respondents were told that the board of directors was dissatisfied with their initial funding decision (resistance condition) and the remaining half were informed that the board was pleased with the initial resource allocation (no resistance condition). The participants were asked

to reallocate their funds. The findings indicated that when a course of action led to negative results (resistance condition), the participants in the low job security condition were more likely to escalate their commitment to the losing course of action by making greater subsequent resource allocations. In other words, negative input from the constituency (the board of directors) in combination with being dependent on this constituency for job security resulted in greater resource allocation. These studies did not examine the possibility that one of the underlying reasons for entrapment in the presence of constituency is an individual's need to save face.

Based on the discussion presented in the sections above, this research puts forth the following hypotheses:

Hypothesis 1 (H1): Entrapment will be more likely when a constituency is present.

Hypothesis 2a (H2a): Justification would be greater when respondents are required to report their behavior.

Hypothesis 2b (H2b): When individuals have to report their behavior, they will have greater need for internal and external self-justifications leading to entrapment.

Hypothesis 3 (H3): Presence of constituency is likely to lead to greater internal and external justification.

Face

Goffman (1955, 1959) introduced the concept of face or the desire to create and sustain positive identities in the eyes of significant others. This desire motivates individuals to appear strong and capable, and to avoid situations in which they could be publicly embarrassed in front of an audience. Goffman argued that people will try to prevent loss of face even if they have to incur costs. Facework is communication aimed at

enhancing or repairing face that has been damaged. Brown (1968, 1970) adopted Goffman's definition of face and facework and conceptualizes facework as face-saving and face-restoration. Face-saving is defined as an attempt to prevent another from causing an individual to appear foolish or incapable to significant others and face-restoration is conceived as an individual's attempt to seek revenge from another after the other has already damaged face.

Brown and Levinson (1987) discuss two types of face: negative face and positive face. Negative face is conceived as an individual's desire to maintain his or her autonomy (i.e., the need not to be imposed upon), whereas positive face is conceptualized as the need to seek inclusion or approval from significant others. In addition, Brown and Levinson (1987) charge that, because of the interdependent nature of social relations, individuals can threaten or support other people's face and protect their own face. Ting-Toomey (1988) adds another dimension to the concept of face: self and other. Self-face implies concern for one's own image and self-interest, whereas other-face implies concern for another's image and other-interest. Ting-Toomey (1988) proposes four types of face maintenance. First, self-negative face is associated with one's need to protect one's autonomy from other's infringements. Second, other-negative face implies the need to demonstrate respect for other person's need for autonomy. Third, self-positive face is concerned with the need to defend one's need for inclusion. Fourth, other-positive face is defined as the need to support the other person's need for association.

Face-Saving and Negotiation

The concept of face has been addressed by scholars examining conflict in the negotiation context. Wilson and Putnam (1990) state that face goals exert strong

influence on the negotiation process. These scholars state that, during negotiation, negotiators have a certain image of themselves that they would like to preserve. Scholars (e.g., Thompson, Nadler, & Kim, 1999; White, Tynan, Galinsky, & Thompson, 2004; Wilson, 1992) have examined the role of face threats in negotiation. According to White et al. (2004), positive face threats include situations in which one of the parties is embarrassed, disrespected or criticized. Negative face threats, on the other hand, are associated with situations in which one party desires to avoid imposition. White et al. (2004) argue that both positive and negative aspects of face could be threatened during a negotiation. However, they charge that research conducted by Cupach and Carson (2002) and Cupach and Messman (1999) suggests that positive face is more important for relationships, and therefore is more likely to be associated with integrative outcomes. Some direct face threats include nonnegotiable offers (Tjosvold, 1977), criticizing an opponent's position (Brown & Levinson, 1987), pressure (Thompson, Nadler & Kim, 1999), and resisting making a concession (Tjosvold & Huston, 1978).

In addition to direct threats to face by an opponent, certain situational factors increase face threat in a negotiation (White et al., 2004). One of these factors is constituency. The presence of constituency is likely to heighten face concerns. The discussion in the previous section illustrates that the presence of an audience can exert significant influence on an individual in a variety of contexts. Brown and Garland (1971) suggest two reasons why presence of an audience increases face-saving behavior. First, audiences can provide evaluative feedback directly to an individual. Second, an audience could also communicate its evaluation to others. Brown (1968) maintains that negotiators seek to communicate a positive image of themselves not only to the counterparts

involved in a bargaining process but also any other audience interested in the outcome. According to Brown (1968), “The latter may include the group the bargainer represents or in which he holds membership; they may be ‘real’ or imagined, physically present at or absent from the setting in which the bargaining occurs” (p. 109). Similarly, Wilson and Putnam (1990) argue that face-maintenance goals become more salient when negotiators receive feedback from and feel highly accountable to constituents. Stevens (1963) links face saving to concession making. He states that bargainers face a dilemma when they have to make concessions to reach an agreement. He maintains that the act of making the concession itself can be perceived by others as a sign of weakness, which can cause face loss and possibly increase attempts of exploitation by the other party. Therefore, the face-saving and economic motives may require mutually incompatible responses by individuals.

The study conducted by Brown (1968) showed that bargainers are willing to sacrifice their own economic gain just to inflict worse losses on their counterparts, especially when they have been made to appear foolish in front of a salient audience. Brown conducted an experiment in which the face saving was induced by informing the participants that they would be observed by an audience while participating in a bargaining task. The task was based on a two-person trucking game in which each player runs a trucking company and has to move his or her truck over a road system to a final destination. The faster one reaches the final destination, the more money the player will earn. The game is set up in such a way that for each player to win the most money, they have to cooperate. In addition, each player has control over a tollgate through which the

counterpart's truck has to pass. Players are required to either charge the opponent a specified toll or grant him or her free passage.

During the first ten trials, a confederate controlled the tollgate and systematically charged the participant high tolls resulting in significant monetary losses for the participant. Then, the participants received feedback from the audience members, who were supposedly, but not actually, observing the interaction from behind a one-way mirror. The participants received feedback that either said that they looked foolish and weak (e.g., "Bolt was out to beat Acme and he really made Acme look like a sucker") or that they looked good (e.g., "Bolt made Acme pay a lot of high tolls but Acme looked good because he tried hard and played fair). The control group received no feedback.

In the second round, the participants had control over the tollgate. The participant had two choices: He or she could either retaliate against the confederate or increase his or her own winnings. The results indicated that those participants who received negative feedback from the audience were much more likely to retaliate against their counterparts than participants who were provided with positive feedback. Further, participants in the negative feedback condition were willing to lose money to restore face. Those in the positive feedback condition proceeded to maximize their profits. The results from the post-experimental questionnaire showed that the negative feedback participants were more concerned with looking strong than were the other participants.

Face-Saving and Entrapment Bias

Only two studies have explored the relationship between face-saving behavior and the entrapment bias. Brockner, Rubin, and Lang (1981) conducted two experiments to explore how the presence of an audience affects entrapment. In the first experiment, the

participants were told that they are about to participate in a study on decision making. The participants were asked to make an investment decision. Half of the participants were told about the virtues of investing conservatively (cautious condition) and the other half was instructed about advantages of investing a larger amount (risky condition). To investigate the role of face saving, experimenters assigned half of the participants to the large-audience condition (experimenter plus two confederates who were supposedly working for psychology professors, and who were interested in observing the procedures because they were considering using them in their own experiments) and the second half to the small audience condition (just the experimenter). The researchers also hypothesized that, because social anxiety is related to self-presentation, the participants with low social anxiety would be less influenced by the experimenter's instructions than would those with high social anxiety. The results showed that investments were less than half in the cautious condition than in the risky condition. The face-saving analysis showed that

- (1) the instructions had a greater effect on subjects with high rather than low social anxiety, and
 - (2) individuals with high social anxiety who participated in front of a large audience were more influenced by the instructions than were individuals with low social anxiety who participated in front of a small audience.
- (p. 68)

In the second experiment, the procedures were the same as the ones in the first experiment, except Brockner, Rubin, and Lang (1981) orthogonally varied the importance of costs and rewards. In the high-cost-importance condition, the participants were given a chart with information regarding their costs at various points in the

experiment, and they were asked to plot their progress toward the jackpot. In the low-cost-importance condition, the participants were not given a chart, and they did not have to track their progress. The results showed that the reward importance variable did not have any effect. The effect of perceived costs was mediated by participants' concern about how their investment would make them look in front of others. Participants in the high-cost-importance condition quit earlier and stated that they became less entrapped to make a desirable self-presentation (e.g., "I thought that it would look good to quit"). The authors concluded, "Individuals will become more or less entrapped to the extent that doing so will portray them in a more favorable light" (p. 78).

The second study exploring face and entrapment was conducted by Brockner, Rubin, Fine, et al. (1982). These researchers varied decision makers' face-saving concerns and the point in time at which these concerns arose. The scholars conducted two experiments. The first experiment dealt with perceived importance of costs and rewards associated with continued investment and did not involve face-saving concerns. In the second experiment, the face-saving manipulation was present and was operationalized through the presence of an evaluative audience.

The participants were told that the purpose of the experiment was to simulate gas-line-waiting procedures. The participants were asked to make a decision about whether to stop or continue waiting in a gas line. Half of the participants were told that experts in decision making would be observing and evaluating their behavior (evaluative condition) and the other half were told that they would be watched by a non-evaluative audience (non-evaluative condition). In the evaluative condition, the participants were provided with a form that the observers would supposedly use to evaluate them. The form included

such items as how much participants “appeared to have the situation under control,” “were being made to look foolish,” and “were using their money wisely” (p. 258).

Brockner, Rubin, Fine, et al. also manipulated the timing of observations so that half of the participants were observed by the audience from the start of the experiment (early condition) and the other half were observed after a significant portion of resources was already invested (late condition). The results showed that the presence of an evaluative audience had no effect on participants’ resource allocation early in the process, but it did have a significant effect on investment behavior later in the process. More specifically:

When the audience was described as “experts in decision making,” subjects high in public self-consciousness (or social anxiety) became less entrapped than those low on these dimensions. When the audience consisted of individuals who “wished to simply observe the experimental procedure,” however, high public self-consciousness (or social anxiety) individuals were significantly more entrapped than lows. Moreover, these interaction effects occurred when the audience was introduced late, but not early, into the entrapment situation. (pp. 247–248)

Given the small number of studies related to, but not directly testing, face-saving behavior in the entrapment situation, further investigation is needed of how the desire to save face, particularly in the presence of constituency, can lead to entrapment. The current research examines the effect of face on entrapment. Because scholars have indicated (White et al., 2004) that concerns for positive face are more important to negotiators than the desire to avoid an imposition (concern for negative face), this study

will primarily focus on concerns for self- and other-positive face. This research puts forth the following hypotheses:

H4: Individuals with greater self- and other-positive face concerns will be more likely to become entrapped.

H5: Concern for saving face will be greater when the individuals have to report their behavior.

H6: Overall other- and self-positive face concerns that an individual has will lead to greater need to justify one's actions in a scenario leading to entrapment.

H7: Concerns for saving face will be greater when constituency is present.

Personal Networks

During the last decades, network analysis has emerged as a way to examine social structures (Emirbayer & Goodwin, 1994). According to Valente (1995), networks are patterns of support, advice, friendship, and communication that are shared by members of a social system. Personal networks include an individual, people who are in contact with this individual, social relationships between the individual and other people, and social relationships between the people in contact with the individual.

Emirbayer and Goodwin (1994) argue that personal network analysis is “one of the most promising currents in sociological research” (p. 1412). In fact, the authors argue that network analysis “offers a more powerful way of describing social interactions than do other structural perspectives that focus solely on the categorical attributes of individuals and collective actors” (p. 1413). According to Wellman (1983), network analysis explains social behavior as the result of individuals' involvement in structured social relations as opposed to common attributes and norms they possess. Network

analysis looks at patterns of relations (Burt, 1986) as opposed to such individual attributes as political affiliation, gender, social status, or ethnicity.

The study of personal networks benefits not only sociological research; it can also be applied to the field of communication. Over the past decades, individualism-collectivism and independent and interdependent self-construal have dominated cross-cultural research as explanations for cultural differences in types of relationships. Both sets of constructs have been widely used to explain the relationship between individuals and their relevant others (Hofstede, 1980; Markus & Kitayama, 1991). The concepts of collectivism and inter-dependent self-construal emphasize the importance of and dependence on relevant others. On the other hand, the concepts of individualism and independent self-construal emphasize self-reliance and focus on oneself.

The concept of face has been closely related to individualism-collectivism. Ting-Toomey (1988) posits that members of individualistic cultures and people with independent self-construals are more concerned with self-face maintenance than members of collectivistic cultures or people with interdependent self-construals. On the other hand, individuals in collectivistic cultures are more concerned with mutual-face and other-face maintenance. Further, Ting-Toomey argues that members of individualistic cultures tend to use autonomy-preserving strategies, and members of collectivistic cultures tend to use approval-seeking strategies when managing conflict.

However, Fiske (2002) criticized individualism-collectivism research, and Levine et al. (2003) offered criticism of the independent and interdependent self-construals pointing out that both sets of constructs have significant operationalization and measurement drawbacks. Massett (1999) suggested that personal networks provide more

accurate representation of the relevant others than the two sets of constructs. Massett outlined three advantages of using personal networks as a framework for examining individuals' differences. First, personal networks allow for more accurate representation of one's social interactions with relevant others within a society. Second, examination of the individual's personal networks, when he or she can identify his or her own set of significant others, reduces the problems associated with arbitrary definitions of groups. Third, examination of personal networks can provide insight into quality and frequency of communication among individuals in a given society or culture.

Networks not only allow for more careful description of relevant others but also allow for the measure of range and strength of the relationship with relevant others (Granovetter, 1973; Marsden & Campbell, 1984). According to Emirbayer and Goodwin (1994), network range is the number of an individual's ties to other people and strength of ties is "the relative frequency, duration, emotional intensity, reciprocal exchange and so on which characterize a given tie or set of ties" (pp. 40-41). Granovetter (1982) provided an overview of studies that have examined tie strength. Among other applications, tie strength was a good indicator of social mobility, in which different degrees of tie strength were positively related to the outcomes of job search efforts. The most common and best indicator of tie strength is the closeness of a relationship (Marsden & Campbell, 1984).

Massett (1999) conducted a study comparing the effects of culture and other-orientation on personal communication networks and behavioral intentions in the United States and Mexico. The study focused on individuals' health networks and diabetes-related behaviors. Massett found that Americans were significantly more independent and

that Mexican respondents were significantly more interdependent. In addition, the comparison of personal networks indicated that, although U.S. participants nominated more people in their networks, Mexican respondents nominated more family members, communicated with members of networks more often, reported more high-context communication with network members and indicated greater degree of closeness with network members than did the U.S. respondents. These findings suggest support for using personal networks to investigate the relationships between individuals and their significant others. More specifically, the results of the network comparison parallel closely the characteristics traditionally associated with interdependent (Mexico) and independent (U.S.) self-construals; that is, individuals with interdependent self construal are more likely to have strong, close tie networks and individuals with independent self-construal are more likely to have weak, loose-tie networks.

Given a plausible relationship between self-construals and networks (Masset, 1998), and taking into consideration that self-construals have an effect on face concerns (Oetzel & Ting-Toomey, 2003; Ting-Toomey, 1988), it is possible that personal networks affect face concerns. In addition, as the previous section established a connection between face concerns and entrapment, an indirect relationship may exist between personal networks and entrapment bias with face concerns as a moderating variable. Further, because a concept of a network range is at the core of network analysis (Granovetter, 1973), the size of an individual's network along with the strength of ties within the network is expected to affect face concerns and entrapment bias.

This research argues that the range and strength of one's personal networks will predict face-saving behavior, which in turn will affect the entrapment bias. The greater

the size of the network and the stronger the ties in the network, the more the individual should be concerned with protecting self-positive face because of his or her desire to look good to the members of the network in order to maintain his or her inclusion in that network. In addition, individuals with stronger ties and larger personal networks are expected to be more concerned with protecting other-positive face, because they feel compelled to protect the other party's interests. Further, individuals with larger, strong-tie personal networks are expected to be more prone to entrapment in the presence of a constituency, because members of the constituency are likely to be members of the negotiator's professional network. Therefore, the negotiator may feel that his or her reputation, as well as reputation of the constituency, are at stake and persist with a failing course of action. Along the same lines of reasoning, these individuals are also more likely to feel more compelled to justify their behavior than individuals with smaller, loose tie networks.

Based on the discussion presented above, this research will test the following hypotheses:

H8: Individuals with more expansive and strong ties in their personal networks will be more concerned with their self-positive face.

H9a: When participants have expansive personal networks, entrapment will be positively associated with protecting the constituency's positive face.

H9b: In the presence of constituency, individuals with larger, strong-tie personal networks will be more prone to entrapment than the individuals with smaller, weak-tie networks.

H10: In the presence of constituency, individuals with larger personal networks and strong ties would report greater justification for making their decisions.

Luck

Although unrelated to the theoretical rationale of this research, the concept of luck is discussed here, because luck was used in the method to foil the nature of the study; that is, the participants were told that the study is about luck. It was necessary not to disclose the nature of the research so as not to bias the outcomes. To identify measures of luck suitable to be employed in this research, a literature review of studies examining luck was conducted. Summarized below is a brief overview of luck research. Luck measures used in this dissertation are discussed in chapter 2.

Traditionally, luck is discussed within the framework of conditions related to expectations of control and success (Darke & Freedman, 1997a). According to Darke and Freedman (1997a), “luck is a random, uncontrollable factor which should have little effect on future expectations” (p. 487). Luck is typically considered to be an external, unstable factor that can explain achievement outcomes or social events (Darke & Freedman, 1997b). Social learning theory of personality developed by Rotter (1955) posits that perceptions of control decrease if events are attributed to luck or other people (external locus of control) and increase when events seem to be a result of a person’s own actions (internal locus of control). Overall, individuals deceive themselves as having less control if they believe that luck is involved.

An attributional model explaining the origin of perceived control identifies four causal factors to which failure or success is usually attributed: luck, task difficulty, effort, and ability (Weiner et al., 1972). In addition to the locus of control aspect specified by

the social learning theory, attributional theory introduces stability—a degree of consistency across time and situations. According to the attributional model, luck is considered to be an external and unstable factor. That is, the model predicts that any success attributable to luck should be regarded as uncontrollable; in addition, future successes cannot be predicted on the basis of luck.

Both the social learning theory and the attributional model assume that individuals have rational views about causes of luck; they see luck as unstable and external. However, studies conducted by Darke and Freedman (1997a) suggest that not all people have rational views about luck, some hold irrational beliefs that luck is a stable factor that influences events in their favor. Individuals who hold the latter view of luck tend to have positive expectations for the outcome of future events. This result supports findings from another study conducted by Darke and Freedman (1997b) that demonstrates that those who believe in luck are more confident and positive about future success. Further, a study conducted by Wohl and Enzle (2002a) shows that individuals who believe they are lucky also believe that they can use their luck intentionally to influence the outcome of chance events. For example, research participants acted “as though luck could be transmitted from themselves to a wheel of fortune and thereby positively affect their perceived chance of winning” (p. 1388). Another study conducted by Wohl and Enzle (2002b) indicates that individuals’ differences in self-perceived luck influence their future behaviors. More specifically, Wohl and Enzle (2002b) conducted an experiment in which participants were assigned to either near win or near loss conditions. The experimental task consisted of playing a computerized slot-machine style wheel of fortune game. In the near-loss condition, the wheel appeared to almost stop at

the Bankrupt section but inched forward towards a small payoff section. In the near-win condition, the wheel appeared ready to stop at the Jackpot section, but came to a complete stop at the small payoff section. The near escape of big loss led participants to deem themselves lucky. As a result, they were more prone to gamble more in comparison to participants who experienced a near big win.

The discussion above suggests that luck is a plausible disguise to be used in this research. Specifics of the experimental procedures are detailed in the chapter 2: Methods.

Summary of Research Hypotheses

Figure 2 provides visual representation of study hypotheses and relationships among study variables. Circles represent constructs that incorporate more than one variable. For example, personal networks are comprised of the size of the network and influence of network members have on the person or tie strength.

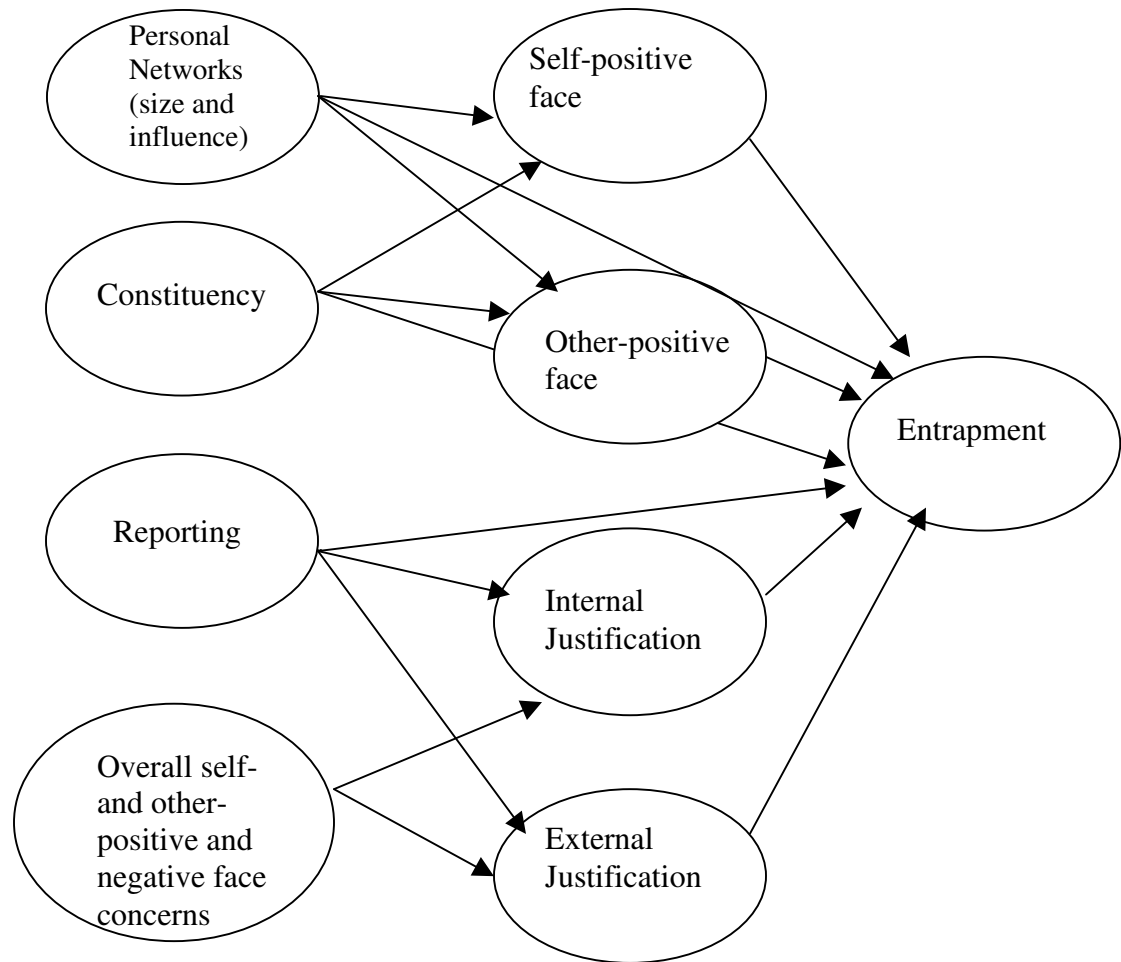


Figure 2. Research Hypotheses.

Overall, this research attempts to provide support for the following hypotheses:

Hypothesis 1 (H1): Entrapment will be more likely when a constituency is present.

Hypothesis 2a (H2a): Justification would be greater when respondents are required to report their behavior.

Hypothesis 2b (H2b): When individuals have to report their behavior, they will have greater need for internal and external self-justifications leading to entrapment.

Hypothesis 3 (H3): Presence of constituency is likely to lead to greater internal and external justification.

Hypothesis 4 (H4): Individuals with greater self- and other-positive face concerns will be more likely to become entrapped.

Hypothesis 5 (H5): Concern for saving face will be greater when the individuals have to report their behavior.

Hypothesis 6 (H6): Overall other- and self-positive face concerns that an individual has will lead to greater need to justify one's actions in a scenario leading to entrapment.

Hypothesis 7 (H7): Concerns for saving face will be greater when constituency is present.

Hypothesis 8 (H8): Individuals with more expansive and strong ties in their personal networks will be more concerned with their self-positive face.

Hypothesis H9a (H9a): When participants have expansive personal networks, entrapment will be positively associated with protecting the constituency's positive face.

Hypothesis 9b (H9b): In the presence of constituency, individuals with larger, strong-tie personal networks will be more prone to entrapment than the individuals with smaller, weak-tie networks.

Hypothesis 10 (H10): In the presence of constituency, individuals with larger personal networks and strong ties would report greater justification for making their decisions.

Research Question

Finally, because currently there are no known studies that have examined the entrapment phenomenon from a communication point of view—that is, no studies have examined messages used by individuals in situations potentially leading to entrapment—

this study poses the following research question: In a situation leading to entrapment, are individuals likely to use social accounts to explain their behavior?

Bies (1987) defines social account as “a verbal strategy employed by a person to minimize the apparent severity of the predicament or convince the audience that the wrongful act is not a fair representation of what the actor is ‘really like’ as a person” (p. 294). Sitkin and Bies (1993) state that social accounts are used to influence an individual’s perception of responsibility for an action and motivation for an action, and to paint the unfavorability of an action.

Sitkin and Bies (1993) identify three broad categories of accounts: (a) mitigating responsibility, (b) legitimizing the action by appealing to some higher-order values or norms, and (c) reframing outcomes. Mitigating, or causal, accounts suggest that the situation forced the individual to take the action. Sitkin and Bies state, “by suggesting that the offending party had no other alternatives to the chosen action, a social account claiming mitigating circumstances should reduce the amount of blame attributed to the party” (p. 350). When individuals use the second type, exonerating accounts, they try to explain their actions by placing them within a broad normative framework that will give legitimacy to their motives. The third type, the reframing account, attempts to put the actions in the best possible light by suggesting to the offended party the appropriate context for interpretation. To this end, this research will examine the messages produced by the research participants to determine whether they are likely to be social accounts and explore which of the social accounts are used most often.

CHAPTER 2

Method

This chapter describes the process of developing research questionnaires and data collection procedures. The first section presents describes the experimental design. The second section provides a description of the study sample. The third section describes in detail the recruitment procedures. The fourth section discusses the experimental procedures and manipulations. Finally, the fifth section provides a detailed discussion of the development of study measures.

Experimental Design

One of the purposes of this research is to examine whether the presence of constituency leads to entrapment. The presence of constituency is expected to pose face threats that lead to entrapment. The research also hypothesizes that accountability, in this case reporting in person to the constituency, will pose greater face threat than non-accountability. In addition, face concerns are expected to be moderated by the size and strength of personal networks.

There are three conditions essential to simulate accountability (Gelfand & Realo, 1999). First, constituents need to have control over rewards. Second, individuals must justify their performance. Third, individuals must be evaluated by the constituency. For the purposes of this study, accountability is manipulated using two requirements in the accountability condition: (a) presence of a constituency who has control over rewards and evaluates performance, which meets the requirements of the first and third conditions; and (b) reporting, so that individuals have to explain their behavior to the constituency in person, meeting the requirement of the second condition. To this end, two experimental

conditions are employed: presence of constituency and reporting on the outcomes of the experiment. Overall, the respondents were assigned to one of the four conditions (see Table 1):

1. Working in groups and reporting in-person to the group (COND I: constituency; reporting).
2. Working in groups, with no reporting (COND II: constituency; no reporting).
3. Working individually and reporting in-person to the researcher (COND III: no constituency; reporting).
4. Working individually (COND IV: no constituency; no reporting).

The research design is 2X2 (constituency [yes/no] by reporting [yes/no]), with face and justification as mediating variables, personal networks as a moderating variable, and entrapment as a dependent variable.

Table 1.

Study Design (N = 236)

		Constituency	
		Yes	No
Reporting	Yes	<i>n</i> = 57	<i>n</i> = 59
	No	<i>n</i> = 58	<i>n</i> = 62

Study Sample

The study sample consisted of 236 undergraduate students majoring in communication enrolled in a large East Coast university (*N* = 236). The overwhelming majority of the participants (97.4%) were full-time undergraduate students. The remaining 2.6% were part-time undergraduate students. Of the participating students

2.5% were freshmen, 33.9% were sophomores, 39.4% were juniors, and 23.7% were seniors. Ethnic composition of the sample was as follows: White, non-Hispanic or Caucasian (64.4%), African American or Black (14%), Hispanic (6.4%), Asian or Asian-American (6.8%). In addition, 6.8% of the respondents reported their ethnicity as “Other.” Participants were between 17 and 33 years old ($M = 20.3$ years, $SD = 1.86$, median = 20). Female participants constituted 80.9% of the sample and male participants constituted the remaining 19.1%. Such an imbalance in female to male student ratio is not unusual, as this is a growing trend in communication classes, where the majority of majors are female. A slight majority of the participants (53%) reported being employed. The most often-cited categories of employment were sales, administrative/clerical (e.g., secretary, administrative assistant, account clerk), and service industry (e.g., waiter, nanny, chef) positions.

Recruiting Procedures and Research Assistants

Participants volunteered to take part in the experiment. They received extra credit in their communication courses for their participation. In addition to extra credit, each participant received ten raffle tickets for four raffle drawings; each drawing was worth \$50. Each ticket was worth \$1. Participants were not allowed to purchase tickets outside of the study. When the study was completed, the researcher administered one lottery and awarded \$50 to the winner.

The study was announced by each class instructor (see Appendix B). The announcement was made several times during the course of the semester. The prospective participants were told that if they would like to receive extra credit for the class, one option available to them was to participate in an experiment investigating an individual's

luck and decision-making processes. An alternative written assignment was offered to those students who wanted extra credit but did not want to participate in research. The instructor passed around the sign up sheet. Those individuals who chose to participate in the study received an informed consent form (see Appendix D) and a number of questionnaires that they were asked to fill out prior to arriving at the experimental laboratory. The questionnaires included demographic information (see Appendix E), a personal network instrument (see Appendix F), a network influence instrument (see Appendix G), and a face scale instrument (see Appendix H).

Two female undergraduate students were recruited to help the researcher and act as the “confederate constituency” in conditions in which constituency was present. Several hours were spent training the undergraduate students on how to act and “exert pressure” on a participant. The confederates were encouraged to put full responsibility for deciding to continue or withdraw from the task on the research participant. Sample statements used by the confederates included the following: “It is all up to you, but it sure would be nice to win some money,” “Win us some money,” “I hope you win, I can use some extra cash” and “If you think it is time to withdraw, it is your call, but extra cash for Christmas presents would be nice.” In addition, on several occasions, the confederates also acted as research assistants, administering instruments to the participants in the no-constituency conditions. During their training the undergraduate assistants also received instructions on how to use the instruments, and they practiced administering them. In addition, the researcher sat in during the first four experiments conducted by the assistants. The researcher was available for questions when the research assistants

administered the study. The undergraduate students helping the researcher received three independent-study credits for their involvement in this research project.

Data Collection and Experimental Procedures

Data were collected between June and December 2004. Prior to starting the experimental task, the participants received an information packet that included details of the task (see Appendix J) and an informed consent form (see Appendix D). In addition, they were asked to fill out the following questionnaires: manipulation check and luck (see Appendices K and L, respectively). After participating in the experiment, the participants were asked to provide a narrative explaining the experiment outcomes and complete the entrapment bias questionnaire and the face-work scale instrument (see Appendices M, N, and O).

At the beginning of each experiment, the researcher explained the procedures (see Appendix I) and distributed the information packet (see Appendix J). The participants were informed that the experiment was designed to study luck. Prior to participation in the study, the respondents were told that the purpose of the experiment was to study luck “but some features of the research will not be revealed until the research is completed. This will ensure that study results are not biased” (see Appendix I).

During the pre-experiment instructions, the researcher also mentioned that results of many past studies investigating luck indicate that how well one performs in this particular experimental task is “a strong indicator of how lucky one is in other areas of life, such as finding a good job, finding a partner for life, etc.” After participants completed the pre-task instruments, the researcher mentioned, “Even though some people feel unlucky, their performance on this task does not depend on it. And, furthermore,

even if you feel that you are unlucky, there is still about one in ten chances that you will be successful in accomplishing the task.” This statement was designed to preclude participants from quitting too early because they consider themselves unlucky.

In social research, not fully disclosing the nature of the study is not uncommon and sometimes is necessary to prohibit biases and confounding variables (Schrag, 2003). According to Schrag (2003), this type of deception is justified when validity of research is at stake, when risk to participants is minimal, and when the researcher has a debriefing plan. In this research, all three criteria were met. First, the researcher could not disclose that the investigation concerns entrapment, because then the participants would have been aware of the potential for escalation of commitment and would be unlikely to become entrapped. Second, the risk to the participants was indeed minimal, and they were not likely to object once they were told about how they were deceived. Third, at the end of the experiment the researcher debriefed the participants and explained to them the true purpose of the experiment, defined entrapment, and identified the experimental conditions and manipulated factors. The debriefing also stressed that the experiment did not “have anything to do with luck and your [participant’s] performance is not indicative of how lucky you are as a person.” The debriefing form can be found in Appendix O.

Task Description

The participants were told that the task would consist of drawing ping-pong balls out of a box. The experimenter explained that the box contained 100 ping-pong balls, of which 90 were white and 10 were red, and that the participant’s luck would be measured by the number of red balls he or she drew from the box. In fact, there were no red balls in the box. The participants were told that the goal of the task is to draw five out of the ten

red balls that are mixed in with white balls. The participants were informed that they could make up to 20 attempts to draw five red balls. It was also emphasized that the experiment was structured so that only drawing five red balls counted as a successful completion of the task; in other words, drawing one, two, three, or four red balls constituted failure to complete the task. All of the participants received extra credit for participation regardless of their performance and were reminded that their performance would not affect receiving extra credit. All of the participants started the experiment with ten raffle tickets. The participants were told that if they successfully completed the task (i.e., drew 5 red balls) they would receive an additional 20 raffle tickets, bringing the total number of raffle tickets to 30. However, because there were no red balls to draw, it was impossible for anyone to receive 30 tickets.

Constituency Manipulation

Half of the participants were told that they would be working on their own (no constituency). In the *no constituency condition*, the respondents were told that after they received instructions, they would be escorted into the experiment room where they would perform the drawing task. They received a pay-off sheet reflecting potential gains and losses (see Appendix J). More specifically, the pay-off sheet detailed that for every white ball drawn, the participant would lose one raffle ticket (of the ten tickets he or she started with) and for every red ball drawn he or she would win two raffle tickets. Each participant was informed that if he or she were to get “in the negative,” he or she would have to pay for the number of negative points accumulated, such that one point was worth one dollar. Because the participants started with ten raffle tickets each and could make up to 20 draws, the maximum penalty possible was \$10. However, no money was actually

collected in the end. The participants were also informed that regardless of how many points he or she lost, if all 5 red balls were drawn by the end of the task, the person would receive 20 raffle tickets with no penalties. For example, if the respondent had negative points at the time of drawing all 5 balls, she or he would not have to pay and would receive all 20 raffle tickets for successfully completing the task.

The other half of the participants were told that they would be working in groups of three participants (constituency condition). These groups actually consisted of two confederates (constituency) and one participant. By the time the participant arrived at the lab, the confederates were already waiting. The researcher pretended that she did not know them and took down their names and classes they were enrolled in along with the participant's information for the purposes of providing this information to his or her instructor to notify the instructor that the student should receive extra credit for participating in the study.

In the *constituency condition*, the participants were told that, although they were working as a group, only one person would be performing the task, and that person would be decided by number drawing. The participants in the constituency condition were told that the experimenter was interested in investigating "how an individual's luck affects groups; particularly, because there have been studies that have shown that not only individuals could be lucky, but also groups."

To vote on the person to perform the task, the participants were asked to draw a number out of a hat; the person who got number "3" had to perform the drawing. To ensure that the participant was the one who would be performing the task, all of the folded pieces of paper had the number "3." The confederates had an agreement that one

would always say that she had “1” and the other one would always say that she had “2.” Because of these arrangements the participant was always the one to perform the task.

Each participant in the constituency condition was instructed in front of the confederates that, for every round in which the participant failed to draw a red ball, the constituency would lose one raffle ticket per person and the participant would also lose one raffle ticket. On the other hand, for every round in which the participant did draw a red ball, the constituency would win two tickets each, and the participant would win two tickets. If the participant got “in the negative,” losing more raffle tickets than the number held by each person, the number of points that the constituency would lose would be the same as the number of points lost by the participant. For example, if the participant drew eleven white balls—that is, one negative point—he or she would lose \$1, and each member of the constituency would also lose \$1. The maximum penalty for each member of the constituency and the participant was \$10.

Furthermore, to meet the requirement that the constituency control rewards, the participants were instructed that, at the conclusion of the task, the constituency would determine an amount (from \$0 to \$5) to be awarded to the participant for his or her performance (this award is in addition to the extra credit that all participants would receive regardless of their performance). The experimenter told the participants that she would pay him or her the amount indicated by the constituency. Modeling after the procedures used by Organ (1971), the participant was told that the constituency would also receive compensation, but the amount or payment structure was “left unspecified so as not to bias their decisions on how much to award.”

Reporting Manipulation

In each accountability condition, half of the participants were asked to report on their performance in the task (reporting condition). The other half of the participants were told that, after they finished the experimental task, they would complete some questionnaires and would be free to go (no reporting condition). Thus, prior to the experiment, half of the participants were informed that they would report in person either to the constituency (one-fourth of the participants) or to the researcher (one-fourth of the participants) at the end of the task. All participants were asked to write a paragraph justifying his or her strategy and statements he or she would use to explain the success or failure in performing the task (outcome narrative). Respondents in the reporting condition were told that they would have to complete the outcome narrative before facing the constituency or the researcher. In fact, the participants did not have to report to the constituency or researcher. As soon as the respondents completed the post-experimental questionnaires they were debriefed by the researcher and were free to go.

The information packet for the *reporting/constituency* condition read: “As a group representative you will perform the drawing task on behalf of your group. At the conclusion of the task, you will write a short essay (one or two paragraphs) summarizing the outcome of the task and explaining your strategy and the results. You will use this essay to report to the group members after you are finished with the drawing. After the explanation is presented to the group members, they will carefully weigh the information and decide how much money to award you for your performance.” The information packet for the *reporting/no constituency* condition read: “You are to perform the experimental task on your own. At the conclusion of the task, you will write a short essay

(one or two paragraphs) summarizing the outcome of the task and explaining your strategy and the results. You will use this essay to report to the researcher after you are finished with the drawing.”

In the *no reporting/constituency* condition, each participant was told that the experimenter would inform the group members of the outcomes of the task and the group members would make a decision regarding the monetary reward to be received by the participant. In the *no reporting/no constituency condition*, the respondent was told that after completion of the task and the post-experimental questionnaires the participant would receive a debriefing and would be free to go.

The statements produced by the participants were collected by the experimenter and analyzed for the types of messages most often used by the respondents in an attempt to explain their behavior.

Dependent Variable

The dependent variable in this study was the entrapment bias. For the purposes of this study, the entrapment bias was conceived of as a participant's commitment to continuing the task. It was operationalized by the number of drawing rounds (the greater number of rounds, the greater the entrapment bias) the participant chose to conduct. Analysis of descriptive statistics of the total number of draws shows $M = 9.78$, $SD = 5.17$ and median = 9.00. Number of draws ranged from 0 (2.5% of the respondents) to 20 (12.7% of the sample). About 75% of the participants withdrew by the 10th round. Approximately 8% of the sample lost all 10 tickets, and about 31% stopped at round nine and thus, were left with just one raffle ticket. The remaining 25% continued the task

incurring the monetary penalty, with approximately 18% (of the total sample) incurring a penalty over \$5.

Final Materials and Development of Measures

For anonymity purposes, each participant selected a unique four-digit number that he or she wrote on all study instruments (see Appendix C). When the respondents handed back their questionnaires, the researchers made sure that all surveys had the matching identification numbers. The respondents filled out the materials in the following order: (1) prior to arriving to the lab, the respondents signed an informed consent form and completed the demographics questionnaire, personal network questionnaire, network influence instrument, and face scale; (2) after receiving the experimental instructions, the respondents signed another informed consent form and completed pre-task questionnaires including the manipulation check and luck scale; (3) after finishing the experimental task, the participants completed a series of post-task questionnaires, which included an outcome narrative, an entrapment scale, and face scale (identical to the one they completed prior to participating in the research study); and (4) after the respondents turned in their post-task questionnaires they read a debriefing form and received explanations about the study from the researcher. Institutional Review Board (IRB) approval was received to conduct this study. The IRB approval letter can be seen in Appendix A. The discussion of measures used in the study (presented below) follows the order in which each instrument was administered. Table 3 summarizes reliability coefficients (Cronbach's α) for the scales used in this study.

Informed consent form. The informed consent form assured the respondents of the confidentiality of their performance, informed them that there were no long-term effects

associated with this research, and explained that they were free to terminate the session at any time without penalty (see Appendix D). In other words, if a participant chose to withdraw from the task, he or she would still receive extra credit for participation. The respondents were asked to sign the form twice. The first time, the participants received the form along with other questionnaires when they signed up for the study. They were asked to bring the signed form and completed questionnaires to the lab on the day of their participation in the study. The second time, the participants were given the form and asked to sign it after they received experimental task instructions.

Demographic questionnaire. The demographics questionnaire contained questions regarding participant gender, age, employment status, student status and standing, and race (Appendix E).

Personal networks questionnaire. Prior to arriving at the lab, the participants were asked to complete a personal networks questionnaire (see Appendix F). The questionnaire used items developed by McAllister and Fischer (1978). The questionnaire included a total of 11 items. Items 1 through 8 covered various aspects of an individual's life. Examples of questions included in the instrument are "Who would care for your home if you were to go out of town?"; "With whom do you talk about school or work decisions?"; "With whom do you engage in social activities?"; and "From whom would or could you borrow a large sum of money?" Descriptive statistics for these questions are summarized in Table 2. Item 9 asked respondents to provide the number of all adult members in their household. As the respondents identified members of various networks, they were asked to indicate either the name of the network member or the relationship of the person to the participant (e.g., my father). The questionnaire allowed the respondents

to nominate up to 15 network members for each of the questions. However, in case there was anyone else important to them that they would have liked to nominate, item 10 offered them an opportunity to list those people. The final question asked the respondents to count the total number of people they named on all of the lists and asked them not to count a person multiple times. However, only 79% of the sample provided answers to this question, reporting 15 people as an average number of network members ($M = 14.64$, $SD = 6.69$ and median = 14). The number of members in the network ranged from 1 to 38. Because about 20% of the respondents failed to indicate the total number of people nominated in their networks, a new variable NETWORK was created in which a total number of people nominated in the network was calculated such that every person nominated, even if they were nominated more than once, were counted (Masset, 1999). The range of the network size for this new variable was 78, with minimum of 9 and maximum of 87 people and with the mean of 39.94 ($M = 39.94$, $SD = 15.18$, median = 39). In addition, for analysis purposes the NETWORK variable was dichotomized, with the network size between 1 and 39.9 considered as *small* and network size between 40 to 100 was considered *large*. This variable was called NETSIZE.

Table 2

Network Questionnaire: Summary of Descriptive Statistics for Total Number of People Nominated in the Networks for Items 1 through 8

Question (Total number of people listed)	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
Who would care for your home if you were to go out of town?	4.46	2.90	4.00
With whom do you talk about school or work decisions?	4.75	2.41	5.00
Who, if anyone, has helped with household tasks in the last three months?	2.85	1.84	3.00
With whom do you engage in social activities (e.g., going to a movie, having dinner)?	6.70	3.63	6.00
Whom do you talk with about your interests or hobbies?	5.39	3.12	5.00
With whom do you talk about personal worries?	4.36	2.43	4.00
Whose advice do you consider in making important decisions?	3.87	1.98	4.00
From whom would or could you borrow a large sum of money?	2.60	2.00	1.36

Because closeness is an important predictor of strong ties, three items were added to the questionnaire (Marsden & Campbell, 1984). Two of these questions, “Please indicate how well do you know each of the people you mentioned?” and “How close do you feel to the person?”, were used by Massett (1999). Responses to these questions were not used in the final analysis; instead, the influence scale (see section below) was used to measure strength of the relationships within the network. The third question, used by

Marsden and Campbell (1984), read, “How would you characterize this person?” In other words, the respondents were asked to indicate whether each person named was a relative, an acquaintance, a good friend, or a very close friend. Overall, the respondents nominated mostly their close friends ($M = 18.01$, $SD = 10.09$, median = 17) and relatives ($M = 16.75$, $SD = 7.85$, median = 16) as members of their networks. The friends category ($M = 2.76$, $SD = 3.58$, median = 1) received just a few nominations, and almost no one nominated acquaintances ($M = .71$, $SD = 1.57$, median = 0) as part of their network.

Influence scale. In addition to the personal network questionnaire, an influence scale was also administered. The scale was developed to measure how close the participants were to the members of their network by asking them how much influence people nominated in their network have on the respondent’s life. This 12-item instrument used a 7-point Likert scale in which 1 indicated “no influence” and 7 indicated “strong influence.” The respondents were asked to indicate how much influence people nominated in the networks would have on their job choice, education choice, social life, personal life decisions, social habits, outward appearance, interests and hobbies, neighborhood choice, ways to resolve conflict, political position, and decision to undergo a serious medical procedure. Reliability analysis indicated that the scale had strong reliability (Cronbach’s $\alpha = .82$). Table 3 summarizes descriptive statistics for the scale items.

Table 3

Influence Scale: Summary of Descriptive Statistics

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
Overall how much influence do people you listed in Q1 through 10 have on a type of job you might choose (e.g., type of company, position)?	4.83	1.36	5.00
Overall how much influence do people you listed in Q1 through 10 have on your decision to pursue education beyond college?	5.08	1.57	5.00
Overall how much influence do people you listed in Q1 through 10 have on your social life (e.g., choice of friends)?	5.23	1.41	6.00
Overall how much influence do people you listed in Q1 through 10 have on personal development (e.g., books you read, music you listen to)?	4.61	1.52	5.00
Overall how much influence do people you listed in Q1 through 10 have on your personal life decisions (e.g., whom to date, sex conduct)?	4.78	1.58	5.00
Overall how much influence do people you listed in Q1 through 10 have on your social habits (smoking, alcohol consumption)?	4.85	1.63	5.00
Overall how much influence do people you listed in Q1 through 10 have on your outward appearance (e.g., clothing)	4.27	1.54	5.00

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
Overall how much influence do people you listed in Q1 through 10 have on your interests and hobbies?	4.27	1.48	5.00
Overall how much influence do people you listed in Q1 through 10 have on your neighborhood choice?	4.26	1.75	5.00
Overall how much influence do people you listed in Q1 through 10 have on ways you choose to resolve conflict?	4.49	1.58	5.00
Overall how much influence do people you listed in Q1 through 10 have on political position you might take (e.g., support a candidate, party, voting behavior)?	3.69	1.84	4.00
Overall how much influence do people you listed in Q1 through 10 have on your decision to undergo a serious medical procedure (e.g., surgery)?	4.93	1.78	5.00

According to Levine (2005), in communication research confirmatory factor analysis (CFA) is preferred to exploratory factor analysis (EFA) because in comparison to exploratory factor analysis, “CFA provides stronger evidence for dimensionality than EFA because EFA can under-factor correlated constructs and because model fit is typically tested with CFA” (p. 337). Therefore, throughout this research CFA was used to confirm scales employed by the study. CFAs were performed using principal components extraction and varimax rotation. To this end, confirmatory factor analysis (CFA) was used to confirm a composite measure of influence that people nominated in the networks have on the participants’ lives (INFLUENC). This initial factor analysis

yielded three factors. However, loadings for the two of the factors were weak. To create a factor score, the items were forced into one factor. The resulting factor score was used in analyses discussed in the chapter 3, Results.

The overall combined network size (NETWORK) was then multiplied by the overall influence measure (INFLUENC) to create an overall measure of the size and strength of the nominated network (NTWRKINF).

Face scale. The participants were asked to complete a face scale developed specifically for this experiment (see Appendix H). The scale was administered twice, once prior to arriving to the lab and the second time after the experiment. The scale was adapted from the instrument developed by Wilson and Kunkel (2000), who examined face threats in relationship issues using a series of scenarios with follow-up questions. For the purposes of this research, instead of scenarios, one-sentence items were created. The instrument was developed using four dimensions: self-positive face, other-positive face, self-negative face, and other-negative face. The 24-item instrument used a 7-point Likert scale in which 1 indicated “strongly disagree” and 7 indicated “strongly agree.”

Among items examining *self-positive face* were questions such as “I worry about how other people judge me when it comes to my physical appearance” and “In general, it is important to me that people do not think that I am nosy.” The reliability analysis of items measuring this dimension yielded strong reliability (Cronbach’s $\alpha = .73$). In addition for the purposes of analysis, confirmatory factor analysis was used to create a composite measure of self-positive face (SELFPOS). The initial factor analysis yielded one factor with all of the loadings above .50. The resulting factor score was used in analyses using self-positive face discussed in the Results chapter.

Examples of items looking at *other-positive* face included “Overall, when I talk to people, it is important to me that what I say does not make them look inadequate” and “I don’t like to get into arguments with people because it might make them look uncooperative.” The reliability analysis of items measuring this dimension yielded strong reliability (Cronbach’s $\alpha = .74$). Review of the reliability of specific scale items suggested that one item, “When I talk to people, I want to make them feel comfortable discussing issues with me,” should be deleted. The new reliability analysis yielded stronger reliability (Cronbach’s $\alpha = .75$). Confirmatory factor analysis was used to create a composite measure of other-positive face (OTHERPOS). The initial factor analysis yielded one factor with all of the loadings above .50. The resulting factor score was used in analyses discussed in the Results chapter.

Items “In general, it is important to me that others feel that I’m an independent person” and “When my close friend does me a favor, I worry about the fact that I will be obliged to return the favor in the future” illustrate examples of questions measuring *self-negative face*. Review of the reliability of specific scale items measuring this dimension suggested that one item, “Overall, I dislike when people give me an advice when I did not ask for it,” should be deleted, resulting in an improved reliability coefficient (Cronbach’s $\alpha = .71$). Confirmatory factor analysis was used to create a composite measure of self-negative face (SELFNEG). The initial factor analysis yielded two factors. However, loadings for one of the two factors were weak. To create a factor score, another confirmatory factor analysis was performed in which the items were forced into one factor. All of the new loadings were above .50. The resulting factor score was used in analyses discussed in the Results chapter.

Finally, examples of items examining *other-negative* face included “When I ask my close friend for a favor, I worry that he/she might find it hard to say ‘no’” and “When I ask my close friend to do something for me, I worry that he/she might feel pushed into agreeing with what I want.” Original reliability analysis of items measuring this dimension revealed that item “In general, I do not feel comfortable sharing my problems with other people because I’m afraid I’m going to overburden them” should be deleted, resulting in an improved reliability (Cronbach’s $\alpha = .96$). Confirmatory factor analysis was used to confirm a composite measure of other-negative face (OTHENEG). The initial factor analysis yielded one factor solution with strong loadings, all above .70. The resulting factor score was used in analyses discussed in the Results chapter.

Overall, for the purposes of analysis, four new variables were created: SELFPOS, OTHERPOS, SELFNEG, and OTHERNEG. Table 4 summarizes descriptive statistics for the scale items.

Table 4

Face Scale: Summary of Descriptive Statistics

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
When I ask my close friend for a favor, I worry that she/he might feel obliged to comply with my request	3.84	1.66	4.00
When I ask my close friend for a favor, I am concerned that he/she might feel like they have to say "yes" to my request	3.69	1.67	3.00
When I ask my close friend for a favor, I worry that she/he might find it hard to say "no"	3.68	1.68	3.00

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
When I ask my close friend to do something for me, I'm concerned that she/he might feel like she/she has to go along with my request	3.54	1.61	3.00
When I ask my close friend to do something for me, I worry that she/he might feel pushed into agreeing with what I want	3.30	1.60	3.00
In general, I do not feel comfortable sharing my problems with other people because I'm afraid I'm going to overburden them	3.00	1.79	3.00
In general, it is important to me that others feel that I'm an independent person	5.24	1.36	5.00
When I ask somebody for a favor, I worry about the fact that I will feel indebted to the person	3.49	1.65	3.00
In general it is important to me to be self-sufficient because I do not like owing anything to other people	5.13	1.53	5.00
In general it is important to me that people in my life realize that I'm capable of making decisions myself	5.73	1.17	6.00
When my close friend does me a favor, I worry about the fact that I will be obliged to return the favor in the future	2.98	1.59	2.98
Overall, I dislike when people give me an advice when I did not ask for it	3.85	1.64	4.00

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
Overall, when I talk to people, it is important to me that what I say does not make them look inadequate	4.71	1.41	5.00
In general, when I give advice to a person, it is important to me that she/he does not feel like I'm implying that she/he has difficulty handling the situation	4.83	1.41	5.00
Overall, when I give an advice to my friend, it is important to me that my friend does not feel like I'm implying that she/he does not understand the consequences of his/her actions	4.66	1.50	5.00
In general, when my friend inadvertently breaks promise, I don't want him/her to feel like I think that she/he is person who never honors his/her commitments	4.17	1.47	4.00
I do not like to get into arguments with people because it might make them look uncooperative	3.18	1.37	3.00
When I talk to people, I want to make them feel comfortable discussing issues with me	6.04	1.08	6.00
I worry about how other people judge me when it comes to my physical appearance	4.76	1.59	5.00
I want people to find me physically attractive	5.85	1.16	6.00

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
In general, when a group of colleagues is having a conversation, I like to be included in the conversation	5.66	1.20	6.00
In general, it is important to me that people do not think that I am nosy	4.86	1.50	5.00
In general, it is important to me to make a positive impression on people	6.29	.80	6.00
In general, it is important to me that people think that I am smart and capable	6.29	.89	6.00

Manipulation check. Manipulations were checked through questions in the information packet given to the participants prior to performing the experimental task. After reading the materials, the participants were asked questions to evaluate their understanding of the instructions (see Appendix K). The questionnaire included such items as “Will you be evaluated?” (1 = yes, 2 = no); “How closely do you believe your actions will be examined?” (1 = not at all closely to 7 = very closely); “How much will you be required to justify your outcomes and strategy?” (1 = not at all required to 7 = very much required); “To receive 20 extra raffle tickets at the end of the task, how many red balls do you have to draw?” (“please circle the appropriate answer: 1, 2, 3, 4, 5”); “What is the maximum number of drawing rounds you can conduct?” (“please circle the appropriate answer: 3, 7, 10, 15, 17, 19, 20, 22, or as many as I want”); “If you receive two negative points, what will be the monetary penalty you will incur?” (“please circle the appropriate answer: \$1, \$2, \$3, \$4, \$5, \$6, \$7, \$8, \$9, \$10”), and only for the constituency

condition “If you receive three negative points, what will be the monetary penalty incurred by each group member?” (“please circle the appropriate answer: 1, 3, 4, 6, 9, 10”).

Two of the experimental manipulations, reporting Yes/No and constituency Yes/No, were checked using an independent-samples *t*-test. The *t*-test was performed on items designed to show meaningful differences based on the assigned conditions. Question one (“Will you be evaluated?”) contrasted the difference between the conditions in which the participants had to report in person to either constituency or the researcher ($M = 1.07, SD = .26$) with the conditions with no reporting ($M = 1.38, SD = .49$). Results indicated a significant difference between these two conditions $t(231) = 6.17, p < .01$. In addition, significant differences were also observed in reporting ($M = 4.96, SD = 1.43$) versus no reporting ($M = 4.28, SD = 1.75$) conditions on question 2, “How closely do you believe your actions will be examined?” ($t[233] = 3.25, p < .01$). Furthermore, the results showed that those participants in the no reporting conditions ($M = 3.36, SD = 1.78$) indicated that they believed that they would not have to justify their outcomes and strategy (question 3) in comparison to those in reporting conditions ($M = 4.90, SD = 1.48; t[232] = 7.14, p < .01$). For the constituency ($M = 1.05, SD = .22$) versus no constituency conditions ($M = 1.39, SD = .49$), only one item (“Will you be evaluated?”) was hypothesized to show significant differences between the conditions. The null hypothesis was rejected ($t[231] = 6.70, p < .01$), such that those participants in the constituency conditions knew that they would be evaluated.

The majority (94.40%) of the individuals assigned to the constituency/reporting condition accurately reported that they would be evaluated by the group members. All (100%) individuals assigned to the no constituency/reporting condition correctly

indicated that they would be evaluated by the researcher. In addition, 98.70% of the participants correctly indicated that they would need to draw five red balls to receive 20 extra raffle tickets. Approximately 94% of the respondents reported that they could conduct a maximum of 20 rounds of drawing, as they were instructed. Furthermore, 83% of the participants accurately pointed out that if they were to lose 12 raffle tickets, they would incur a \$2 monetary penalty. The results also suggested that the majority of the participants (89.30%) understood that if, on the first four tries, they were to draw only white balls, they would be left with 6 raffle tickets. The data indicated that 81.60% of the individuals assigned to the constituency conditions understood that if they were to lose 13 raffle tickets, each group member would incur a \$3 monetary penalty.

Luck scale and scenarios. Because the participants were told that the experiment was about luck, to make the situation more believable the participants were asked to fill out a number of luck scales and scenarios borrowed from studies investigating luck (Darke & Freedman, 1997a; Wohl & Enzle, 2002a). The items from these studies were placed into one instrument called “Luck Questionnaire” (see Appendix L). Although luck was not part of the experimental manipulation, reliability of the scales was assessed.

The first scale included in the Luck Questionnaire was called Belief in Good Luck (BIGL), a 12-item-scale developed by Darke and Freedman (1997a). This scale was designed to measure the belief that luck is a stable and personal trait. The questionnaire consisted of 6-point Likert scale items ranging from 1 (strongly agree) to 6 (strongly disagree). For example, items 1, 4, and 10 respectively asked, “Luck plays an important part in everyone’s life,” “I believe in luck” and “Even the things in life I can’t control tend to go my way because I’m lucky.” Darke and Freedman reported strong reliability

(Cronbach's $\alpha = .85$). The reliability analysis using data from the current research study also yielded good reliability (Cronbach's $\alpha = .78$). The review of the scale items suggested that item 7, "It's a mistake to base any decisions on how lucky you feel," and item 12, "Luck is nothing more than random chance," should be deleted. The reliability analysis was conducted without items 7 and 12 resulting in higher reliability (Cronbach's $\alpha = .88$).

To make the case that this was a study about luck more convincing, three short scenarios about luck were also included in the experimental materials. The scenarios were borrowed from Darke and Freedman (1997a). Originally, the scenarios were used to establish the external validity of the BIGL scale. For example, scenario number 1 read, "If you were walking down a street that was full of people and someone dropped a \$20 bill in the middle of the crowd, do you feel that you would: (1) most certainly find it; (2) probably find it; (3) have a slightly better than even chance of finding it; (4) have no feeling one way or the other; (5) have a slightly better than even chance of not finding it; (6) probably not find it; (7) most certainly not find it." Reliability analysis of these scenarios, however, showed that they were not reliable (Cronbach's $\alpha = .26$).

In addition to the BIGL scale and luck scenarios, a questionnaire developed by Wohl and Enzle (2002a) was adopted and slightly modified for this study. This questionnaire consisted of four 7-point scale items, which included such items as "When it comes to games of chance (gamble), usually my chances of winning are" (1 = very bad to 7 = very good); "How often do you play games of chance (gamble)?" (1 = never to 7 = more than once a week); "To what extent do you feel that luck is a quality of the person or a quality of the situation?" (1 = quality of situation to 7 = quality of the person), and

“If you were to say that you were ‘lucky’ in terms of some event, to what extent do you mean that you a lucky type of person or that a lucky thing happened to you?” (1 = A lucky thing happened to me and 7 = I am a lucky type of person). These items were poorly interrelated (Cronbach’s $\alpha = .50$).

Low reliabilities for the scenarios and Wohl and Enzle’s (2002a) questionnaires had no implications for the results of the study, because luck was not the focus of this research and there were no research hypotheses associated with luck. However, because the BIGL scale did have strong reliability, for exploratory research purposes, a luck factor score was computed on that scale (LUCKSCAL) using confirmatory factor analysis. First, the analysis yielded two components. However, only two items in the second factor had a loading above .50, so another principal component analysis was performed forcing items to load as one factor. All of the new loadings were above .50, and the factor score from this analysis was used for analyses performed for the current research. Table 5 summarizes descriptive statistics for the BIGL scale items.

Table 5

Belief in Good Luck Scale: Summary of Descriptive Statistics

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
Luck plays an important part in everyone's life	4.30	1.55	4.00
Some people are consistently lucky, and others are unlucky	4.30	1.55	4.00
I consider myself to be a lucky person	3.94	1.40	4.00
I believe in luck	4.34	1.54	5.00
I often feel like it's my lucky day	3.45	1.41	3.00
I consistently have good luck	3.37	1.29	3.00

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
It's a mistake to base any decision on how lucky you feel	4.67	1.54	5.00
Luck works in my favor	3.58	1.25	4.00
I don't mind leaving things to chance because I'm a lucky person	2.77	1.23	3.00
Even the things in life I can't control tend to go my way because I'm lucky	3.11	1.27	3.00
There is such a thing as luck that favors some people, but not others	3.78	1.60	4.00
Luck is nothing more than a random chance	4.76	1.62	5.00

Outcome narrative. This instrument asked participants to summarize the results of the task and explain the strategy that he or she chose to pursue while performing the drawing (see Appendix M). The respondents were first asked, “What was the color of the ball you drew?” Then, they were asked, “What did you choose to do next?” to which they could respond that they chose to withdraw from the task or continue drawing. If the respondents chose to continue to draw, they were asked in an open-ended question to explain why they made this decision. Participants were asked the same set of questions for each round of drawing. At the end of the questionnaire the respondents were asked to identify some specific statements that they might use to explain what happened during the drawing task. These data were collected to explore whether individuals are likely to use social accounts to explain their behavior. Coding procedures and analysis of the open-ended questions will be discussed in the Results chapter.

Entrapment bias scale. The scale measuring cognitive processes contributing to conflict escalation was constructed specifically for this study. It was administered after the participants completed the experimental task (See Appendix N). The instrument used a 7-point Likert scale in which 1 indicated “strongly disagree” and 7 indicated “strongly agree.” The questionnaire was administered to participants in all conditions. The instrument consisted of 20 items for the constituency conditions and no constituency/reporting condition and 18 items for the control condition. For the control condition, two items were omitted because they were not applicable to the respondents.

The scale was developed using four factors: internal self-justification, external self-justification, and other- and self-positive face goals. The *internal self-justification* measured the need to appear to be a rational decision maker (Aronson, 1968). This portion of the scale consisted of six items (i.e., 1, 2, 3, 4, 5, and 16) including “I feel that my strategy choice was rational,” “I made my decision to continue drawing unemotionally,” “I weighted potential risks and gains carefully prior to making each round of drawing,” “I calculated my odds prior to each drawing,” “I felt that my investment in the process will be justified by the eventual pay off,” and “It was important for me to do well on this particular task.” Review of the reliability coefficients (Cronbach’s $\alpha = .60$) for this dimension revealed that one item, “I made my decision to continue (or stop) drawing unemotionally,” should be omitted, which improved the reliability for this factor (Cronbach’s $\alpha = .67$). Confirmatory factor analysis was used to create a composite measure of internal self-justification (INTRNJS). The initial factor analysis yielded one factor with all factor loadings above .50.

The *external self-justification* measured the desire to appear rational to others and to demonstrate to them that persisting in a failing course of action was a correct decision in the long term (Staw, 1976). The external self-justification items (i.e., 6, 7, 8, 9, 10) included five questions, among them were such items as “In general, it was important to me that the group members see me as a rational person” and “I wanted the other group members to understand the logic used in choosing my course of action.” Items administered to the participants in the no constituency condition were adapted for relevancy. For example, “I wanted my group members to feel that my choices were well-calculated” was adapted to read “If I were to perform this task in a group in which I was a group representative, I would want the group members to feel that my choices were well-calculated.” To improve reliability coefficients (Cronbach’s $\alpha = .79$) on this dimension, two items, “Under the circumstances, I believe that the course I pursued had the best potential for earning the most extra raffle tickets for my group members” and “I felt it was important to perform well in this task for my group members,” were omitted resulting in stronger reliability score (Cronbach’s $\alpha = .83$). Confirmatory factor analysis was used to create a composite measure of external self-justification (EXTRNJS). The initial factor analysis yielded one factor with strong factor loadings, all of them above .50.

In addition, the discussion in the preceding sections regarding face argues that participants who have expansive personal networks are likely to be concerned with protecting group image (other-positive face). Five items (i.e., 11, 12, 13, 14, 15) were developed to measure *other-positive face* goals. Sample items included “I felt it was important to perform well in this task for my group members” and “I was concerned for

my group's needs." Again, items were adapted to be applicable to all conditions. For example, the item "I wanted to help my group" was administered to the participants in constituency present conditions; for the no constituency conditions the item was adapted to read, "When working in a team, I want to help my group." Reliability analysis resulted in strong reliability (Cronbach's $\alpha = .87$), but also suggested that item 15, "I was worried what the group members will think about me after the task was completed," should be removed, which resulted in even greater reliability (Cronbach's $\alpha = .91$). Confirmatory factor analysis was used to create a composite measure of other-positive face goals (OTHRPENT). The initial factor analysis yielded one factor with strong factor loadings, all of them above .50.

Items measuring the *self-positive face* dimension (i.e., 17, 18, 19, 20, 21, 22) included "I was worried what [the researcher/group members] will think about me after the task was completed," "It was important for me to do well on this task," "I wanted to perform well to make a positive impression on [the researcher/group members]," "I don't want my group members to be mad at me for losing some of their raffle tickets and/or money," "I think this was an unfair task" and "I didn't want [the researcher/group members] to think that I'm unable to calculate the odds." However, because the items were largely inapplicable to the control group—that is, by definition, this condition (no reporting/no constituency) did not include any threats to self-positive face—this condition was excluded from the analysis for the control group. Reliability analysis on items for conditions I, II, and III revealed that reliability of the scale for this dimension could be improved (Cronbach's $\alpha = .67$) if items 19, 21 and 22 were omitted (Cronbach's $\alpha = .80$). Confirmatory factor analysis was used to create a composite measure of self-

positive face goals (SELPENT). The initial factor analysis yielded one factor with strong factor loadings, all of them above .50.

Overall, to measure how much internal and external self-justification and other- and self-positive face goals contributed to the entrapment bias and to distinguish which of the factors contributed to the entrapment, four new variables were created: INTRNJS (measure for internal justification); EXTRNJS (measure for external justification); OTHRPENT (measure for other positive face), and SELFPENT (measure for own positive face). Again, the self-positive face factor score (SELPNET) did not include COND IV. Tables 6 through 9 summarize descriptive statistics for the entrapment bias scale items by each condition.

Table 6

Entrapment Bias Scale: Summary of Descriptive Statistics for Condition I

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
I feel that my strategy was rational	5.38	1.60	6.00
I made my decision to continue (or stop) drawing unemotionally	5.05	1.89	6.00
I weighed potential risks and gains carefully prior to making each round of drawing	3.87	1.96	4.00
I calculated my odds prior to each drawing	2.91	1.87	3.00
I felt that my investments in the process will be justified by the eventual pay off	3.96	1.90	4.00
Under the circumstances, I believe that the course I pursued had the best potential for earning most extra raffle tickets for my group members	4.29	1.69	4.00

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
I wanted the other group members to understand the logic used in choosing my course of action	4.91	1.58	5.00
I wanted my group members to feel that my choices were well-calculated	4.80	1.48	5.00
In general, it was important to me that the group members see me as a rational person	4.65	1.76	5.00
I felt it was important to perform well in this task for my group members	4.94	1.56	5.00
I was concerned for my group's needs	4.75	1.52	5.00
I wanted to help my group	5.40	1.24	5.00
I did not want to let my group down	5.24	1.42	5.00
When performing the task it was important to me to consider the consequences my behavior might have for my group	5.04	1.52	5.00
I was worried what the group members will think about me after the task was completed	3.73	1.60	4.00
It was important for me to do well on this task	4.44	1.60	4.00
I wanted to perform well to make a positive impression on my group members	4.27	1.72	4.00
I don't want my group members to be mad at me for losing some of their raffle tickets and/or money	5.35	1.51	5.00
I think this was an unfair task	3.93	1.84	4.00
I didn't want my group members to think that I'm unable to calculate the odds	4.04	1.68	4.00

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
I don't think I understood the instructions well	3.00	1.89	3.00
I believe that any person in my position would have behaved the same way I did	4.89	2.00	5.00

Table 7

Entrapment Bias Scale: Summary of Descriptive Statistics for Condition II

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
I feel that my strategy was rational	5.55	1.49	6.00
I made my decision to continue (or stop) drawing unemotionally	5.40	1.45	6.00
I weighed potential risks and gains carefully prior to making each round of drawing	4.43	2.04	5.00
I calculated my odds prior to each drawing	3.29	1.95	3.00
I felt that my investments in the process will be justified by the eventual pay off	4.48	1.72	4.00
Under the circumstances, I believe that the course I pursued had the best potential for earning most extra raffle tickets for my group members	4.28	1.79	4.00
I wanted the other group members to understand the logic used in choosing my course of action	5.02	1.63	5.00
I wanted my group members to feel that my choices were well-calculated	4.83	1.71	5.00
In general, it was important to me that the group members see me as a rational person	5.14	1.33	5.00

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
I felt it was important to perform well in this task for my group members	5.09	1.48	5.00
I was concerned for my group's needs	4.86	1.56	5.00
I wanted to help my group	5.45	1.38	6.00
I did not want to let my group down	5.55	1.37	6.00
When performing the task it was important to me to consider the consequences my behavior might have for my group	5.21	1.39	5.00
I was worried what the group members will think about me after the task was completed	4.29	1.68	4.00
It was important for me to do well on this task	4.57	1.54	5.00
I wanted to perform well to make a positive impression on my group members	4.33	1.46	4.00
I don't want my group members to be mad at me for losing some of their raffle tickets and/or money	5.07	1.58	5.00
I think this was an unfair task	4.14	1.89	4.00
I didn't want my group members to think that I'm unable to calculate the odds	4.03	1.73	4.00
I don't think I understood the instructions well	2.60	1.85	2.00
I believe that any person in my position would have behaved the same way I did	5.03	1.57	5.00

Table 8

Entrapment Bias Scale: Summary of Descriptive Statistics for Condition III

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
I feel that my strategy was rational	5.13	1.63	5.00
I made my decision to continue (or stop) drawing unemotionally	4.95	1.89	5.00
I weighed potential risks and gains carefully prior to making each round of drawing	4.36	1.93	5.00
I calculated my odds prior to each drawing	3.32	1.98	3.00
I felt that my investments in the process will be justified by the eventual pay off	4.13	1.61	4.00
Under the circumstances, I believe that the course I pursued had the best potential for earning most extra raffle ticket	3.63	1.90	4.00
I wanted the researcher to understand the logic used in choosing my course of action	3.89	1.74	4.00
I wanted the researcher to feel that my choices were well-calculated	3.91	1.71	4.00
In general, it was important to me that the researcher sees me as a rational person	3.75	1.70	4.00
In general, when performing in a group/team environment, it is important to me to perform well for my group members	6.04	0.97	6.00
When working in a team, I'm concerned for my group's needs	5.95	.90	6.00
When working in a team, I want to help my group	6.11	1.06	6.00
When working in a group, I do not want to let my team down	6.25	1.06	6.50

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
When working in a group, it is important to me to consider the consequences my behavior might have for my group	6.20	.92	6.00
When working in a group, I worry what the group members will think about me after the project is completed	5.25	1.47	6.00
It was important for me to do well on this particular task	4.11	1.65	4.00
I wanted to perform well to make a positive impression on the researcher	3.57	1.72	4.00
I don't want the researcher to think less of me for losing raffle tickets and/or money	3.34	1.67	3.00
I think this was an unfair task	3.41	1.91	3.00
I didn't want the researcher to think that I'm unable to calculate the odds	3.34	1.62	3.00
I don't think I understood the instructions well	2.14	1.45	2.00
I believe that any person in my position would have behaved the same way I did	4.20	1.35	4.00

Table 9

Entrapment Bias Scale: Summary of Descriptive Statistics for Condition IV

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
I feel that my strategy was rational	5.60	1.66	6.00
I made my decision to continue (or stop) drawing unemotionally	5.57	1.61	6.00

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
I weighed potential risks and gains carefully prior to making each round of drawing	4.15	2.29	5.00
I calculated my odds prior to each drawing	2.93	1.91	2.00
I felt that my investments in the process will be justified by the eventual pay off	3.82	1.70	4.00
Under the circumstances, I believe that the course I pursued had the best potential for earning most extra raffle ticket	4.00	1.77	4.00
In general, when I do something it is important to me that others understand the logic I used in choosing my course of action.	4.47	1.73	4.00
If I were to perform this task in a group in which I was a group representative, I would want the group members to feel that my choices were well-calculated.	5.63	1.21	6.00
In general, when working in groups, it is important to me that group members see me as a rational person	5.88	1.04	6.00
In general, when performing in a group/team environment, it is important to me to perform well for my group members	6.13	0.89	6.00
When working in a team, I'm concerned for my group's needs	5.95	1.05	6.00
When working in a team, I want to help my group	6.27	0.86	6.00
When working in a group, I do not want to let my team down	6.38	0.86	7.00

Question	Mean (<i>M</i>)	Standard Deviation (<i>SD</i>)	Median
When working in a group, it is important to me to consider the consequences my behavior might have for my group	6.08	0.94	6.00
When working in a group, I worry what the group members will think about me after the project is completed	4.43	1.57	5.00
It was important for me to do well on this particular task	3.90	1.89	4.00
When working in a group, it is important to me to perform well to make a positive impression on my team members	5.72	1.20	6.00
I think this was an unfair task	3.48	1.89	4.00
I don't think I understood the instructions well	2.47	1.64	2.00
I believe that any person in my position would have behaved the same way I did	4.10	1.56	4.00

Table 10

Scale Reliability Coefficients

Scale	Cronbach's α
Influence scale	0.82
Face scale	
Self-positive face	0.73
Other-positive face	0.75
Self-negative face	0.71
Other-negative face	0.91
Belief in good luck	0.88
Entrapment bias scale	
Internal self-justification	0.67
External self-justification	0.83
Other-positive face	0.91
Self-positive face (only conditions I, II and III)	0.80

CHAPTER 3

Results

This chapter presents the results of the study. This research explores a number of factors affecting entrapment bias. The discussion below presents the findings for each of the hypotheses and research question.

Data Preparation

A number of transformations were performed in attempts to correct skewness in the data while maintaining variance homogeneity. However, no transformation was found that would eliminate skewness.

Overall, most variables had no or less than three missing values. Missing values were a result of respondents leaving the items blank, apparently because they either refused to or forgot to answer the questions.

Table 11 presents a correlation matrix for the independent and dependent variables.

Table 11

Correlation Matrix: Independent and Dependent Variables

	Total number of draws	Constituency (present or not)	Reporting (yes or no)	Overall face concern: Other negative face	Overall face concern: Self negative face	Overall face concern: Other positive face scale	Overall face concern: Self positive face scale
Constituency (present or not)	0.02						
Reporting (yes or no)	0.13*	0.01					
Overall face concern: Other negative face	-0.01	0.01	0.06				
Overall face concern: Self negative face	0.04	0.02	0.01	0.47**			
Overall face concern: Other positive face scale	-0.10	0.10	-0.12	0.26**	0.33**		
Overall face concern: Self positive face scale	0.07	0.02	0.04	0.15*	0.30**	0.34**	
Network size multiplied by strength of network influence	-0.03	0.01	0.05	0.07	0.06	0.03	0.13
Luck	0.07	0.08	-0.03	0.07	0.08	0.13*	0.02
Entrapment scale: Internal justification	-0.23**	0.06	-0.04	0.05	0.08	0.07	0.05
Entrapment scale: External justification	-0.23**	0.09	-0.30**	0.10	0.10	0.20**	0.16*
Entrapment scale: Other Positive Face	-0.20**	-0.41**	-0.05	0.07	0.04	0.13*	0.25**
Entrapment scale: Self positive face (Conditions 1,2 and 3)	-0.05	0.34**	-0.16*	0.12	0.20**	0.30**	0.24**

	Network size multiplied by strength of network influence	Luck	Entrapment scale: Internal justification	Entrapment scale: External justification	Entrapment scale: Other Positive Face
Luck	0.03				
Entrapment scale: Internal justification	0.10	0.17*			
Entrapment scale: External justification	0.13	0.06	0.50**		
Entrapment scale: Other Positive Face	0.13	0.09	0.31**	0.42**	
Entrapment scale: Self positive face (Conditions 1,2 and 3)	0.15*	0.15*	0.41**	0.60**	0.33**

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 12

Independent Variables: Factor Score Descriptive Statistics for Condition I

Variable	Mean	Std. Deviation
Total Number of Draws	10.52	4.72
Overall face concern: Other negative face	0.15	1.04
Overall face concern: Self negative face scale	-0.01	1.00
Overall face concern: Other positive face scale	-0.01	1.00
Overall face concern: Self positive face scale	-0.07	1.04
Network size multiplied by strength of network influence	5.80	35.89
Luck	-0.03	0.86
Entrapment scale: Internal justification	-0.09	0.97
Entrapment scale: External justification	.019	1.00
Entrapment scale: Other positive face	-0.49	1.06
Entrapment scale: self positive face	0.26	0.95

Table 13

Independent Variables: Factor Score Descriptive Statistics for Condition II

Variable	Mean	Std. Deviation
Total Number of Draws	10.41	5.13
Overall face concern: Other negative face	-0.02	0.98
Overall face concern: Self negative face scale	0.03	1.04
Overall face concern: Other positive face scale	-0.23	0.91
Overall face concern: Self positive face scale	0.14	0.99
Network size multiplied by strength of network influence	-0.39	40.79
Luck	-0.03	1.10
Entrapment scale: Internal justification	0.00	0.94
Entrapment scale: External justification	-0.63	1.05
Entrapment scale: Other positive face	0.38	0.68
Entrapment scale: self positive face	-0.48	0.96

Table 14

Independent Variables: Factor Score Descriptive Statistics for Condition III

Variable	Mean	Std. Deviation
Total Number of Draws	10.52	4.72
Overall face concern: Other negative face	0.15	1.04
Overall face concern: Self negative face scale	-0.01	1.00
Overall face concern: Other positive face scale	-0.01	1.00
Overall face concern: Self positive face scale	-0.07	1.04
Network size multiplied by strength of network influence	5.80	35.89
Luck	-0.03	0.86
Entrapment scale: Internal justification	-0.09	0.97
Entrapment scale: External justification	.019	1.00
Entrapment scale: Other positive face	-0.49	1.06
Entrapment scale: self positive face	0.26	0.95

Table 15

Independent Variables: Factor Score Descriptive Statistics for Condition IV

Variable	Mean	Std. Deviation
Total Number of Draws	9.03	5.49
Overall face concern: Other negative face	-0.01	0.99
Overall face concern: Self negative face scale	-0.07	1.07
Overall face concern: Other positive face scale	1.03	1.16
Overall face concern: Self positive face scale	-0.13	1.07
Network size multiplied by strength of network influence	1.52	42.61
Luck	-0.11	1.08
Entrapment scale: Internal justification	-0.12	1.06
Entrapment scale: External justification	0.41	0.72
Entrapment scale: Other positive face	0.43	0.71

Test of the Hypotheses

Hypothesis 1 (H1) posited that entrapment will be more likely when a constituency is present than when it is not present. To test this hypothesis, a one-way ANOVA was performed, with constituency (present versus not present) as the independent variable, and entrapment—measured by the number of balls drawn—as the dependent variable. Presence of constituency did not affect entrapment, $F(1, 235) = .07$, n.s. Therefore, H1 was not supported.

Hypothesis 2a (H2a) posited that internal and external justification would be greater when respondents are required to report their behavior. Two ANOVAs were performed with reporting conditions dichotomized (i.e., reporting yes or no) as the independent variable, and internal and external justification factor scores, derived from the entrapment scale, as the dependent variables. The results indicated no significant effect for internal self-justification, $F(1, 228) = .45$, n.s. However, a significant main effect was found for external self-justification, $F(1, 228) = 22.11$, $p < .01$. That is, although requiring an individual to report his or her behavior had no effect on the need to internally self-justify behavior, the requirement to report did affect individuals' need to appear rational to others. Therefore, H2a was partially supported.

Hypothesis 2 (H2b) stated that when individuals have to report their behavior, their need for internal and external self-justifications will lead to greater entrapment. To test this hypothesis, only cases in which reporting was required were selected ($n = 116$). A regression analysis was performed with internal and external self-justification factor scores derived from the entrapment scale serving as independent variables, and the total number of draws—or entrapment—as the dependent variable. The results showed that the

overall analysis was significant, $F(2, 110) = 7.30, p < .01$. However, consistent with the finding presented above, only the effect of internal justification was significant, with a negative relationship to entrapment, $t(110) = 3.47, \beta = -1.94, p < .01$. That is, among the individuals who had to report their behavior, the greater need for internal self-justification led to lower levels of entrapment. The external justification had no effect on entrapment, $t(110) = .46, n.s.$ Therefore, H2b was partially supported.

Hypothesis 3 (H3) posited that the presence of constituency would lead to greater internal and external justification. Two ANOVAs were performed with constituency dichotomized (i.e., present or not) as the independent variable, and internal and external justification as the dependent variables. The results demonstrated no significant main effects for either test (internal justification: $F[1, 228] = .83, n.s.$; external justification: $F[1, 228] = 1.83, n.s.$). Therefore, H3 was not supported.

Hypothesis 4 (H4) stated that individuals with greater self- and other-positive face concerns would be more likely to become entrapped. Prior to testing this hypothesis, a regression analysis was performed using self- and other-positive and self- and other-negative face scale scores derived from the face scale instrument administered prior to the experimental task as the independent variable and total number of draws as the dependent variable. The regression analysis was performed to test if general concern for face affects entrapment. The overall relationship was non-significant, $F(4, 232) = 1.24, n.s.$ However, the results provided marginal support for the relationship between other positive face goals and entrapment, which approached significance, $t(114) = 1.86, p = .06, \beta = -.71$. That is, the results suggest that the greater the person's concern for other's positive face, the less likely the person is to become entrapped.

Next, to test the hypothesis that individuals' face-saving goals affect entrapment, two regression analyses were performed using self-positive and other-positive face goal (derived from the entrapment scale administered after participants completed the experimental task) as independent variables and the total number of draws as the dependent variable. It should be noted that the analysis for self-positive face was performed only on experimental conditions 1, 2, and 3. The control group (condition 4) was excluded from the analysis because the experimental design was such that individuals in this condition should not have experienced any threats to self-positive face. Because individuals in this condition should not have experienced any threats to self-positive face, questions about self-positive face differed for this group and this analysis could not be run.

The results showed that other-positive face goals were negatively associated with entrapment, $F(1, 228) = 9.20, p < .01; \beta = -1.03$. This result is consistent with the finding reported above regarding individuals' general other-positive face concerns and entrapment. That is, the results indicated that the individuals were less likely to get entrapped if they had significant concerns for other-positive face. However, self-positive face goals did not affect entrapment, $F(1, 168) = .35, n.s.$ Therefore, H4 was partially supported.

Hypothesis 5 (H5) posited that concern for saving self- and other-positive face would be greater when the individuals have to report their behavior. To test this hypothesis, two ANOVAs were performed with reporting conditions dichotomized (yes/no) as the independent variable and self- and other-positive face factor scores for entrapment as dependent variables. In self-positive face analysis, only constituency

present and reporting conditions (i.e., conditions 1, 2, and 3) were used, because, in the control condition, the participants should have not experienced any threats to self-positive face. The results revealed a reliable main effect across experimental conditions, $F(1, 168) = 4.30, p < .05$, such that concern for saving self-positive face was greater when individuals had to report their behavior. However, a similar two-way ANOVA with reporting conditions dichotomized (yes/no) as the independent variable and other-positive face as the dependent variable, using participants in all of the conditions, demonstrated no significant main effect, $F(1, 228) = .53, n.s.$ Therefore, H5 was partially supported.

Hypothesis 6 (H6) posited that *overall* other- and self-positive face concerns (as opposed to face concerns related to the experimental manipulation) would lead to greater need to justify one's action in a situation that could lead to entrapment. To test this hypothesis, four separate regression analyses were performed with self- and other-positive face, derived from the face scale instrument administered prior to the experimental task, as the independent variables and internal and external justification as dependent variables. The results indicated that face concerns did not affect internal justification (self-positive face: $F[1, 226] = .48, n.s.$; other-positive face $F[1, 225] = .96, n.s.$). However, the relationships between external self-justification and other- and self-positive face were significant (other-positive face $F[1, 225] = 9.08, p < .01$; self-positive face $F[1, 226] = 5.67, p < .05$). Both, other- and self-positive face concerns had a positive effect on external justification, $\beta = .20$ and $\beta = .16$, respectively. More specifically, the greater concern one had for protecting either self- or other-positive face, the more important it was to the person to appear rational to others. Thus, H6 was partially supported.

Hypothesis 7 (H7) stated that concerns for saving face would be greater when constituency was present. To test the hypothesis, a two-way ANOVA was performed with constituency dichotomized (i.e., present or not) as the independent variable and self-positive face from the entrapment scale as the dependent variable. Once again, the control condition was excluded from the analysis. The results revealed a significant main effect across experimental conditions, $F(1, 168) = 22.23, p < .01$. A similar test with other-positive face, derived from the entrapment scale, also yielded a significant main effect, $F(1, 228) = 46.96, p < .01$. That is, the presence of constituency led to greater self- and other-positive face concerns. Therefore, H7 was supported.

Hypothesis 8 (H8) posited that individuals with more expansive and strong ties in their personal networks would be more concerned with their self-positive face. To test this hypothesis, first, a regression analysis was performed using network size multiplied by the influence score as the independent variable and self-positive face factor score (derived from the entrapment scale) as the dependent variable. Here, again, the control condition was excluded because the participants in this experimental condition should not have experienced any self-positive face threats. The results indicated that the size and the influence of the network members had a positive effect on self-positive face, $F(1, 167) = 4.02, p < .05; \beta = .003$. That is, the greater the size and the stronger the influence of an individual's network, the greater were his or her self-positive face concerns.

Next, a regression analysis was performed using network size multiplied by the influence score as the independent variable and other-positive face factor score (derived from the entrapment scale) as the dependent variable. This analysis included all cases. The results were marginally significant; the size and influence of an individual's personal

network positively affected concern for others' positive face $F(1, 227) = 3.71, p = .055; \beta = .003$. That is, the greater the size of one's network and the stronger its influence, the greater were this person's concerns for other-positive face.

In addition, regression analyses were performed using the total combined number of people in the network as the independent variable and self- and other-positive face scores as respective dependent variables to test if the network size alone would affect face saving goals. The results indicated that the network size by itself had no effect on face saving goals (self-positive face $t[168] = .31, n.s.$, and other-positive face $t[228] = .93, n.s.$). In other words, the size of the network alone did not affect face-saving goals, but size and influence of personal networks affected both self- and other-positive face concerns. Therefore, H8 was supported.

Hypothesis 9a (H9a) posited that, when participants have expansive personal networks, entrapment would be positively associated with protecting the constituency's (other) positive face. To test this hypothesis, a series of regression analyses were performed. First, cases in which constituency was present were selected ($n = 115$). Then, only cases in which participants reported having large network size (over 40 people in the network) were selected from the constituency present conditions ($n = 60$). A regression analysis was performed using other-positive face derived from the entrapment scale as the independent variable and total number of draws as the dependent variable. The results indicate no overall significant relationship, $F(1, 58) = 1.73, n.s.$, and no effect of other positive face goals, $t(58) = 1.31, n.s.$ Next, a regression analysis was performed using all cases (i.e., all four conditions) in which participants reported having large network sizes

($n = 110$). Here, again, the results were nonsignificant, $F(1, 107) = 1.60$, n.s.; $t(107) = 1.26$, n.s.

To further investigate the relationship between other-positive face goals and entrapment, a two-step regression analysis was performed using network size multiplied by the influence score as the independent variable in the second step. For the purposes of this analysis, again, only cases with large personal networks were selected ($n = 110$). The results showed that the regression was a moderately good fit ($R^2 = .53$), such that other-positive face significantly affected entrapment ($F[1, 111] = 6.20$, $p < .01$), which supports findings reported above, but network size and influence of the network did not affect entrapment, $F(1, 110) = .47$, n.s. The effect of other-positive face goals was significant ($t[112] = 2.46$, $\beta = -1.06$, $p < .01$), such that the more concern for other-positive face the less likely an individual was to be entrapped, which is opposite than the relationship posited between other-positive face and entrapment. Overall, H9a was not supported.

To further examine the relationship between network size and influence and face, additional regression analyses were performed using network influence, network size (all members combined) and networks multiplied by influence as independent variables and overall face concerns (self- and other-positive and self- and other-negative) measured *prior* to participating in the experiment as dependent variables. The results indicated that network size, network influence, and interaction of size and influence affected only self-positive face concerns. More specifically, the greater the influence of the network on an individual, the greater were his or her self-positive face concerns, $F(1, 232) = 7.03$, $p < .01$; $\beta = .17$. The larger the size of an individual's network, the greater were his or her self-positive face concerns, $F(1, 232) = 3.61$, $p < .06$; $\beta = .12$. The greater the size of

the networks and the network's influence, the greater were the individual's self-positive face concerns, $F(1, 232) = 3.76, p < .05; \beta = .13$.

Hypothesis 9b (H9b) posited that, in the presence of constituency, individuals with larger, strong-tie personal networks will be more prone to entrapment than the individuals with smaller, weak-tie networks. To test this hypothesis, only those cases in which constituency was present were selected. Then, a one-way ANOVA was performed, with network size (high vs. low) as the independent variable and entrapment, measure by the number of balls drawn, as the dependent variable. The size and strength of the personal network did not affect entrapment, $F(1, 114) = 1.59, n.s.$

To further test this hypothesis, still using only those cases in which constituency was present, a regression analysis was performed using network size multiplied by the influence score as the independent variable and entrapment as the dependent variable. Again, the size and strength of the personal network did not affect entrapment, $F(1, 114) = .82, n.s.$ Another regression analysis was performed using just influence score with total number of draws as dependent variable. This analysis was also performed on those cases where constituency was present. Once again, the influence members of the network have on the individual did not affect entrapment, $F(1, 114) = 1.41, n.s.$ Therefore, H9b was not supported.

Hypothesis 10 (H10) posited that, in the presence of constituency, individuals with larger personal networks and strong ties would report greater justification for making their decisions. To test this hypothesis, only those cases in which constituency was present were selected ($n = 115$); then, a regression analysis was performed using network size multiplied by the influence factor score as the independent variable and

internal justification derived from the entrapment scale as the dependent variable.

Network size and network influence did not affect internal justification, $F(1, 112) = .68$, n.s. Next, a regression analysis using external justification factor score as the dependent variable was performed. Similarly, network size and network influence did not affect external justification, $F(1, 112) = 1.75$, n.s.

To further examine the relationship between networks and reported justification in the presence of constituency, two additional regression analyses were conducted using total network size (with all members combined) as the independent variable and factor scores for internal and external justification as dependent variables. These analyses were also conducted using only cases in which constituency was present. The results appeared marginally significant for internal self-justification, $F(1, 112) = 3.07$, $p = .08$. That is, it is possible to suggest that, in the presence of constituency, individuals with large personal networks seem to be less likely to use internal self-justification. However, no significant effect was observed for external self-justification, $F(1, 112) = .05$, n.s. Therefore, H10 was largely unsupported.

Luck and Entrapment

In addition to the specific hypotheses posited for this study, the relationship between luck and other variables examined in the research was explored. A series of regression analyses were performed to examine whether luck affected need for justification, entrapment, or face concerns.

Justification. To examine a relationship between luck and justification needs, two regression analyses were conducted with luck, derived from the BIGL scale serving as the independent variable and internal and external self-justification as dependent

variables. The results indicated that luck had no effect on external self-justification, $F(1, 227) = .84$, n.s. However, luck had a positive effect on internal self-justification, $F(1, 227) = 6.60$, $p < .01$; $\beta = 1.70$. That is, the luckier a person felt, the more the person was likely to self-justify his or her behavior.

Entrapment and internal justification. To examine whether luck had an effect on entrapment, a regression analysis was performed with luck as the independent variable and entrapment (i.e., total number of draws) as the dependent variable. The results showed that luck had no effect on entrapment, $F(1, 234) = 1.09$, n.s.

To further investigate relationship between internal justification, entrapment and luck, using the rationale that if individuals believed they were lucky, they were more likely to internally justify their entrapment attributing it to luck, a two-step regression analysis was performed. In this regression analysis, luck factor score was the independent variable, internal justification factor score was the independent variable in the second step, and total number of draws was the dependent variable. The results indicated that the regression was a poor fit $R^2 = .06$. However, there was a significance in R^2 change, $F(1, 225) = 15.08$, $p < .01$. The overall relationship for the second step was significant, $F(2, 227) = 8.30$, $p < .01$. However, although the effect of luck approached significance, $t(227) = 1.90$, $\beta = .64$, $p < .06$, the effect of internal justification was the only significant effect, $t(227) = 3.90$, $\beta = -1.32$, $p < .01$, suggesting an indirect relationship between luck and entrapment, in which an individual who feels lucky had a greater need for internal justification, which helped to prevent the person from becoming entrapped.

Other- and self-positive face concerns. Regression analyses were also performed to investigate the relationship between luck and face concerns. In the first regression

analysis, luck was the independent variable and other-positive face, derived from the entrapment scale was the dependent variable. The results indicated that luck had no effect on other-positive face goals, $F(1, 227) = 1.76$, n.s.

In the second analysis, luck was the independent variable and self-positive face, derived from the entrapment scale, was the dependent variable. Again, data from the control condition were excluded. The results showed that luck had positive effect on self-positive face $F(1, 167) = 4.07$, $p = .05$; $\beta = .16$. That is, the luckier the person felt, the more she or he was concerned with protecting self-positive face.

Overall face concerns. Finally, four regression analyses were performed to examine the relationship between luck and overall face concerns measured prior to the experiment. In these analyses luck was the independent variable, and self- and other-positive and self- and other-negative face factor scores were dependent variables. The only significant relationship observed was between luck and other-positive face concerns, suggesting a positive effect, $F(1, 231) = 4.05$, $p < .05$; $\beta = .13$. Relationships between luck and other-negative face, self-negative face, and self-positive face were all non-significant, $F(1, 234) = 1.2$, n.s.; $F(1, 234) = .07$, n.s., and $F(1, 232) = .12$, n.s., respectively.

Research Question

The Research Question posed in this study asked whether, in a situation leading to entrapment, individuals would be more likely to use social accounts to explain their behavior. To this end, participants were asked qualitative, open-ended questions that were designed to explore messages that individuals used to explain their performance during the experimental task. Specifically, two sets of questions were posed. First, after each

round, the respondents were asked to explain why they chose to continue to draw (if they did); and, second, at the end of the experimental task, the respondents were asked to produce some specific statements that they “might use to explain what happened during the drawing task.”

Coding scheme and procedures

Qualitative approaches are ideal for questions that require an answer about understanding participants' views, for questions that address the meanings or interpretations of experiences or information, or for rich descriptions of complex phenomena. Because qualitative data is subjective and open to interpretation, two independent coders were used to increase reliability. The open-ended statements were first reviewed by the researcher and coders to develop a coding scheme.

The theoretical framework for this study suggested that the coders should be looking for the following four themes: (1) internal justification (i.e., rationalization of why one did not win); (2) external justification (i.e., when participants mentioned a group's “plan” as a reason for continuing or withdrawing from the task); (3) protecting self-positive face (i.e., participants expressed concern about group being upset with them for losing); and (4) protecting other-positive face (i.e., participants expressed concern for the group). In addition to these four themes, (5) luck also emerged as a theme during the initial coding of the open-ended questions. Statements that did not fall into any of the above categories were coded as (6) other. Statements that had more than one theme were coded with more than one code. For example, the statement “I realize there was a low probability of me choosing a red ball. Although I kept picking I knew there wasn't a good chance of me picking a red ball, never mind 5. I stopped at sixth round so that I and my

group would have at least a few raffle tickets” was coded as 1 and 4. Or in another case, the statement, “There were more white balls than red. I am not a lucky person. I didn’t feel around the box a lot,” was coded as 1 and 5.

When themes were identified, the statements were coded by assigning a unique label that contained references to particular categories of information (Bernard, 1994; Miles & Huberman 1994). After the initial read, a draft codebook was developed. The codebook, discussed in more detail in the section below, included the code, a brief definition, a full definition, guidelines for when to use the code, and examples (see Table 4).

The initial review of open-ended data indicated that statements generated as explanations of a person’s decision to continue or withdraw from the task produced after each round did not contribute to the understanding of the entrapment phenomenon. The overwhelming majority of comments were process-oriented (e.g., “[I] needed [a] red [ball],” “[I] have to finish [the task],” “[I] decided to try two more times”), and often the respondents provided identical explanations for each round (e.g., statements “[I will continue drawing] for fun,” “I felt lucky,” “[I’m] willing to lose one dollar” used as an entry for each round). Because most of the statements did not contribute to the understanding of the entrapment phenomenon, they were omitted from the analysis. The following discussion focuses on the final strategy explanation statement provided by the respondents.

Codebook. A total of five themes were used to code the open-ended statements. In addition, statements that did not reflect any of the themes were coded as “other.” This section provides a detailed discussion of each coding category.

The items coded as (1) *internal justification* included statements containing expressions in which respondents provided excuses and explanation for why they did not win, including rationalizations about why or how the task was difficult, predetermined strategies, offering non-emotional reasons for continuing to draw (e.g., goal completion, wanting to make a profit). All of the items that included references to “odds,” “probabilities,” “chances,” and “percentages” were coded as internal justification.

Examples of statements coded as (1) include:

“I wanted to get a red ball, but I didn’t get one—I didn’t want to lose any of my own money so I stopped at 10 tries.”

“There may have been all white balls in the box. I just didn’t pick any of the red balls. 10% of the balls was not enough to by chance pick a red ball.”

“The chances are very slim of drawing a red ball so I’m not surprised I didn’t draw anything.”

“The guide on the task instructions make it appear as though completion is easy, however finding 5% of a population of balls is quite difficult.”

The items coded as (2) *external justification* were statements that included expressions that would indicate that the participants wanted their group members to understand their decision and that they followed the group’s plan or strategy. To this end, all of the items that included words “group,” “our” as well as “plan,” “strategy,” or “decision” in one statement were coded as (2). Examples of statements coded as (2) are:

“Since I didn’t draw a single red ball, I am wondering if there actually were any red balls, but I continued just to be sure because that is what the group decided on, and I didn’t want to go back on my word.”

“I have a sinking feeling that there probably were no red balls in the task. I decided to draw until we lost the 10 raffle tickets, because those were not even guaranteed anyway.”

“Was ‘unlucky,’ and followed plan established before experiment.”

“I had a strategy, I began to think what would be a fair outcome for everybody.”

“Followed plan established before experiment.”

Review of the open-ended items did not reveal any statements that would include an expressed concern about the group being upset with the participant for losing; that is, there were no items expressing the need to protect *self-positive face* in a traditional definition of the term: “the need to defend and protect one’s need for inclusion and association” (Ng, 1999, p. 6). However, there were a number of items that could be interpreted as a participant’s desire to do well on the task as well as responses using emotions to describe decisions to stop or persist. The emotional responses were coded as self-positive face because they were related to a person’s identity; that is, the way the person saw him or herself. Statements that included words such as “hoping,” “still,” “believing,” and “determined” were coded in this category (3). In addition, statements including “emotional excuses” (e.g., “felt insecure” or “stubborn”) were coded as part of (3) self-positive face. Some sample statements include:

“I kept drawing and kept picking up white balls. I was determined to draw a red ball so I kept going.”

“After having no luck whatsoever in drawing a red ball early on, I felt that there was nothing for me to lose, except a few dollars, in hoping to draw a red ball to gain back some of the tickets.”

“I became greedy, believing that I would eventually draw a red ball.”

“I think the reason is I still have chances even though this ball is the last one.”

Items coded as (4) *other-positive face* were statements that indicated that the respondent was taking group members into consideration (expressed concern for the group) while making the decision to proceed or stop with the task. Statements that included such words as “everyone,” “everybody,” “we,” “worried about the group,” “no one,” and “responsibility” were assigned to other-positive face category. The following statements are representative of this theme:

“Then on the 11th try I had a feeling I was going to draw another white ball but figured one dollar was worth the try. Then I stopped because now I was gambling the group’s actual money.”

“I decided to go up to 10 whites so that no one would owe any money—this way we just broke even.”

“I completely blew it for the team. We all have no money. I didn’t draw any red balls out of the 10 items attempted. All balls were white.”

“I was worried about the group.”

In addition to the four themes described above, *luck* also emerged as a prominent theme. Statements referring to luck could be interpreted as an extension of external self-justification theme because in part, external justification is blaming the act on a situational factor (Aronson, 1999). In the context of the current study, luck can be seen as a situational factor. However, because of the prominence of the theme, statements including references to “luck,” “being lucky,” or “unlucky” were coded (5) as a separate category. Some sample statements include:

“I didn’t get lucky.”

“I did not draw any red balls. I have no luck. I owe money.”

“I didn’t get any red balls. I am not that lucky today. There’s no chance of winning.”

“Luck is just a chance you come across.”

In addition, statements that included guesses about the experimental procedures, expressions of frustration, factual accounts of the outcomes were coded as (6) *other*.

Some examples include:

“I drew 8 white balls from the box.”

“I felt horrible when I saw the white ball and decided to not take any more chances.”

“No red balls were drawn.”

“I just drew white ball out of the box.”

Table 16

Codebook

Theme	Code	Brief definition	Definition	Guidelines	Examples
Internal justification	1	Justifications that the decision to pursue the course of action was rational	Excuses and explanation for not winning including rationalizations about why or how the task was difficult, predetermined strategies, offering non-emotional reasons for continuing to draw.	Statements containing the following words: odds, probabilities, chances, and percentages. Statements communicating desire for: goal completion or making a profit.	<p>“I wanted to get a red ball, but I didn’t get one—I didn’t want to lose any of my own money so I stopped at 10 tries.”</p> <p>“There may have been all white balls in the box. I just didn’t pick any of the red balls. 10% of the balls was not enough to by chance pick a red ball.”</p> <p>“The chances are very slim of drawing a red ball so I’m not surprised I didn’t draw anything.”</p> <p>“The guide on the task instructions make it appear as though completion is easy, however finding 5% of a population of balls is quite difficult.”</p>
External justification	2	Expressed wants to appear rational to constituency	Expressions that would indicate that the participants wanted their group members to understand their decision and that they followed the group’s plan or strategy	Statements that included words: group and plan combined with strategy or decision	<p>“Since I didn’t draw a single red ball, I am wondering if there actually were any red balls, but I continued just to be sure because that is what the group decided on, and I didn’t want to go back on my word.”</p> <p>“I have sinking feeling that there probably were no red balls in the task. I decided to draw until we lost the 10 raffle tickets, because those were not even guaranteed anyway.”</p>

Theme	Code	Brief definition	Definition	Guidelines	Examples
Self-positive face	3	Image-related desire to do well or identity-related emotional response	Expressed desire to do well on the task as well as responses using emotions to describe decisions to stop or persist.	Statements that included words: hoping, still, believing, determined and emotional excuses (e.g., “felt insecure” or “stubborn”)	“I kept drawing and kept picking up white balls. I was determined to draw a red ball so I kept going.” “I became greedy, believing that I would eventually draw a red ball.”
Other- positive face	4	Concern for the group’s interests—feeling bad for them: the need to support the other person’s need for association	Indication that the respondent was taking group members’ interests into consideration	Statements that included words like everyone, everybody, we, worried about the group, no one, and responsibility	“I completely blew it for the team. We all have no money. I didn’t draw any red balls out of the 10 items attempted. All balls were white.” “I was worried about the group.”
Luck	5	Luck attributions	Expressions indicating that the reason for losing had something to do with an individual’s luck	Statements including words luck, being lucky or unlucky	“I didn’t get lucky.” “I did not draw any red balls. I have no luck. I owe money.”
Other	6	Statements unrelated to other themes	Statements unrelated to other themes	Statements including guesses about the experimental procedures, expressions of frustration, and factual accounts of the outcomes	“I drew 8 white balls from the box.” “I felt horrible when I saw the white ball and decided to not take any more chances.”

Inter-coder agreement. Because initial coding can yield poor agreement, qualitative researchers stress the importance of pre-testing and revising codebooks (Carey, Morgan, & Oxtoby, 1996; Miles & Huberman, 1994). After a draft of the codebook was developed, the next step was to ensure that all coders (including the researcher) could independently replicate each other's work using the same instructions. To pretest the codebook and make estimates of the final inter-coder agreement, 48 statements comprising the responses given by the first 12 participants in each condition were selected. This group of responses represented approximately 22% of 214 strategy explanation statements. Two coders each coded the 48 statements twice. The first round of coding was conducted to identify the problems with the codebook. After the problems were identified and remedied, to estimate the achieved degree of inter-coder reliability, the same two coders used the revised codebook to independently recode the same 48 statements.

After the first round of coding, the sets of codes that each coder assigned to each of the 48 statements were compared. A statement was deemed as coded identical only if both coders used the same set of codes. For example, to be considered in agreement, if one coder marked the statement as 1 and 5, the other coder had to assign that statement the same two codes. A coding discrepancy was noted if one of the coders did not assign both of these codes or assigned a third one. Using this method, comparison of the codebook pretest results showed that approximately 30 (62.5%) statements out of the 48 were coded the same by both coders. This level of replicability suggested the need to refine the codebook and the need for additional coder training. The two coders and the researcher discussed the reasons for disagreements and identified and corrected problems

with the codebook. In addition, the application of the coding scheme by the coders was discussed. The discrepancies were often the result of vague and somewhat overlapping code definitions and the lack of shared understanding in the procedures for using specific codes. For example, the original definition for self-positive face included the allusions to “unfair task” or “difficult task”—similar themes appeared under the explanation of internal justification category, which resulted in a great number of coder discrepancies. To remedy this problem, clarifications were introduced to define the “self-positive face” category as only those in which respondents indicated their desire to successfully complete the task. Any statements referring to the difficulty of the task were to be considered internal self-justification; that is, using the difficulty of the task as an excuse for failure. Another instance of coder disagreement was the confusion as to whether to code statements articulating emotional reasons for continuing to draw as “internal justification” or “self-positive face.” Based on the discussion, it was decided that the emotional responses that were related to how a person saw him- or herself (i.e., identity-related statements such as “I got more stubborn in picking the white balls so I continued”) were considered “self-positive face,” whereas statements rationalizing a participant’s decision were coded as internal justification (e.g., “During the drawing task, I realized my chances of getting a red ball was [sic] not good. There was no reason I should continue since I could not get 5 red balls after 7 attempts without losing money.”)

After clarifying the problem areas and revising the codebook, the two coders recoded the same 48 responses a second time using the revised code categories. The final level of agreement between the coders showed improvement. With the revised codebook, the agreement was achieved in coding 39 (81.25%) of the 48 statements.

Inter-coder agreement was computed using Cohen's Kappa, a statistic used to assess inter-rater reliability in analyzing qualitative data (Cohen, 1960). To calculate the statistic, first, the observed percentage agreement among coders was calculated (89%). Next, the proportion of chance agreement was computed (.167). Then, the statistic was calculated using the formula presented by Folger, Hewes, and Poole (1984). The resulting Kappa was .87, suggesting substantial agreement between the coders.

In addition, Guetzkow's U was calculated to assess the level of agreement between the coders in assigning the same number of codes across the responses. This index is based "on the premises that two independent, equally skilled coders unitize a text each into same specifiable number of units" (Folger et al., 1984, p. 119). For the purposes of this research, Guetzkow's index was calculated to determine the coder agreement in the number of themes assigned to each statement. The resulting statistic ($U = .02$), indicating high agreement among the coders.

Analysis

The number of times each theme appeared in the responses was counted. The most prominent theme was (1) internal justification (47%), followed by (6) other category (21.96%). Luck had the third number of codes (17%). Self-positive face accounted for 12.15% and other-positive face theme accounted for 7.5%. Finally, external justification appeared in only 4.2%; however, as mentioned earlier, luck could be considered as an external justification, attributing failure to a situational factor, namely being "unlucky." If luck is combined with external justification, these responses account for 21.96% of the statements.

When analyzed by condition (see Table 5), it appears that individuals in the constituency/reporting condition were almost twice as likely (64.30%) to cite other-positive face concern as a reason for explaining their strategy than those individuals in the constituency/no reporting condition. Individuals in the constituency/no reporting condition cited most often the external justification (50%) strategy. In the no constituency/reporting condition, the most often-cited strategy was concern for self-positive face (41%). And, the control group had no clear preference for any of the explanation themes, just slightly favoring “internal justification” (30.5%).

Table 17

Condition by Qualitative Category (Reported in percentages)

			No	
	Constituency & Reporting	Constituency & No Reporting	Constituency & Reporting	No Constituency & No Reporting
Internal Justification	25.30	15.80	28.40	30.50
External Justification	50.00	50.00	0.00	0.00
Other- Positive Face	64.30	35.70	0.00	0.00
Self-Positive Face	6.90	24.10	41.40	27.60
Luck	23.70	31.60	21.10	23.70
Other	25.50	31.40	17.60	25.50

Among those individuals who did get entrapped (i.e., continued past tenth attempt to draw a ball), many (39.30%) used self-positive face concerns as a strategy to explain their behavior. The “other” category also received 39.20%.

Table 18

Percent of People Entrapped or Not Who Used Specific Qualitative Themes To Explain Their Actions

	Internal Justification	External Justification	Other- Positive Face	Self- Positive Face	Luck	Other
1–10 Draws	82.40	100.00	92.30	60.70	78.40	60.80
11–20 Draws	17.60	0.00	7.70	39.30	21.60	39.20

In addition, logistic regression analysis was performed to examine whether experimental conditions to which participants were assigned affected the type of social accounts used by the participants. Six separate regression analyses were performed in which constituency (dichotomized yes/no) and reporting (dichotomized yes/no) were the independent variables and one of each themes (i.e., 1, 2, 3, 4, 5, or 6) was the dependent variable. The results were significant only for the internal justification and self-positive face themes. Both internal justification and self-positive face were affected only by the constituency condition; reporting condition had no significant effect. More specifically, the results suggest that when constituency is present, internal justification decreases (Wald test statistic [1, $N = 236$] = 3.78, $\beta = -.52$ [SE = .27], $p < .03$). In addition, the results indicate that when constituency is present, self-positive face concerns also

decrease (Wald test statistic $[1, N = 236] = 4.00, \beta = -.85 [SE = .46], p < .03$). Finally, as mentioned earlier, luck could be considered an external justification explanation because an individual attributes failure to a situational factor, namely being “unlucky.” To this end, luck and external justification themes were recoded into one theme. The logistic regression analysis in which constituency (dichotomized yes/no) and reporting (dichotomized yes/no) were the independent variables and the new theme was the dependent variable was performed. The results indicate that when constituency is present the statements of external justification increase (Wald test statistic $[1, N = 236] = 5.89, \beta = .86 [SE = .34], p < .01$).

Findings

Statements that fell within the theme of self-positive face could be interpreted as goal-driven messages that are often colored by one’s emotions. For example, one participant wrote, “I felt compelled risking my raffle tickets/money because I felt that with each white ball I took out of the box, my chances of picking a red one would be higher.” Or, in the words of another participant, “I got angered I was losing so I continued to keep drawing hoping I could win.”

On the other hand, statements that are attributed to concerns for other-positive face, internal or external justification, and luck can be considered social accounts defined as strategies designed to minimize the impact of an individual’s behavior or to persuade the audience that the behavior is not an accurate representation of what the person truly is (Bies, 1987).

As mentioned earlier, Sitkin and Bies (1993) identified three broad categories of accounts: mitigating responsibility, legitimizing the action by appealing to some higher-

order values or norms, and reframing outcomes. The majority of the messages produced by the participants that were coded as concerns for other-positive face, internal or external justification, and luck could be classified as “causal accounts,” because many of these messages indicated that the participants felt they had little or no choice in the matter. According to the participants, the real cause for continuing to draw was not their own preference and intention but something beyond their control; that is, the task was difficult, they were down on their luck, or it was the group’s decision. In the words of the participants:

“Since I didn’t draw a single red ball, I am wondering if there actually were any red balls, but I continued just to be sure because that is what the group decided on, and I didn’t want to go back on my word.”

“I realize there was a low probability of me choosing a red ball. Although I kept picking I knew there wasn’t a good chance of me picking a red ball, never mind 5. I stopped at sixth round so that me and my group would have at least a few raffle tickets.”

“I didn’t get any red balls. I am not that lucky today. There is no chance of winning.”

“I was unlucky. However, there was only 10% chance I would get a red ball each time.”

Implications, directions for future research, and significance of these findings are provided in the Discussion chapter.

CHAPTER 4

Discussion

This chapter presents a summary of the study, discusses the results and their implications, and identifies limitations of the research. In addition, directions for future research are provided in this chapter. Finally, the theoretical significance of this research is addressed.

Summary of the Study Design and Gaps Addressed by the Research

This dissertation examined a number of factors affecting entrapment. The research examined whether accountability, mediated by face concerns (self- and other-positive) and justification (internal and external self-), leads to entrapment. Accountability was manipulated by the presence of constituency and the requirement to report to the constituency. In addition, the dissertation explored whether personal networks affected face concerns and contributed to entrapment. Personal networks were operationalized as size of the network and influence members of the network have on an individual. The dissertation also examined the direct effects that face concerns and justification have on entrapment. In addition, the study examined the effect of the size and influence of personal networks on self- and other-positive face concerns. The research also explored whether overall face concerns have an effect on internal and external self-justification. Furthermore, the study examined the effect of accountability on individuals' self- and other-positive face concerns and internal and external justification. Finally, the study explored messages used by individuals in a scenario potentially leading to a failing course of action.

Entrapment is an individual's tendency to assume that the greater the resources expended, the closer the person is to achieving the goal (Rubin, Kim, & Peretz, 1990). To simulate a situation leading to entrapment the following conditions had to be present: negative consequences, commitment to behavior, perceived degree of freedom in commitment to the behavior, responsibility for the negative circumstances and desire for goal completion (Brehm & Cohen, 1962; Cooper, 1971; Festinger & Carlsmith, 1959; Rubin & Brockner, 1975; Staw, 1976). These conditions, as well as variables and relationships explored in this dissertation, were identified through examination of theory and research from the fields of social psychology, business, cross-cultural communication, and conflict management and negotiation.

The negative consequences condition was simulated by the study's stipulation that, as a participant pursued the experimental task, he or she continued to lose one's own money, and, in conditions in which the constituency was present, the constituency's money. More specifically, the rules of the experiment specified that if the participant continued to draw beyond 10 attempts, he or she would have to pay \$1 for each failed attempt by pursuing the failing course of action. By pursuing beyond 10 attempts, the participants were also imposing the same financial penalty on the members of constituency.

Commitment to behavior was operationalized as a potential for winning one of four \$50 lottery drawings, and, in the conditions in which constituency was present, a potential for receiving a \$5 reward for one's own performance on the task. Similarly, the anticipation of potential pay off was conceived to stimulate the desire for goal completion. The perceived degree of freedom in commitment to the behavior was

operationalized by instructing the participants that they could stop the drawing task at any time. Likewise, the participant's responsibility for negative consequences was operationalized as the individual's freedom to make a choice of whether to pursue or withdraw from the drawing task

To further simulate an entrapment situation and increase responsibility for negative consequences, this study employed accountability conditions manipulated by the presence of constituency and the requirement to report on one's behavior to either the researcher or to the constituency after the task (Asch, 1951; Gelfand & Realo, 1999). This method is a significant contribution to the study of entrapment bias because past studies have either employed a *paper* constituency (Fox & Staw, 1979; Staw, 1981), to whom respondents had to pretend to report, or a *live* constituency whose role was merely to observe the participant (Brockner, Rubin, & Lang, 1981; Brown, 1968). To this end, in this study *live* members of the constituency had control over the rewards by evaluating the participants' performance; that is, the participants were told that after they complete the task the constituency would review the outcomes and make a decision about how much money to award to the participants for their performance (maximum award was \$5). Also, the participants were required to report to the members of the constituency either in person or via a written statement. Overall, one of the significant contributions of this dissertation is that the research design takes into account all of the conditions essential for creating entrapment.

Another contribution of this dissertation is the introduction of two important variables, face and personal networks, to examine their effect on entrapment. Although few studies (Brockner et al, 1982; Brockner, Rubin, & Lang, 1981; Brown, 1968)

examined how face concerns contribute to entrapment, there is some evidence that face concerns become more prominent in the presence of an audience and can increase the likelihood of entrapment. According to Brockner et al. (1981), face concerns contribute to entrapment because of individuals' desire to appear socially appropriate. However, previous studies have addressed the concept of face in its totality without examining how different aspects of face may affect entrapment. To this end, this research distinguished between self- and other-positive face concerns and explored how each type may affect entrapment. In addition, to investigate whether face concerns unrelated to an entrapment situation have any effect on individuals' justification needs, this study examined how *overall* face concerns affected these needs.

Because the notion of face is a social concept—it is dependent on and affected by others—this research used personal networks to examine how networks, and more specifically their size and strength of influence, affect face concerns and may contribute to entrapment. The use of personal networks as a variable affecting face concerns is significant contribution because it provides a potentially new explanation for motivations that may underlie face goals and, in turn, affect entrapment. Traditionally, the tendency for having stronger or weaker self- and other-face maintenance goals has been explained using individualism and collectivism or independent and interdependent self-construals. By focusing on networks, this research looks at the relational strength and breadth of networks as a measure of relational focus and values.

Finally, although not discussed as a part of the theoretical framework, by virtue of the study design, this research introduced luck as a variable with potential to affect entrapment and examined its effect on justification needs and face concerns.

Research Hypotheses

Respondents in the study were 236 undergraduate students. Participants were assigned to four conditions: reporting/constituency; no reporting/constituency; no constituency/reporting, and no reporting/no constituency. First, prior to participating in the study, all participants completed questionnaires; at a later date, they participated in the experimental task, before and after which they completed additional instruments. All data were collected between June and December 2004.

The study posed 10 hypotheses and one research question. Figure 3 summarizes the significant relationships found in the study.

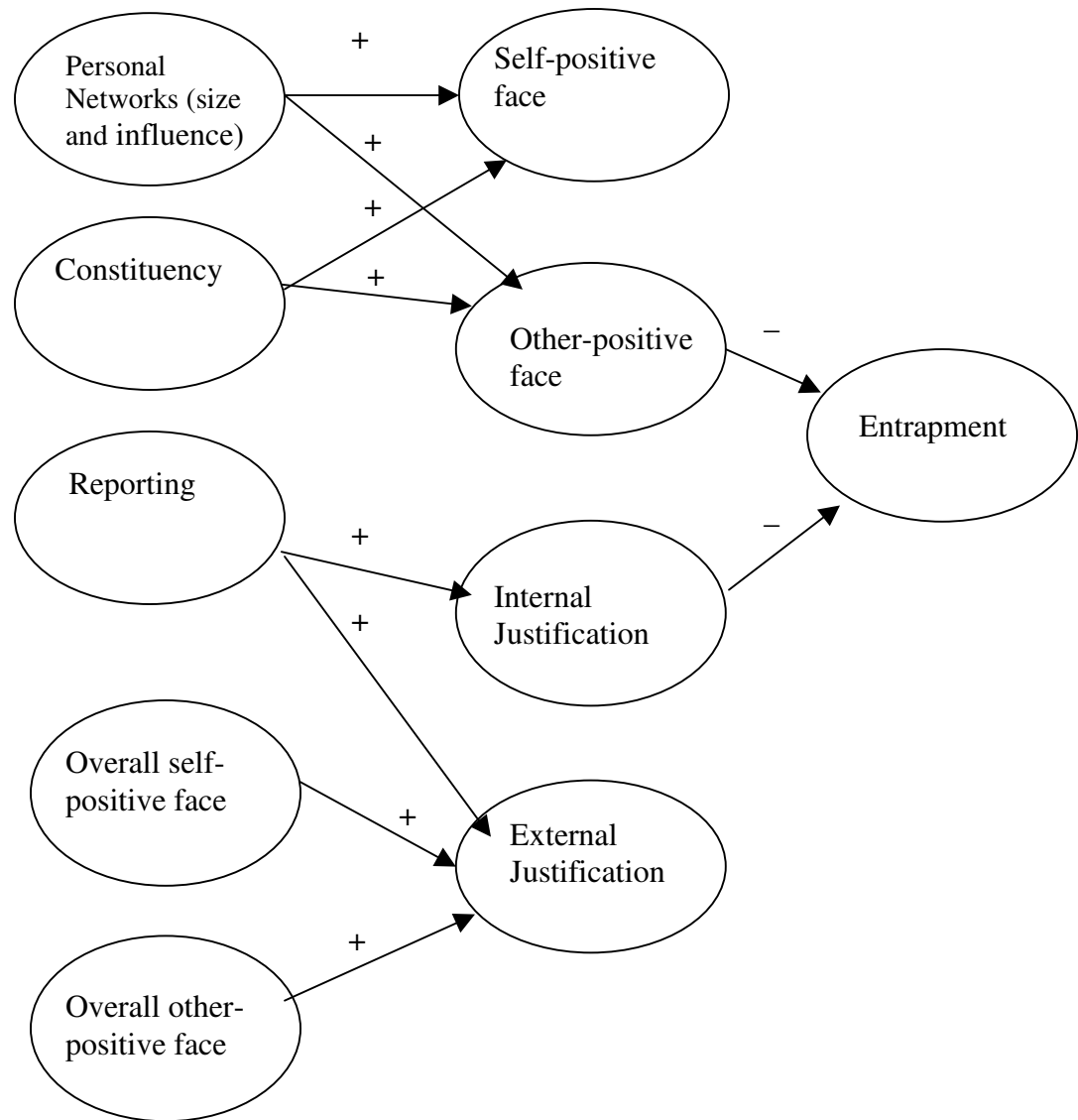


Figure 3. Research Findings.

Hypothesis 1 (H1) posited that entrapment would be more likely when a constituency was present. Surprisingly, contrary to studies suggesting a relationship between presence of constituency and entrapment (Brockner et al., 1982; Brockner, Rubin & Lang, 1981; Fox & Staw, 1979; Staw & Hoang, 1995), presence of constituency did not directly affect entrapment. This result can potentially be explained by the design of the study: whereas in past studies the constituency was present only on paper or was a

passive observer, in this study, constituency was made up of active participants who shared mutual interests with the respondents in the form of winning extra raffle tickets and avoiding monetary penalties. In addition, the constituency controlled the reward for the participant's performance; that is, the participants were told that the constituency would review the participant's performance on the experimental task and would determine a monetary award for the performance (maximum \$5). This finding has significant implications for negotiation. That is, the findings suggest that if a negotiator is a member of the group on whose behalf he or she is conducting negotiations and the negotiator's goals are aligned with the group, the negotiator will be less likely to become entrapped. However, further research is needed to identify whether the presence of a neutral third party or a distant constituency may have greater effect on the negotiator becoming entrapped.

Hypothesis 2a (H2a) posited that internal and external justification would be greater when respondents are required to report their behavior. Although the results indicate no significant effect for internal self-justification, the effect for external self-justification was significant. That is, when reporting is required individuals feel compelled to appear rational to the judging party: they want the party to understand their decision making process and they want the party to believe that the pursued course of action was in the best interest of the group.

Hypothesis 2b (H2b) stated that, when individuals had to report their behavior, they would have greater needs for internal and external self-justifications, which would lead to entrapment. However, analysis performed only on cases in which reporting was required, revealed that only the effect of internal justification was significant. The results

indicated that the greater one's need to appear rational, the less likely he or she is to get entrapped. This finding is surprising because it contradicts the majority of past research on entrapment (e.g., Fox & Staw, 1979; Staw, 1976; Staw & Ross, 1978), which suggests that individuals who experience failure are likely to pursue the failing course of action because they feel compelled to demonstrate the rationality of their original decision. Review of open-ended questions supports these findings; that is, internal self-justification was the most prominent category of responses in the explanations participants provided for why they decided to stop drawing as opposed to continue with the task. Overall, these findings suggest that the reporting requirement has an indirect positive rather than negative effect on entrapment.

Hypothesis 3 (H3) posited that the presence of constituency would lead to greater internal and external justification. H3 was not supported; the presence of constituency did not influence individuals' need for justifying a decision to pursue a course of action. This finding is particularly interesting when related to the results from H7, that constituency affected the relational and identity aspects of one's image (i.e., face concerns) but not the rational aspect—that is, the need for justification. On the surface, these results contradict those reported by Fox and Staw (1979) and Staw and Hoang (1995), who state that the presence of constituency contributes significantly to entrapment and explain this outcome to be a result of external justification. However, the presence of constituency alone may not increase a person's need for justification; instead, reporting to the constituency may be essential to motivate the need to justify behavior. In the present study, accountability was simulated by both the presence of constituency and the need to report to it. To examine whether there is an interaction effect between constituency and reporting

conditions, a two-way ANOVA was performed with constituency present (yes or no) and reporting (yes or no) as independent variables and the external justification factor score as the dependent variable. The results indicate a significant interaction effect between reporting and constituency ($F [3, 228] = 12.98, p < .01$) on external justification, such that constituency had an effect on external justification when no reporting was required. But, when reporting was required, constituency had no effect on external justification. See Table 7 for the summary of the means.

Table 19

*Interaction of Reporting (Yes/No) and Constituency (Yes/No)
on External Justification: Mean Summary*

		Reporting (<i>M</i>)	
Constituency (<i>M</i>)	YES	NO	
YES	.09	.41	
NO	-.63	.16	

Another noteworthy finding is that examination of qualitative data revealed that when external justification and luck themes were recoded into one theme, results of logistic regression analysis indicated that presence of constituency has a positive effect on the combination of luck into external justification. Overall, the importance of this finding was that it furthers understanding of mechanisms underlying the need to justify one's behavior, ruling out constituency alone as a motivating factor for the need for external justification.

Hypothesis 4 (H4) stated that individuals with greater self- and other-positive face concerns would be more likely to become entrapped. This hypothesis was partially supported. The results show that other-positive face goals negatively affect entrapment. However, self-positive face goals did not affect entrapment. An additional regression analysis, using only constituency present conditions, also showed that concern for other-positive face prevent an individual from becoming entrapped ($F[1, 112] = 6.19, p < .01; \beta = -1.06$). These findings indicate that the presence of constituency does affect entrapment indirectly. Again, contrary to the results of previous research, it actually reduces propensity for entrapment, not increases it. Another potential interpretation of this finding could be that individuals can become more or less entrapped depending on what they believe will portray them in a more favorable light (Brockner et al., 1981). Yet another reason for why concern for other-positive face prevented participants in this study from becoming entrapped could be that the majority (80.90%) of the study participants were women. According to Kolb and Williams (2000), women negotiators tend to be more aware of other's feelings, to be more devoted to others and to show more concern for others. Future research should explore whether women and men behave differently in a situation leading to entrapment. Within the negotiation and conflict management contexts this finding implies that the presence of constituency may lead individuals to be more cautious, guarding the constituency's interests. Finally, this finding provides support for distinguishing between various dimensions of face.

Hypothesis 5 (H5) posits that the concern for saving face will be greater when individuals have to report their behavior. The results indicate that the reporting requirement affects self-positive but not other-positive face concerns. This finding

suggests that when individuals have to explain their actions, they are more concerned about how they are perceived by a judging party than they are concerned about protecting the image (i.e., other-positive face) of others. In a negotiation situation, constituency should take into account that a negotiator may put his or her own needs and image first and try to minimize threats to the negotiator's self-positive face.

Hypothesis 6 (H6) posited that *overall* other- and self-positive face concerns that an individual has would lead to a greater need to justify one's action (i.e., internal and external justification). The results indicate that face concerns did not affect internal justification. However, the relationship between external self-justification and both other- and self-positive face was significant. Both other- and self-positive face concerns were positively associated with external justification. That is, the need to appear rational to others seems motivated by the concerns for protecting own image and needs as well as those of others because it is important to the person to look good in the others' eyes and to demonstrate to them that the individual had their interests at heart when the decision was made. Although not related to entrapment, this finding provides an insight into motivations underlying self-justification that has implications for negotiation and conflict management. In the presence of an audience, individuals' need to prove to others that they were correct in their action or decision could be communicated using messages affirming one's expertise and experience as well as insisting that they acted in the interests of the constituency.

These findings are especially interesting in relation to the results derived from H2a, which suggest that reporting affects external self-justification, and H5, which indicates that reporting affects self-positive face. Thus, based on these results, it seems

that the reporting requirement motivates an individual's need for external justification (the need to prove to the constituency that an error was a correct decision in the long term) due to the desire to maintain a positive image (greater face concerns).

Hypothesis 7 (H7) stated that concerns for saving face would be greater when constituency was present. The hypothesis was supported; the results provided a reliable main effect for both self-positive and other-positive face concerns. This finding supports past studies suggesting that the presence of constituency affects face concerns (e.g., Brown, 1970; Wilson & Putnam, 1990). The results regarding other-positive face suggest an indirect relationship between constituency and entrapment. That is, presence of constituency affects concerns for other-positive face, which in turn has a negative effect on entrapment. However, as mentioned earlier, this finding is surprising in that past studies have indicated that the presence of constituency leads to entrapment. Again, this finding can be explained in a number of ways: the presence of *live* constituency; the fact that individuals want to please the constituency and will do what they think would make the constituency happy (Brockner et al., 1981); and, potentially, the fact that the majority (80.90%) of the study participants were women, who usually tend to show more concern for others when negotiating (Kolb & Williams, 2000).

Although the study did not simulate a negotiation situation, these results have implications for negotiations, because negotiation is inherently a decision-making process in which a negotiator could become entrapped (Neale & Bazerman, 1985). In a negotiation situation, to look strong to their constituents, negotiators may act against their constituents' best interest in order to protect self-positive face (Bazerman, 1986). However, this study found no link between self-positive face and entrapment. According

to previous research, if negotiators are committed to their constituency's interests, then they may commit to a course of action that lacks the flexibility in compromising that is necessary for ensuring the welfare of the constituency (Neale & Bazerman, 1985). In other words, the pressure from the constituency may lead to the escalation of commitment, which impedes the ability of the negotiator to represent the constituency's best interests. However, this argument is not supported by the current research. One potential explanation for why this expectation was not supported could be that the participants were not directly observed by the constituency. Studies have shown that surveillance by the constituents leads negotiators to be more competitive and often less successful (Klimoski & Asch, 1974; Lamm & Kogan, 1971; Neale, 1984; Organ, 1971). The question of whether the physical presence of constituency as opposed to the psychological presence leads to greater likelihood of entrapment should be examined in future research.

Hypothesis 8 (H8) posited that size and strength of individuals' networks would affect face concerns related to entrapment. The results indicate that the size and influence of the network members have a positive effect on both self- and other-positive face. These findings are important in that they support the use of personal networks as a framework for examining structure of individuals' relationships. The findings also provide insight into factors affecting face concerns. Often, types and direction of face concerns are predicted based on cultural dimensions, such as individualism-collectivism, or based on an individual's national culture. Individuals with predominantly independent self-construals or those coming from individualistic cultures are thought to be more concerned with *self* aspects of face, whereas those with predominantly interdependent

self-construals or those coming from collectivistic cultures are believed to be more concerned with *other* aspects of face (Oetzel & Ting-Toomey, 2003; Ting-Toomey, 1988). However, the current research findings suggest that the larger and more influential one's network is, the more likely the person is to have increased concerns for protecting both self- and other-positive face. These results provide support for the use of size and influence of personal networks as a measure for differences in relationships in future research.

Hypothesis 9a (H9a) stated that when participants have expansive personal networks, entrapment would be positively associated with protecting the constituency's positive face. This hypothesis was not supported, suggesting that network size alone does not contribute to entrapment. The results from the two-step regression analysis performed to further investigate the relationship between personal networks, face, and entrapment with other-positive face as the independent variable in the first step—and network size multiplied by the influence score as the independent variable in the second step—and total number of draws as the dependent variable, reinforce findings from H4 and H8. The results indicate that (in the presence of a constituency) although size and influence of the networks affect face concerns, the network size and its influence are not related to entrapment. More significantly, similar to the findings in H8, these results provide bases for exploring networks as an alternative measure of individuals' social interactions with relevant others within a society. That is, given the criticism associated with the measurement of independent-interdependent self-construals (Levine et al., 2003) and individualism-collectivism (Fiske, 2002), networks could be considered a plausible alternative for operationalizing these theoretical constructs. Both individualism-

collectivism and independent-interdependent self-construals measures rely on self-reports about individuals' psychological orientation using arbitrary definitions of relevant others. By asking individuals to identify their own set of significant others and asking them to report quality and frequency of communication with significant others, personal networks provide one alternative for moving away from psychological reporting and moving toward examining structural features of relationships, such as how large are the individuals' networks and how important are relationships in these networks.

Although not part of the study hypotheses, additional analyses examining the relationship between *overall* face concerns and networks were performed (see chapter 3: Results). The results indicate that the size and influence of networks positively affect self-positive face concerns. The greater the size and influence of the network, the greater is the need to protect self-positive face. This finding is somewhat surprising given that, within the context of the experiment, networks' size and influence affected positively both self- and other-positive face concerns, suggesting that networks and their size and influence affect face based on some situational factors. Future research is needed to examine in greater detail the effects of networks on *overall* face concerns.

Hypothesis 9b (H9b) posited that, in the presence of a constituency, individuals with larger and more influential personal networks would be more prone to entrapment than individuals with smaller, less influential networks. Research findings suggest no relationship between networks and entrapment. The implication of this finding for negotiation is that, when a person is negotiating on behalf of constituency, an individual's social connectedness has no apparent direct effect on conflict escalation.

Hypothesis 10 (H10) posited that, in the presence of constituency, individuals with larger and stronger personal networks would report greater justification (internal and external) for making their decisions. This hypothesis was not supported, ruling out networks as a contributing factor to the need to justify one's decisions.

Finally, the research question asks whether in a situation leading to entrapment, individuals will be more likely to use social accounts to explain their behavior. The majority of messages produced by the participants were social accounts, more specifically, causal or mitigating accounts whereby the respondents claimed that they had no alternative to the chosen action; that is, the task was difficult, they were unlucky, or it was the group's decision. This is consistent with an attribution theory. According to Lee (1977), the fundamental attribution error is human tendency to overestimate the role of dispositional versus situational causes of behavior. That is, individuals tend to attribute things that are wrong with another person to the person's disposition and their own wrong-doing to situational causes. Within the negotiation context, these findings suggest that, in the event that the negotiation was unsuccessful, invested parties should not be surprised to hear excuses blaming the negative outcome on external factors.

Entrapment can contribute to a conflict, because when individuals make a commitment to their initial position, they are more likely to notice information that supports their initial evaluation of the situation. Their judgment is biased to interpret what they see and hear in a way that justifies their initial position, ignoring the other's point of view, resulting in a conflict situation. As Sitkin and Bies (1993) pointed out, the tactic of explaining why an action was taken is much more readily available and commonly used than other conflict management techniques (e.g., compromise or collaboration). Research

question findings are particularly relevant to negotiation and conflict management, suggesting that one way of preventing entrapment is to keep the parties accountable, and not to the outcome but to the process (Simonson & Staw, 1992), so that the constituency can possibly break the inertia of pursuing a failing course of action perhaps by re-framing the situation or other means (Fox & Hoffman, 2002).

In addition to the hypotheses and the research question examined in this dissertation, analyses were performed to explore the effect of self-perception of how lucky one is on cognitive processes presumably underlying entrapment and entrapment itself. The results indicate that luck has no direct effect on entrapment. However, it does have positive relationships with internal self-justification and self-positive face. These results suggest that the luckier the person feels, the more compelled the individual is to appear rational and the greater is person's desire to protect his or her image. Although there was no indirect relationship between luck and entrapment via self-positive face concerns, luck had a marginally negative effect on entrapment via internal self-justification. That is, luck contributed positively to the desire to appear rational and this desire prevented individuals from getting entrapped. It could be that those individuals who did not feel lucky stopped the drawing task because they generally perceived themselves as not lucky—that is, there was no purpose to continue because they would not be able to win anyway, due to their perception of own unluckiness. On the other hand, those individuals who do believe that they are lucky may have had greater need for justification because they were not able to pick any red balls, and therefore they needed to justify their action. However, because the respondents were primed to think about luck,

future research should be conducted to examine the role of self-perception of luck in a situation leading to entrapment.

Implications

This research addressed four gaps in the theoretical study of entrapment. First, because few social factors contributing to entrapment have been explored (Brockner et al., 1982; Brockner, Rubin, & Lang, 1981; Fox & Staw, 1979; Staw & Hoang, 1995), this study was designed to provide support and expand the existing body of knowledge by further examining the presence of audience, or constituency, and its effect on entrapment, and to introduce personal networks as a social explanation for why some people maybe more or less prone to becoming entrapped. Second, this study examined face concerns and how they moderate the entrapment bias. Third, because previous studies did not directly measure cognitive processes affecting entrapment, this dissertation examined the effect of the need for internal and external self-justification on entrapment. Finally, because none of the studies examined the escalation of commitment from a communication perspective, this study looked at the types of messages participants used to explain their decision in a situation potentially leading to entrapment.

This study is unique in that it combines the elements essential to simulating entrapment within the self-justification paradigm and measures processes previously expected to contribute to entrapment. Surprisingly, none of the factors employed in the study positively contributed to entrapment. The results indicate two paths linking conditions required for entrapment to occur to two of the four cognitive processes examined in this study. Presence of constituency influenced other-positive face concerns, which in turn negatively influenced the likelihood of entrapment. Also, the reporting

requirement influenced the need for internal self-justification needs, which negatively influenced the likelihood of entrapment. The relationship between the processes and entrapment were negative: Concerns for other-positive face and internal self-justification led to a decrease in entrapment, not to its increase, as previous studies would have suggested. Therefore, one of the main contributions of this research is that it identified processes that may prevent entrapment.

Overall, because none of the elements essential to simulating entrapment within the self-justification paradigm contributed positively to entrapment, these findings provide support for the need to identify another framework for examining entrapment. Perhaps one of the alternative perspectives is to view conflict-escalation as a goal-driven activity as suggested by Fox and Hoffman (2002). Fox and Hoffman argue that escalation behavior is a specific instance of the broader and more encompassing phenomenon of persistence, a behavioral tendency that arises in all goal-directed activities. The scholars propose that escalation should be viewed as a continuation of the same psychological motivating forces that govern the inception and maintenance of all forms of goal-directed behavior. According to Fox and Hoffman, persistence is measured by the total number of trials the person continues to make prior to stopping or changing a course of action. Traditionally, people do not stop their efforts after a single incident of the initial failure; they stop after multiple failures or learning that the goal cannot be attained. Future research is needed to examine whether escalation as a goal-driven activity can provide a viable explanation of the phenomenon.

Future research should also consider the relationship between attribution theory and the likelihood of entrapment. For example, McCain (1986) argues that persisting with

a chosen course of action in the face of other plausible alternatives results from an individual making an attribution that the previous failure was or was not caused by some unstable factors. If the same decision fails repeatedly, its failure could be attributed to stable causes. Results of the study conducted by McCain indicate that escalation tends to diminish at a fairly constant rate following initial trials. Results of the present study substantiated McCain's findings in that many participants cited either luck or difficulty of the task as explanations for their decision to stop the experimental task. Both reasons are attributable to external, unstable factors.

Another explanation for this dissertation's findings, namely that neither internal self-justification nor concern for other-positive face led to entrapment, may be that the diagnostic value of repeated failures could not be ignored by participants as it was mounting in direct proportion to sunk cost. That is, similar to the results from the study conducted by Garland, Sandefeur, and Rogers (1990), this study was structured in such a way that the participants could not ignore their failure to complete the task, because they were asked to track and record their gains and losses on a separate sheet which served as a constant reminder of their success or failure. Because there were no red balls in the box, success was improbable. Thus, with each additional draw, a participant's situation worsened. This line of reasoning is consistent with Staw and Ross (1987), who assert that one of the major factors contributing to withdrawal from a failing course of action is that the "objective situation increasingly worsens over time, making it economically clear that persistence is more costly than withdrawal" (p. 69). If the impossibility of ignoring the failure is an explanation for these findings, then this dissertation provided empirical support for some ways to reduce escalation. For one, providing explicit data regarding the

low (or no) return rate if one continues with a chosen course of action seems to reduce the likelihood of entrapment (Heath, 1995; Fox & Hoffman, 2002). In addition to instructing the participants to track their performance, the design of the current study also allowed the participants to stop the experimental task at any time, a feature that, compounded by a tracking requirement, could have contributed to preventing entrapment. Future research could compare conditions in which participants record or do not record their successes or failures to examine whether ongoing tracking of an individual's performance on a task reduces the likelihood of entrapment.

In this study, the role of constituency indirectly influenced participants' decisions to stop with the experimental task due to concerns about protecting other-positive face. Future studies should investigate the conditions under which planning a strategy with the members of constituency would indeed lead to preventing entrapment. Also, setting limits before outcomes are known (Brockner & Rubin, 1985) or setting a *stopping rule* prior to making the initial commitment (Boulding, Morgan, & Staelin, 1992) can reduce the likelihood of entrapment, "possibly reflecting the role of limits as psychological contracts that bind decision makers to behave in a manner consistent with their goals" (Brockner & Rubin, 1985, p. 85).

Support of the hypothesis that size and influence of individuals' personal networks affect face-saving behavior suggests a number of implications for cross-cultural communication research. In particular, in light of recent criticism of the individualism-collectivism and independent-interdependent self-construal paradigms (Fiske, 2002; Levine et al., 2003), these results suggest that personal networks may be helpful for gaining insight into social relations across cultures. Personal networks can provide a

more specific and informative way to operationalize differences in social relationships with relevant others than the individualism-collectivism and independent-interdependent self-construals. Although the results of this study indicate no direct relationship between personal networks and entrapment, further research examining entrapment in inter-cultural settings would have to be conducted to explore relationships between networks, self- and other-positive face concerns and entrapment.

Limitations of the Study

This research has several limitations related to the participant sample, experimental design and manipulations, and personal network measures that should be noted.

Sample

One limitation of the study is the use of college students as participants for the study. A major criticism of using college students as research participants is based on the belief that students are likely to be significantly different from non-students, and these differences can affect the external validity of an experiment (Sears, 1986). Attitudes, peer-group relationships, cognitive skills, personality traits, age, and experience are some of the factors that may distinguish students from non-students (Ashton & Kramer, 1980; Sears, 1986). However, use of students as research participants is common practice in social sciences. For example, in 1999, 86% of the samples for participant-based articles published in the *Personality and Social Psychology Bulletin* were made up of students. Student samples were also used in 63% of studies published in the *Journal of Personality and Social Psychology*. Furthermore, since its first issue in 1992, the *Journal of Consumer Psychology* has included college samples in 86% of its empirically based

articles (Sherman, Buddie, Dragan, End, & Finney, 1999). Therefore, the use of the students as study participants in this research is in line with practices acceptable in the field. Undoubtedly, it would be interesting to examine whether the results of the study could be replicated with a non-student sample, because individuals' professional experience may affect the way they behave in a situation potentially leading to entrapment. In addition, size and influence of networks as well as types of networks (personal versus professional) of professionals are likely to differ from those of students and may affect face concerns and contribute to entrapment differently.

Another limitation associated with the study sample is that the majority of the sample (80.90%) was female. As mentioned earlier, such sample composition may have affected the results of the study in that women tend to be more concerned about others than men, and, therefore, the concern for others may have led them to become less entrapped. Future studies should compare male and female performance in a comparable study.

Experimental Design and Manipulation

This study addressed some of the past limitations in entrapment research regarding constituency by introducing a physically present constituency that interacted with the participants, which is different from past studies that have employed a paper constituency or passive observers. The limitation of this approach is that the confederates were not able to form a long-term relationship with the participant, given that they spent only 10 to 15 minutes together. Results should be compared to similar situations in which an individual represents a group with which he or she has longer relationships. Still, regardless of the fact that the individuals were not intimately familiar with members of

the constituency and did not have a real relationship with them, the results of this study suggest that the concerns for constituency needs (i.e., other-positive face) deterred the participants from getting entrapped.

Another limitation of experimental manipulation is operationalization of entrapment (i.e., the number of balls drawn by participants). Because the box did not contain any red balls, some participants might have withdrawn from the task because they consistently drew only white balls. Although none of the participants guessed the true nature of the study, as evidenced by a few verbal comments made to the researcher after completing the experimental task, some did guess that there were no red balls in the box. Future studies may incorporate *baits for success* (e.g., red balls in a smaller number than needed to win) in the design. In addition, the fact that participants were told that the study is about luck may have affected the final results. The individuals' belief regarding how lucky or unlucky they are might have prevented those who believe that they are unlucky from pursuing the task and encouraged those who believe that they are lucky to continue with the task.

Another potential limitation of the study is the manipulation of entrapment using raffle tickets and dollars lost. A penalty of \$1 might have not been perceived as a serious one. However, past studies employing dollar auction methodology, in which individuals compete against each other in bidding for \$1 bill, have suggested that dollar amount is not what drives people to pay more than \$1 for a dollar; it is the desire to win that drives them to overbid (Brockner, 1977). Nonetheless, future research could examine the effect of the value being sunk into persistence.

Finally, although the implications for negotiation and conflict management are provided, the simulation in this experiment did not involve negotiation or conflict. In fact, most past studies of entrapment used neither simulations. However, scholars interpret findings from these past studies to be applicable to negotiation context (e.g., Bazerman, 1986; Neale & Bazerman, 1985). Future studies should employ negotiation scenarios when examining entrapment to identify how the presence of a counterpart could affect entrapment.

Personal Networks Measures

The context for generating the networks spanned a wide variety of everyday activities, from borrowing money to making health decisions, but did not focus on any area in particular. If participants were asked about their work or health networks, a different set of individuals may have been nominated. Further, the type of network activated is likely to vary from one situation to another. For example, in a family setting, a person is likely to be much more concerned about family and friends, whereas in a work setting, the person may be more concerned about the opinion of colleagues than of family members. This study did not ask participants to identify which set of networks was activated or gained prominence in an individual's mind when the person was facing a situation potentially leading to entrapment. Investigating a number of different network contexts and their salience to the situation studied should provide greater insight into the effect of network types. Because the scenario used in this study did not focus on a specific context (e.g., business or health care) a broad network was used. Future studies should use context-specific scenarios (e.g., negotiation) in which participants represent

real life organizations and involve individuals with whom the participants have true relationships to examine network activations and how they affect cognitive processes. For example, network shifts may affect individuals' concerns for self- or other-face. When networks are small, an individual's concerns for protecting self-face may be predominant, whereas when the networks are large, concerns for protecting other-face dominate. However, these issues are beyond the scope of this study. A longitudinal study could address these issues and examine causes that lead to changes in network size and potentially network member influence.

Directions for Future Research

In addition to the future directions for research already suggested, future studies should explore other frameworks for investigating the entrapment bias, including concern for goal-completion and attribution paradigms. A study using goal-completion framework could identify additional mechanisms that contribute to entrapment and provide insight as to whether the desire to achieve a future goal, combined with past failure and sunk cost of the investments, leads to entrapment. Future studies also should investigate whether causal accounts are effective strategies for explaining behavior in an entrapment situation; that is, does the constituency accept them as a viable explanation of an individual's behavior.

Future studies should also focus on the salience of negotiator and constituency goals, especially comparing teams of individuals who know each other in real life with the experimental team selected to perform an experimental task simulating an entrapment situation. Prior to commencing the task, goals of the individual carrying out the task and team-member goals should be measured to explore whether they are aligned to determine

whether salience of goals decreases the propensity for entrapment.

One of the key contributions of this study is that it demonstrates a relationship between individuals' networks and face concerns. However, future studies are needed to explore whether the relationship exists in other, non-entrapment related contexts and the implications of this relationship for communication. With further development, personal networks could become an alternative description of individuals' relationships with relevant others usually assumed in measures of individualism-collectivism and independent-interdependent self-construals. Future cross-cultural comparisons should examine individuals from traditionally individualistic or independent self-construal cultures and from traditionally interdependent or collectivistic cultures to identify whether behaviors predicted by individualism-collectivism could be also predicted by the size and strength of personal networks.

Future research should also explore types and interconnectedness of various network types in different cultures. For example, in cultures typically described as individualistic, individuals may have non-overlapping, large, work-related networks and small family networks, whereas in cultures typically described as collectivistic, people may have larger family networks and smaller work-related networks that overlap. This comparison of network types provides more specific information about the webs of relationships people in those cultures have, which can provide the basis for more specific knowledge about communication flow and the salience of different network types in various kinds of communication situations. Studies could also explore whether individuals' values are related to the size and strength of the network in which they are connected. For example, do individuals with smaller, less strong networks value

competition, freedom, autonomy, and achievement more than those with larger and stronger networks? Future research should address how these aspects of network differences contribute to encouraging or preventing entrapment.

This study shows that accountability may stimulate more accurate decision-making. Future research should further explore this possibility. Future studies could examine whether regular de-briefing with members of constituency and establishing a common rule for stopping (Brockner & Rubin, 1985), combined with explicit data regarding the rate of return on additional investments (Heath, 1995) and explicit performance goals (Kernan & Lord, 1989), can result in decreased entrapment.

Future studies also should use more than one network-generating context and use a less generic entrapment situation (e.g., business, family, health). Additional information about individuals' networks would allow making within-subject comparisons to identify patterns in the types of networks. Future studies should employ non-student samples to investigate whether professionals, because of their life experience, behave differently in a situation leading to entrapment, and the type and implicit or explicit influences of networks among professionals when dealing with situations that could lead to entrapment. And, future studies should also present participants with real-life situations (e.g., negotiating a contract, working on a failing project).

The results of this study indicate that, although the psychological self-reports indicate that presence of constituency increases individuals' concern for self-positive face, the analysis of actual messages produced by the participants suggests that individuals report less concern for self-positive face. Future research should examine potential incongruence between reported psychological processes and physical

explanations or messages produced by individuals in a situation leading to entrapment and its implications for communication.

Finally, future studies should be conducted to replicate the results of this study and identify other cognitive variables that could lead to entrapment. For example, future research could examine whether a negotiators' degree of cognitive complexity (i.e., people's ability to put themselves into the opponent's shoes in a conflict situation) might contribute to entrapment. That is, individuals who routinely put themselves into other people's shoes may be less prone to entrapment in a negotiation or conflict situation.

Significance of the Study

This study provides additional insight into the investigation of the entrapment bias, cognitive processes identified from previous research as leading to entrapment bias, and messages communicated in an entrapment situation. In addition, it investigated the role of personal networks and their effects on face concerns. The findings regarding personal networks have implications for future research in the field of cross-cultural communication.

The current investigation does not support the findings from previous studies that suggest that justification processes and face concerns lead to entrapment. This study found that only internal self-justification and other-positive face concerns are related to entrapment, but instead of contributing to entrapment, these aspects prevent individuals from becoming entrapped.

Methodologically, this study provides empirical support for the value of using personal networks as a predictor of face goals. In light of criticism associated with the measurement of independent-interdependent self-construals (Levine et al., 2003) and

individualism-collectivism (Fiske, 2002), this study showed that networks could be considered a plausible alternative for operationalizing these theoretical constructs. Both individualism-collectivism and independent-interdependent self-construals measures rely on self-reports about individuals' psychological orientation using arbitrary definitions of relevant others. By allowing individuals to nominate people who were relevant to them and asking them to report quality and frequency of communication with these people, this study moved away from psychological reporting and examined structural features of relationships (i.e., how large are the individuals' actual networks and how important are relationships in these networks?). In addition, an original measure of the strength of influence of a network on an individual was developed. This research used the interaction between size and influence of networks, and found this measure to predict other-positive face goals. This measure should be validated in future research using networks to understand communication.

Furthermore, this study measured individuals' cognitive processes identified in the past literature as those that potentially contribute to entrapment. Past studies have not directly measured these processes rather they attributed the entrapment to them. Finally, the study examined messages used by individuals in a situation leading to entrapment, suggesting that when individuals try to explain their behavior, they tend to use causal accounts.

Overall, this study has made a contribution to the field of communication by identifying processes and conditions (e.g., concern for other-positive face, internal self-justification, reporting requirement, direct observation by constituency, keeping clear record of performance success or failure) that may prevent entrapment bias from

occurring. These processes and conditions could potentially improve the outcomes of negotiation with the use of effective communication strategies. For example, the results indicate that the reporting requirement has a positive effect on entrapment, because it increases individuals' needs to rationalize their behavior—preventing them from becoming entrapped. In addition, the requirement to report also leads individuals to be more concerned about protecting their own positive face than they are about protecting the image of others. Both issues could be addressed through communication, by setting up clear reporting guidelines and providing encouraging feedback to minimize threats to the negotiator's face.

This research also has several practical implications for minimizing entrapment during a negotiation or conflict situation. The results indicate that, in the constituency-present conditions, the participants become less entrapped because of the concern for other-positive face. One plausible explanation for this finding is that the constituency was not physically present when participants performed the task, because in the presence of constituency, individuals tend to be more competitive and often less successful (Klimoski & Asch, 1974; Lamm & Kogan, 1971; Neale, 1984; Organ, 1971). Therefore, from the practitioners' point of view, limiting the physical presence of constituency during a negotiation or in a conflict situation may lead to more effective outcomes. The results indicate that the reporting requirement prevents entrapment; however, it increases concerns for self-positive face. To this end, the constituency should try to minimize these concerns by providing encouraging feedback. The results also suggest that keeping an explicit track record of success or failure may also contribute to de-biasing effect. Thus, constituency should instruct the negotiator to keep a record of his or her successes and

failures. Finally, because the results of the study indicated that individuals tend to use causal accounts as message strategies to explain their failure to complete the task, to minimize the attribution error the constituency should keep the negotiators accountable to the process of negotiation, not just the final outcome.

Overall, this dissertation demonstrated the negative relationships between the entrapment bias and other-positive face and entrapment and internal self-justification. It demonstrated that the presence of constituency and the requirement for reporting, respectively, affect positive-face concerns and justification processes, suggesting that both are essential for entrapment to occur through indirect processes of other-positive face and internal justification. In addition, this research demonstrated that the size and influence of personal networks are positively associated with face-saving behaviors.

APPENDIX A

IRB Approval Letter



UNIVERSITY OF
MARYLAND

INSTITUTIONAL REVIEW BOARD

Reference: IRB HSR Identification Number 0440033

2100 Lee Building
College Park, Maryland 20742-5121
301.405.4212 TEL 301.314.1475 FAX

February 3, 2004

MEMORANDUM

Notice of Results of Final Review by IRB on HSR Application

TO: Dr. Deborah A. Cai
Ms. Anna Karavanov
Department of Communication

FROM: Dr. Phylis Moser-Veillon, Co-Chairperson
Dr. Marc Rogers, Co-Chairperson
Institutional Review Board

PROJECT ENTITLED:
"Social Factors Affecting Luck & Decision Making"

The Institutional Review Board (IRB) concurs with the departmental Human Subjects Review Committee's (HSRC's) preliminary review of the application concerning the above referenced project. The IRB has approved the application and the research involving human subjects described therein. We ask that any future communications with our office regarding this research reference the IRB HSR identification number indicated above.

We also ask that you not make any changes to the approved protocol without first notifying and obtaining the approval of the IRB. Also, please report any deviations from the approved protocol to the Chairperson of your departmental HSRC. If you have any questions or concerns, please do not hesitate to contact us at irb@deans.umd.edu. Thank you.

ADDITIONAL INFORMATION REGARDING IRB/HSRC APPROVALS

EXPIRATION OF IRB APPROVAL—Approval of non-exempt projects expires one year after the official date of IRB approval; approval of exempt projects expires three years after that date. If you expect to be collecting or analyzing data after the expiration of IRB approval, please contact the HSRC Chairperson in your department about submitting a renewal application. **(PLEASE NOTE: If you are not collecting data from human subjects and any on-going data analysis does not increase the risk to subjects, a renewal application would not be necessary.)**

STUDENT RESEARCHERS—Unless otherwise requested, the IRB will send copies of approval paperwork to the supervising faculty researcher (or advisor) of a project. We ask that such persons pass on that paperwork or a copy to any student researchers working on that project. That paperwork may be needed by students in order to apply for graduation. **PLEASE BE ADVISED THAT THE IRB MAY NOT BE ABLE TO PROVIDE COPIES OF THAT PAPERWORK, particularly if several years have passed since the date of the original approval.**

Enclosures (where appropriate), will include stamped copy of informed consent forms included in application and any copies of the application not needed by the IRB; copies of this memorandum and any consent forms to be sent to the Chairperson of the Human Subjects Review Committee

APPENDIX B

Participant Solicitation Announcement

[TO BE MADE IN CLASS]

Dear Students,

If you are interested in receiving extra credit for [INSERT COURSE NUMBER], you can participate in an experiment investigating an individual's luck and decision-making processes. If you chose to participate, you will receive [INSERT NUMBER] of extra credit points. In addition to receiving extra credit, those of you who decide to participate will receive ten raffle tickets for four drawings of \$50.

If you are interested in extra credit but do not want to participate in research, your instructor will offer you an alternative written assignment.

I'm going to pass around a sign-up sheet.

APPENDIX C

ID Number Instructions

Dear Student,

You will notice that the surveys you are about to fill out require an ID code. To ensure confidentiality, we are not assigning ID codes, instead we are asking you to come up with your own ***FOUR DIGIT*** code that would be **EASY FOR YOU TO REMEMBER.**

It could be **any four numbers**. Here are some suggestions:

- Last four digits of your social security number
- Combination of the month, day or year of your birthday
- Your MARS pin code
- Last four digits of your parents' zip code

APPENDIX D

Informed Consent Form

*Consent Form***INFORMED CONSENT FORM**

Identification of Project/Title	Social factors affecting luck and decision making.
Statement of Age of Participant (parental consent needed for minors)	I state that I am 18 years of age or older, in good physical health, and wish to participate in a program of research being conducted by Dr. Deborah Cai and Ms. Anya Karavanzov in the Department of Communication at the University of Maryland College Park, Maryland 20742-7635.
Purpose	The purpose of the research is to investigate decision-making and luck.
Procedures	The procedures involve drawing ping-pong balls from a box and completing related questionnaires. I understand my participation will require approximately thirty minutes.
Confidentiality	All information collected in the study is confidential, and my name will not be identified at any time. The data I provide will be grouped with data others provide for reporting and presentation.
Risks	I understand that there are no long-term effects associated with this research.
Benefits, Freedom to Withdraw, & Ability to Ask Questions	I understand that the experiment is not designed to help me personally, but that the investigator hopes to learn more about luck and decision making. I understand that I am free to ask questions and/or to withdraw from participation at any time without penalty and/or decline to answer certain questions. If I withdraw I understand that any record of my research participation will be destroyed.
Principal Investigator	Dr. Deborah A. Cai 2110 Skinner Building Department of Communication University of Maryland College Park, MD 20742-7635 301-405-6524 debcai@umd.edu
Obtaining a copy of the research results	I understand that I may obtain a copy of the results of this research after June 1, 2004 by contacting Dr. Deborah A. Cai at the Department of Communication, 2110 Skinner Building, University of Maryland, College Park, MD 20742-7635. Phone: 301-405-6524; E-mail: debcai@umd.edu

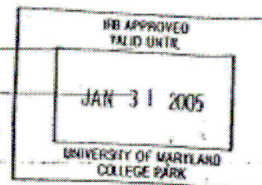
If you have questions about your rights as a research subject or wish to report a research-related injury, please contact: Institutional Review Board Office, University of Maryland, College Park, Maryland, 20742, (e-mail) irb@deans.umd.edu; (telephone) 301-405-4212.

I have chosen to participate in this research project and understand that my participation is one of several ways that I may earn extra credit that will be applied towards my class grade.

Printed Name of Participant _____

Signature of Participant _____

Date _____



APPENDIX E

Demographic Questionnaire

Demographic Questionnaire

ID Code _____

Please take a few moments to answer the following questions:

1. Gender (check one) Female _____ Male _____

2. Age (in years) _____

3. Are you currently employed? (check one) Yes _____ No _____

If "Yes," what is your occupation? _____

4. Which of the following most accurately describes your student status?

I'm a full-time undergraduate student _____

I'm a part-time undergraduate student _____

I'm a full-time graduate student _____

I'm a part-time graduate student _____

5. Which of the following most accurately describes you current status?

___ Freshman ___ Sophomore ___ Junior ___ Senior

___ Master's student ___ Doctoral student

6. Are you (check one)...

White, Non-Hispanic or Caucasian _____

African-American or Black _____

Hispanic _____

Asian or Asian-American _____

Other _____

APPENDIX G

Influence Scale

Questions below refer to people that you listed in Questions 1 through 10

Answer the following questions using a scale from “1” to “7” where “1” is “no influence” and “7” is “strong influence.”

Overall, how much influence do people you listed in Questions 1 through 10 have on:

12. A type of job you might choose (e.g., type of company, position)?

1	2	3	4	5	6	7
no influence						strong influence

13. Your decision to pursue education beyond college?

1	2	3	4	5	6	7
no influence						strong influence

14. Your social life (e.g., choice of friends)?

1	2	3	4	5	6	7
no influence						strong influence

15. Your personal development (e.g., books you read, music you listen to)?

1	2	3	4	5	6	7
no influence						strong influence

16. Your personal life decisions (e.g., whom to date, sex conduct)?

1	2	3	4	5	6	7
no influence						strong influence

Overall, how much influence do people you listed in Questions 1 through 10 have on:

17. Your social habits (e.g., smoking cigarettes, alcohol consumption)?

1	2	3	4	5	6	7
no						strong
influence						influence

18. Your outward appearance (e.g., clothing)?

1	2	3	4	5	6	7
no						strong
influence						influence

19. Your interests and hobbies?

1	2	3	4	5	6	7
no						strong
influence						influence

20. Your neighborhood choice?

1	2	3	4	5	6	7
no						strong
influence						influence

21. Ways you choose to resolve a conflict?

1	2	3	4	5	6	7
no						strong
influence						influence

22. Political position you might take (e.g., support a candidate, party, voting behavior)?

1	2	3	4	5	6	7
no						strong
influence						influence

23. Your decision to undergo a serious medical procedure (e.g., surgery)?

1	2	3	4	5	6	7
no						strong
influence						influence

APPENDIX H

Face Scale

Questionnaire

We want to know if you agree or disagree with the following statements. Read each statement carefully. Indicate your agreement or disagreement with the statement by using the following scale: 1 is “strongly disagree” and 7 is “strongly agree.”

Please answer ALL of the questions below. CIRCLE the number that best reflects your answer.

1. When I ask my close friend for a favor, I worry that she/he might feel obliged to comply with my request.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

2. When I ask my close friend for a favor, I am concerned that he/she might feel like they have to say “yes” to my request.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

3. When I ask my close friend for a favor, I worry that he/she might find it hard to say “no.”

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

4. When I ask my close friend to do something for me, I am concerned that he/she might feel like she/he has to go along with my request.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

5. When I ask my close friend to do something for me, I worry that he/she might feel pushed into agreeing with what I want.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

6. In general, I do not feel comfortable sharing my problems with other people because I'm afraid I'm going to overburden them.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

7. In general, it is important to me that others feel that I'm an independent person.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

8. When I ask somebody for a favor, I worry about the fact that I will feel indebted to the person.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

9. In general, it is important to me to be self-sufficient because I do not like owing anything to other people.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

10. In general, it is important to me that people in my life realize that I am capable of making decisions myself

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

11. When my close friend does me a favor, I worry about the fact that I will be obliged to return the favor in the future

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

12. Overall, I dislike when people give me an advice when I did not ask for it.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

13. Overall, when I talk to people, it is important to me that what I say does not make them look inadequate.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

14. In general, when I give advice to a person, it is important to me that he/she does not feel like I'm implying that he/she has difficulty handling the situation.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

15. Overall, when I give an advice to my friend, it is important to me that my friend does not feel like I'm implying that he/she does not understand the consequences of his/her actions.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

16. In general, when my friend inadvertently breaks promise I don't want him/her to feel like I think that he/she is person who never honors his/her commitments.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

17. I do not like to get into arguments with people because it might make them look uncooperative.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

18. When I talk to people, I want to make them feel comfortable discussing issues with me.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

19. I worry about how other people judge me when it comes to my physical appearance.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

20. I want people to find me physically attractive.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

21. In general, when a group of colleagues is having a conversation, I like to be included in the conversation.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

22. In general, it is important to me that people do not think that I am nosy.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

23. In general, it is important to me to make a positive impression on people.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

24. In general, it is important to me that people think that I am smart and capable.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

APPENDIX I

Experimental Conditions: Participant Instructions

Condition I: Constituency; reporting.

RESEARCHER INSTRUCTIONS

Hello, my name is _____. Thank you for volunteering to participate in this experiment. You will receive an extra credit for your participation. Also, in addition to extra credit, here are 10 raffle tickets for four drawings of \$50. Each ticket is worth \$1. I also want to stress that the results of this experiment are strictly confidential. Please feel free to ask questions or withdraw from participation at any time. By quitting you will just forfeit the raffle tickets but you will not lose the extra credit points.

The experiment you are about to participate in is designed to study decision making and luck. I will provide you with more background on this experiment after you complete the experimental task. I just don't want to bias the outcomes of the research by giving you too much detail.

So, as I just mentioned, the study is about luck. The results of many past studies investigating luck indicate that how well one performs in this particular experimental task is a strong indicator of how lucky one is in other areas of life—e.g., finding a good job and finding a partner for life.

The experimental task will consist of drawing ping-pong balls out of a box. The box contains 100 ping-pong balls, of which 90 are white and 10 are red. The measure of luck is the number of red balls an individual is able to draw.

You will be working as a group. I'm interested in how an individual's luck affects groups. There have been studies that have shown that not only individuals could be lucky, but groups also can be lucky.

Although you are going to be working as a group, only one person will be performing the task and the three of you have to decide who this person will be. To decide on the person to perform the task you will draw a number out of a hat—the person who gets number "3" will have to perform the drawing. We'll do the drawing after I will explain the experimental procedures to you.

The ultimate goal of the task is to draw only 5 out of the 10 red balls that are mixed in with white balls. You can make up to 20 attempts to draw all 5 red balls but **you can stop at any time**. And I want to stress this—**drawing only all 5 balls counts as a successful completion of the task**; drawing one, two, three or four red balls constitutes failure to complete the task. You are all starting the experiment with 10 raffle tickets and all of you will receive extra credit for participation regardless of your performance. If you successfully complete the task—draw 5 red balls—you will receive additional 20 raffle tickets—bringing

the total to 30. For every red ball you draw in addition to 5 you need to successfully complete the task, you will receive another raffle ticket.

For every white ball drawn you will lose one raffle ticket (of the 10 tickets you started with) and your group members will also lose one raffle ticket each. If you draw a red ball you gain two raffle tickets and members of your group also gain two tickets each. If you get “in the negative” (maximum minus 10 raffle tickets), you will have to pay \$1 for each ticket and your group members will also have to pay \$1 each. So, the maximum penalty for the person who draws is \$10 and the maximum penalty for each group member is \$10.

But I want to stress that regardless of how many points the person who performs the drawing loses, if all 5 red balls are drawn by the end of the task, you and your group members will receive 20 raffle tickets each with no penalties. For example, if the person who is drawing had negative points at the time of drawing all 5 red balls, neither this person nor group members have to pay any penalties and everyone will receive all 20 raffle tickets for successfully completing the task.

After the drawing task is completed, the individual who does the drawing will report in-person to the group members and explain his or her success or failure. Upon reviewing the outcomes, group members will determine an amount (from \$0 to \$5) to be awarded to the person performing the task. I will pay the amount indicated by the group members. Group members will also receive compensation, but I don't want to disclose the pay structure so as not to bias their decisions on how much to award. While one of you is performing the drawing task, the other group members will be asked to fill out additional questionnaires.

Do you have any questions regarding the procedures that we just covered?

Now, let's decide who is going to perform the drawing task. **[DO THE HAT DRAWING]**

AFTER THE PARTICIPANT IS SELECTED, THE RESEARCHER WILL TAKE HIM/HER TO THE EXPERIMENT ROOM AND GIVE THE PARTICIPANT THE INSTRUCTIONS AND PAY-OFF SHEET. THE RESEARCHER WILL ASK THE PARTICIPANT TO SIGN THE CONSENT FORM, FILL OUT DEMOGRAPHIC INFORMATION, MANIPULATION CHECK AND LUCK QUESTIONNAIRES.

AFTER THE PARTICIPANT COMPLETES QUESTIONNAIRES, THE RESEARCHER WILL MENTION:

I forgot to mention that even though some people feel unlucky, their performance on this task does not depend on it. And, furthermore, even if you feel that you are unlucky, there is still about one in 10 chances that you will be successful in accomplishing the task.

*Condition II: Constituency; no reporting***RESEARCHER INSTRUCTIONS**

Hello, my name is _____. Thank you for volunteering to participate in this experiment. You will receive an extra credit for your participation. Also, in addition to extra credit, here are 10 raffle tickets for four drawings of \$50. Each ticket is worth \$1. I also want to stress that the results of this experiment are strictly confidential. Please feel free to ask questions or withdraw from participation at any time and without penalty. By quitting you will just forfeit the raffle tickets but you will not lose the extra credit points.

The experiment you are about to participate in is designed to study decision making and luck. I will provide you with more background on this experiment after you complete the experimental task. I just don't want to bias the outcomes of the research by giving you too much detail.

So, as I just mentioned, the study is about luck. The results of many past studies investigating luck indicate that how well one performs in this particular experimental task is a strong indicator of how lucky one is in other areas of life—e.g., finding a good job and finding a partner for life.

The experimental task will consist of drawing ping-pong balls out of a box. The box contains 100 ping-pong balls, of which 90 are white and 10 are red. The measure of luck is the number of red balls an individual is able to draw.

You will be working as a group. I'm interested in how an individual's luck affects groups. There have been studies that have shown that not only individuals could be lucky, but groups also can be lucky.

Although you are going to be working as a group, only one person will be performing the task and the three of you have to decide who this person will be. To vote on the person to perform the task you will draw a number out of a hat—the person who gets number "3" will have to perform the drawing. We'll do the drawing after I will explain the experimental procedures to you.

The ultimate goal of the task is to draw only 5 out of the 10 red balls that are mixed in with white balls. You can make up to 20 attempts to draw all 5 red balls but **you can stop at any time**. And I want to stress this—**drawing only all 5 balls counts as a successful completion of the task**; drawing 1, 2, 3 or 4 red balls constitutes failure to complete the task. You are all starting the experiment with 10 raffle tickets and all of you will receive extra credit for participation regardless of your performance. If you successfully complete the task—draw 5 red balls—you will receive additional 20 raffle tickets—bringing the total to 30. For every red ball you draw in addition to 5 you need to successfully complete the task, you will receive another raffle ticket.

For every white ball drawn you will lose one raffle ticket (of the 10 tickets you started with) and your group members will also lose one raffle ticket each. If you draw a red

ball you gain two raffle tickets and members of your group also gain two tickets each. If you get “in the negative” (maximum minus 10 raffle tickets), you will have to pay \$1 for each ticket and your group members will also have to pay \$1 each. So, the maximum penalty for the person who draws is \$10 and the maximum penalty for each group member is \$10.

But I want to stress that regardless of how many points the person who performs the drawing loses, if all 5 red balls are drawn by the end of the task, you and your group members will receive 20 raffle tickets each with no penalties. For example, if the person who is drawing had negative points at the time of drawing all 5 red balls, neither this person nor group members have to pay any penalties and everyone will receive all 20 raffle tickets for successfully completing the task.

After the drawing task is completed, the individual who does the drawing will give me the tally sheet. I will share the tally sheet with other members of the group. Upon reviewing the outcomes, group members will determine an amount (from \$0 to \$5) to be awarded to the person performing the task. I will pay the amount indicated by the group members. Group members will also receive compensation, but I don't want to disclose the pay structure so as not to bias their decisions on how much to award. While one of you is performing the drawing task, the group members will be asked to fill out additional questionnaires.

Do you have any questions regarding the procedures that we just covered?

Now, let's decide who is going to perform the drawing task. **[DO THE HAT DRAWING]**

AFTER THE PARTICIPANT IS SELECTED, THE RESEARCHER WILL TAKE HIM/HER TO THE EXPERIMENT ROOM AND GIVE THE PARTICIPANT THE INSTRUCTIONS AND PAY-OFF SHEET. THE RESEARCHER WILL ASK THE PARTICIPANT TO SIGN THE CONSENT FORM, FILL OUT DEMOGRAPHIC INFORMATION, MANIPULATION CHECK AND LUCK QUESTIONNAIRES.

I forgot to mention that even though some people feel unlucky, their performance on this task does not depend on it. And, furthermore, even if you feel that you are unlucky, there is still about one in ten chances that you will be successful in accomplishing the task.

*Condition III: No constituency, reporting***RESEARCHER INSTRUCTIONS**

Hello, my name is _____. Thank you for volunteering to participate in this experiment. You will receive an extra credit for your participation. Also, in addition to extra credit, here are 10 raffle tickets for four drawings of \$50. Each ticket is worth \$1. I also want to stress that the results of this experiment are strictly confidential. Please feel free to ask questions or withdraw from participation at any time and without penalty. By quitting you will just forfeit the raffle tickets but you will not lose the extra credit points.

The experiment you are about to participate in is designed to study decision making and luck. I will provide you with more background on this experiment after you complete the experimental task. I just don't want to bias the outcomes of the research by giving you too much detail.

So, as I just mentioned, the study is about luck. The results of many past studies investigating luck indicate that how well one performs in this particular experimental task is a strong indicator of how lucky one is in other areas of life—e.g., finding a good job and finding a partner for life.

The experimental task will consist of drawing ping-pong balls out of a box. The box contains 100 ping-pong balls, of which 90 are white and ten are red. The measure of luck is the number of red balls an individual is able to draw.

You will be working on your own. The ultimate goal of the task is to draw only 5 out of the ten red balls that are mixed in with white balls. You can make up to 20 attempts to draw all 5 red balls but **you can stop at any time**. And I want to stress this—**drawing only all 5 balls counts as a successful completion of the task**, i.e. drawing one, two, three or four red balls constitutes failure to complete the task. You are starting the experiment with 10 raffle tickets and you will receive extra credit for participation regardless of your performance. If you successfully complete the task—draw 5 red balls—you will receive additional 20 raffle tickets—bringing the total to 30. For every red ball you draw in addition to 5 you need to successfully complete the task, you will receive another raffle ticket. For every white ball drawn you will lose one raffle ticket (of the ten tickets you started with). If you draw a red ball you will gain two raffle tickets. If you get “in the negative” (maximum minus ten raffle tickets), you will have to pay \$1 for each ticket lost. So, the maximum penalty is \$10.

But I want to stress that regardless of how many points you lose, if all 5 red balls are drawn by the end of the task, you will receive 20 raffle tickets with no penalties. For example, if you had negative points at the time of drawing all 5 red balls, you don't have to pay any penalties and you will receive all 20 raffle tickets for successfully completing the task.

After the drawing task is completed, you will report in-person to me.

Do you have any questions regarding the procedures that we just covered?

THE RESEARCHER WILL TAKE THE PARTICIPANT TO THE EXPERIMENT ROOM AND GIVE THE HIM/HER THE INSTRUCTIONS AND PAY-OFF SHEET. THE RESEARCHER WILL ASK THE PARTICIPANT TO SIGN THE CONSENT FORM, FILL OUT DEMOGRAPHIC INFORMATION, MANIPULATION CHECK AND LUCK QUESTIONNAIRES.

AFTER THE PARTICIPANT COMPLETES QUESTIONNAIRES, THE RESEARCHER WILL MENTION:

I forgot to mention, that even though some people feel unlucky, their performance on this task does not depend on it. And, furthermore, even if you feel that you are unlucky, there is still about one in ten chances that you will be successful in accomplishing the task.

Condition IV: No constituency; no reporting.

RESEARCHER INSTRUCTIONS

Hello, my name is _____. Thank you for volunteering to participate in this experiment. You will receive an extra credit for your participation. Also, in addition to extra credit, here are 10 raffle tickets for four drawings of \$50. Each ticket is worth \$1. I also want to stress that the results of this experiment are strictly confidential. Please feel free to ask questions or withdraw from participation at any time and without penalty. By quitting you will just forfeit the raffle tickets but you will not lose the extra credit points.

The experiment you are about to participate in is designed to study decision making and luck. I will provide you with more background on this experiment after you complete the experimental task. I just don't want to bias the outcomes of the research by giving you too much detail.

So, as I just mentioned, the study is about luck. The results of many past studies investigating luck indicate that how well one performs in this particular experimental task is a strong indicator of how lucky one is in other areas of life—e.g., finding a good job and finding a partner for life.

The experimental task will consist of drawing ping-pong balls out of a box. The box contains 100 ping-pong balls, of which 90 are white and 10 are red. The measure of luck is the number of red balls an individual is able to draw.

You will be working on your own. The ultimate goal of the task is to draw only 5 out of the 10 red balls that are mixed in with white balls. You can make up to 20 attempts to draw all 5 red balls but **you can stop at any time**. And I want to stress this—**drawing only all 5 balls counts as a successful completion of the task**, i.e. drawing one, two, three or four red balls constitutes failure to complete the task. You are starting the experiment with 10 raffle tickets and you will receive extra credit for participation regardless of your performance. If you successfully complete the task—draw 5 red balls—you will receive additional 20 raffle tickets—bringing the total to 30. For every red ball you draw in addition to 5 you need to successfully complete the task, you will receive another raffle ticket. For every white ball drawn you will lose one raffle ticket (of the 10 tickets you started with). If you draw a red ball you will gain two raffle tickets. If you get “in the negative” (maximum minus 10 raffle tickets), you will have to pay \$1 for each ticket lost. So, the maximum penalty is \$10.

But I want to stress that regardless of how many points you lose, if all 5 red balls are drawn by the end of the task, you will receive 20 raffle tickets with no penalties. For example, if you had negative points at the time of drawing all 5 red balls, you don't have to pay any penalties and you will receive all 20 raffle tickets for successfully completing the task.

Do you have any questions regarding the procedures that we just covered?

THE RESEARCHER WILL TAKE THE PARTICIPANT TO THE EXPERIMENT ROOM AND GIVE THE HIM/HER THE INSTRUCTIONS AND PAY-OFF SHEET. THE RESEARCHER WILL ASK THE PARTICIPANT TO SIGN THE CONSENT FORM, FILL OUT DEMOGRAPHIC INFORMATION, MANIPULATION CHECK AND LUCK QUESTIONNAIRES.

AFTER THE PARTICIPANT COMPLETES QUESTIONNAIRES, THE RESEARCHER WILL MENTION:

I forgot to mention, that even though some people feel unlucky, their performance on this task does not depend on it. And, furthermore, even if you feel that you are unlucky, there is still about one in 10 chances that you will be successful in accomplishing the task.

APPENDIX J

Participant Information Packet

Condition I: Constituency; reporting.

PARTICIPANT INSTRUCTIONS

As a group representative you will perform the drawing task on behalf of your group. Your ultimate goal is to draw 5 red balls out of the box. Drawing **only all 5 red balls** will be considered a successful completion of the task. You can make up to 20 attempts to draw all 5 balls **but** you can stop just after a few drawings.

At the conclusion of the task, you will write a short essay (one or two paragraphs) summarizing the outcome of the task and explaining your strategy and the results. You will use this essay as a basis for reporting to the group members after you are finished with the drawing task. After the explanation is presented to the group members, they will carefully weigh the information and decide how much money to award you for your performance.

To aid you in tracking the outcomes you will find a pay-off sheet on the next page of this packet. The sheet also contains a sample pay-off table and reminders on how to keep the score. Please review the pay-off sheet.

Do you have any questions at this time?

ID _____

Pay-Off Sheet

You and your group members start with 10 raffle tickets each

THIS IS A SAMPLE PAY-OFF SHEET:

Drawing	Red Ball	White Ball	Tickets: You	Tickets: Group Members
1.		X	-1	-1
2.		X	-1	-1
3.	X		+2	+2
...				
8.	X		+2	+2
9.		X	-1	-1
10.		X	-1	-1
...				
12.	X		+2	+2
13.		X	-1	-1
...				
18.		X	-1	-1
19.		X	-1	-1
20	X		+2	+2
Drawing Total:	4	16	1	1
Raffle Tickets			11	11
Grand Total:				

Remember:

- For every white ball you draw, you lose 1 raffle ticket. If you lose all raffle tickets and continue to draw, you will pay \$1 for any additional round of drawing.
- For every white ball you draw, each of your group members will lose 1 raffle tickets. If you lose all raffle tickets and continue to draw, each group member will pay \$1 for every additional round of drawing.
- If you draw a red ball, you will gain two raffle tickets and your group members will also gain two raffle tickets each.
- If you draw all 5 balls, you and each of your group members will receive 20 raffle tickets (each) and you will incur NO PENALTY REGARDLESS OF HOW MANY WHITE BALLS YOU HAVE DRAWN IN THE COURSE OF THE TASK.

Drawing	Red Ball	White Ball	Tickets: You	Tickets: Group Members
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
Drawing Total:				
Raffle Ticket Grand Total:				

Condition II: Constituency, no reporting.

PARTICIPANT INSTRUCTIONS

As a group representative you will perform the drawing task on behalf of your group. Your ultimate goal is to draw 5 red balls out of the box. Drawing **only all 5 red balls** will be considered a successful completion of the task. You can make up to 20 attempts to draw all five balls **but** you can stop just after a few drawings.

At the conclusion of the task, you will hand the researcher the tally sheet summarizing the outcome of the task. The researcher will share it with your group members. After the explanation is presented to the group members, they will carefully weigh the information and decide how much money to award you for your performance.

To aid you in tracking the outcomes you will find a pay-off sheet on the next page of this packet. The sheet also contains a sample pay-off table and reminders on how to keep the score. Please review the pay-off sheet.

Do you have any questions at this time?

ID _____

Pay-Off Sheet

You and your group members start with 10 raffle tickets each

THIS IS A SAMPLE PAY-OFF SHEET:

Drawing	Red Ball	White Ball	Tickets: You	Tickets: Group Members
1.		X	-1	-1
2.		X	-1	-1
3.	X		+2	+2
...				
8.	X		+2	+2
9.		X	-1	-1
10.		X	-1	-1
...				
12.	X		+2	+2
13.		X	-1	-2
...				
18.		X	-1	-1
19.		X	-1	-1
20	X		+2	+2
Drawing Total:	4	16	1	1
Raffle Tickets Grand Total:			11	11

Remember:

- For every white ball you draw, you lose 1 raffle ticket. If you lose all raffle tickets and continue to draw, you will pay \$1 for every additional drawing round.
- For every white ball you draw, each of your group members will also lose 1 raffle tickets. If you lose all raffle tickets and continue to draw, each group member will pay \$1 for every drawing round.
- If you draw a red ball, you will gain two raffle tickets and your group members will also gain two raffle tickets each.
- If you draw all 5 balls, you and each of your group members will receive 20 raffle tickets (each) and you will incur NO PENALTY REGARDLESS OF HOW MANY WHITE BALLS YOU HAVE DRAWN IN THE COURSE OF THE TASK.

Drawing	Red Ball	White Ball	Tickets: You	Tickets: Group Members
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
Drawing Total:				
Raffle Ticket				
Grand Total:				

Condition III: No constituency, reporting.

PARTICIPANT INSTRUCTIONS

You will perform the drawing task. Your ultimate goal is to draw 5 red balls out of the box. Drawing **only all 5 red balls** will be considered a successful completion of the task. You can make up to 20 attempts to draw all 5 balls **but** you can stop just after a few drawings.

At the conclusion of the task, you will write a short essay (one or two paragraphs) summarizing the outcome of the task and explaining your strategy and the results. You will use this essay as a basis for reporting to the researcher after you are finished with the drawing task.

To aid you in tracking the outcomes you will find a pay-off sheet on the next page of this packet. The sheet also contains a sample pay-off table and reminders on how to keep the score. Please review the pay-off sheet.

Do you have any questions at this time?

ID _____

Pay-Off Sheet

You start with 10 raffle tickets

THIS IS A SAMPLE PAY-OFF SHEET:

Drawing	Red Ball	White Ball	Tickets: You
1.		X	-1
2.		X	-1
3.	X		+2
...			
8.	X		+2
9.		X	-1
10.		X	-1
...			
12.	X		+2
13.		X	-1
...			
18.		X	-1
19.		X	-1
20.	X		+2
Drawing Total:	4	16	1
Raffle Tickets Grand Total:			11

Remember:

- For every white ball you draw, you lose 1 raffle ticket. If you lose all raffle tickets and continue to draw, you will pay \$1 for every additional round of drawing.
- If you draw a red ball, you will gain two raffle tickets.
- If you draw all 5 balls, you will receive 20 raffle tickets and you will incur NO PENALTY REGARDLESS OF HOW MANY WHITE BALLS YOU HAVE DRAWN IN THE COURSE OF THE TASK.

Drawing	Red Ball	White Ball	Tickets: You
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
Drawing Total:			
Raffle Ticket Grand Total:			

Condition IV: No constituency; no reporting.

PARTICIPANT INSTRUCTIONS

You will perform the drawing task. Your ultimate goal is to draw 5 red balls out of the box. Drawing **only all 5 red balls** will be considered a successful completion of the task. You can make up to 20 attempts to draw all 5 balls **but** you can stop just after a few drawings.

To aid you in tracking the outcomes you will find a pay-off sheet on the next page of this packet. The sheet also contains a sample pay-off table and reminders on how to keep the score. Please review the pay-off sheet.

Do you have any questions at this time?

ID _____

Pay-Off Sheet

You start with 10 raffle tickets

THIS IS A SAMPLE PAY-OFF SHEET:

Drawing	Red Ball	White Ball	Tickets: You
1.		X	-1
2.		X	-1
3.	X		+2
...			
8.	X		+2
9.		X	-1
10.		X	-1
...			
12.	X		+2
13.		X	-1
...			
18.		X	-1
19.		X	-1
20.	X		+2
Drawing Total:	4	16	1
Raffle Tickets Grand Total:			11

Remember:

- For every white ball you draw, you lose 1 raffle ticket. If you lose all raffle tickets and continue to draw, you will pay \$1 for every additional round of drawing.
- If you draw a red ball, you will gain two raffle tickets.
- If you draw all 5 balls, you will receive 20 raffle tickets and you will incur NO PENALTY REGARDLESS OF HOW MANY WHITE BALLS YOU HAVE DRAWN IN THE COURSE OF THE TASK.

Drawing	Red Ball	White Ball	Tickets: You
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
Drawing Total:			
Raffle Ticket Grand Total:			

8. *Constituency Conditions ONLY*: If you lose thirteen raffle tickets, what will be the monetary penalty incurred by each of your group members?

\$1 \$2 \$3 \$4 \$6 \$9 \$10

APPENDIX L

Luck Questionnaire

On a scale from 1 to 6 where “1” indicates “strongly disagree” and “6” indicates “strongly agree” please rate the following statements:

1. Luck plays an important part in everyone’s life.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

2. Some people are consistently luck, and others are unlucky.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

3. I consider myself to be a lucky person.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

4. I believe in luck.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

5. I often feel like it’s my lucky day.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

6. I consistently have good luck.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

7. It's a mistake to base any decisions on how lucky you feel.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

8. Luck works in my favor.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

9. I don't mind leaving things to chance because I'm a lucky person.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

10. Even the things in life I can't control tend to go my way because I'm lucky.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

11. There is such a thing as luck that favors some people, but not others.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

12. Luck is nothing more than random chance.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

After reading the scenarios presented below, please select a statement that most accurately describes your feelings.

13. If you were walking down a street that was full of people and someone dropped a \$20 bill in the middle of the crowd, do you feel that you would (check one):

- most certainly find it
- probably find it
- have a slightly better than even chance of finding it
- have no feeling one way or the other
- have a slightly better than even chance of not finding it
- probably not find it
- most certainly not find it

14. If you were on a bus that crashed on the roadway and half the people were injured while the other half were safe, do you feel that you would:

- most certainly be safe
- probably be safe
- have a slightly better than even chance of being safe
- have no feeling one way or the other
- have a slightly better than even chance of being injured
- probably be injured
- most certainly will be injured

15. If you had to flip a coin to see whether you would get a set of extra tickets to a show or someone else would get them, do you feel like you would:

- most certainly lose
- probably lose
- have a slightly better than even chance of losing
- have no feeling one way or the other
- have a slightly better than even chance of winning
- probably will win
- most certainly will win

Please read the following questions and circle the answer that most accurately describes you.

16. When it comes to games of chance (gamble), usually my chances of winning are:

- | | | | | | | |
|------|---|---|---|---|---|------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| very | | | | | | very |
| low | | | | | | high |

17. How often do you play games of chance (gamble)?

- never
- once every couple of years
- once a year
- once every couple of months
- once a month
- once a week
- more than once a week

18. To what extent do you feel that luck is a quality of the person versus a quality of the situation?

- | | | | | | | |
|--------------------------------|---|---|---|---|---|-----------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| quality
of the
situation | | | | | | quality
of the
person |

19. If you were to say that you were lucky in terms of some event, to what extent do you mean that you a lucky type of person or that a lucky thing happened to you?

- | | | | | | | |
|---------------------------------------|---|---|---|---|---|----------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| A lucky
thing
happened
to me | | | | | | I'm a lucky
type of
person |

APPENDIX M

Outcome Narrative

Strategy Explanation

Please complete the following form.

*Section I***Round 1**

1. What was the color of the first ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 2

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 3

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 4

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 5

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 6

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 7

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 8

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 9

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 10

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 11

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 12

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 13

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 14

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 15

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 16

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 17

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 18

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 19

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Round 20

1. What was the color of the ball you drew? _____

2. What did you chose to do next? (Please check one)

_____ withdraw from the task (Proceed to Section II)

_____ continue drawing

3. Why did you choose to continue to draw?

Section II

What are some specific statements that you might use to explain what happened during the drawing task?

APPENDIX N

Entrapment Questionnaire

Constituency present conditions.

Post-Experiment Questionnaire

We want to know if you agree or disagree with the following statements. Read each statement carefully. Indicate your agreement or disagreement with the statement by using the following scale “1” is “strongly disagree” and “7” is “strongly agree.”

Please answer ALL of the questions below. CIRCLE the number that best reflects your answer.

1. I feel that my strategy was rational.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

2. I made my decision to continue (or stop) drawing unemotionally.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

3. I weighed potential risks and gains carefully prior to making each round of drawing.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

4. I calculated my odds prior to each drawing.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

5. I felt that my investments in the process will be justified by the eventual pay off.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

6. Under the circumstances, I believe that the course I pursued had the best potential for earning most extra raffle tickets for my group members.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

7. I wanted the other group members to understand the logic used in choosing my course of action.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

8. I wanted my group members to feel that my choices were well-calculated.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

9. In general, it was important to me that the group members see me as a rational person.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

10. I felt it was important to perform well in this task for my group members.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

11. I was concerned for my group's needs.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

12. I wanted to help my group.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

13. I did not want to let my group down.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

14. When performing the task it was important to me to consider the consequences my behavior might have for my group.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

15. I was worried what the group members will think about me after the task was completed.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

16. It was important for me to do well on this task.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

17. I wanted to perform well to make a positive impression on my group members.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

18. I don't want my group members to be mad at me for loosing some of their raffle tickets and/or money.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

19. I think this was an unfair task.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

20. I didn't want my group members to think that I'm unable to calculate the odds.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

21. I don't think I understood the instructions well.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

22. I believe that any person in my position would have behaved the same way I did.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

*No constituency; reporting condition.***Post-Experiment Questionnaire**

We want to know if you agree or disagree with the following statements. Read each statement carefully. Indicate your agreement or disagreement with the statement by using the following scale “1” is “strongly disagree” and “7” is “strongly agree.”

Please answer ALL of the questions below. CIRCLE the number that best reflects your answer.

1. I feel that my strategy was rational.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

2. I made my decision to continue (or stop) drawing unemotionally.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

3. I weighted potential risks and gains carefully prior to making each round of drawing.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

4. I calculated my odds prior to each drawing.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

5. I felt that my investments in the process will be justified by the eventual pay off.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

6. Under the circumstances, I believe that the course I pursued had the best potential for earning most extra raffle tickets.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

7. I wanted the researcher to understand the logic used in choosing my course of action.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

8. I wanted the researcher to feel that my choices were well-calculated.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

9. In general, it was important to me that the researcher sees me as a rational person.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

10. In general, when performing in a group/team environment, it is important to me to perform well for my group members.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

11. When working in a team, I'm concerned for my group's needs.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

12. When working in a team, I want to help my group.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

13. When working in a group, I do not want to let my team down.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

14. When working in a group, it is important to me to consider the consequences my behavior might have for my group.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

15. When working in a group, I worry what the group members will think about me after the project is completed.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

16. It was important for me to do well on this particular task.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

17. I wanted to perform well to make a positive impression on the researcher.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

18. I don't want the researcher to think less of me for losing raffle tickets and/or money.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

19. I think this was an unfair task.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

20. I didn't want the researcher to think that I'm unable to calculate the odds.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

21. I don't think I understood the instructions well.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

22. I believe that any person in my position would have behaved the same way I did.

1	2	3	4	5	6	7
Strongly						Strongly
Disagree						Agree

No constituency; no reporting condition.

Post-Experiment Questionnaire

We want to know if you agree or disagree with the following statements. Read each statement carefully. Indicate your agreement or disagreement with the statement by using the following scale “1” is “strongly disagree” and “7” is “strongly agree.”

Please answer ALL of the questions below. CIRCLE the number that best reflects your answer.

1. I feel that my strategy was rational.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

2. I made my decision to continue (or stop) drawing unemotionally.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

3. I weighted potential risks and gains carefully prior to making each round of drawing.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

4. I calculated my odds prior to each drawing.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

5. I felt that my investments in the process will be justified by the eventual pay off.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

6. Under the circumstances, I believe that the course I pursued had the best potential for earning most extra raffle tickets.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

7. In general, when I do something it is important to me that others understand the logic I used in choosing my course of action.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

8. If I were to perform this task in a group in which I was a group representative, I would want the group members to feel that my choices were well-calculated.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

9. In general, when working in groups, it is important to me that group members see me as a rational person.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

10. In general, when performing in a group/team environment, it is important to me to perform well for my group members.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

11. When working in a team, I'm concerned for my group's needs.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

12. When working in a team, I want to help my group.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

13. When working in a group, I do not want to let my team down.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

14. When working in a group, it is important to me to consider the consequences my behavior might have for my group.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

15. When working in a group, I worry what the group members will think about me after the project is completed.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

16. It was important for me to do well on this particular task.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

17. When working in a group, it is important to me to perform well to make a positive impression on my team members.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

18. I think this was an unfair task.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

19. I don't think I understood the instructions well.

1	2	3	4	5	6	7
Strongly Disagree						Strongly Agree

20. I believe that any person in my position would have behaved the same way I did.

1 2 3 4 5 6 7

Strongly

Disagree

Strongly

Agree

APPENDIX O

Debriefing Form

DEBRIEFING FORM

Thank you for your participation in today's study. Communication scholars are interested in decision-making processes. Often individuals use heuristics, or rules of thumb, as shortcuts to reduce the amount of information that needs to be processed while making a decision. However, there are situations in which these judgmental heuristics have been shown to bias decisional outcomes. One of these decision biases is called entrapment bias. Entrapment bias is the tendency for decision makers to persist with a failing course of action.

So, today's study had nothing to do with luck but it dealt with entrapment bias. Our experiment today examined factors that compel individuals to either pursue or stop performing the task. These factors were: the presence of group members, the fact that group members make a decision regarding monetary reward, and the fact that you were told that you will have to report to the group members. All together, there were four conditions:

1. Individuals worked in groups and report to the groups in-person.
2. Individuals worked in groups and did not report to the group members in-person.
3. Individuals worked alone and report in person to the experimenter.
4. Individuals worked alone and did not have to report to anyone.

To simulate the futility of the action the box had no red balls. So even if you were the luckiest person in the world you could not draw five red balls. Therefore, regardless of your performance, you do not lose any raffle tickets and/or owe any money that you might have lost. If you represented a group, your group members did not lose any raffle tickets and/or they do not owe any money. Once again, I want to stress that this experiment does not have anything to do with luck and your performance is not indicative of how lucky you are as a person.

All the information collected in today's study will be completely confidential, and there will be no way of identifying your responses in the data archive. I am not interested in any one individual's responses; rather, I want to look at the general patterns that emerge when the data are aggregated together.

Please do not discuss any aspects of this study with others who may later participate in it (until after June 1, 2004, when data collection is complete) as this could affect the validity of our research conclusions.

THANK YOU AGAIN FOR YOUR PARTICIPATION

REFERENCES

- Arkes, H. R., & Blumer, C. (1985). The psychology of sunk cost. *Organizational Behavior and Human Decision Processes*, 35, 124–140.
- Arkes, H. R., & Ayton, P. (1999). The sunk cost and concorde effects: Are humans less rational than lower animals? *Psychological Bulletin*, 125(5), 591–600.
- Aronson, E. (1968). Dissonance theory: Progress and problems. In R. Abelson, E. Aronson, W. McGuire, T. Newcomb, M. Rosenberg, & P. Tannenbaum (Eds.), *Theories of cognitive consistency: A sourcebook* (pp. 5–27). Chicago: Rand McNally.
- Aronson, E. (1999). Adventures in experimental social psychology: Roots, branches, and sticky new leaves. In A. Rodriques & R.V. Levine (Eds.), *Reflections on 100 years of experimental social psychology* (pp. 82–113). New York: Basic Books.
- Asch, S. E. (1951). Effects of group pressure upon the modification and distortion of judgments. In H. Guetzkow (Ed.), *Groups, leadership and men* (pp. 177–190). Pittsburgh, PA: Carnegie Press.
- Ashton, R.H. & Kramer, S.S. (1980). Students as surrogates in behavioral accounting research: Some evidence. *Journal of Accounting Research*, 18, 1–15.
- Atkinson, J. W., & Raynor, J. O. (Eds.). (1974). *Motivation and achievement*. Washington, DC: Winston.
- Bartunek, I. M., Benton, A. A., & Keys, C. B. (1975). Third party intervention and the bargaining behavior of group representatives. *Journal of Conflict Resolution*, 19, 532–557.

- Bazerman, M. H. (1984). The relevance of Kahneman and Tversky's concept of framing to organizational behavior. *Journal of Management*, 10, 333–343.
- Bazerman, M. H. (1986). Why negotiations go wrong: Five common mistakes in judgment defeat our efforts to solve personal business and international conflicts. *Psychology Today*, 20(6), 54–58.
- Bazerman, M. H., Schoorman, F. D., & Goodman, P. (1980). *A cognitive evaluation of escalation processes in managerial decision making*. Unpublished manuscript, Boston University.
- Bernard, H. R. (1994). *Research methods in anthropology: Qualitative and quantitative approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Bies, R. J. (1987) The predicament of injustice: The management of moral outrage. In L. L. Cummings & B. M. Staw (Eds.), *Research in organizational behavior* (9th ed, pp. 289–319). Greenwich, CT: JAI Press.
- Boulding, W., Morgan, R., & Staelin, R. (1992). Pulling the plug to stop the new product drain. *Journal of Marketing Research*, 34, 164-176.
- Bowen, M. G. (1987). The escalation phenomenon reconsidered: Decision dilemmas or decision errors? *Academy of Management Review*, 12(1), 52–66.
- Brehm, J. W., & Cohen, A. R. (1962). *Explorations in cognitive dissonance*. New York: Wiley.
- Brockner, J. (1977). The social psychology of entrapment in escalating conflicts. *Dissertation Abstracts International*, 38 (09B). (UMI No. AAT 7732721).
- Brockner, J. (1992). The escalation of commitment to a failing course of action: Toward theoretical progress. *Academy of Management Review*, 17(1), 39–61.

- Brockner, J., & Rubin, J. Z. (1985). *Entrapment in escalating conflicts: A social psychology analysis*. New York: Springer-Verlag.
- Brockner, J., Rubin, J. Z., Fine, J., Hamilton, T., Thomas, B., & Turetsky, B. (1982). Factors affecting entrapment in escalating conflicts: The importance of timing. *Journal of Research in Personality, 16*, 247–266.
- Brockner, J., Rubin, J. Z., & Lang, E. (1981). Face-saving and entrapment. *Journal of Experimental Psychology, 17*, 68–79.
- Brown, B. R. (1968). The effects of need to maintain face on interpersonal bargaining. *Journal of Experimental Psychology, 4*, 107–122.
- Brown, B. R. (1970). Face saving following experimentally induced embarrassment. *Journal of Experimental Psychology, 6*, 255–271.
- Brown, P., & Levinson, S. C. (1987). *Politeness: Some universals in language usage*. Cambridge, UK: Cambridge University Press.
- Burt, R. S. (1986). Comment. In S. Lindenberg, J. S. Coleman, & S. Nowak (Eds.), *Approaches to social theory* (pp. 105–107). New York: Russell Sage.
- Carey, J.W., Morgan, M., & Oxtoby, M. J. (1996). Intercoder agreement in analysis of responses to open-ended interview questions: Examples from tuberculosis research. *Cultural Anthropology Methods, 8*(3), 1–5.
- Carnevale, P. J. D., Pruitt, D. G., & Britton, S. D. (1979). Looking tough: The negotiator under constituent surveillance. *Annual Review of Psychology* (Vol. 43, pp. 531–582). Palo Alto, CA: Annual Reviews.
- Conlon, E. J., & Parks, J. M. (1987). Information requests in the context of escalation. *Journal of Applied Psychology, 72*, 344–350.

- Cohen, J. (1960). A coefficient of agreement for nominal scales. *Educational and Psychological Measurement, 20*, 37–46.
- Cooper, J. (1971). Personal responsibility and dissonance: The role of foreseen consequences. *Journal of Personality and Social Psychology, 39*, 289–302.
- Cupach, W. R., & Carson, C. L. (2002). Characteristics and consequences of interpersonal complaints associated with perceived face threat. *Journal of Social and Personal Relationships, 19*, 443–462.
- Cupach, W. R., & Messman, S. J. (1999). Face predilections and friendship solidarity. *Communication Reports, 12*, 13–19.
- Darke, P. R., & Freedman, J. L. (1997a). The belief in good luck scale. *Journal of Research in Personality, 31*, 486–511.
- Darke, P. R., & Freedman, J. L. (1997b). Lucky events and beliefs in luck: Paradoxical effects on confidence and risk-taking. *Personal and Social Psychology Bulletin, 23*, 378–388.
- Davis, M., & Bobko, P. (1986). Contextual effects of strategy, visibility, and involvement on allocation behavior. *Organizational Behavior and Human Performance, 26*, 172–192.
- Davidson, M. & Friedman, R. A. (1998). When excuses don't work: The persistent injustice effect among black managers. *Administrative Science Quarterly, 43*(1), 154–184.
- Drummond, H. (1994). Escalation in organizational decision making: A case of recruiting an incompetent employee. *Journal of Behavioral Decision Making, 7*, 43–55.

- Eagley, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Fort Worth, TX: Harcourt Brace College Publishers.
- Emirbayer, M., & Goodwin, J. (1994). Network analysis, culture, and the problem of agency. *American Journal of Sociology*, *99*(6), 1411–1454.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Festinger, L., & Carlsmith, J. M. (1959). Cognitive consequences of forced compliance. *Journal of Abnormal and Social Psychology*, *68*, 359–366.
- Fiske, A. P. (2002). Using individualism and collectivism to compare cultures—A critique of the validity and measurement of the constructs: Comment on Oyserman et al. (2002). *Psychological Bulletin*, *128*(1), 78–88.
- Folger, J. P., Hewes, D. E., & Poole, M. S. (1984). Coding social interaction. In B. Dervin & M. J. Voigt (Eds.), *Progress in communication sciences, vol. IV* (pp. 115–159). Norwood, NJ: Ablex Publishing.
- Fox, S., & Hoffman, M. (2002). Escalation behavior as a specific case of goal-directed activity: A persistence paradigm. *Basic and Applied Social Psychology*, *24*(4), 273–285.
- Fox, F. V., & Staw, B. M. (1979). The trapped administrator: Effects of job insecurity and policy resistance upon commitment to a course of action. *Administrative Science Quarterly*, *24*, 449–471.
- Garland, H. (1990). Throwing good money after bad: The effect of sunk costs on the decision to escalate commitment to an ongoing project. *Journal of Applied Psychology*, *75*(6), 728–731.

- Garland, H., & Conlon, D. E. (1998). Too close to quit: The role of project completion in maintaining commitment. *Journal of Applied Psychology, 28*(22), 2025–2048.
- Garland, H., Sandefur, C. A., & Rogers, A. C. (1990). De-escalation of commitment in oil exploration when sunk costs and negative feedback coincide. *Journal of Applied Psychology, 75*, 721-727.
- Gelfand, M. J., & Realo, A. (1999). Individualism-collectivism and accountability in intergroup negotiations. *Journal of Applied Psychology, 84*(5), 721 –736.
- Goffman, E. (1955). On face work. *Psychiatry, 18*, 213–231.
- Goffman, E. (1959). *The presentation of self in everyday life*. New York: Doubleday.
- Goffman, E. (1967). *Interaction ritual: Essays in face-to-face behavior*. Chicago: Aldine.
- Graduate Ethics Research: Cases and Commentaries*. (n.d.) Online Ethics Center for Engineering and Science at CASE Western Reserve University. Retrieved October 10, 2003, from: <http://www.onlineethics.org>
- Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology, 78*, 1360–1380.
- Granovetter, M. S. (1982). The strength of weak ties: A network theory revisited. In Peter V. Marsden & N. Lin (Eds.), *Social structure and network analysis*. Newbury Park, CA: Sage.
- Gruder, C. L. (1971). Relationships with opponent and partner in mixed-motive bargaining. *Journal of Conflict Resolution, 15*, 403–416.
- Gruder, C. L., & Rosen, N. (1971). Effects of intragroup relations on intergroup bargaining. *International Journal of Group Tensions, 1*, 301–317.

- Heath, C. (1995). Escalation and de-escalation of commitment in response to sunk cost: The role of budgeting in mental accounting. *Organizational Behavior and Human Decision Processes*, 62, 38-54.
- Hofstede, G. (1980). *Culture's consequences*. Newbury Park, CA: Sage.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47, 263–291.
- Kanter, J. W., Kohlenberg, R. J., & Loftus, E. F. (2002). Demand characteristics, treatment rationales, and cognitive therapy for depression [Electronic version]. *Prevention & Treatment*, 5, 41. Retrieved from:
<http://www.journals.apa.org/prevention/volume5/pre0050041c.html>.
- Kelman, H. C. (1961). Process of opinion change. *Public Opinion Quarterly*, 25, 57–78.
- Kernan, M. G., & Lord, R. G. (1989). The effects of explicit goals and specific feedback on escalation processes. *Journal of Applied Social Psychology*, 19, 1125 – 1143.
- Klimoski, R. J., & Asch, R.A. (1974). Accountability and negotiator behavior. *Organizational Behavior and Human Performance*, 11, 363–383.
- Kolb, D. M., & Williams, J. (2000). *The shadow negotiation: How women can master the hidden agendas that determine bargaining success*. New York: Simon & Schuster.
- Lamm, H., & Kogan, N. (1971). Risk taking in the context of intergroup negotiation. *Journal of Experimental Social Psychology*, 6, 351–363.
- Lee R. (1977). The intuitive psychologist and his short-comings: Distortions in the attribution process. In L. Berkowitz (Ed.) *Advances in experimental social psychology: Vol. 10* (p. 184). New York: Academic Press.

- Levine, T. R. (2005). Confirmatory factor analysis and scale validation in communication research. *Communication Research Reports*, 22(4), 335-338.
- Levine, T. R., Bensnahan, M. J., Park, H. S., Lapinski, M. K., Wittnenbaum, G. M., Shearman, S. M., et al. (2003). Self-construal scales lack validity. *Human Communication Research*, 29, 210-252.
- Lewin, K. (1935). *A dynamic theory of personality*. New York: McGraw-Hill.
- Lewicki, R. J., Saunders, D. M., & Minton, J. W. (1985). *Negotiation*. Boston: Irwin McGraw-Hill.
- Markus, H., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224-253.
- Marsden, P. V., & Campbell, K. E. (1984). Measuring tie strength. *Social Forces*, 63(2), 482-501.
- Massett, H. (1999). The effects of culture and other-person orientation on personal communication networks and behavioral intentions: A comparison between the United States and Mexico. *Dissertation Abstracts International*. (UMI No. AAT 9957185).
- McCain, B. E. (1986). Continuing investment under conditions of failure: A laboratory study of the limits of escalation. *Journal of Applied Psychology*, 71, 280-284.
- McCallister, L., & Fischer, C. S. (1978). A procedure for surveying personal networks. *Sociological Methods and Research*, 7(2), 131-148.
- Miles, M. B. & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks, CA: Sage.

- Nail, P. R. (1986). Toward an integration of some models and theories of social response. *Psychological Bulletin, 100*, 190–206.
- Neale, M. A. (1984). The effects of negotiation and arbitration cost salience on bargainer behavior: The role of arbitrator and constituency on negotiator judgment. *Organizational Behavior and Human Decision Processes, 34*, 97–111.
- Neale, M. A., & Bazerman, M. H. (1985). Perspective for understanding negotiation. *Journal of Conflict Resolution, 29*, 33–55.
- Ng, J. S. K. (1999, March 28). *The four faces of face: Implications for mediation*. Paper presented at the 2nd Mediation Conference held at the National University of Singapore, Singapore.
- Oetzel, J. G., & Ting-Toomey, S. (2003). Face concerns in interpersonal conflict: A cross-cultural empirical test of the face negotiation theory. *Communication Research, 30*, 599–624.
- Organ, D. W. (1971). Some variable affecting boundary role behavior. *Sociometry, 34*, 524–537.
- Putnam, L. L., & Jones, T. S. (1982). Reciprocity in negotiations: An analysis of bargaining interaction. *Communication Monographs, 49*, 171–191.
- Raiffa, H. (1982). *The art and science of negotiation*. Cambridge: Harvard University Press.
- Ross, J., & Staw, B. M. (1986). Expo 86: An escalation prototype. *Administrative Science Quarterly, 26*, 274–297.

- Rotter, J. B. (1955) The role of the psychological situation in determining the direction of human behavior. In M. R. Tones (Ed.), *The Nebraska symposium on motivation*. Vol. 3 (pp. 245–249). Lincoln, NE: University of Nebraska.
- Rubin, J. Z., & Brockner, J. (1975). Factors affecting entrapment in waiting situations: The Rosencrantz and Guildenstern effect. *Journal of Personality and Social Psychology*, *31*, 1054–1063.
- Rubin, J., & Brown, B. (1975). *The social psychology of bargaining and negotiation*. New York: Academic Press.
- Rubin, J. Z., Kim, S. H., & Peretz, N. M. (1990). Expectancy effects and negotiation. *Journal of Social Issues*, *46*(2), 125-139.
- Scheier, M. F., & Carver, C. S. (1980). Private and public self-attention, resistance to change, and dissonance reduction. *Journal of Personality and Social Psychology*, *39*, 390–405.
- Schelling, T. C. (1960). *The strategy of conflict*. Cambridge, MA: Harvard University Press.
- Schoorman, F. D., Mayer, R. C., Douglas, C. A., & Hetrick, C. T. (1994). Escalation of commitment and the framing effect: An empirical investigation. *Journal of Applied Social Psychology*, *24*(6), 509–528.

- Schrag, B. (n.d.) Association for practical and professional ethics. In B. Schrag (Ed.) *Graduate ethics research: Cases and commentaries*. Bloomington, IN. Prepared under NSF Grant No. SBR 941897. Online Ethics Center for Engineering and Science at CASE Western Reserve. Retrieved October 10, 2003 from: <http://www.onlinethics.org/reseth/appe/index.html>.
- Sears, D. O. (1986). College sophomores in the laboratory: Influences of a narrow data base on social psychology's view of human nature. *Journal of Personality and Social Psychology, 51*, 515–530.
- Sherman, R. C., Buddie, A. M., Dragan, K. L., End, C. M., & Finney, L. J. (1999). Twenty years of PSPB: Trends in content, design, and analysis. *Personality and Social Psychology Bulletin, 25*, 177–187.
- Shubik, M. (1971). The dollar auction game: A paradox in noncooperative behavior and escalation. *Journal of Conflict Resolution, 15*, 113–120.
- Shweder, R. A., & Borne, E. J. (1982). Does the concept of the person vary cross-culturally? In A. J. Marsella, & G. M. White (Eds.) *Cultural conceptions of mental health and therapy* (pp. 97–137). London: Reidel.
- Simonson, I., & Staw, B. M. (1992). De-escalation strategies: A comparison of techniques for reducing commitment to losing courses of action. *Journal of Applied Psychology, 77*(4), 419-426.
- Sitkin, S. B., & Bies, R. J. (1993). Social accounts in conflict situations: Using explanations to manage conflict. *Human Relations, 46*, 349–370.

- Staw, B. M. (1976). Knee-deep in the big muddy: A study of escalating commitment to a chosen course of action. *Organizational Behavior and Human Performance*, 16, 27–44.
- Staw, B. M. (1981). The escalation of commitment to a course of action. *Academy for Management Review*, 6, 577–587.
- Staw, B. M., & Hoang, H. (1995). Sunk costs in the NBA: Why draft order affects playing time and survival in professional basketball. *Administrative Science Quarterly*, 40, 474–493.
- Staw, B. M., & Ross, J. (1978). Commitment to a policy decision: Multitheoretical perspective. *Administrative Science Quarterly*, 23, 40–64.
- Stevens, C. M. (1963). *Strategy and collective bargaining negotiations*. New York: McGraw-Hill.
- Strube, M. J., & Lott, C. L. (1984). Time urgency and the Type A behavior pattern: Implications for time investment and psychological entrapment. *Journal of Research in Personality*, 18, 395–409.
- Teger, A. I. (1980). *Too much invested to quit*. New York: Pergamon.
- Thompson, L., Nadler, J., & Kim, P. H. (1999). Some like it hot: The case for the emotional negotiator. In L. Thompson (Ed.), *LEA's organization and management series, Shared cognition in organizations: The management of knowledge* (pp. 139–161). Mahwah, NJ: Erlbaum.
- Ting-Toomey, S. (1988). Intercultural conflict styles: A face-negotiation theory. In Y. Y. Kim, & W. B. Gudykunst (Eds.), *Theories in intercultural communication* (pp. 213–235). Newbury Park, CA: Sage.

- Tjosvold, D. (1977). Low power person's strategies in bargaining: Negotiability of demand, maintaining face, and race. *International Journal of Group Tensions*, 7, 29–41.
- Tjosvold, D., & Huston, T. L. (1978). Social face and resistance to compromise in bargaining. *Journal of Social Psychology*, 104, 57–68.
- Triandis, H. C. (1988). Collectivism vs. individualism: A reconceptualization of a basic concept in cross-cultural psychology. In G. Verma & C. Bagley (Eds.), *Cross-cultural studies of personality, attitudes, and cognition* (pp. 60-95). New York: St. Martin's Press.
- Valente, T. W. (1995). *Network models of the diffusion of innovations*. Cresskill, NJ: Hampton Press.
- Wall, J. A., & Blum, M. W. (1991). Negotiations. *Journal of Management*, 17(2), 273–303.
- Ways, M. (1979, January 15). The virtues, dangers, and limits of negotiation. *Fortune Magazine*, 87.
- Weiner, B., Frieze, I., Kukla, A., Reed, L., Rest, S., & Rosenbaum, R.M. (1972). Perceiving the causes of success and failure. In E. E. Jones, D. E. Kanouse, H. H. Kelley, R. E. Nisbett, S. Valins, & B. Weiner (Eds.) *Attribution: Perceiving the causes of behavior* (pp. 95–120). New York: General Learning Press.
- Wellman, B. (1983). Network analysis: Some basic principles. In R. Collins (Ed.), *Sociological theory* (pp.155–200). San Francisco: Jossey-Bass.

- White, J. B., Tynan, R., Galinsky, A. D., & Thompson, L. L. (2004). Face threat sensitivity in negotiation: Roadblock to agreement and joint gain. *Organizational Behavior and Human Decision Processes*, *94*, 102–124.
- Whyte, G. (1986). Escalating commitment to a course of action: A reinterpretation. *Academy of Management Review*, *11*, 311–321.
- Wilson, S. R. (1992). Face and facework in negotiation. In L. L. Putnam, & M. E. Roloff (Eds.), *Communication and negotiation* (pp. 176–205). Newbury Park, CA: Sage.
- Wilson, S. R., & Kunkel, A. W. (2000). Identity implications of influence goals. Similarities in perceived face threats and facework across sex and close relationships. *Journal of Language and Social Psychology*, *19*(2), 195–221.
- Wilson, S. R. & Putnam, L. L. (1990). Interaction goals in negotiation. In J. A. Anderson (Ed.), *Communication yearbook 13* (pp. 374–406). Newbury, CA: Sage.
- Wohl, M. J. A., & Enzle, M. E. (2002a). The deployment of personal luck: Sympathetic magic and illusory control in games of pure chance. *Personality and Social Psychology Bulletin*, *28*(10), 1388–1397.
- Wohl, M. J. A., & Enzle, M. E. (2002b). The effects of near wins and near losses on self-perceived personal luck and subsequent gambling behavior. *Journal of Experimental Social Psychology*, *39*, 184–191.
- Zimbardo, P. G., Weisenberg, M., Firestone, I., & Levy, B. (1965). Communicator effectiveness in producing public conformity and private attitude change. *Journal of Personality*, *33*, 233–255.