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The power of identity in important leadership decisions

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THE POWER OF IDENTITY IN IMPORTANT LEADERSHIP DECISIONS

by

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Dedicated to Frank N. and Judith C. Kelley -thank you for your help and faith

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ABSTRACT

Why might someone avoid information that could be useful for making an important decision? Useful information can indicate that some options are better than others for achieving an important goal or averting disaster. A theory is developed here which proposes that decisions feel more important because the consequences of the decisions are more threatening the self-concept. Useful information threatens to reduce a decision maker's decision options, thus constraining their opportunities to act quickly, reduce uncertainty and make the decision in a way that is self-verifying. This occurs while a decision maker is strongly motivated to reduce the uncertainty and the threat to the self-concept generated by the decision making situation. As a result, people become less likely to access useful information when making more important decisions. This is more likely to occur when the decisions includes a substantial threat to more salient identities and core aspects of the decision maker's self-concept.

First a study is conducted to develop a measure of the relative strength of a respondent's leadership identity. Then, hypotheses derived from the theory are tested in two experiments. The hypotheses predict that participants making more important decisions will (1) experience stronger feelings, (2) value self-verifying options more and feel more certain after making a decision, (3) prefer fewer options in a subsequent decision task after making more, as opposed to less important decisions, (4) make more important decision more quickly, (5) access less useful information when making more important decisions , (6) feel more certain after avoiding useful information that could indicate an identity validating solution is inferior and less certain if accessing that information, (7) report that decisions associated with stronger feelings are more important, and (8) prefer fewer choices to pick from in a subsequent decision when having made a prior decision with less useful information.

The hypotheses are tested in two incrementally differing experimental in which participants make organizational leadership decisions after completing the instrument developed to test the strength of their leadership identity. Contrasting pairs of conditions vary theoretically

important elements to make the decisions feel more or less important. Both pairs vary the importance of the decision situation by changing the definition of the situation to increase or decrease the consequences for the participant's leadership identity. The second study similarly varies the decision's importance and adds the opportunity to access various types of useful information prior to making each decision.

Findings indicate that decisions feel more important when the outcome includes a credible threat to the maintenance of a highly salient identity. Participant making more important decisions in experiment A felt more certain they were right after making their decisions. They preferred fewer options in a subsequent decision situation which indicates they felt more powerful. In Experiment B Participants were less likely to access useful information when making more important decisions. Participants who did access useful information prior to making a more important decision preferred more options in a subsequent task. This indicates they felt less powerful after making more important decisions with more information. These findings have implications for research on decision making, identity theory, leadership in organizations, and research on emotions, and the role of perceptual control in the resiliency of social structure.

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CHAPTER 1. INTRODUCTION

When a leader and avoids useful information when making an important decision the consequences can affect many people. Brigadier General Matthew Broderick was the director of the Homeland Security Operations Center in Washington D.C., a clearing house of information for the Federal Emergency Management Agency. The agency is tasked with coordination of twenty-two federal agencies of the Executive Branch involved in emergency response to possible disasters and security issues. Monday, August 29th 2005, during Hurricane Katrina, General Broderick received several reports on the conditions in New Orleans. These included seventeen reports of major flooding, one report from the Army Corp of Engineers that there was no evidence yet of breaching, and a TV news report showing Bourbon Street crowded with revelers claiming they had "dodged a bullet" (Campbell, Whitehead, and Finkelstein 2009:6). General Broderick reported to the White House that the levees were holding and went home for the evening. At 8:13 the next morning, General Broderick read the overnight reports of multiple levee breaches, informing him that most of New Orleans was under water. Broderick sent an email to the White House suggesting that the report might be an exaggeration, and that reports of levee breaches were being assessed. Not until Tuesday morning did General Broderick send word to the White House that levees had been breached.

To make the decision to leave for the evening in the midst of one of the nation's greatest disasters, General Broderick recounted that he used information from his own history. In his experience, Broderick claimed that first reports in the face of crisis situations are overblown. Rather than seeking additional information after conflicting reports, General Broderick decided that the levees were holding and reported this erroneously to the White House. The theory

presented will explain why people such as General Broderick may avoid useful information, rather than seek it, when making important decisions.

This theory proposes that the strength of feelings that indicate the importance of a decision can lead people to avoid information which could help them make a better decision. More important decisions feel more important because they are threatening to our self-concept. They leave us uncomfortable and motivated to quickly make a decision and feel normal. For example, General Broderick's need to appear decisive and a leader may have led him to feel he knew enough to claim the levees would hold. By his account he used some information he had and insights from his experience rather than staying and seeking information confirming the situation on the ground in New Orleans. Decisions are made using both thoughts and feelings. The more important a decision, the more intense the feelings evoked. Intense feelings push decision makers to resolve those feelings by taking a decision quickly rather than seeking out information useful for making the best decision.

The theory developed below, using evidence from social psychological, economic, and neurobiological research, explains why a decision maker would be more likely to avoid useful information when making a more important decision. Several tests of five hypotheses derived from the theory are proposed in a six-condition experiment to learn if 1) decisions feel more important when they are threatening to the participant's self-concept or when they are similarly threatening to another's self-concept, 2) participants use more or less useful information to make more important decisions and 3) participants have more or less power by having more opportunity to avoid useful information while making important decisions.

Study 1 develops a measure of leadership identity strength to gauge the likely threat to participants' self-concepts in Study 2, Experiments A and B. Study 2 contains two experiments

that vary the importance of a set of six decisions across two conditions. In Experiment A, participants make the decisions without having to consider additional useful information. Participants making more important decisions are predicted to be more certain, experience and report stronger feelings, and prefer fewer choices in a subsequent task as a result of having chosen from among more valuable options than participants making less important decisions. In Experiment B, participants are faced with having access to information that will help them to make a better decision in each problem. This experiment investigates the effects of condition and identity on information avoidance, and the effect of exposure to information on participant feelings, certainty, and preference for more or fewer choices in a subsequent decision task. Taken together, these studies show that participants feel more strongly, express greater certainty, and likely gain greater feelings of power from making more as opposed to less important decisions. Information use acts against these feelings, with those participants viewing information preferring more options in a subsequent task, a measure predicted to increase with a participant's lack of powerful feelings in a prior decision.

Together, this theory and research suggest that people making more important decisions, particularly those individuals whose own identities are threatened by the decisions, may avoid information that could help them achieve the instrumental goals they hold, or those goals held by a group or organization.

CHAPTER 2. THEORETICAL BACKGROUND

Introduction

The recognition that people sometimes avoid useful information when making decisions is not new. Researchers from psychology have examined the phenomena of *selective exposur*e and *confirmation bias* since Festinger's published his work "A Theory on Cognitive Dissonance" in 1957. Sears and Freedman (1967) explain that the strongest support for selective exposure and confirmation bias has been research indicating that people prefer communications that agree with their pre-existing opinions. Confirmation bias is analogously referred to as unintentional case building, which involves seeking support for one side of an argument without being aware of it (Nickerson 1998), In the psychology literature, confirmation bias is defined as the tendency to seek or interpret evidence in a way that is supportive of existing beliefs. This phenomenon has been noted at least since Sir Francis Bacon (1620). Findings over time examining these and similar phenomena are robust, but results supporting a dissonance-based explanation have been mixed (Sears and Freedman 1967). Research in economics by Tversky and Kahneman (1974) explained that people making non-rational decisions are biased against loss and anchored by first impressions. Their findings have been robust and from them a growing number of decision biases have since have been discovered. These findings are pervasive in both popular and scholarly literature on economics, decision making, and psychology.

Despite the understanding that people do not generally operate with a rational calculus in everyday thinking and decision making, no general theory has yet adequately explained when people are more and less likely to use or avoid useful information when making important, non-trivial, decisions. Here a theory is proposed that builds on sociological and social psychological theory and combines with research across disciplines to explain decisions as a social process with overarching goals of self-verification that operates similarly to those in interactions. Self-verification dive to be recognized by others in the same ways that one recognizes and perceives of themselves. People are motivated to behave so that others with perceive them in the same

ways they perceive themselves and occurs regardless of whether the related self-views are negative or positive (Swann, Stein-Seroussi and Brian 1992). The self-verification process can change feelings about decision options which obscure the connections between decision outcomes and instrumental goals. When this happens, information useful for making a better decision can become an obstacle to making the decision in a way that reduces the feelings of uncertainty and allows the decision maker to feel better by making a choice. In this way the self-verification process can lead people making important decisions to avoid useful information when it might disconfirm their self-concept and seek more information when it might help them gain a socially-valued identity.

In the 1990's, neuropsychological researchers began providing insight into how biological processes effect decisions which are made using a combination of feelings and reasoning (Damasio 1994). Although others have proposed models that explain decisions as either more emotional or more cognitive (Petty, Cacioppo, and Schumann 1983) advancements in neuropsychology have increased the precision of our understanding of how cognitions and emotions can change decisions and thinking. More recent research in psychology disputes early dissonance explanations for biased information seeking (Windschitl et al. 2013; Smith and Sherer, Windschitl, and Smith 2013). Webb, Chang, and Benn (2013) proposed that people have a tendency to "bury their head in the sand" to intentionally reject information that could help them monitor their goals because of motivated reasoning. This recent research indicates what is motivating attention to information is the desire to be right (Kunda 1990, Windschitl et al 2013) and mechanisms that operate to protect the self-concept and enhance the self.

Recent Social Psychological Research

Psychologist have investigated the biased search for information and noted, at least since 1924 that "the more urgent the impulse, or the closer it comes to the mainance of our own selves, the more difficult it becomes to be rational and intelligent (Thurstone 1924, p. 101). A research program, on biased information seeking by Windschitl and colleagues (2013), challenges

previous assumptions about the role of desirability bias and cognitive dissonance explanations in the traditional selective exposure paradigm. Their finds suggest a more nuanced explanation of the mechanisms driving information avoidance in decision making is needed. This research indicates that once an arbitrary preference is formed, “the hope to be right” (Scherer et al. 2013) biases information searches, suggesting that self-verification may play a role in how information is sought in most decisions.

Management Power and Perception

Recent research in management and marketing has also demonstrated the biasing effects that feelings of power have on how leaders perceive and use information (Weick and Guinote 2008). Additional studies on perception and feelings of power indicate that feeling powerless can lead people to generate illusionary connections and patterns to increase their sense of control in the situation (Whitson and Galinsky 2008).

Galinsky and colleagues (2006) examined the effects of being primed to feel more or less powerful on people’s likelihood to generate innovative ideas, resist the influence of salient examples, express attitudes that conformed less to others opinions, be more affected by their own social value orientation than the reputations of others, and perceive themselves as having greater choice to make statements that counter existing attitudes. This research indicates that feeling more powerful while making decisions may insulate decision makers from influence and suggests that decision makers will be more likely to avoid information when making decision that feel more important to them.

Research from marketing (Fitzsimons and Lehmann 2004) indicates that unsolicited advice from experts that contradicts existing attitudes can lead to a backlash state, increasing the strength of pre-existing attitudes and leading agents to act in direct contrast to the advice. This suggests that some useful information for making decisions may feel like having power used and generates resistance and resentment.

Studies by Galinsky, Gruenfeld and Magee (2003) investigated if feeling more powerful incited people to be more likely to act, in both related and unrelated contexts, regardless of whether the action was pro-social or anti-social. Feeling more powerful led people to be more or less likely to act across varied circumstances. First, they tested if being in a structurally-advantaged position of power affected a person's likelihood to take action (asking for another card in the card game blackjack). Next, they investigated whether participants primed to feel more powerful were more likely to act by moving a fan which was intended as an annoying stimulus. Finally, they tested if being primed to feel more powerful led participants to take action in a social dilemma regardless of whether the action would have pro- or anti-social consequences. They found that feeling more powerful led people to be more likely to take action. The relationship of salient identities and feelings of power in decision making situations may help explain how decision makers choose to act in respect to elements of the situation that could affect how powerful they feel.

The Social Construction of Power and the Self

Sociologist Max Weber (Gerth and Mills 1946) proposed that behind the intellectual quest of the relatively powerless man lay the idea that "knowledge is somehow power" (p 44). In the translation of Weber's writings on economically determined power and social order, Weber lays out the role of power in constructing and maintaining social order as an extension of socially created perceptions of meaning. For Weber, power—which he defined broadly as "the chance of a person or some number of persons to realize their will in a communal action, even against the resistance of others" (p. 180)—may be valued for its own sake. Here it is proposed that information has the capacity Weber spoke of to define the meanings people attach to themselves and to create the situation.

Symbolic interactionist theories propose that the meanings people hold for themselves and the situation are constructed through the reflexive process and interactions with others (Mead 1934). People's behaviors are governed by their conceptions of who they are in the

situation (Turner and Franks 2013). Their judgment is affected by how they conceive of themselves in situations and their relation to others then and in the future (McCall and Simmons 1960).

Turner's theory of transactional needs conceives of all interactions as forms of exchange and describes a hierarchy of needs in these exchanges; implicitly the relative value of any interaction is dominated by the need for self-verification. This hierarchy of needs is topped by the verification of four basic identities that are present in all interactions. Second, the need for profit in the exchange of resources suggests the need to feel that the receipt of resources in an encounter exceeds investment and cost of the interaction. Third, Turner lists group inclusion (2013). Finally he lists trust, the need for predictability, and then inter-subjectivity, the mutual understanding of meanings in interaction. Taken together these suggest that rationality attached to the exchange value of resources in decision making situations may be superseded by the need for self-verification and assurances of stable current and future social relations. This is evident in the fact that people don't often commit crimes like theft even when there is no chance of penalty, simply because they do not want to define themselves as a thief.

Identity and the Self-Concept

Mead (1934) conceived of the self as a reflexive process between the impulsive "I" and the social meanings attributed to the self as an object, the "me." This process takes the form of the self-concept (Epstein 1973) in self-reflection and self-consideration, or the "knower" (James 1890). Generally the self-concept is understood as how one thinks of or perceives themselves, the collections of feelings, beliefs, and attitudes attributed to the self.

Symbolic interactionist theories of identity explain the formation of the self-concept as a social process. This process involves role taking and role making in the formation of role-related identities that provides a key link between the individual and macro-structures (Turner 2001:223). All human social behavior is organized by symbolic designations of the aspects understood as belonging to the physical and social environment we exist within. This assumes

relationships are positional, based on social definitions and distinctions of power and status (Kemper 2013).

These theories propose that the taking and making of social roles in interactions with others define sets of interrelated identities, role-related relationships with others. These identities, just as the self-concept, are made up of both normative values and meanings attached to those roles as well as individual interpretations of how best to enact them. How people come to see themselves in and across situations forms the self-conceptions that drive behavior in interactions (Stryker and Burke 2000). These identities have varying degrees of salience, or likelihood to be activated across situations, suggesting various degrees of value and usefulness for individuals. From this it can be inferred that more salient roles make up larger or more valued aspects of the self-concept contributing to higher order identities (Burke 1991).

Identities are not limited to specific roles but play a larger function in the constitution of the self. As Stryker describes, identities are organized sets of meanings (Stryker 1980). Identities are organized into *salience hierarchies* that correspond to the likelihood an identity will be evoked or enacted across situations. The more salient an identity is, the more likely it is to be enacted in any situation and play a part across situations (Serpe and Stryker 1987). More salient identities play a larger role in the individual's construction of their self-concept.

Symbolic interactionist theories explain that the self, identities, and the self-concept develop in and reflect society. Assuming that how people understand themselves and the world is first determined socially, this theory proposes that people are most affected by the social implications of their decisions and motivated by the need to verify the self (Turner and Stets 2006). To understand why people may be more likely to avoid useful information to make more important decisions, first the theory addresses what makes some decisions feel important, and some more important than others.

Burke's identity theory (Stryker and Burke 2000) complements Turners explanation of human need in interactions. Burke conceives of the self as a type of feedback loop where interactions with others work to confirm or disconfirm conceptions of the self and an individual's

identity within the situation. Conceptions of oneself in an interaction are held internally as interconnected values and self-meanings that form expectations for the self and others in any interaction. This set of self- and other-expectations is the identity standard. It is like a thermostat in that it takes account of inputs from the environment to gauge correct outputs that we use to take account of how others are interacting with us. We act to bring others' definitions of ourselves and our expectations for them in line with these standards. For Burke, this is the primary motivation for behavior.

Sociological theories stress the importance of identity verification in all interactions. In decisions, information from an outside source, such as an expert, may be available while an interaction partner is absent. Books, articles, and internet searchers from this perspective can be thought of as a type of interaction. Research on influence shows that information from absent higher status partners can people present in the situation more than the same information from absent lower status partners. This suggests that the information is treated by people as if it were a proxy interaction partner (Soboroff and Kelley 2011). Participants behaved as if they were considering how they relate socially to the absent person who provided the information.

Identity and Ties to Social Structure

Freese and Burke (1994) address behavior driven by self-verification motives in the pre-symbolic and pre-rational actions of actors. These actions create meanings that tie actors to social structure. This allows for the assumption that social structure is created and maintained by identity processes. They note that systems are organized activities that facilitate resource flows, and that the flows of resources are maintained by interactions in which people's behavior is defined their identity sets. When people get something from interactions that align with expectations defined by their role or identity, they will maintain those interactions. Interactions that fail to support their definitions of the situation and their definitions of themselves are less likely to be maintained. As a result, people are motivated to continue positive, identity

confirming interactions as opposed to interactions which fail to confirm their identities. This process both generates and maintains social structure.

Identity theory is ultimately concerned with social structure and the factors that motivate behavioral choices that people make when alternative lines of action are available (Hunt 2003). Identities are derived from meanings and expectations tied to roles embedded in social structure as well as the meanings and expectations created within roles.

Roles are social relationships involving the self and others. Enacting these roles requires accounting for and managing other peoples' expectations and acting to meet one's own self-expectations within the role. Expectations people hold for themselves within a role, as well as the expectations others hold for them will affect how they choose to behave. Choices are based on a prediction by the person of how courses of action are likely to play out through interaction to either meet, or fail to meet, their own or others' expectations.

Identities help define courses of action and influence the likelihood of possible behaviors as they relate to the actor's understanding of the personal and social consequences of any behavior (Owens and Serpe 2003; Lawler 2003). From a philosophical perspective people have free will to choose how to act. However, a person's will is ultimately limited by the motivation to act in line with their self-concept, narrowing the likelihood of various actions. Social structure limits the opportunity to define the ways roles and identities are enacted and the opportunity to take on specific roles and identities. This in turn changes perceptions of the situation and directs possible behaviors.

More direct evidence of identity creating and reinforcing social structure is found by Kohn and Schooler (1973). In this study, men's occupations, roles as defined by role and identity theory (Turner 1978; Stryker and Burke 2000), affect their psychological functioning. The authors proposed that work conditions either "facilitated or inhibited the exercise of occupational self-direction" and that "occupational self-direction is of critical importance for understanding the impact of social class on (these) men's values and orientation" (Kohn and Schooler 1973). Work conditions that defined the occupational situation of the men studied determined the values

the men held. Values form higher order identities according to Burke (2003), who proposes that higher-level identity standards direct behavior. Work conditions that included the opportunity for self-direction had the strongest impact on these men's values and the "substantive complexity of the job had substantially greater impact on the psychological functioning (of these men) than the reverse" (Kohn and Schooler 1973). This suggests that role-based identities affect the cognitive processing of information, the perception of the situation, and the validity of various options as possible courses of action.

Recent Studies Demonstrating the Avoidance of Useful Information for Making Important Decisions

Research on decision making is conducted in and across disciplines. Understanding how decisions are made holds implications in all spheres of human interaction from the interpersonal to global. Of key interest to researchers over recent decades is how people come to make sub-optimal decisions. In the age of information a key variable of interest affecting the quality of decisions is the quality and quantity of information used for making a decisions. Important decisions have substantial consequences for people. The decisions we make and the choices we prefer determine the course or our lives and can affect others in significant ways. To understand how people use information to make important decisions it seems important to understand how information interacts with the goals of decision makers in the situation. Some recent research in sociology suggests that people seek less useful information when making more important decisions.

Consider decisions of law in the courtroom. The legal system holds as its goal justice, the honest and accurate assessment of information in order to make decisions. Court decisions commonly have a substantial difference in possible consequences for people in respect to the court's decision. In a recent experiment investigating the likelihood of prosecutorial misconduct in more and less severe cases, researcher's proposed that prosecutors would be more likely to withhold exculpatory evidence when the crime being prosecuted was more severe, murder, as

opposed to assault (Lucas, Graif, and Lovaglia 2006). The researchers proposed that in more severe cases the participants playing the role of prosecutor would (1) be more likely to believe in the defendant's guilt (2) rate getting a conviction as more personally important (3) be more likely to withhold evidence that could be used by the defense to exonerate the accused. All other variables, except the amount and type of information turned over to the defense, were controlled experimentally and by random assignment to condition. They found support for all three hypotheses. This suggests that the more personally important the decision in the murder case as opposed to the assault case, the less information the participants decided should be used by anyone to make the decision. It was important to assure a specific outcome, conviction, when the decision was more important and the participant's personal feelings were involved.

An ethnographic study by Lareau and Weininger (2013) involved interviews with 90 native-born parents living in the northeastern United States to determine how parents with young children decide where to live. A home purchase is likely to be the largest personal expenditure of a lifetime. Parents claimed this decision, what neighborhood to buy a home, was driven by the quality of local the school system. The researchers were primarily interested in why people choose to live in the suburbs as opposed to the city. They found that networks, class, and race, hence identity, guided parents to different locations. Decisions were made with limited knowledge about school districts other than that provided by their friends and their social network. They drew on informal networks and very rapidly settled on a district (Lareau and Weininger 2013). When asked about the lack of actual data, other than word of mouth one participant, a PhD, responded "I'm a scientist, I know how to check things out, and the fact is I really didn't do it." Citing a 2012 survey by Phi Delta Kappa the authors noted that nationally when asked to rate schools only 19 percent of parents rated any schools with an A or B quality while when asked to rate their oldest child's school, 77 percent rated that school A or B. Walker and Lynn 2013 found that identity becomes more salient as role based others become more tightly woven into an individual's social fabric. Taken together these studies suggest that the choice of where to live was, controlling for important economic factors, not the quality of the

school system, but was based in identity confirmation. Information was that was used was drawn from a dense identity based network. Useful information, data on graduation rates, college attended rates, and per capita expenditures that could help parents make decisions based on their instrumental goal of school quality were largely ignored or avoided.

Neuropsychology of Decisions and Economics and Decision Making

Traditional economic theories assume rational decision making and would predict that people are more motivated to use helpful information when making more important decisions in order to assure they will choose the best option for achieving their instrumental goal. Decisions are generally defined as situations that introduce uncertainty over mutually exclusive courses of action or decision options (Naqvi, Shiv, and Bechara 2006). Early economists tended to focus on the outcomes for the decisions as their consequence. More recently research on the framing of decisions suggests that outcomes are linked to expectations for achieving instrumental goals in the decision situation. Since this pivotal research in economics on decision making by Kahneman and Tversky (1979), much of the research has sought to explain why the choices people actually make run counter to rational economics theories by defining a variety of situations where this occurs and identifying specific cognitive biases.

Bechara and Damasio (2004) performed decision making experiments with participants who either did or did not have damage to the prefrontal ventral medial cortex. These patients made decisions in a setting that included one set of choices that allowed for some large gains but even larger losses or another set that allowed for smaller gains but even smaller losses. Over time patients without damage to this area of the brain that is associated with decision making would learn to draw from the set of choices with smaller gain and smaller losses and profit. The participants with damage to the brain continued to draw from the deck that eventually generated significant losses. They also noted that patients with damage to this area of the brain could weigh options well while making decisions and when faced with decisions over trivial matters made

comparisons of pro and cons to a crippling extent. The patients with damage to the prefrontal ventral medial cortex also lacked telltale galvanic skin responses that were present in other participants prior to poor decisions. They concluded that decision requires a combination of feelings and emotions and later demonstrated ways in which emotion biased decision making.

Research by Bishop (2007) examined the role of the ventromedial prefrontal cortex for controlling attention to threats and limiting anxiety. This is the same area of the brain Bechara and Damasio (2004) determined was involved in combining feelings and cognitions to form judgments. These findings indicated that greater anxiety was associated with reduced top-down control over threat-related distractors. They explain that cognitive control of task relevant processing is reduced by threatening stimuli, motivating the control and reduction of threat prior to cognitive processing. Further, research by Ochsner and Gross (2005) explained that the control of emotions prior to cognitive processing is a strategy that allows for the direction of attention away from evocative stimuli. Emotion can be suppressed to avoid or examine evidence through higher cognitive functions. This suggests that efforts to avoid uncomfortable information may limit rationality in decisions. Working to overcome uncomfortable feelings can allow threatening information to be processed, but requires substantial and sustained effort.

Conclusion

The theory developed here builds on prior research while including sociological theories of the self, identity, social psychology and positional power to explain how the decision process is one that is fundamentally social.

The research from neuropsychology helps to explain the essential role of feelings and emotion in decision making. Assuming that the self and decision making are fundamentally social and that important decisions involve strong feelings related to the self, useful information for making important decisions can be recognized as a type of interaction between the self and the social world. It seems likely that understanding how people relate to others may help useful for understanding how people relate to useful information for making decisions. Consider that all

that people know arises from social and experiential sources that are understood through the reflexive processes of the self which ascribes to everything a socially-defined meaning. From this it is clear that in order to understand how people perceive information it may be useful to conceive of information similarly to an interaction partner. Beginning with the idea that behavior towards information may be similar to behavior with an interaction partner, and assuming the most valued outcome of interaction is self-verification, it seems reasonable that the value of decision options as a resources would be first determined by how self-verifying the option is and secondly how likely, if the option is best, to assure the decision's instrumental goal.

Starting with definitions drawn from previous decision making theories and sociological theories of identity and power, this theory explains a general mechanism that predicts people will be less likely to access useful information when making more important decisions. First the theory explains the role of feelings in decision making. Next, it proposes how feelings are related to decisions when they indicate that decisions are perceived as important by generating feelings that are primarily self-relevant. Next, it explains how decisions feel more important when the decision's outcome reflects on the decision maker, affecting the value they place on options for making the decision.

CHAPTER 3. INFORMATION AND POWER IN IMPORTANT DECISIONS

Theory Development

The theory developed below explains mechanism for how a decision maker may become more likely to avoid useful information when making an important decision. The theory proposes that important decisions include two concurrent goals. The more evident goal of important decisions is selecting the best decision option for achieving an outcome associated with the decision maker's instrumental goals. The second, and at times countervailing goal, is making the decision in a way that will verify the decision maker's existing self-concept. The motivation to maintain the self-concept is the most valued aspect of all transactions and may generate feelings that can change the value associated with decision options, make decisions feel more important, and motivate decision makers to decide more quickly, while avoiding useful information. This will not only help them make a better decision, but could challenge the opportunity to make the decision in a way that will verify their self-concept and make them feel better quickly.

Neurological Processes and Important Decisions

To explain how a decision maker may avoid useful information to make an important decision, assume that important decisions are made using a combination of feelings and reasoning processes (Zajonc 1980; Naqvi, Shiv and Bechara 2006). Feelings are generated as part of a bio-regulatory process which activates specific bodily systems in response to the contents of perceived stimuli. Feelings signal both conscious and unconscious knowledge about the importance of the stimuli to the decision maker and work to order cognitions for processing (Bechara and Damasio 2004). Reasoning is the cognitive processes of weighing evidence to infer cause and effect, facilitating cost-benefit analysis used in making decisions (Bechara and Damasio 2004).

Using logical reasoning alone, a decision maker would seek out useful information rather than avoid it (Damasio 1994; Bechara and Damasio 2004). Without feelings attached to different pieces of information, however, a decision maker cannot distinguish the important from the

trivial and thus finds it difficult to determine if information is useful for making a sound decision (Damasio 1994; Bechara and Damasio 2004). The strength of feelings attached to a piece of information, a cognition, allows decision makers to effectively apply limited cognitive resources (Simon 1956) by indicating what information is and is not important prior to reasoning processes. It follows that the strength of feelings signals the importance of information to decision makers (Naqvi et al. 2006; Bechara and Damasio 2004).

Proposition 1: The process of making more important decisions will produce stronger feelings in a decision maker with greater somatic consequences (Bechara and Damasio 2004).

Elements of a Decision

"Taking" a decision refers to a behavior; the act of choosing one from among the finite set of mutual exclusive options. The process of decision "making" includes discerning, then evaluating differences between a set of mutually exclusive options for available courses of action. Decision making is done with the intent of reducing uncertainty by selecting one option through elimination or preference. Assume that when making decisions people intend to choose the option they hope leads to a desired outcome, and that an outcome is desirable as a means of proceeding toward an instrumental goal (Damasio 1994; Bechara and Damasio 2004; Kahneman and Tversky 1979). An instrumental goal in a decision is the objective the decision maker hopes to accomplish through attaining a desirable outcome from the decision. Thus an instrumental goal is a consequence inferred to result, at least in part, from a decision.

Options in decisions lead to distinct outcomes. Outcomes lead to consequences for decision makers. The inferred consequences of any outcome become what decision makers rely on to impute a value to that outcome. Options for decisions are valued by the connection a decision maker infers between the option, a desired outcome, and a decision maker's instrumental goal. This is demonstrated by experiments based in prospect theory (Tversky and Kahneman 1974; Tversky and Kahneman 1981) where decision makers' perceptions of a decision's instrumental goal were changed by the framing of the decision. Decision makers were

given two options for a health program in response to a deadly virus in two versions. Outcomes were mathematically identical for both yet differently worded. Decision makers preferred different options for health programs in the different versions depending on whether options characterized their decisions as lifesaving as opposed to life ending. This suggests that preferences are based in how representative the decision maker feels the option is of how they perceived themselves, as life savers and not as life takers. These experiments indicated that an instrumental goal, saving lives, rather than the decision's outcomes, determined the value of options to decision makers. Kahneman and Tversky (1979) explained patterns of sub-optimal choices in risky situations as the tendency of decision makers to err on the side of avoiding loss (1979).

Different options in a decision making situation produce varied outcomes. An outcome may or may not help a decision maker progress toward an instrumental goal. Because of this, decision making requires the cognitive processing of information to reduce uncertainty over which option, from a set of options, is the best for proceeding toward the decision maker's instrumental goal. Decisions where the comparative value of options and their respective outcomes for proceeding toward an instrumental goal are more obscured by additional information, and generate greater uncertainty. Recent research in psychology (Bar-Anan, Wilson and Gilbert 2009) demonstrates that uncertainty intensifies affective reactions. Uncertainty is defined in line with Knight's (1921) classic distinction in economics between the ambiguity involved in uncertainty and the more defined probabilities involved in risk. Here uncertainty is the ambiguity resulting from a lack of information about the relationship between a decision maker's options and the instrumental goal.

Proposition 2: Greater uncertainty over an important decision intensifies the feelings evoked when making the decision.

The Importance of Maintaining the Self-Concept through Decisions

Assume that more substantial differences between better or worse consequences for a decision maker produce stronger threatening feelings prior to taking the decision. Neuropsychological research on feelings indicates that self and other-related feelings occur in different parts of the brain (Kelley et al. 2002). This and similar research suggests that self-related feelings likely occur faster and are more easily accessed than feelings about others because of where and how self-related feelings occur (Kelley et al. 2002).

Swann and colleagues (1992, 2002) explain why people persist in humiliating behaviors and move from one desperate and hurtful relationships to the next describing "the incredible magnetic power" of the self-verification process and an overwhelming need for psychological coherence. The Self-verification process assumes that the maintenance and confirmation of existing and stable self-views is a crucial source of coherence and is essential to defining and organizing experience, guiding social action and predicting future events (Swann, Rentfrow and Guinn 2002). According to the self-verification process a negative outcome in a decision would be an outcome fails to verify a decision makers self-view regardless of how that outcome is generally viewed, negatively or positively.

When decisions have more substantial consequences for one's self, decision makers focus more on negative outcomes producing more threatening feelings and so feel the decision is more important than decisions with similar consequences for others (Polman 2010: Burke 1991). Feeling threatened is uncomfortable and can motivate people to act quickly to reduce the discomfort caused by threatening feelings in order to return them to a state of emotional equilibrium (Ochsner and Gross 2004; Burke 1997; Graig 2003; Northoff et al. 2006).

Burke (1991) and others have shown that this self-preservation motive extends to the preservation of the self-concept (Hart et al. 2009). The self-concept is made up of an individual's self-perceptions including the sum total of the person's thoughts, beliefs, attitudes, and feelings about themselves (Rosenberg 1979, Epstein 1973, Gecas 1982). It is reasonable to assume that

defining oneself requires interpreting the meanings people apply to themselves in and across situations (Stryker 1980; Stryker and Serpe 1994). People are more likely to define themselves using behaviors they enact more often and the meanings made salient by the immediate situation (James 1890; Lewin 1936; Stryker 1980).

Identity Control Theory (Burke 1997; Stryker and Burke 2000) explains that peoples' self-definitions are maintained using a hierarchy of nested identity control systems which process information from the environment about the person. These control systems develop through a person's experience. Information from the environment is compared against information from internal identity standards, definitions of the self that guide behavior across situations. Identity Control Theory proposes that people act to maintain their identity standards by modifying their behavior when information from the environment is not aligned with their identity standards (Burke 1991; 1997). In a person's hierarchy of control systems, higher order control systems, those attached to identities enacted more often, govern lower order control systems. The maintenance of higher order identity standards for higher order control systems is essential for informing a person's self-conception and behavior across situations. Thus maintaining these higher order identity standards feels more important and reduces uncertainty across situations. Identity verification is noted by Turner (2005:165) as the most important in the hierarchy of human needs. He prioritizes the verification of the core self, the feelings that the self is stable across all situations, above other needs any interaction.

Proposition 3: The more important the perceived consequence of a decision to a decision maker's self-concept, the more motivated the decision maker will be to reduce the threatening feelings quickly.

Proposition 4: The greater the uncertainty that arises over the maintenance of higher order identity standards informing the self-concept, the more important a decision will feel to the decision maker.

Proposition 5: The more important a decision feels, the more motivated a person will be to behave to quickly reduce uncertainty over threats to the self-concept.

The Dual Objectives of Important Decisions

From the definition of a decision and the above propositions, it follows that people making important decisions have two objectives: 1) to choose an option that is best for proceeding toward an instrumental goal, and 2) to quickly reduce threatening feelings to feel better about themselves. Useful information is helpful for choosing the best option for achieving an instrumental goal, but may not be helpful for reducing the uncertainty caused by threats to the maintenance of the self-concept. Useful information is information which indicates that some options are better than others for proceeding towards a decision maker's instrumental goal. Useful information does not necessarily preserve options that would maintain the decision maker's self-concept. It is reasonable to assume that decision makers generally prefer having more options over fewer when differences are perceived as non-trivial (Deci and Ryan 1985; Iyengar and Lepper 2000).

The Value of Decisions Options and Information's Power

When a decision maker relies on a decision outcome to maintain the self-concept, the options will be more valued as resources that provide more opportunities to maintain the self-concept. The value of options as resources likely increases as the threat to the maintenance of the self-concept increases. However, useful information could constrain the decision maker's opportunity to choose an option that is both aligned with their self-concept and best to proceed toward their instrumental goal. From this we can infer that options for making important decisions are valued resources for decision makers. If useful information indicates that some options are better than others, useful information constrains a decision maker's access to valued resources; namely, more decision options. This suggests that information operates as power over the decision maker making an important decision.

Drawing on Emerson (1962) and Weber (1946), power is the capacity to realize one's will despite others' resistance. Information indicating that options unaligned with the maintenance of the decision maker's self-concept are better for achieving the decision maker's

instrumental goal can push decision makers to act against their own will to maintain their own self-concepts. Research on power demonstrates that the potential to exercise power over another is equal to the capacity to (1) exclude that person from a valued resource, (2) their level of dependence on that resource, (3) and the availability of alternative sources for the resource (Emerson 1962; Cook, Emerson, Gillmore and Yamagishi 1983; Sell et al. 2004; Willer, Lovaglia, and Markovsky 1997).

People depend on decision options for opportunities to maintain higher order identity standards (Burke 1997). People use identity standards to compare input perceived from social situations to definitions of who they are and what it means to be themselves in that situation. The higher the order of the identity standard a person fails to maintain, the greater the magnitude of uncertainty the person would experience over who they are in any situation. Failure to maintain a higher order identity standard leaves people unable to define themselves in future situations. If people do not know how they are identified themselves in relation to others, they won't know what meanings to apply with respect to themselves and will experience greater uncertainty about the value of their instrumental goal.

Maintaining higher order identity standards allows people to decrease uncertainty over how they are perceived and how best to behave across situations to achieve goals. By reducing peoples' power to maintain their self-concepts, useful information increases uncertainty regarding the value of achieving their instrumental goals. Applying the concept of power to people making important decisions, useful information constrains peoples' acceptable options for taking the decision and so reduces their power to maintain their self-concepts.

Proposition 6: If information is useful for making an important decision then that information has the power to constrain the decision makers' acceptable options for maintaining their own self-concept while making the decision.

Information and the Power to Verify the Self-Concept

Useful information has the power to constrain a decision makers' acceptable options and thus to constrain their capacity to maintain their self-concepts. This would occur while a decision

maker is strongly motivated to reduce threatening feelings by taking the decision. Power use creates negative emotions and resistance (Willer, Lovaglia and Markovsky 1997). Losing power to control opportunities to maintain the self-concept while making an important decision will increase feelings of uncertainty and so amplify already strong threatening feelings (Bar-Anan, Wilson, and Gilbert 2009). In turn, these amplified feelings generate greater resistance to useful information. This suggests that if information threatens to limit decision makers' acceptable options to maintain their own self-concepts, then useful information feels threatening. Recall that decision makers will be more motivated to reduce strong feelings when they feel more threatened. If the opportunity to access useful information is threatening, then decision makers will avoid the information and be pushed to take the decision more quickly.

Proposition 7: The more important the decision, the more likely a decision maker is to avoid useful information.

Information's Power over the Self-Concept

If decision makers are motivated to maintain their self-concept, they will be motivated to avoid the power of useful information when their self-concept feels threatened. For decision makers driven to reduce uncomfortable feelings, the power of useful information appears to represent a threat to their capacity to bolster their confidence in their self-concept. Useful information decreases their power to reduce the threat and so generates negative emotions and resistance to the power of useful information when making important decisions.

Additionally, stronger feelings increase the demands on a decision maker's limited cognitive resources, and make reasoning more difficult. The more important a decision is for a decision maker, the more motivated the decision maker will be to quickly reduce uncertainty (Bar-Anan et al. 2009) and decrease threats to the self-concept (Burke 1991, Burke 1997). By avoiding power that generates more negative feelings (Willer et al. 1997) the decision maker will free up cognitive resources for subsequent reasoning (Ochsner and Gross 2005) by resisting useful information.

Paradoxically, this suggests that decision makers are likely to feel more threatened by useful information when making more important decisions than when making less important decisions. If useful information decreases decision makers' capacity to maintain their own self-concept, then people who can avoid useful information while making an important decision have more power to maintain their self-concepts. Conversely, decision makers unable to avoid useful information have less power to maintain their self-concepts.

Proposition 8: People who are unable to avoid useful information when faced with an important decision have less power over the decision than people who can avoid the information.

Discussion

The theory developed above explains that people are more likely to avoid useful information when making more important decisions. Useful information has the power to constrain decision makers' acceptable options for making the best decision while decreasing uncertainty over the maintenance of their own self-concepts. This is because useful information would indicate that some options are better than others for achieving the decision maker's instrumental goal.

The more important a decision feels, the more motivated a decision maker will be to reduce uncertainty over the maintenance of the self-concept. Thus decision makers will be more motivated to avoid acting in ways that increase uncertainty over the maintenance of the self-concept. Therefore, the more important the decision is to a decision maker, the more likely the decision maker is to avoid useful information. Decision makers are therefore more likely to depend on themselves to inform their choices when making more important decisions because it affords them the best opportunity to act quickly to reduce threatening feelings.

General Hypotheses

From this theory the following eight hypotheses were developed and tested in two experiments. Each experiment has two conditions. In Condition 1, more important decisions, participants make six organizational leadership decisions while under a defined threat to the maintenance of their leadership identity. In Condition 2 participants make the same set of six decisions without this threat to their leadership identity. The threat to leadership identity was generated by defining the decision situation as a leadership test in Condition 1 and as an effort to improve the quality of course questions written by graduate students in Condition 2. Both Experiments A and B in Study 2 include the measure of leadership identity developed in Study 1.

Experiment A tests three hypotheses. The first hypothesis predicts differences between conditions in strength of emotions participants reported after making the six decision task, with participants making more important decisions predicted to report stronger emotions. The second hypothesis predicts that participants making more important decisions will report greater certainty about the choices they make than participants making less important decisions. The third hypothesis predicts that participants making more important decisions will prefer to have fewer choices in a product selection immediately after making more important decisions. Justifications for these hypotheses are provided below.

Hypotheses for Study 2, Experiment A

> Hypothesis 1: Participants making more important decisions will report stronger feelings after making the decisions than participants making less important decisions.

Hypothesis 1 follows from Propositions 1 and 4 because feelings are experienced as part of a bio-regulatory process resulting from a response to stimuli. All cognitive operations depend on support processes such as attention, working memory, and emotion. Some processes are conscious, overtly cognitive, and some are not (Bechara and Damasio 2000). Feelings are first processed neutrally in conjunction with the body to identify feelings and attribute meaning.

Threatening stimuli can be processed more quickly this way and reactions to those stimuli are then faster compared to cognitive processing. It is proposed that when making decisions that pose a substantial threat to the maintenance of the self-concept, decision makers will experience stronger, faster emotions than if decisions were fully processed cognitively. The body distinguishes feelings of threat from feelings of non-threat but does not fully distinguish threatening feelings caused by physical danger from other threatening feelings. The more important an identity is to the maintenance of the decision maker's self-concept, the stronger feelings are likely to be when that identity is threatened. People are thus are predicted to report stronger emotions after making decisions that include a greater threat to their self-concept. Strong emotions are also proposed to affect how much information participants are likely to use when making the same decisions in Experiment B.

> Hypothesis 2: Participants making more important decisions and experiencing stronger feelings will report greater certainty in their decisions than participants making less important decisions.

Hypothesis 2 follows from Propositions 2, 3, and 4. The uncertainty caused by a threat to the maintenance of the self-concept, generated by the decision situation within Condition 1, is predicted to intensify emotions signaling which option must be correct and which options are not. Participants who feel stronger emotions in Condition 1 will therefore feel greater value for decision options that maintain their identities. Decision makers who do not experience an identity threat, but who have an opportunity in Condition 1 to validate the highly-valued identity of leadership, are also likely to attach greater value to options they view as correct. This hypothesis assumes decisions that create greater uncertainty about the maintenance of the self-concept generate greater value for options that maintain or could enhance a person's identities. Options viewed as likely to verify a person's identity are predicted to generate stronger feelings and have greater value than options that are not consistent with the person's self-concept. Some decision options will be worth much less because they do not verify an identity standard. Since those with weaker leadership identity do not have a strong leadership identity standard, options may have more value to meet their unthreatened identity standards and provided opportunity for

possible gains. This is because they have the chance of gaining a valued social identity but face no significant consequences for choosing incorrect options. As the value of options for maintaining the self-concept increases, the strong feelings associated with these options will signal the correctness of the option for the decision maker, particularly if that option is consistent with the identity standard and generates greater positive emotion. This will result in greater certainty that the identity-consistent, highly-valued option is the correct one. Therefore choosing an option that verifies the decision maker's self-concept or increases the possibility of gaining a valued identity will be reflected in a greater change in the degree of certainly experienced by the decision maker. The greater change in certainty after making the decision will be indicated in higher self-reports of the degree of certainty about the decision.

> Hypothesis 3: Participants making more important decisions will prefer fewer choices in a subsequent decision task than participants making less important decisions.

Hypothesis 3 follows from Proposition 5 and 8 and work by Inesi et al. (2011) which demonstrated that people primed to feel less powerful preferred more options for subsequent choices whereas people primed to feel more powerful preferred fewer options. Being able to control the outcome of a decision by choosing an option that verifies the self or assures a gain for the self is proposed to be similar to having the ability to exercise one's own will in the face of resistance. This is the definition of power. The resistance that is overcome here are those decision options that would not verify the decision maker's self-concept and the chance to create value for the self. As a result, decision makers able to verify their-concept or attain a socially valued identity are predicted to feel more powerful, all else being equal.

Hypothesis 3 is based on the propositions that people making less important decisions will be less motivated by any particular option, associate less value with options, and feel less power after making decisions. Following from Proposition 8, the options available to the decision-maker constitute a valued resource. Thus, having more valuable options represents having more power. For Condition 1, the ability to gain or loss as socially-valued and/or highly-salient identity should leave all participants feelings more powerful. Those making more

important decisions that include more valued options are proposed to feel more powerful and so are predicted to desire fewer options in the subsequent task. Participants in Condition 2 making less important decisions with less valued options will be more likely to desire more options in a subsequent decision task and so will report a preference for more options from which to choose.

Hypotheses, Study 2, Experiment B

> Hypothesis 4: Participants making more important decisions will make decisions more quickly than participants making less important decisions.
>
> Hypothesis 4, extended: Participants with higher *Lead ID Scores* in Cond 1 will make decisions more quickly than participants in Cond. 1 with lower *Lead ID Scores*.

Hypotheses 4 follows form propositions 1 through 5 explaining that decisions feel more important when the decision threatens the maintenance of a highly salient identity. Stronger feelings are made more intense by uncertainty and so decision makers are motived to resolve those feelings quickly by making the decision. The stronger the feelings the more motivated a decision maker will be to make the decision quickly.

> Hypothesis 5: Participants in Condition 1, making more important decision will use significantly less information than participants in Condition 2 making less important decisions when controlling for the strength of the effects of leadership identity across conditions.
>
> Hypotheses 5, extended: The higher a participants score on the leadership identity measure the less information they will use in the six decision task across conditions.

Hypothesis 5 and Hypothesis 5, extended, follow from propositions 4 through 7. The more salient a person's leadership identity is in a decision making situation, the more likely they will be to make the decision by selecting an option that is most aligned with their leadership identity standard. Participants with stronger leadership identities will value options more to maintain this standard than participant's who do not see themselves as leaders or who have a weaker leadership identity. When making decisions in Condition 1, where performance of a leadership identity can be indicted by the option selected, participants with stronger leadership identities are going to be more motivated to make the decision in a way that verifies that identity

and their self-concept. Therefore they are also motivated to choose an option that is consistent with their self-concept. Participants with weak leadership identities will be more strongly motivated by the decision's instrumental goal of making the best leadership decision. These participants are predicted to have weaker option preferences and so may be more likely to access useful information that can indicate which option is best for attaining the decision's instrumental goal. If participants with weak leadership identities do well, they gain in a highly socially valued skill. If they underperform, they have little to lose.

When the decision situation includes a threat to a highly salient identity, the decision maker in is motivated by stronger feelings to make the decision by choosing an option quickly that is consistent with their identity standard and verifies their self-concept. Useful information for making a decision indicates some options are better or worse than others for achieving the decision maker's instrumental goals. Because useful information can indicate some options are better than others, it has the power to constrain a decision maker's options when they are most motivated to choose the option they prefer. Information is therefore less valuable for indicating which option is best and more likely, respectively, to constrain the decision maker's options. The more motivated the decision maker is to choose in a way that maintains their self-concept, the less likely they will be to access useful information that could constrain their options and increase the uncertainty they are strongly motivated to reduce. Therefore we can expect the strength of leadership identity to be a strong predictor of the amount of information used to make more important decisions (Condition 1). Leadership identity should not be a significant predictor of how much information is used to make decisions in Condition 2, because there should be little threat to the maintenance of the self-concept by making these decisions.

> Hypothesis 6: Participants making more important decisions will feel more certain after those decisions than participants making less important decisions.
>
> Hypothesis 6 extended: Participants in Condition 1 will report lower certainty after looking at more critical information than participants in Condition 1 who looked at less critical information.

Following from Propositions 1 and 2, decision options that maintain a participant's leadership identity when it is threatened, as in Condition 1, will feel more valuable to the decision maker than when they face no threat to their leadership identity. Although all the decision makers in the study will be motivated to choose an option that is aligned with their self-concept, only decision makers in Condition 1 have the real opportunity to verify or to disconfirm an identity. Thus participants in Condition 1 will attach greater value to options that are in line with their identity standard and less value to options that are not consistent with that standard. When making the decision in a way that confirms a leadership identity standard, participants in Condition 1 reduce greater uncertainty by selecting from among substantially more valuable and less valuable options. If they value their identity more they will be more certain about selecting options that verify that identity. Stronger feelings associated with decision options make decisions important and lead to greater value attributed to options for making the decisions. This difference in the value between options will leave decision makers feeling more certain immediately after making the decision.

Hypothesis 6, extended follows from propositions 5 through 8. If participants making more important decisions were to access useful information indicating that the correct option is one that is not aligned with their identity, they may learn that choosing options they valued as identity-consistent would indicate they were not a good leader. This is predicted to increase uncertainty about themselves and about their decision. The critical information available in this study indicates that the most counter-intuitive and likely least-satisfying option is correct. If participants look at more critical information they are more likely to discover that choosing the option(s) aligned with their identity standard will indicate they are not a good leader, and so disconfirm their identity standard.

> Hypothesis 7: Participants will report stronger feelings when making more important decisions than when making less important decisions.

Hypothesis 7 is a replication of Hypotheses 1 from Study 2, Experiment A and follows from the same logic.

> Hypothesis 8: Participants who look at more critical information (information indicating counter intuitive options were correct) while making decisions will prefer to choose from a larger product assortment than participants who look at less critical information while making decisions.

Hypothesis 8 follows from propositions 5 through 8. These propositions explain that decisions feel more important when there are credible threats to a decision maker's self-concept. Strong feelings are generated by the need to choose an option aligned with their identity standard and achieve the instrumental goal of the decision to score well on the evaluation of leadership identity. Useful information has the capacity to constrain decision options and, as is most often the case with the design of these decisions, indicate that an option which is not aligned with the decision maker's identity standard is the best option for achieving the decision maker's instrumental goal. Information that indicates the counter-intuitive option is correct (referred to in analyses as "critical information") can constrain valued options and so constrain the decision maker's capacity to act according to their own will. In a sense, the critical information represents a disembodied expert. The expert's knowledge can constrain the participant's opportunity to choose an option aligned with their identity standard to give the organization the best chance to reach its instrumental goal. The information creates resistance to the decision maker's will by indicating that their most valued choice will not allow them to both achieve the decision's instrumental goal and verify their leadership identity and their self-concept. Decision makers are thus potentially left in a bind; to choose an option that verifies their self-concept but fails to achieve the decision's instrumental goal, or to choose the best option for the organization and undermine their own self-concept.

The product choice preference measure is the same as in Study 2, Experiment A and is based on work by Inesi et al. (2011). Here it is predicted that participants will indicate a preferences for significantly more choices in Condition 1 after accessing more critical information than participants in Condition 2.

> Hypothesis 8 extended: Participants with higher *Lead ID Scores* will prefer more products after making decisions with the opportunity to access useful information than participants with lower *Lead ID* scores.

When a participant's self-concept is threatened as with participants with stronger leadership identities, the effect of information on choice preferences should be greater. Therefore participants with stronger leadership identities are predicted to prefer more choices than participants with weaker leadership identities in Condition 1.

To assess whether a threat to leadership identity occurs in an experiment, a measure of participant leadership identity strength needs to be developed. Given that leadership is not solely based on either power or status, indicators of these concepts may provide clues as to a person's leadership identity but will not exhaust the self-meanings people attach to themselves as leaders or the meanings they attach to the role. Study 1, outlined in the following chapter, develops a measure of leadership identity strength that will be used to assess how much people associate leadership traits and descriptors to themselves.

CHAPTER 4. DEVELOPMENT OF A LEADERSHIP IDENTITY MEASURE

Introduction

In Study 1 an instrument was developed to measure each respondent's leadership identity prior to their participation in a subsequent study which includes two experiments. The instrument asks respondents to rate thirty terms for how well each term describes them. Ten of the terms included are attributes people use to describe effective leaders and not to describe effective group members. The ten leader descriptive terms create a scale measure, the *Lead ID* scale, which functions as an index of the relative strength of each respondent's leadership identity. The Lead ID scale will be used as a control variable to account for individual differences in self-perceptions of being a leader-like in the analysis of data collected in the two later experiments.

This instrument is designed to produce an index of respondent's leadership identity while not acting to prime changes in feelings or behavior. Feelings and behavior related to feelings of power are important outcome variables in the experiments where the respondent's *Lead ID* score is used as a control measure. Why a measure of leadership identity is used, requirements for the measure, its theoretical grounding, its construction, as well as its reliability and validity as a quantitative indicator of the strength of the respondent's leadership identity are discussed. Additionally the challenges of designing a measure of leadership identity that limits (1) spurious effects of self-enhancement, (2) social desirability biases, (3) priming feelings of power, and (4) prompting respondents to act in line with terms that describe leader characteristics are addressed.

Why Develop a Leadership Identity Measure?

The *Lead ID scale* was created for use as a control variable in Study 2, Experiments A and B. The strength of a leadership identity is expected to vary among participants in Study 2 with two-thirds of participants predicted to produce scores above the mid-range point of responses. Both experiments test for predicted differences in behavior resulting from differences in the strength of feelings that are generated by differences in the level of threat to a participant's

leadership identity. The relative strength of each participant's leadership identity in following experiments will operate as a proxy measure of the level of threat in the treatment condition to each participant's self-concept, the entirety of their beliefs, attitudes, and feelings related to the self (Epstein 1973). The measure will also be used in analyses across and within conditions as a measure of the level of threat likely to the participant's identity. Identity threat, or threat to the self-concept, is proposed as a motivator for behavior in treatment conditions where the performance on leadership ability can be judged. The threat is minimized, although unlikely eliminated, in the control conditions where the perception that the participant can be judged on leadership ability is minimized. The theory that produced the predictions tested in these experiments explains that specific behaviors are caused by feelings generated by threats to the maintenance of the self-concept.

The self is a reflexive process accomplished through conceptions of the self that are derived from meanings attached to a person's various identities. Therefore a threat to a more salient identity is proposed to threaten the self-concept (Burke 1980; Smith-Lovin 2005). An identity is considered more salient when it is more likely to be activated across situations (Stryker 1980). If an identity is more likely to be activated across situations, then the meanings that make up that identity must play a larger role in the make-up of the self-perceptions. Self-perceptions of the self-concept are proposed as a prime motivator of social behavior across situations. A threat to a more salient identity then should produce a greater threat to the maintenance of the self-concept than threats to a less salient identity. Leadership identity was chosen because previous studies have shown that the majority of new college students believe they are good leaders (Alicke and Govorun 2005).

This suggests the identity of leader is likely to be more salient than other identities on average for about two-thirds of college students. This means that effects that are proposed to be generated by threats to the self-concept of participants from this population should occur in about two-thirds of the population sampled and differences in outcome variables related to the threat more likely to be detected within and between conditions with smaller samples.

The population from which Study 1 respondents were recruited is similar to the population of participants for Study 2, Experiments A and B, college men attending the same large Midwestern university. If leadership identities may be important to a majority of the sample, but not all, this identity likely affected how those participants reacted to the leadership scenarios. Therefore, a measure of the participant's leadership identity was needed as a control variable to assess the impact of the manipulation of decision importance between Study 2 experimental conditions.

What an Identity Measure Should Include

Identity theory proposes that identities are classifications if the self which are derived primarily from shared meanings applied to roles as well as individual meanings applied to the self in those roles (Burke 2005). A measure of identity should be theoretically grounded, capture these meanings succinctly, and be quantitative to allow for statistical comparisons with other quantitative measures (Burke 1980).

While identities are derived from internalized meanings people individually attach to roles, these meanings are necessarily social constructs. Identities vary with individual experiences within social structure; however they also remain centered in commonly held core meanings that form generalized expectations attached to any role (Burke 2003).

Identities are also defined relationally in terms of counter-identities (Burke 1980). While people bring individual distinctions to the meanings they attach to roles, these are based on common shared meanings that constitute the role as opposed to the counter-role. These can be recognized by people as sets of personal attributes that describe individuals who play that role and who do in the counter-roles. It is necessary for people to identify themselves in relation to others in order to interact effectively and avoid conflict. Because of this, people form expectations for others in social situations that help them define who they are and how they should behave by quickly determining the nature of the relationship between them and others.

Part of this process is identifying the roles each person holds in the situation while behaving in ways that communicate to others the role they perceive themselves to be enacting.

These meanings are proposed by identity theory (Burke 1990, Stryker and Burke 2000) to be used as internal standards that guide behavior in roles across situations. The meanings attached to specific roles like leadership can be captured in the terms used to describe expectations for what a leader is and is not. Because the role of leader is so highly valued, carrying prestige, opportunity, and expectations for general competence (Ridgeway 2001), the role of "not leader" or "follower" is pejorative, holding negatively valued social connotation. Because of this, and because "follower" is so closely associated with "leader," acquiring a measure of meanings associated with a role counter to leader might prove difficult using the term "follower." Because of this, the counter-role chosen to depict non-leader attributes was "effective group member." An effective group member is a positive role, and is likely a role that is easier to conceptualize and so to measure.

The Lead ID Scale includes sets of terms used as leadership identity descriptors (Lead ID) that include meanings commonly associated with effective leadership but not associated with the counter-role of a group member. The Lead ID Scale was created by paring down lists of terms by using ratings of the terms for describing either effective group members or effective leaders to determine a discrete set of terms that together are only likely to be associated with the role of leader. These terms then can be used to form a discrete, valid, and reliable indicator of the relative strength of each participant's leadership identity. The measure would also indicate how central demonstrating competency in leadership is likely to be to the maintenance of a person's self-concept.

Requirements for the Lead ID Measure in the Following Experiments

The Lead ID scale is designed to (1) produce a quantitative indicator of the strength of each respondent's leadership identity, (2) avoid priming respondents for feelings of power, (3)

avoid self enhancement biases of self-report in a measures of a desirable role, (4) produce a quantitative index of differences between participants self-perceptions of being "leader like," and (5) avoid causing participants to change behaviors in order to act in line with what are generally determined to be leader descriptive terms. To accomplish this it was assumed the best approach would be to develop a covert measure of leadership identity that would ostensibly be presented as a survey of general personal characteristic.

Challenges for Constructing an Accurate Leadership Identity Measure

Taking the design for Study 2 into consideration, the measure of leadership identity employed terms related to a leadership identity, "not" leadership terms (those associated with group members), and terms that are equally likely to be associated with both or neither, leaders or group members. If participants knowingly answer a leadership identity measure, it could make assessing the strength of their leadership identity more difficult. A recognizable or overt leadership identity measure could introduce a self-presentation bias. The positive social connotations of being seen as a leader are likely to draw participants to rate themselves highly on specific attributes, believing these will indicate they are leader-like (Ganster, Hennessey and Luthans 1983), and decreasing the validity of the measure.

The design of this instrument allowed it to be presented to participants in Study 2, Experiment A and Experiment B as a measure of individual personality factors. Participants in Study 2 were presented with this measure prior to experimental procedures, ostensibly as a survey of terms that would allow researchers to control for idiosyncratic differences between participants. The final measure only includes ten terms determined to be distinctly related to leadership, and are couched within a total of thirty terms and short phrases. The instrument is given prior to experimental manipulation because multi-dimensional measures of identity, as opposed to measures of personality (Heatherton and Polivy 1991), may change significantly based on factors within the experimental setting.

The Lead ID scale was also designed to avoid priming participants to feel powerful in Study 2. A recent set of experiments by Weick and Guinote (2008) and Galinsky et al. (2009) demonstrated that being primed to feel more or less powerful can both impact information processing and feelings. The manipulation in Study 2 of the importance of decisions is expected to impact how powerful people feel, and hypotheses predict differences in perceptions and behavior due to these feelings. Study 2, Experiment A tested predictions about how varying the importance of a decision affected how powerful the participants felt. In Experiment B participants had the opportunity to access useful information to make leadership decisions. Hence, priming feelings of power might have introduced a confounding factor affecting how much information was accessed. Hypotheses tested in the Study 2, Experiments A and B make predictions about situations where participants feel more or less powerful as a result of the importance of decisions and how those feelings will affect perceptions of information. Therefore it is important not to prime feelings related to power prior to experimental manipulations in Study 2 experiments.

Instrument Development Overview

The initial assessment collected 302 terms from internet sites depicting effective leaders and group members, and narrowed a list of 302 to 211 terms by having six research assistants rate how like a leader they thought each term was, and having six research assistants rate how like a group member they thought each term was. Terms that averaged a rating below three on both lists were excluded, leaving 211 terms.

The first study split the remaining 211 terms into three sets of either 140 or 141 terms, each containing a variation on two-thirds of the entire set of 211 terms. Each of these sets was made into two questionnaires, one asking respondents to rate how well each term described an effective leader and the other asking respondents to rate the terms for how well they described an effective group member. These six instruments were randomized and distributed to college students in a undergraduate sociology course. In total, the 143 responses allowed for the

construction of ninety-four complete sets of term ratings, forty-seven sets of 211 rating terms for describing effective leaders and forty-seven sets of 211 terms rated for how well they described an effective group member. Each set of 211 terms was treated as a single case for analyses. Independent sample t-tests were used to determine which terms were significantly associated with effective leaders and not effective group members or effective group members and not effective leaders.

The next instrument used fifty-one terms, including fifty pared down from the list of 211 to include terms that were either (1) only significantly associated with effective leaders or (2) only significantly associated with effective group members. Participants rated how well each of the fifty terms, plus an additional phrase “acts like a leader”, described them. Participants then rated how well each of six statements about people behaving like leaders described them.

Ratings from this instrument were used to determine the terms for use in the Lead ID scale and an additional twenty terms to be included in the instrument. These thirty term where included in a computer program that allowed respondents to use a slide bar to rate themselves on a one to seven scale of how well each of the terms described them.

The Lead ID Scale

From the total of thirty terms included in the final instrument, only ten terms are used to form the scale of leadership identity descriptors, the Lead ID scale. These ten terms together assess the strength of attributes that people generally associate with effective leaders but do not associate with non-leaders. These ten terms were determined by findings in an initial assessment of terms and two preliminary studies that, together, indicate these attributes closely tied to general conceptions of effective leadership and are predictive of individual’s perceptions of themselves as leader. The thirty term instrument includes the ten term Lead ID scale as well as (1) ten terms unassociated with effective leaders but generally associated with effective work group members, (2) five terms generally associated with both effective leaders and effective workgroup members and (3) five terms not commonly associated with either effective leaders or

effective work group members. Taken together the Lead ID scale should produce a valid and reliable measure of the strength of a respondent's leadership identity and indicate the importance of this identity in the identity salience hierarchy that makes up the respondents' perceptions of themselves.

Because the Lead ID scale includes attributes that, taken together, are associated only with conceptions of effective leaders, this scale is presented covertly as a measure of personal characteristics and mixed within an additional twenty terms. This disguises the measure while countering priming effects by presenting attributes associated with a leadership identity, attributes associated with a non-leader identity, and attributes that appear unrelated to either identity, and could serve as indicators of a respondent's level of engrailment and perceptions of the situation.

Table 1. Terms Included in the LEAD ID Measure

Effective Leader	Effective Group Member	Neither like Leaders or Group Members	Both Like Leaders and Group Members
Certain	Fanatic	Ambiguous	Plain-Spoken
Busy	Excitable	Skeptical	Competitive
Decisive	Group-Motivated	Inefficient	Serious
Independent	Modest	Indifferent	Restrained
Self-Virtuous	Respectful Cautious	Secretive	Hesitant
Good	Shy		
Mature	Perky		
Unshakable	Spirited		
Assertive	Agreeable		

Methods for Identifying Leader, Group Member, and Neutral Terms

In order to construct a leadership identity scale that includes these ten effective leadership descriptors, yet does not appear to be an obvious self- assessment of leadership attributes, the

final test is constructed by combining three lists of terms. The list will include a mix of various personal attributes with a balance between generally positive and generally negative attributes. Together, these attributes are unlikely to be recognized as a measure of leadership identity.

The thirty terms and phrases included in this instrument (See Appendix A Figure 2) were pared down from an initial list of 302 attributes used to describe the essential qualities of a good leader or effective group member, gleaned from several websites. These websites included U.S. military websites (all branches), leadership training and testing organizations, dictionary definitions and synonyms, terms from the BEM sex role inventory (Bem 1974; Twenge 1997), and websites identified by a Google search which included the terms “effective leader”, “leadership”, or “effective workgroups” and “effective teams”. The initial set of 302 attributes represented terms determined to have face validity pertaining to effective leadership or effective group work. While the initial list is not exhaustive, it is sufficient for use to derive the three brief lists of ten attributes that will (1) generally be indicative of good leaders, (2) associated with good group members but not with good leaders, or (3) are equally likely to be associated with good group members and good leaders.

The initial list of 302 attributes were given to twelve research assistants with instructions to rate each word on a scale from one to seven, (one being very much like, and seven being not at all like), on how well it described either a good leader or an effective group member. Six research assistants completed the ratings on all terms as descriptors of effective leaders and six completed ratings of all terms as descriptors of effective workgroup members. The ratings for both leaders and group members were averaged independently and terms with ratings that averaged three or below for both leaders and group members were set aside. This left a total of two hundred and eleven terms.

Procedure

A questionnaire was written for distribution to undergraduates in lecture courses. In order to reduce likely participant fatigue and limit the impact of ordering effects on ratings, the list of

211 terms was randomized and then broken into three separate lists, each with a distinct two-thirds of the terms with either 141 or 140 terms per lest. One list included the first two-thirds of the terms, another included the last two-thirds, and a final list included the first and last thirds of the original list of 211 terms. Each of the three lists was again randomized and paired with one of two sets of instructions asking participants to rate each of the terms, on a scale from one to seven, on how well each described either a good leader (Condition 1) or group member (Condition 2) (see Appendix B). Additionally, participants were asked to provide basic demographic information.

Participants

One-hundred and forty-three undergraduates provided complete data on questionnaires. These participants were recruited from lecture classes during a break in class activities. Participants ranged in age from 18 to 50, with the mean age of 20.9 years. Women accounted for 49.7% of respondents, while men made up 48.3%. Two participants did not provide gender. Thirty-four participants (23.8%) were freshman, thirty-six participants (25.2%) were sophomores, forty-nine participants (34.3%) were juniors, and twenty (14%) were seniors. One person reported being a graduate student, and one person did not provide year in school.

Analysis of Data from First Instrument

The data from each condition was aggregated. Independent samples t-tests were used to compare mean ratings of the same term across conditions to determine if the term was rated as more like a leader or a group member. When a term had a significantly higher rating for being like a leader than a group member, it was put on a list of potential leadership factors. When a term was rated higher for being like an effective group member it was put on a list of potential effective group member factors. Independent samples t-tests also were used to determine the smallest differences

between ratings of terms as either leader-like or group member-like. Terms with highly similar ratings across conditions were selected for a list of "either more like an effective leader or more like an effective group member.

Results

Independent samples t-tests showed that the following terms were identified as receiving higher ratings when participants were asked to rate their relation to leaders (Condition 1) than when they were asked to rate their relation to group members (Condition 2): *Restrained, Forceful, Uncorrupt, Competitive, Spirited, Physically Fit, Self-Assured, Vigorous, Willful, Decisive, Unshakable, Aggressive, Uses Good Judgment, Certain, Assertive, Hopeful, Dominant,* and *Mature.* Table 1 displays results of t-tests comparing ratings of these terms between conditions. Given the small number of terms that were shown to have significantly different ratings between conditions, and since this instrument was meant to identify terms that were likely to predict dimensions of leadership, one-tailed t-tests with p-values of .10 were used. However, only those terms that had face validity as likely traits associated with leadership or group membership were selected. Additionally terms that had the most similar means on both measures were kept.

Terms that were similarly identified as most significantly associated with group members were: *Serious, Plain Spoken, Reliable, Shy, Humorous, Group Motivated, Indifferent, Flexible, Cautious, Agreeable, Cooperative, Excitable, Accommodating, Fanatic, Dutiful,* and *Modest.* Terms rated most similarly for leaders and group members included: *Virtuous, Independent, Busy, Cold, Inefficient, Unpredictable, Secretive, Skeptical, Cunning, Perky, Hesitant, Ambiguous, Detail-oriented, Peaceful, Mature, Persistent,* and *Respectful.* Added to these were

the lowest rated terms first excluded from the list of 302 terms and a similar number of terms from the list of 211 that had the most similar means to construct a list of fifty terms. These fifty terms were included, in random order, in a third instrument to identify measures that would best predict survey statements indicating dimensions of leadership. Terms associated either leaders or group members, terms associated with both group members and leaders, and terms associated with neither were included in the final instrument to determine whether (1) group member terms were indeed not capable of predicting ratings of dimensions tied to leadership (and so likely represent a “not” self to self-identified leaders), (2) whether terms related to both group membership and leadership might predict leadership dimensions measured with six statements, and terms previously determined to be strongly associated with leadership or associated with neither leadership or group members.

Table 2. Independent Samples t-test Results
Comparing Ratings of Leadership Terms by Condition, Study 1, Instrument 1 (N = 143).

Term	Condition 1 Avg. Rating (St. Dev.)	Condition 2 Avg. Rating (St. Dev.)	t-statistic	p-value (one-tailed)
Restrained	4.22 (1.44)	3.54 (1.63)	2.10	.019
Forceful	3.72 (1.60)	2.91 (1.44)	2.53	.008
Uncorrupt	6.27 (1.25)	5.49 (1.69)	2.50	.007
Competitive	5.35 (1.38)	4.40 (1.61)	3.09	.002
Spirited	6.02 (1.02)	5.30 (1.16)	3.23	.001
Physically Fit	4.08 (1.47)	3.51 (1.23)	2.06	.022
Self-Assured	5.81 (1.19)	5.21 (1.37)	2.25	.014
Vigorous	5.00 (1.35)	4.31 (1.31)	2.47	.008
Willful	6.16 (1.21)	5.62 (1.15)	2.19	.016
Decisive	6.06 (.810)	5.36 (1.41)	2.99	.002
Unshakable	5.17 (1.49)	4.63 (1.41)	1.83	.035
Aggressive	4.11 (1.46)	3.13 (1.57)	3.13	.001
Uses Good Judgment	6.55 (.775)	6.10 (1.21)	2.15	.017
Certain	5.92 (1.18)	5.19 (1.12)	3.08	.002
Assertive	5.98 (.977)	5.27 (.962)	3.54	.001
Hopeful	5.74 (1.24)	5.15 (1.32)	2.25	.014
Dominant	4.70 (1.43)	3.90 (1.56)	2.59	.006

An Instrument to Identify and Validate Measures of Leadership Identity

The fifty terms identified above were categorized as representing a leadership identity, a group member identity, or as neutral leader/group member terms. Using these fifty terms, a third instrument was designed to determine which of the potential leadership terms could best predict six statements indicating dimensions of leadership. In addition to these terms, a term "Acts as a Leader" was added as a check on the validity of the six leadership statements. The instrument included instructions and the 51 terms on side of the page and a set of six statements related to three dimensions of leadership on the reverse side of the page (see Appendix B). These statements were based on the three dimensions laid out in the following definition of leadership as (1) directing the attention of others towards tasks and group goals, (2) effectively integrating the actions of others and (3) getting others to do things they may not otherwise do in service of attaining shared goals.

The first two of these six statements was a self-assessment of the respondent's ability to get others to work together and resolve conflict. Jehn and Mannix (2001) suggest that management of levels of process conflict within workgroups throughout the task can affect performance. Leaders who can manage high degrees of conflict mid task and can then follow through with consensus and implementation of task goals performed better. Managing conflict with the ability to focus on group goals would allow a resolution that prioritizes task success over immediate problems and so insight into the most effective solutions. The next two statements address the ability to help group members focus on the big picture and to keep in mind group goals (Zaccaro, Rittman and Marks 2001). The last two statements asked how comfortable the respondent felt giving advice and direction to others while acting as a group

leader. Self-awareness of one's own emotional states in the role of leader is essential to effective leadership (Goleman, Boyatzis, and McKee 2013). It seems reasonable to assume that individuals would feel more comfortable as leaders if they felt that having a high status position fit their personal self-conception. These six statements were designed to assess the predictive validity of the sixteen leadership terms. Also, added to the list of fifty terms on the front page of the instrument was the term "acts like a leader" as an indicator of the measure's construct validity. This term also serves as an additional measure of the validity of the six statements presented on the reverse page of the instrument.

Respondents

The instrument was administered to 135 undergraduates enrolled in a large introductory level course at the same large Midwestern university where Study 2, Experiments A and B were later conducted. The sample included ninety women, thirty-eight men, and seven people who chose not to indicate their sex. For the instrument used in Study 2, women were excluded from the analyses because the sample for these two studies included only undergraduate men. However, correlation tables for the ten leadership identity terms for both the sample of men and the entire sample are included below to demonstrate the robustness of the inter-correlation between the chosen terms in a more diverse sample.

Procedure

Respondents were first given brief verbal instructions (see Appendix B) prior to receiving the instrument. Written instructions on the front pages first asked participants to provide answers to six demographic questions asking their sex, career goal, age, year in school, major, and high school GPA, and second provided instructions for rating the fifty terms. The rating instructions asked respondents to circle the number between one and ten next to each term indicating how like or unlike them each term or statement was, where one to three represented "not at all like

me", four to seven represented neither like me nor unlike me, and eight to ten represented "very much like me". After rating the fifty terms and the additional "acts like a leader" term, instructions directed respondents to turn over the ratings sheet and complete similar ratings on six additional statements. These six statements were used to indicate how likely a person is to engage in specific types of leadership behaviors and to indicate how like a leader participants viewed themselves.

Results and Discussion

Reliability analyses indicated that the six leadership statements formed a reliable scale (Cronbach's alpha = .874). A principal components factor analysis indicates the six leadership statements also load on a single factor (E = 3.752). Additionally the six leader statements scale was significantly correlated with the term "acts like a leader" included in part as a check on the validity of those six statements, (r = .617, p = .000). These findings taken together suggests these six leadership statements form a good measure of common conceptions of leadership behavior for men and so a scale measure averaging responses to these six statements was constructed.

Next, correlations between the fifty-one terms and six leadership statements were calculated. Nine terms previously shown to be descriptive of leaders and not group members were significantly correlated with the six leader statements scale at the .05 level (*two- tailed*). One additional term (*Mature*) was selected that was significantly correlated with the six leadership statements scale at the 0.1 level (two-tailed) for a total of ten terms indicative of leader traits. These ten leader terms were made into a scale and a reliability analysis indicates these terms form a reliable scale (Cronbach's alpha = .868). The term "acts like a leader" was positively and significantly correlated at with ten term leader term scale (r = .637, p < .000, two-tailed) supporting the construct validity of the scale.

All of the terms in the ten term scale were positively inter-correlated (see Tables 2 and 3), with coefficients that range from .659 to .111 (mean inter-term correlation = .336). A strict-parallel model was used to produce an unbiased estimate of reliability of .776. Initial solutions

in factor analysis indicated a two factor structure (E > 1.00) accounting for 50.89% of the overall variability in scores. “Decisive” and “Certain” load onto a different factor than the other eight terms. However, given the significant and positive correlations between these two terms and all other terms individually, and pre-tests indicating their likely relationship, further analyses were warranted. Disambiguation of the relationship between these two factors can be achieved through a rotation procedure with reasonable assumptions. Confirmatory maximum likelihood factor analysis with oblique rotation was used due to the expectation that each of the leadership terms theoretically relate to a single latent factor and the multiple factors obtained are likely to be correlated with each other. This analysis confirmed a single factor consisting of the ten leader-only terms. Based on the reliability of these terms as a scale and the identification of a single underlying factor structure for these measures, these ten leader-only terms were then used to construct the leadership identity scale.

Table 3. Pearson’s r Correlation Coefficients, 10 Leadership Terms
Men Only, Study 1, Instrument 2 (N = 38).

	Assertive	Certain	Busy	Decisive	Ind.	Self-Assured	Virtuous	Good Judgment	Mature
Certain	.429**								
Busy	.413*	.408*							
Decisive	.560***	.563***	.416**						
Independent	.368*	.195	.713***	.392*					
Self-Assured	.376*	.415*	.145	.392*	.297				
Virtuous	.466**	.340*	.237	.111	.417**	.659***			
Good Judgment	.590***	.310	.369*	.402*	.359*	.327*	.335*		
Mature	.302	.117	.470**	.236	.542***	.322*	.416*	.453**	
Unshakable	.549***	.321	.508***	.400*	.411**	.468**	.389*	.632***	.496**

*Note: ***p < .001, **p < .01, *p < .05, two-tailed*

Table 4. Pearson's r Correlation Coefficients, 10 Leadership Terms (Men and Women), Study 1, Instrument 2 (N = 135).

	Assertive	Certain	Busy	Decisive	Independent	Self-Assured	Virtuous	Good	Mature
Certain	.414***								
Busy	.305***	.361***							
Decisive	.401***	.613***	.300***						
Independent	.378***	.379***	.483***	.332***					
Self-Assured	.326***	.381***	.327***	.428***	.333***				
Virtuous	.375***	.272**	.324***	.152	.273**	.452***			
Good Judgment	.268**	.233**	.282***	.312***	.177*	.352***	.297***		
Mature	.263**	.241**	.370***	.223*	.414***	.377***	.287***	.481***	
Unshakable	.369***	.297***	.315***	.360***	.284***	.282***	.278***	.343***	.288***

Note: ***p < .001, **p < .01, *p < .05, two-tailed

The correlation coefficient for the ten leadership identity scale and the six leader statements was calculated. The two scales are positively and significantly correlated (r = .574, p = .000). The ten leader terms scale was also positively and significantly correlated with the term "acts like a leader" (r = .521, p = .000). Together these findings suggest that the ten leader term scale is both a reliable and valid predictor of a person's self-perception of being like a leader, and so should prove a valid indictor of the strength of a person's leadership identity in subsequent studies. Ten terms that were initially determined to be associated with effective group members and not with effective leaders and which had the weakest correlation with male responses on each of the six leadership statements were also selected. None of these ten "non-leader" terms were significantly correlated with either the six leader statements significantly predicted scale or more than two of the individual leadership dimension statements. Correlation coefficients ranged from -.223 to .220 and p values ranged from (p > .159) for *Cautious* to (p> .989) for *Excitable*.

A third set of ten terms was selected using all remaining terms and their correlations with male responses on the fifty terms and six leadership statements scale. These terms were selected

regardless of list of origin, effective leader or effective group member. The criteria for selection for these remaining terms were that their correlations with the six leadership dimension statements scale were the weakest and they were also weakly correlated with individual statements making up the six statements scale (see Table 4). These three lists, each with ten descriptors, were combined for the final instrument, the Lead ID scale, to provide a measure, *Lead ID Score* for later analyses.

Table 5. Pearson's r Correlations of Terms with Six Leadership Statements Scale and Number of Scale Statements Each Terms Positively Predicted, Study 1, Instrument 2, Males only (N= 38)

Describes Effective Leader	Statements Significantly Predicted	Describe Effectives Group Member	Statements Significantly Predicted	Not Different for Either	Statements Significantly Predicted
Certain .304 (p = .067)	2 of 6	Fanatic -.053 (p = .754)	0 of 6	Ambiguous .111 (p = .512)	0 of 6
Busy .357 (p = .028)	4 of 6	Excitable -.002 (p = .989)	0 of 6	Competitive -.080 (p = .636)	0 of 6
Decisive .412 (p = .010)	5 of 6	Group Motivated .111 (p = .507)	0 of 6	Inefficient -.279 (p = .089)	0 of 6
Independent .370 (p = .022)	3 of 6	Modest -.090 (p = .595)	0 of 6	Indifferent -.097 (p = .561)	0 of 6
Self-Assured .420 (p = .009)	4 of 6	Respectful .060 (p = .729)	0 of 6	Hesitant .024 (p = .887)	0 of 6
Virtuous .553 (p = .000)	6 of 6	Cautious -.233 (p = .159)	1 of 6	Secretive .030 (p = .856)	0 of 6
Good Judgment .319 (p = .000)	5 of 6	Shy -.205 (p = .224)	0 of 6	Serious -.005 (p = .974)	0 of 6
Mature .528 (p = .001)	5of 6	Perky .063 (p = .709)	0 of 6	Skeptical .167 (p = .317)	1 of 6
Unshakable .472 (p = .003)	5 of 6	Spirited .010 (p = .957)	2 of 6	Restrained .178 (p = .286)	2 of 6
Assertive .631 (p = .000)	6 of 6	Agreeable .220 (p = .185)	2 of 6	Plain Spoken .141 (p = .400)	1 of 6

Study 1 Discussion

The *Lead ID* measure allows for the measurement of the strength of a participant's leadership identity in Study 2, Experiments A and B. Its design allowed for the collection of data about leadership identity without specifically priming participants for leadership or power. Further, the sequential identification and validation of the terms' relationship to leadership in contrast to group member traits produced a valid and reliable measure of leadership that was able to predict participant self-ratings on leadership dimensions. This increases confidence that the *Lead ID* measure will be able to capture the strength of participants' leadership identities in Study 2 and provide a useful quantitative control variable for later analysis. Further, using the final list of thirty terms, a computer program was constructed for collection of data in Study 2. Used in conjunction with the web-based C4 Experimental Design Center, this program allowed connection of Lead ID measure data with participant decisions and questionnaire ratings.

CHAPTER 5: METHODS: STUDY 2, EXPERIMENTS A AND B
LEADERSHIP DECISIONS

Introduction

Two experiments were conducted to test hypotheses. Study 2, Experiment A tested the predictions that (1) participants making more important decisions will report stronger feelings, (2) participants making more important decisions will report greater certainty in their decisions, and (3) participants making more important decisions will prefer fewer choices in a subsequent decision task when compared to participants who make less important decisions. Study 2, Experiment B tested hypotheses that predicted (1) participants making more important decisions will access less useful information than participants making less important decisions, (2) participants with stronger leadership identities will access less useful information than participants with weaker leadership identities, and (3) participants who access more useful information will prefer more choices in a subsequent decision task than participants who access less useful information.

The importance of the decisions in each condition was manipulated by changing the definition of the situation to increase or decrease the level of threat to the participant's leadership identity. Within both experiments A and B, the importance of an identical set of six organizational decisions was varied in two conditions, Condition 1, important decisions, and Condition 2, less important decisions. In each of the decision situations the participant was given three solution options and asked to choose the one that would best meet the organization's clearly defined goals. In experiment A, participants are allowed to make the decisions based on their own intuition. In experiment B, participants were given the option to access additional information about each of the three possible solutions. In experiment A, no additional information about the three decision options was available. In experiment B, the ability to access three types of additional useful information about the three decision options was added. In both experiment A and B, posttests were designed to measure subjective feelings of power,

Why Experiment?

Experimental methods to test research questions often demonstrate the occurrence of a predicted phenomenon under a set of specific and scientifically-controlled conditions (Lovaglia 2003). Evidence to support counter-intuitive explanations for some social phenomena can be obscured in the complexity of social situations in everyday life. Because of this, convincing support for a proposed causal mechanism can be difficult to isolate and verify. Whereas all methods can produce useful evidence to support or weaken theoretical explanations, the question addressed and resources available often determine the initial investigative approach. When initially seeking convincing support for a proposed causal relationship it is helpful for the researcher to isolate the theoretically important elements of a social situation.

With an experimental approach, a researcher can determine the environment to faithfully recreate only the essential aspects of a social situation as specified by the theory (Aronson et al. 1990). A simple and practical way to approach this is by using a laboratory experiment. With laboratory experiments, researchers have the benefit of experimental and statistical control to limit the possible effects from confounding and extraneous factors. This degree of control can help clarify evidence that supports or weakens proposed causal relationships between independent and dependent variables, leaving results easier to interpret.

When employing a laboratory experiment, random assignment of participants to conditions can be used to limit the effect of individual differences on comparisons between conditions in limited tests of hypotheses. Hypotheses tests using convenience samples are helpful for researchers seeking to determine if valid theoretically-proposed mechanisms meant to explain a social phenomenon are sound within the scope of the theory. Laboratory experiments can then garner convincing support for the soundness of initial assumptions and propositions within an explanation that can be more difficult to garner when using other methods. By using a laboratory experiment, researchers can more easily isolate and so manipulate essential elements of a social situation affording direct observation of differences in behavior across conditions as an apparent consequence. In this way, experiments provide researchers with another useful tool to develop

theory through the reciprocal process of limited tests, followed by revisions to propositions, followed by more tests (Lucas 2003).

Repeated experimental support for a theory then lends confidence in the soundness of an explanation and its predictions within those particular settings. Evidence that supports or does not support hypotheses tested in this way is useful for revising propositions and theory building. Repeated tests that inform theory using laboratory experiments can then indicate how different methods might further assess the extent of a phenomenon within increasingly more complex social settings (Zelditch 1969; Lovaglia 2003).

Design

Two laboratory experiments were designed for study 2, experiment A and experiment B. In both experiments, participants first completed the leadership identity measures developed in study 1. In both experiments level of threat to the participant's leadership identity was varied between conditions. Participants in both experiments completed an identical set of decisions, each with the same three options. Greater threats to identity are predicted to make decisions more important to participants. As a result, participants are predicted to be more certain about their decisions when they may freely choose options that are consistent with their identities. In experiment B, however, the opportunity to access additional useful information about each decision option was added. In order to maintain their identities, participants are predicted to avoid accessing useful information for making more important as opposed to less important decisions.

A series of pre-test measures for leadership identity, cognitive ability, and feelings of power preceded the decision making task (see Appendix A Figure A3 – A7 and Appendix B). During the six decision task in both experiments A and B, measures of time to read problems, time to answer problems, the answer given, and certainty of answer given were collected. In experiment B, additional measures included the amount of useful information accessed to make

each decision, time spent looking at additional information, and the amount of various types of useful information accessed.

Posttests included a product selection preference task, a scale to measure the subjective importance of the decision task, scales of emotions felt by participants, and items measuring personal feelings of power. After completing surveys participants were asked to provide a brief paragraph explaining their reasoning for three randomly chosen answers they provided for the decision task. After completing the study a researcher conducted an exit interview with manipulation checks and debriefed participants.

Organizational Leadership Decisions Task

A decision task was developed which involved completing a set of six organizational leadership decisions in sequence. Each decision problem was broken up into three parts: the presentation of the decision problem, the presentation of three possible options, and the opportunity for the participant to choose a solution and indicate their certainty that they selected the best option for achieving explicitly defined organizational goals. Participants selected an option for each decision and indicated their level of certainty before moving on the next decision or completing the series.

Design and Presentation of the Decisions

The organizational leadership decision problems were designed to give participants decision scenarios, similar to case studies, in the form of one page executive summaries broken into three elements. Each element was set aside by a descriptive title. First, “the situation,” put the decision within a context by providing the decision maker’s role in the setting and defining the organizational goal(s). Second was “the problem,” a brief summary of a conflict or opportunity that also included detail intended to evoke strong emotion in participants. Third, “the decision,” defined the challenge the participant must resolve to achieve the previously stated organizational goal(s). Each decision had an expertly determined, empirically correct, and

counter-intuitive best answer. The best solutions were determined by scholarly research on leadership and power, and are explained below in each of the decision scenario descriptions.

After reading the organizational decision scenario, participants proceeded to a page showing three solution options. The three solutions included (1) an option with a high use of power by the leader acting to impose their will to resolve the problem, (2) an option with a less direct use of power and (3) an option that required the leader to resist the opportunity to use their power and not make unnecessary demands of others. The lowest power use solution in each decision situation was designed as the correct solution to meet organizational goals. The design of the questions was developed using research on power and emotions (Lucas and Lovaglia 1998). Lucas and Lovaglia (1998) found that being higher status or higher power creates positive emotions. Therefore, correct solutions that avoid power use were designed to be less emotionally satisfying and potentially uncomfortable for participants to consider. While the use of power in some solutions is more subtle, each of the six decisions requires the decision maker to focus on what is best for the organization as a whole, and to avoid acting in a way that would feel immediately agentic and more satisfying.

Organizational Leadership Decisions Development

The six decision questions were developed using research on small groups, status, power, trust, emotions, and the relationship of these elements to effective leadership (Bradley 2008; Soboroff 2012; Lawler, Thye, and Yoon 2008; Stewart 2006). The model assumed for effective leadership is defined by two fundamental concepts underlying the distinctions between transformational and transactional leadership (Bycio, Hacket, and Allen 1995). For this study, effective leadership is defined as (1) directing the attention of others towards the task and group goals while (2) integrating the actions of others by aligning individual and group goals in order to (3) getting others to do things they may not otherwise do in service of attaining those goals.

Each of these decision scenarios is created with a few basic assumptions about effective leadership in mind: (1) that power use, getting someone to do something they would not

otherwise do despite their resistance, generates resentment and negative emotions (Lawler and Yoon 1996; Willer, Troyer, and Lovaglia 2005; Willer, Lovaglia and Markovsky 1997), that (2) status, the honor, prestige, perceived value of an individual within a group, affords greater influence without generating resentment (Ridgway, Diekema, and Johnson 1995), (3) that the ability to stay focused on the group task and showing a strong interest in seeing group members be successful increases perceptions of a leader's competence (Ridgeway 1982) and (4) status and perceptions of competence afford leaders the capacity to influence others and should allow leaders to define situations in ways that inspire action rather than engender resentment. These assumptions derive from the premises that (1) good leaders inspire others, (2) motivate others intrinsically, and (3) that this occurs when the leader and the leader's suggestions become more valued. Good leaders gain a degree of influence over others and so the capacity to define the relationships of others to the situation in ways that align the individual's and the group's goals.

Differences in Leadership Decisions between Experiments A and B

Both the decisions made and the options for each decision were identical between Conditions 1 and 2 and between experiments A and B. In experiment B the opportunity to access three types of useful information for making the best decision was added. In both experiments A and B, participants read the same three-part executive summary presenting the situation, the problem, and the decision. In experiment A, participants made each decision by moving from the page presenting the executive summary to a page presenting their three decision options. In experiment A this initial presentation of the three options was where participants selected their choice and then indicated how certain they were that they had made the correct decision. Participants in experiment A then moved on to the next decision.

In experiment B an intermediate stage was added. After participants finished the executive summary of the problem they proceeded to a page showing their three decision options and icons that they could click to learn additional useful information about the decision for each

of the three options. One icon labeled “additional information” offered insights into the correct solution. In addition, under each of the three available options there were two icons, one labeled “Pro” and another labeled “Con”. The “Pro” and “Con” icons provided supporting and opposing insights into each decision option. In experiment B participants then proceeded to make their decision before indicating how certain they were that they had made the best choice.

In experiment A, with no information, it is unlikely participants will differ by condition in the number of correct solutions chosen. Hypotheses tested addressed only the predictions that participants in Condition 1, more important decisions, would be more certain, have stronger feelings, and prefer fewer choices in a subsequent decision task than participants in Condition 2, less important decisions.

For experiment B, however, the solution participants chose mattered. Hypotheses predict differences in the amount of useful information accessed, time spent on information between conditions and how these measures differed by strength of leadership identity. Participants with a stronger leadership identity in Condition 1, more important decisions, are predicted to access less information than those with a weaker leadership identity, and so are less likely to find the correct solution. Because of this, it was important to design questions that had counter-intuitive solutions that additional information would help participants identify. Included in the design were elements intended to affect participants’ emotional states between conditions. Each decision had a theoretically correct solution supported by research, making that solution the best decision given the description of the problem, the available information, and the limited options defined the task for participants. Though these are hypothetical decisions with hypothetical solutions, the participant was instructed that useful information based on research by experts indicated the definitive solution to each problem. Given that decisions were designed using research and information from research to generate useful ‘general,’ ‘pro,’ and ‘con’ information about the available options, the participant had every reason to believe all the information they could access was reliable and pointed to the single correct solution.

Content of the Six Organizational Leadership Decisions

To design interesting and potentially emotionally evocative decisions, each of the six problem scenarios included a problem involving someone in a leadership role. The theory here assumes participants with a stronger leadership identity would be more apt to empathize with someone in a leadership role than participants with a weaker leadership identity. Accordingly, participants with a stronger leadership identity should experience stronger emotions with respect to these decisions when their own leadership identity is at stake, as in Condition 1, than when it was not, as in Condition 2.

Each problem is essentially a vignette, a brief evocative literary portrait of a social situation (Jasso and Rossi 1977). Because participants were not actors directly involved in these events, making decisions in an interactive setting, the effects of the emotional prompts were likely weak in comparison to experiencing similar events in everyday life. However, vignettes allow for greater experimental control and can be written to include all important theoretical elements. These problems were written to draw participants into assuming the role of the acting agent and to experience the feelings of the leader, to the extent that they identify themselves as leaders. While the base of the problem represents bare facts of the situation, some of what is presented includes the opinion or perspective of the leader. While not misrepresented as a fact of the situation, the leader's perspective could easily be interpreted that way without careful reading.

Each of these leadership decision scenarios is fictional although written to have correct and incorrect solutions based on expert knowledge. While there may be some disagreement as to the veracity of each solution, the task in both conditions is well defined. Participants are told that the correct solution is determined by expert opinion. They are told this information came from a "standardized test" (Condition 1) or an "organizations textbook" with "recent case studies" (Condition 2). Further, they are told these solutions have correct answers and that information they can access comes from the same expert source. Thus the correct answer for any question in

either condition is indicated by the useful information in Study, experiment B. Participants have little reason to distrust the information provided or believe it did not come from an expert.

The distinction of absolute correctness of a solution is important only when testing the prediction that participants in study 2, experiment B will be more likely to avoid useful information for making important as opposed to less important decisions. Here, a best answer is well defined by the information provided by the interface. There is no factual reason for the participants to doubt that the useful information proffered for each question in study 2, experiment B is anything but accurate according to the definition of the situation they have been presented by the researcher. The information was therefore expert information indicating the correct answer. Participant's willingness to access this useful information in both conditions, varying in degrees with respect to their leadership identities, indicates this was communicated clearly by instructions and understood by participants. It is possible for participants to conjecture that some part or all of the information available is intentionally misleading or presented to count against them if it is accessed. The likelihood of participants making such a presumption should however be equally distributed across conditions through random assignment.

It is important to note that participants in study 2, experiment B had unrestricted access to three types of useful information for solving each of the six decision questions. The few participants who accessed all or most of the information still completed the study within an hour, so while time to answer was a possible concern it should not have been an issue. All participants were told they could use as much time as they needed and that this was not a time-limited task. Exit interviews surreptitiously performed a second check by asking participants first where they were headed and how soon they had to be there when first sitting down to complete exit interviews.

The three types of information were arranged strategically so that the more information participants accessed overall, the greater the likelihood they would be directed to the correct answer. Participants saw video instructions on how to answer questions and, in experiment B, how to access useful information and use information icons to help solve the problems.

Each piece of information varied slightly in length from three to six sentences that spelled out three major points (see Appendix B). Pro information tended to start with common sense reasoning or obvious assumptions one might make about the option and move towards the strongest appeal to emotion in the two incorrect answers. Pro information for the correct solution also began with the most common sense reasoning and moved to a final point that included a statement, that alone or in conjunction with the "additional information" statement indicated directly that it was the correct option and/or made a point excluding the possibility the other two options were correct. This was the statement indicating the correct solution. Con information also began with common sense reasoning and assumptions, moving to the most academic. The academic information was intentionally the most compelling reasoning against the two incorrect solutions being correct. For the correct solution, weak arguments were made against the option. This design was intended to make it more likely those participants who accessed and considered more useful information would be more likely to choose the correct answer.

Decision 1: Bradford Arena.

The premise for this decision is based in research on the effects of a difficult team member on group performance. The findings suggest that while difficult group members can negatively impact the feelings of group members by creating stress, teams with high interdependence are less affected and more productive than teams with lower interdependence (Bradley 2008). This suggests the best solution for a leader when dealing with a difficult team member is to work at keeping the group focused on the problem at hand. Additionally, overt power use by leader, forcing the difficult member out or publicly admonishing them is likely to decrease creativity even if it promotes stability (Slighte, de Drew and Nigstad 2011) and so decrease willingness of group member to contribute novel solutions. In short, a heavy handed leader, publicly admonishing or excluding a group member, is likely to divide concerns between solving the problem and avoiding the leader's wrath. Even subtle cues signaling a potentially

dangerous environment in the group can cause less powerful group members to focus narrowly on the leader, and lose sight of the problem (Friedman and Forster 2010).

In this scenario, the CEO of a sport arena meets with the management team after the arena's namesake is arrested, hurting the company's reputation and revenue stream. In the meeting a group member interrupts others and makes snide comments. The leader's goal is to ensure the team works together to stay focused on the task so they have the best chance at arriving at an effective solution. In short, the options for the problem include: (1) concentrate on keeping everyone in the meetings focused on the problem, (2) publicly admonish the disruptive person in the meeting, or (3) eject the difficult person from the meeting.

While the options to eject or admonish the difficult person are worded attractively, the "general" useful information available in Study 2, experiment B indicates team cohesion and trust suffers when group members focus on the disruptive member rather than the problem. The

"pro" information for the correct solution, ensuring group members stay focused on the task states this option is "…. the only option that does not dampen the needed creativity for coming to an effective solution." This statement tells the participant directly that option is the only option that will solve this type of problem.

Decision 2: Investment Group

This decision scenario is based in research on group size, cohesion, and productivity that indicates small groups benefit from adding people with specific skills needed for group success (Stewart 2006). The negative impact of group size on group cohesion does not occur in general until groups become larger than six group members (Soboroff 2012).

In this scenario the leader of a four person investment group discovers that the investments proposed by the group's newest member, brought in because of specialized knowledge of volatile tech markets, have been the source of losses for the group over recent months. The leader's goal is to determine which plan will best help the group be profitable again. The options include: (1) add a new person with similar tech market expertise to the group, (2)

fire and replace the weak group member, and (3) wait for markets to improve and make up for losses over the coming year.

The attractive option would be to fire and replace the group member that appears to be under-performing. This would be a direct use of power and is likely to make the leader feel better, having taken swift and decisive action. However this decreases group cohesion and is likely to cause group members to feel less secure in the group. Also, replacing the member is unlikely to decrease uncertainty about the group's stability and investments. The option to wait for markets to improve over the next year seems to fit common sense investment wisdom which is to wait and not react to market changes quickly. The choice has merit but is a sub-optimal decision. It does nothing to reduce the uncertainty about investments in the volatile tech market. Adding a new person with specialized expertise increases the group's overall knowledge of the tech market and should help reduce uncertainty regarding current and future investments. The "additional" useful information for this option explains that groups which include more competent contributing members generate more ideas, are more cohesive, and are more successful. Additionally, investment groups can benefit by sharing risk. The "pro" information states: "….This option is superior because it reduces risk for all members while increasing productivity. Additional expertise in tech stocks will ensure investments in tech markets are more likely to bring profit…." The "pro" information for the correct option states specifically that "…This option is superior…" explaining that it 1) reduces risk for members 2) increases group productivity and 3) by adding expertise in this area will help ensure these investments are more likely to bring profit. This tells the participants directly that this option is better than the other two.

Decision 3: Promotion Choice

For this decision a boss asks the direct supervisor of two employees, one man and one woman, to assign them to work together on a demanding project and then make a promotion recommendation when they have finished. This decision is based in the temptation for leaders to

unnecessarily micro-manage previously delegated tasks and so damage the effectiveness of others they depend on (Spreitzer 1996). In the scenario, the supervisor recommends only one employee, a woman, for promotion. The boss originally felt both may be worthy of promotion so emails asked the supervisor why he choose to recommend one and not both. The supervisor, Adam, provides a justification for his recommendation based on information given to him by the woman about the man leaving early to care for a sick child and leaving her to finish their work.

The decision is how the boss should respond to the recommendation and the email response justifying the recommendation. Although not explicitly stated with the problem, the goal is for the boss to make the best decision for the organization. The options include: (1) thank the supervisor for the recommendation and approve the recommended promotion, (2) reverse the recommendation, promoting the employee that was not recommended and not promoting the employee that was recommended, saying that he disagrees with the supervisors interpretation of the situation explained in the email, and (3) ignore the recommendation and the explanation telling the supervisor he disagrees with his concerns and promote both.

The construction of this scenario also takes advantage of gender bias that exists in the workplace. Women may be seen as more self-serving in their actions and less group-motivated (Ridgeway 1982). Also, being attentive to pressing family issues may be seen as ennobling when done by a male at work but may appear to signal split loyalties when the same action is taken by a woman (Correll, Benard, and Paik 2007). It seems likely complaints coming from a woman employee about a male co-worker taking off early for a family concern are more likely to be seen as inconsistent with expectations attached to women, and could engender resentment against her. If roles were reversed, the same complaint by a man may seem a legitimate action. As such, by having the email explanation of the promotion recommendation include these elements of detail, a woman lobbying for her promotion over a male co-worker who left to address a childcare issue, participants are more likely to feel some injustice was done by the supervisor. They will likely question the decision to promote her and not him and so be motivated to step in and use their power to override the recommendation to reconcile the perceived injustice. The most

extreme reaction would be to reverse the decision and tell the subordinate to promote the man and not the woman. A less extreme choice would be to ignore the recommendation and promote both employees; however this again supersedes the delegated authority of the supervisor, who was asked to assign the project to the employees and to make the recommendation. Thanking the supervisor for doing as asked by following through on the recommendation recognizes that the direct supervisor is in the best position to make the promotion recommendation. This option also resists the temptation to assume, despite making this inference that the CEO knows better. The general "additional" information explains that unconscious expectations favor promoting men over women. It also states unambiguously: "...It is important that leaders support subordinates." The "pro" information for the correct choice explains, "This choice will enable Adam to become a more effective contributor to the company's goals. This makes it the best choice for the company's goals…"

Decision 4: IDTronic Employee Complaint

In this decision two employees have lodged a complaint against someone with direct power over them. The setting takes advantage of inherent problems that can arise in organizations as a result of differences in power. First, the effects of power use are less obvious to those who use power than those who it is used against (Fiske 1993). Second, organizational structures in place to check problems of power use also may be coercive. Third, perceived feelings of injustice can result in negative emotion and inappropriate aggression aimed against supervisors when subordinates assume supervisors have the power to alter organizational conditions (Greenberg and Barling 1999).

The decision requires a response by the president of a company to a complaint made about Tom, the head of human resources. The goal for this decision, by Tom, is to convince the president that he, as the head of human resources, despite having a complaint lodged against him, will remain a valuable employee for the organization and a good leader. The description of the situation first builds up the value of the head of human resources and touts his effectiveness as

proven during recent organizational growth. Participants who think of themselves as leaders are likely to identify with the head of human resources. Also, all participants are expected to imagine themselves in this role in order to make the best decision. This leaves the reader less aware of the demands on the president of the company who must address the complaint about Tom while protecting the interests of the complainant and the organization. Making the person who is charged in the complaint also the person responsible for the human resources department, a policing body for the organization as described, also means the President must take into account the level of understanding and sensitivity that the human resources head demonstrates in the situation. Here, the HR head, being in a position of power may make it difficult for Tom to consider or select the correct option, one that entails an act of contrition and humility. The options include: (1) apologize and assure the president immediate improvement, (2) ask the president who it was that complained, or (3) ask for details of the specific accusations. The "additional" information icon points out that the employees at the company must be able to lodge complaints without fear of reprisal from the human resources department. The pro information for the option to "apologize" tells the reader that this option resolves the problem and avoids angering the CEO, shows competence, and is the only option that will not get the head of human resources, Tom, fired. Knowing Tom is an asset and important to the company, from the description of the situation, the solution that keeps Tom from getting fired is plainly the best option for the Company and likely for Tom as well.

Decision 5: New Manager

The decision required Don to respond when he, as an account executive, is given a one year rotating appointment as assistant director of marketing. This decision scenario takes advantage of the tendency of readers to have difficulty separating opinions from objective statements in the account of the problem and uses assumptions about the use of power's likelihood of engendering resentment. The role of assistant director includes mostly service duties. These require the careful management of power while allocating a shared pool of

resources including work space, furniture and equipment. This job requires service to the interest of others and some self-sacrifice. Here it is assumed from findings in Study 1 that people may think of leadership in terms of a position of power, telling others what to do, more than as a role that involves helping others.

The definition of the problem is intended to draw the participants into taking the perspective and opinions of the newly appointed assistant director and assuming these as objective statements about the situation. In fact all of the statements are carefully worded to be attributed to how the newly appointed assistant director defines the situation. The great success of the firm following the previous manager's appointment serve as a hint that the new assistant manager may actually have a lot left to learn about the best practices for success in this highly creative work environment. The goals for this position are clearly defined as "…doing whatever he or she can to help the marketing firm's other Account Executives be successful in keeping their current clients and bringing in new business."

The decision requires the participants to determine which option is best as a new leader to assure he demonstrates leadership ability in this role. The options include: (1) ask for advice from the outgoing leader on how best to help others in this role, (2) establish new procedures to address existing problems ahead of time and be ready to implement these as soon as he starts, or (3) begin by sending out emails to gather information on what people want him to do and use it to establish new polices to be introduced at a meeting he will call for on his first day. Clicking the "additional" information Icon indicates that starting out with the assumption that he knows best is not the best way for Don to achieve the decision goal. It indicates that options which start with the assumption of Don knowing better are not correct and hint towards his seeking advice. The "pro" information Icon for the correct solution, asking the outgoing manager for advice, informs the reader that this is the option that will keep Don from choices that will make him a poor leader. This information adds that good leaders are humble, helpful, and good listeners. If readers consider these pieces of information in conjunction, the correct option should be unmistakable.

Decision 6: Request for time off.

Assuming people are tired by the time they reach the sixth and final question, this scenario allows them to make a decision about a request for time off to relax. A probationary employee has requested time off immediately after being hired for her performance as a probationary employee. This decision scenario is based in research (Molm 1997) explaining that rewards and punishment operate similarly as power use. It also draws on research on transactional and intrinsic motivation that indicate rewards and punishment only motivate people to do as much as they have to in order to get rewards or avoid punishments. In contrast, intrinsic motivation leads people to accomplish as much as they can (Deci, Koestner and Ryan 1999).

In this scenario a company president decides to hire a superstar probationary employee who turns around and requests the afternoon off, essentially to party and celebrate her achievement of a permanent position with the company. While rewards and punishment are almost always alluring forms of motivation for leaders (the stick and the carrot), the correct solution is to help the new employee get involved with the company and focused on how her goals are best served by efforts to ensure the success of the organization. The new employee is hired because it is evident that she has the potential to contribute a great deal to the company's success in the near future with long hours and hard work.

The goal of the decision is to convince the new hire to play the important role she has been hired for in the organization. The decision is how best to respond to her request for time off immediately upon being officially hired. The options include: (1) give her some work to do and inform her that the job includes going to others to ask how she can be helpful, (2) reward her with time off, and (3) reward her with time off but take money for the time off out of her salary. The "additional" information Icon includes a description of intrinsic motivation and the line "….Punishments and rewards often work similarly, leading the person to work just as much as it takes to receive either." And the "Pro" information Icon for the correct solution, give her more work to do, includes the lines, "….Getting the best from others requires tapping their intrinsic

motivation. This is the only option that does not reward or punish Sarah for her promotion and is most likely to help her become a more devoted employee and a greater asset to the company."

All of these decisions include people in leadership roles in differing situations. Both conditions in experiments A and B include this identical set of decisions with identical options. In experiment B the options are accompanied by additional information useful for determining which option is best to achieve the organization's goals. These decisions were written primarily with attention to Condition 1, the leadership test, in both experiments. This was done because decisions that could initiate a threat to the maintenance of a leadership identity were essential to testing primary hypotheses. The approach here was to write questions that felt like important types of decisions in both conditions and then minimize the possibility of identity disconfirmation in Condition 2 for both experiments. This was achieved in Condition 2 by defining the situation as one where their answers would not necessarily be in contrast to leading experts, and explaining the situation as one where the evaluation was of another with no opportunity for the participant's own work to be evaluated. This allows a more conservative test of hypotheses related to feelings of power, since in Condition 2 participants are put in the position of providing feedback that will be used to evaluate a graduate student's performance. This puts participants in Condition 2 in a position with some social power. Condition 2 participants also have relatively more social power than participants in Condition 1, whose decisions subject them to evaluation and possible identity disconfirmation if they see themselves as leaders.

Decision Task Instructions and Between Condition Manipulation

The introduction and instructions prior to the decision task for both Conditions 1 and 2 in Experiments A and B include the between condition manipulation for the experiments as well as the explanation of the task. The explanation given for each condition differs in well-defined and theoretically important ways. First, the introduction and instructions build in the between condition manipulation, changing the importance of the six decision task by defining the task

situation differently for participants in Condition 1 and Condition 2. Experiment A is essentially the same as experiment B in content and procedures, with two exceptions. Experiment B adds the opportunity to access useful information about the decision options prior to choosing and includes a similar but strengthened between-condition manipulation from experiment A. The participants in both experiments completed an identical set of six decisions related to leadership and organizations regardless of condition.

The between condition experimental manipulation for both studies A and B changes the definition of the participants role in respect to the six organizational decision task to increase the threat to leadership identity in Condition 1. In Condition 2, less important decisions, the description is designed to minimalize the threat to a leadership identity while making the same decisions. The decision task in Condition 2 is defined as assessing the abilities of graduate students who wrote the decisions in the task rather an assessment of participants' abilities. The decisions in both conditions are made important by providing the opportunity to validate an identity, for Condition 1, a leader identity, and for Condition 2, a helpful student, while varying the threat to identity maintenance.

Experimental control is increased by using the identical set of six decisions in both conditions and across both studies. The six decision problems include a situation where a person with a leadership role is described in a context requiring they make a decision. Because the decisions include a person in a leadership role it is unlikely that the manipulation would completely remove any threat to leadership identity. Participants with highly salient leader identities are more likely to feel threatened because the decision mentions leadership. The threat to leadership identity is limited in Condition 2 by removing the possibility of an evaluation of participant's performance in the task. This was achieved with the assurance participants receive that the task is evaluating another's capabilities to construct leadership decision scenarios and that their individual performance cannot be evaluated and is not scrutinized. They were told that results would indicate how well a graduate student had performed and that those results could be reported on the graduate student's transcript. This in fact put the participants in a more powerful

position, that of an evaluator rather than one being evaluated. This changed the relationship between the participants and the importance of the decision's correctness in Condition 2 while limiting the threat of incorrect answers to disconfirm a leadership identity. This also maintained the goal of making the best decision possible while increasing the likelihood the decisions remained non-trivial.

Design Elements for Conditions 1 and 2

Experiment A. In Study 2, Experiment A, Condition 1, participants learned via onscreen text and audio instructions that the decision task is a well-established standardized test indicating their aptitude for leadership. In both conditions, a cover story insists that researchers are uninterested in the participant's performance in the task outside of asking them to try to do their best to make the best choices. This construction uncouples the role performance of research participants from their role performance of a leader identity. The objective score in Condition 1 for the leadership test is not available to the researcher and so removes the capacity of the researcher to connect the leadership role to the role of research participant. Their score in either task does not matter to their role as a participant. Differences in participant motivation to perform that identity should be controlled by random assignment of participants to either Condition 1 or Condition 2.

By calling the decisions task a test in Condition 1, an evaluation of the participant's relative abilities is implicit and an objective score will define the quality of their performance as a leader. Participants have strong reason to believe they will find out exactly how good a leader they are or are not after completing the decision task as a test. They learn that they will have the opportunity to learn exactly how well they performed by logging into a website from home in private. To increase the importance of the evaluation, participants were then told they could choose to sign a document after the study to have their leadership score added to their university transcript if they were satisfied with their performance. This also served as a manipulation check.

If participants asked about their score it was clear they believed they were taking a real test and cared about their performance.

In study 2 experiment A, Condition 2, the same decision task is described as an effort to test the ability of new graduate students who developed the questions from a textbook for a future online organizations class. In Condition 2, participants were told their decisions were not scored or individually recorded so there was no way to assess their performance. They were told only that the graduate students were being assessed and we need their help as students to determine how well the questions were written.

These two conditions presented different levels of threat to the leadership identity of the participants. However, the same instructions were similar in their explanation of how to complete the task and the decision goals. Where Condition 1 explains participants should "Indicate which option is best for the organization and how certain you are of your decision before proceeding…," Condition 2 instructions read: "each option has merit but one is the correct option because it is better for the organization." This instruction emphasizes similarly that good decisions in these situations will be based on what is best for the organization, and not what makes someone feel most like a powerful leader.

Experiment B. For Study 2 Experiment B, Conditions 1 and 2, the manipulation was strengthened by replacing the on screen text and audio introduction to the decision task with instructions delivered directly by a researcher. Observations of participants' progress through experiment A, via monitors in the control room, revealed some participants were quickly skipping through the manipulation, the task introduction and instructions. Exit interviews also indicated some participants were unable to articulate the nature of the study or could not accurately articulate the type of task they had just performed. The script for instructions was altered slightly to be more conversational and to include the manipulation check questions. A researcher entered the room, read the introduction, and then asked the participant questions to determine if they understood and could articulate the type of task and what ostensibly was being measured. If a participant was unable to articulate the description or the goals respective of

condition, the research assistant would repeat the introduction and again ask the participant to articulate the information. For Condition 1 this articulation would need to include examining physical responses while they are either taking a leadership test and in Condition 2 includes helping evaluate how well graduate students had designed questions.

Additionally in study 2 experiment B an onscreen video accompanied the task instructions explaining the use of the "info" icons to complete the decision task. The instruction video for both conditions was identical in every way except where in Condition 1 the term 'test' was used, while in Condition 2 the term test was replaced by 'task'. The instructions described the "additional information", "pro" and "con" Icons as providing helpful information about the decision options. The video also explains participants must proceed to the next page to indicate their decision and how certain they are that they have chosen the best option.

Conditions for Study 2 Experiment A and B

In study 2 both experiment A and experiment B similarly vary the importance of the organizational leadership decisions task between conditions by changing the definition of the situation for the decision task in each condition. In experiment B alterations to the manipulation were made to strengthen the manipulation.

Within experiment A there are two conditions, Condition 1, "Important Decisions" and Condition 2, "Less Important Decisions". Within experiment B these two conditions are mirrored, with the same kind of manipulation intended to make the decision task feel less important in Condition 2 than in Condition 1. The between condition manipulation in both experiment A and B were originally designed to be identical with the exception that experiment B adds the opportunity to access useful information helpful for making better decisions. This design was to allow for concurrently running both A and B to allow direct comparisons between decisions made under identical conditions with and without the opportunity to access useful information.

However, the two studies were run consecutively and procedural changes were made to the experimental protocol to strengthen the manipulation in experiment B, where it was delivered first by a researcher in person and followed with a manipulation check. In Experiment A, participants heard a recording of the instructions while they were reinforced by text on the screen. In experiment B the participant saw an instructional video in place of the audio in Experiment A. Audio instructions were the same and the video demonstrated how to complete the six decision problems and use the additional useful information to get the correct answer. With of the exception of the strengthened manipulation, additional instructional video, and availability of additional information in experiment B, all else remained identical between the two studies.

In both experiment A and B the two conditions vary the importance of the six decision task by defining the situation differently. Both conditions included the possibility for gain or loss in respect to some aspect of the participant self-concept. However, Condition 1 includes a threat to the maintenance of the decision maker's self-concept with an evaluation of their performance in a highly valued social role, leadership. The content of the decision task itself is identical between conditions. All of the decisions, however, include a decision being made by a person who has a leadership role. Assuming participants' leadership identities are equally distributed to each condition by random assignment, participants in both conditions are expected to feel it is important to make the best possible decision. However participants in Condition 1 face a real likelihood of disconfirming a leadership identity, so face a threat to the maintenance of their leadership identity. The greater the strength of that identity the greater the possible threat to their self-concept. Assuming that the significant majority of participants across conditions believe they would make a good leader, and assuming about two thirds do, we can expect differences between conditions with respect to the level of threat to the participant's self-concept.

Condition 1 Experiment A

In Condition 1, important decisions, participants read text on screen and heard recorded audio describing the decision task in a cover story explaining that researchers were interested in learning more about their physiological responses to different kinds of decisions (see Appendix A Figure 8). The introduction to the task explained that the participants would be taking a leadership ability test while researchers measure their physiological responses through the electrical leads attached to their hand (see Appendix A Figure 8). The manipulation included the description of the type of decisions the participants in each condition were given. In order to increase the perceived validity of the leadership test, the instructions described the decision task as the "Intuitive Leadership Test" and the "Early Career Advancement Natural Leadership Intelligence Test for Men", and explained the test is used by universities and Fortune 500 companies to gauge leadership aptitude in prospective job candidates. Additionally, the introduction told participants that if they were satisfied with their score on this leadership test they could request to the scores posted on their official university transcript. Because the six decisions task was described as tests and an indicator of leadership aptitude and intelligence, participants were led to believe that their performance indicated ability in a highly-valued social role, leadership. In this way participants could gain or lose in the verification of leadership identity respective of their own self-conceptions.

Instructions state the goal in these decisions is to select the best option for the organization. The description includes an explanation that the task will include a challenge to their leadership that must be resolved to solve the problem and again emphasizes the goal is to select the option that is best for solving the organizations problems.

Condition 2 Experiment A

In Condition 2, less important decisions, the online interface provided participants with both written and audio instructions (see Appendix A Figure 9). The instructions explained that researchers were interested in participants' physiological responses while they answered a series

of questions written by graduate students. Participants were told they would be helping researchers evaluate new graduate students' abilities to develop fair, relevant, and sufficiently difficult questions from using an organization's textbook. The instructions explained that this method of evaluating new instructors is used by most colleges and universities to assess the skills of new instructors (see Appendix A Figure 9). Participants are informed that the graduate students were instructed to write questions about case studies from the text, providing a single best solution and two less optimal solutions. The instructions explain that the questions were not a test of participants' abilities and would only help evaluate whether the instructor wrote good questions. To emphasize that the participant was not being evaluated, they were assured that no identifying information would link them to their answers. Further, they were told that these questions had been randomly chosen from a pool of questions written by graduate students, and it was implied that questions would vary in their quality. To make the task and the decisions non-trivial the introduction explains that researchers need the help of undergraduates to assure graduate instructors are qualified. The introduction then states that results of the study might be reported for use on graduate students' official transcripts, and asks the participant to do their best to determine the correct solution.

Instructions in both conditions state the goal of these decisions is to select the best option for the organization. The description of each decision explains the problem for the organization and a decision that needs to be made to solve the problem, again emphasizing the goal is to select the best option for solving the organizations problems.

Independent Variables Experiment A

Identity Threat in Decision Situations. The importance of decisions was altered between conditions by increasing the level of threat to the participant's leadership identity. In condition 1 the threat to participant's leadership identity was increased by defining the six decision task as a standardized test of leadership aptitude. Greater identity threat in Condition 1 is predicted to

make the decisions feel more important relative to Condition 2. In Condition 2, threats to participants' identities were reduced by making the decisions an assessment of graduate students' question writing abilities. In analyses, *Condition* is entered as a dummy variable where 0 = Condition 1 and 1 = Condition 2.

Dependent Variables

Preference for Number of Product Choices after Decisions. Immediately after completing the six decision task in both conditions participants received instructions telling them to use a slide-bar to indicate how much they would prefer to select from an assortment of three varieties of a product or an assortment of fifteen varieties of the same product. The type of product was randomly selected by the online interface to be either potato chip varieties or brands of bottled water. The products were pictured, but labels were blacked out so brands of water and flavors of chips were obscured. The slide-bar indicted a number between one on the far left and ten on the far right, with one unit increments in-between. The instructions explained that 1 indicates they highly prefer choosing from the three product assortment and 10 indicates they highly prefer selecting from the fifteen product assortment. Hypothesis 3 predicts that participants will prefer to choose from fewer products after making more important decisions than when they make less important decisions.

This measure is adapted from prior research by Inesi et al. (2011). They found that participants who were primed by writing about situations where they had control over others preferred a smaller assortment of products to choose from than participants who were primed by writing about situations where others had control over them. Inesi et al. (2011) predicted that priming feelings of power by writing about having power over others would result in a desire for fewer choices in a subsequent product selection preference task. That research also suggested that feeling less powerful in a prior situation, one where participants write about others having power over them, would result in a desire for more choices in a subsequent product selection

preference task. Inesi et al. (2011) proposed that feeling less powerful meant feeling as if options were constrained and so these feelings would lead people to prefer more options in a subsequent situation. Feeling more powerful means feeling as if options were are unconstrained and so participants were expected to prefer fewer options. The theory presented here suggests that the same options for a decision can become more valuable when their exclusion threatens the maintenance of a more valued aspect of the self-concept. Therefore, decision makers who made more important decisions should feel more powerful after controlling a more valuable resource. Further, if information has the potential to exclude more valuable options for maintaining important aspects of the self-concept, that information is more likely to be avoided. Being able to control more valued options is predicted to cause participants to feel more powerful. Accessing information could restrict access to valued options necessary for maintaining the self-concept and achieving the decision's instrumental goals is predicted to make decision makers feel less powerful. This disruptive information is predicted to leave a decision maker feeling less powerful after making more important decisions, if accessing useful information indicates that identity confirming options are incorrect.

Average Certainty about Decisions Made. Certainty was measured after the participant selected an option for each decision and before moving on to the next decision. A slide-bar appeared underneath an option after it was selected. A 1 anchored the slide-bar on the far left, indicating low certainty and a 7 indicated high certainty on the far right. The indicator started centered with a "4" visible underneath. The indicators could be clicked and dragged to indicate degree of certainty on the slide-bar. The degree of certainty and the option selected was recorded as the participant selected the proceed icon at the bottom of each decision's options page. The certainty scores for the six decisions were averaged to produce a measure of overall decision certainty. For this scale higher scores, closer to seven, indicate greater average certainty about the six decisions. Lower scores, closer to 1, indicated lower overall certainty.

The theory proposes that decisions feel more important when they pose a greater threat to the maintenance of the self-concept because the decision maker has more to lose if they choose

wrongly. Feeling a greater threat to the self-concept generates greater uncertainty prior to a decision and generates greater value for options that will maintain their self-concept. The theory also proposes that making a decision reduces uncertainty and causes a decision maker to feel better. Greater threats to the decision maker's self-concept will increase the value of options that the decision maker believes will maintain the self-concept. If threats to the self-concept create greater uncertainty for participants whose leadership identity is at stake, participants are likely to feel more certain after choosing options they believe will maintain that identity.

If some options are in fact more valued than others because they can either confirm or confer a new socially valued identity on the person or undermine it for those who already held the identity, then we could expect to see certainty increase with lower threat and increase with greater threats to identity. Higher leader identity would generate greater uncertainty. The act of deciding in a way that maintains a leader identity under threat should consequently generate greater certainty. The greater threat to the person's identity, the greater the value of options that maintain that identity and the more certain the person should be after choosing that option.

Self-Reported of Importance of the Decisions and Importance Scale. Participants answered seven questions about the importance of the decisions on scales ranging from 1 to 10, where one indicted either "not important" or "not concerned" and ten indicted "concerned" or "important." Items included: (1) *How concerned were you about what might happen to the organization because of your decisions?* (2) *How important was it for you to make the best decisions you could? (3)How important was it for you to make the decision you wanted to make without outside interference? (4) How important was it for you to recognize which option was the best for furthering the organization's goals? (5) How important was it to you to score well on this test? (6)How concerned were you with how the decisions you made reflect on the kind of person you are? (7) How important was it for you to do your best while making these decisions?* These questions were designed to measure differences in (1) how important the decisions were in each condition, (2) how important the decisions were in relation to the strength of participants' leadership identity, (3) how important these questions were between conditions in relation to

pretest strength of leadership identity, and (4) how important organizational goals were relative to personal goals. Participants moved a slide-bar that was initially centered on "4" to answer each question. These measures were summed and averaged to form a scale of "Importance of the Decisions."

Self-report of Positive and Negative Emotions and Emotions Scales. Originally two scales, positive feelings and negative feelings, were adapted from the "POSEMOT scale" (Lucas and Lovaglia 1998) with the addition of two questions about participants level of engagement and level of uncertainty and presented as eleven semantic differential scales asking participants about how they felt while making the series of six decisions.

Positive emotions were measured with four semantic differential scales. Participants were asked to respond to the following questions presented individually: *(1) How happy did you feel while making decisions during today's study? (2) How satisfied did you feel while making decisions during today's study? (3) How excited did you feel while making decisions during today's study? (4) How engaged did you feel while making decisions during today's study?*

Seven semantic differential scales collected data regarding negative emotions. Participants were asked to respond to the following questions presented individually. *(1) How frustrated did you feel while making decisions during today's study? (2) How anxious did you feel while making decisions during today study? (3) How angry did you feel while making decisions during today's study? (4) How regretful did you feel while making decisions during today's study? (5)How disappointed did you feel while making decisions during today's study? (6) How resentful did you feel while making decisions during today's study? (7) How uncertain did you feel while making decisions during today's study?* Participants moved a slide-bar that was initially centered on "4" to answer each question. A high rating indicated that the participant experienced more positive feelings (Not frustrated, not angry, not regretful, etc.) and a lower rating indicated that the participant experienced more negative feelings (Very frustrated, very angry, very regretful, etc.). Three questions regarding *anxiety, frustration, and uncertainty* were

then averaged to construct the *Distress Scale*. The answers to these questions were reverse coded, so that higher scores corresponded to more negative feelings.

Control Variables

Leadership Identity Strength. For the leadership identity measure participants rated themselves on thirty terms using a slide-bar to indicate on a 1 to 7 scale, where 1 indicated the term "does not describe you at all" and 7 indicated the term "describes you very well". The actual scale for leadership identity consisted of ten from the thirty items averaged. These ten items together were determined by results in Study 1 to form a valid indicator of strength of a person's leadership identity. These ten terms were *busy, certain, unshakable, self-assured, decisive, mature, independent, assertive, virtuous, shows good judgment.*

General Feelings of Powerlessness Scale. This measure was adapted from scales developed by Nesler et al. (1999). The scales were originally developed to measure personal feelings of power, based on what these authors referred to as "global social power." Our "feelings of personal power" measure was derived from scales included in the "global social power" measure which also included several subscales based on French and Raven's (1959) bases of power. These subscales had both status and power elements and the questions selected and adapted for this measure were more closely related to Weber's (1922) definition of power as the ability to realize one's own will or gain one's own interest against the resistance of others ([1922] 1946: 180). The scales measured the participants' perceptions that they had a personal capacity to act in accord with their own will, or the ability to cause others to act in accord with their will. While these measures can, in some degree, be interpreted in ways that may conflate answers with self-perceptions of status, the scale as a whole is meant only as a measure of personal feelings about one's own power to act without constraint. The questions for this scale were taken from three subscales originally. These were the (1) global power (2) resistance and control and (3) compliance subscales. The personal feelings of power scale was made up of the following questions to reflect a person's general sense of their opportunities to act in line with

their own will or to cause others to bend to their will: *(1) How likely are others to get what they want from you? (2) How likely are you to get what you want from other people? (3)How easily convinced are you to work harder at work on school projects when urged to by others? (4)How likely are your opinions of co-workers or classmates to be affected by the views of others? (5) How likely are you to get the credit you deserve for the work that you do? (6) How much do you worry about how other people think of you? (7) How likely are you to change your mind when others disagree with you? (8) How likely are you to act in accord with the wishes of others even when they conflict with your own?*

The pretest for participant's general feelings of power was included as both a control measure and to address a possible alternative explanation for why people's sense of power was affected in the experiment. The measure could help determine support for or undermine the theoretical explanation for suggesting that decision options feel more valuable when the self-concept is threatened. In conjunction with experiment B this control measure may help isolate and support explanations in the theory about what drives the observed effects. The general power pretest indicates how powerful participants perceived themselves to be at the beginning of the study by indicating how much control they believed they had over experiences in their lives.

These measures were captured using a slide-bar and a ten point scale where 1 = not likely 10 = likely or 1 is worried and 10 = not worried. Two questions, number *(2) "How likely are you to get what you want from other people?"* and number *(5)" How likely are you to get the credit you deserve for the work that you do?"* were reverse coded and then all items were averaged for each participant. A higher score indicates a person feels generally less powerful and able to enact their own will and a lower score indicates a person feels generally more powerful and able to enact their own will.

Raven Advanced Matrices Decision Task Pretest. The Raven's Advanced Progressive Matrices Test (Raven, Raven, and Court 2004) was developed as a cross-cultural intelligence test made up of sixty progressively more difficult multiple choice problems. A selection of the first

ten problems from the Raven Advanced Matrices Cognitive Ability test was included in the pretests for this study because performance on these problems can indicate a participant's level of engagement in the study. Ample time (6 minutes and 40 seconds) was provided to finish this portion of the study. College students should have little trouble getting a score of 5 or above, and so scores lower than 5 serve as a proxy for engagement on the part of participants. Level of engagement is important because (1) low engagement provides an alternative explanation for not accessing useful information (2) indicates participant is predisposed to treat the following decision questions as a trivial task (3) serves as a control of participants whose lack of engagement leaves them unlikely to be affected by the manipulation or provide useful data. The questions also serve as measures of cognitive ability and will serve to determine a baseline for each participant's galvanic skin response readings during decision-making in later analyses. Comparisons of biometric readings from this initial task and the post-manipulation decision task can serve to determine the relative arousal of participants between conditions and the strength of their leadership identities.

The design of these problems as the recognition of geometric patterns rather than story problems is useful here because geometric patterns are unlikely to evoke feelings associated with other socially related meanings that might be found in word problems. Feelings that occur while making these decisions can be assumed to result from the level of difficulty of problems. In later analysis not yet conducted the galvanic skin responses measured while answering these problems can serve as a baseline measure for each individual's response while making decisions. The average response while answering could be used to compare galvanic skin response readings taken while participants are selecting an option for making each of the organizational leadership decisions. Planned analysis includes between and within each condition assessments of differences in response from baseline readings in respect to the strength of the leadership identity measure for Experiment A. Additionally, the same test would be applied in experiment B, as well as efforts to detect changes in galvanic skin response when participants access various types of useful information to make decisions and when they do not.

Product Group. The product choice measure was developed in line with Inesi et al. (2011) however the variety of products was cut down from four products to two because the original measure as outlined found no difference between products. However, we controlled for product group and found differences in reported preference for number of choices in respect to product. *Product Group* was coded as a dummy variable for analysis where "0" was chips choices and "1" was water choices.

Year in School. Year in school was a demographic variable collected prior to participants entering the study room. Participants were recruited over summer and the beginning of the fall semester. Participants in summer tended to be more advanced students than participants in the fall, and some of the students during summer session were from a local community college. This variable allows control for experience that might affect certainty in decisions, feelings of power, or leadership identity. It was coded as a 5-level ordinal variable where 1 = Freshman, 2 = Sophomore, 3 = Junior, 4 = Senior, and 5 = Graduate Student.

High School Grade Point Average. A demographics questionnaire asked participants to report their high school grade point average. Grade point average was used as a control in later regression analyses, as it may reflect a participant's ability to make decisions.

Procedures Study 2 Experiment A

Recruiting

Male undergraduates were recruited during summer sessions from The University of Iowa and Kirkwood Community College to participate in a study measuring basic physiological responses to leadership decisions. The recruiting materials (see Appendix B) included multiple mass emails, campus bulletin board ads, signage, and printed cards with study information handed out to students in the local college community. The materials indicated participants should be male undergraduate college students who spoke English as a first language. The language stipulation was included for two reasons. First, the study uses a pretest asking participants to recognize meanings of English words. Second, the decision problems use subtle

differences in language that are predicted to be more likely overlooked in one condition than another. Third, processing language is likely to differ when using a second language, enhancing or minimizing effects in unpredicted ways. A more homogeneous sample should minimize the introduction of extraneous variables likely to contribute uncontrolled variance in measures.

All recruiting material directed potential participants to a scheduling website and the study titled "Leadership Decisions." The scheduling website specified that male undergraduate participants could choose from a series of concurrent studies offering different levels of compensation, ranging from course credit to $20.00. Information about the study titled "Leadership Decisions" explained eligibility requirements. It noted that all participants could elect to be compensated with $20 in the form of a Visa gift card and the study sessions would take one hour. It explained that the study consists of participants making various types of decisions while researchers monitored and recorded their physiological responses with non-invasive equipment. The website and the consent document given to participants before the study informed them they could leave the study at any point after they arrived and would still receive compensation. Participants were able to schedule any open one-hour time slot between the hours of 10 AM and 6 PM on weekdays, up to two weeks in advance. A reminder email was sent out each night to the next day's participants with directions to the lab and brief instructions on where to wait prior to beginning the study (see Appendix B).

Pre-study Preparatory Procedures

Prior to participants arriving in the lab a pair of research assistants worked together to set up the study. Research assistants flipped a coin to assign participants to Condition 1, "More Important Decisions" or Condition 2 "Less Important Decisions." The researchers set up the laboratory research notebook, prepared materials for the study and calibrated the galvanic skin response equipment. This included opening "Chart 5" software that recorded and charted galvanic skin response readings. The computer in the study room was set up with a log-in screen displaying the condition. The research assistants then cleaned metal lead pads that would be

attached to participants' fingers to measure galvanic skin response. A full and detailed explanation of the pre-study procedures can be found in the experimental protocol (see Appendix B).

Waiting Room Procedures and Consent Process

When participants arrived in the lab waiting room they were greeted by a research assistant in a white lab coat holding a clipboard. Participants were told that researchers were interested in learning more about how people make decisions by measuring physiological responses during decision making tasks. Participants were then told their galvanic skin response would be measured while they made decisions and that none of the equipment used was invasive. They were informed they would have an electronic lead attached to their hand. Participants were then given the chance to opt out of the study and still receive compensation. All who showed up agreed to participate.

The research assistant gave each person a waiver to read and a demographics questionnaire (see Appendix B) which asked for their year in school, academic major, gender, mother's and father's highest completed education level, family income, ethnic background, age, and high school G.P.A. The questionnaire also included three additional questions about their previous experiences as members of organizations. These additional questions were to serve as a later check on our leadership identity measure. They were asked (1) if they had any courses or specialized training on organizations or leadership in organizations, (2) to briefly list formal organizations and extracurricular actives in which they participated at the university and the various roles they held and (3) to list the formal organizations and extracurricular actives they were involved in prior to college and to list their roles in those organizations as well. The questions were designed to gather information about the participant's history and experiences in roles within formal organizations without priming participants to think only of leader or group member roles. This was achieved by having participants list both types of roles. Demographic questions were included as control variables for later analyses.

After presenting the participant with a clipboard containing the consent form, demographic survey items, and a pen, the researcher told the participants they would have a few minutes to read over the items and complete the questionnaire. The researcher then left the waiting room to check the set up in the study room. After five to seven minutes the research assistant checked to see if the participants appeared to have finished the questionnaire.

When the researchers retuned to the waiting area they again asked the participants if they were interested in participating in the study after reading the release form and asked if each participant had completed the questionnaire. If the participant answered yes to both questions they were asked if they had any questions prior to moving on to the study room. The researcher then led the participant to the study room.

In Study Equipment Setup and Participant Instruction

Once in the study room participants were shown where to set personal items, asked to take out their cell phone and shut it off, and were then given a seat at a table in front of a large computer screen. One screen pointed towards the participant and a smaller screen was directed away from their sight. The smaller screen was attached by cables to the biometric measuring equipment located on a cart next to the table where the participant sat. The researcher then asked the participant to set aside their cell phone for the duration of the study. The research assistant explained that the tone from a cell phone call or text message during the study could cause them to give a false reading on the biometric equipment. The researcher then asked the participant to put their hand and forearm in a padded cradle on the table in front of them. Velcro straps were then used to secure their arm in the cradle.

Participants were told the arm cradle would help remind them not to move the hand with the electronic leads during the study to help assure more accurate readings. As the researcher attached electronic leads to the participant's left hand index and ring fingers they explained that the leads would indicate the participant's galvanic skin response, a mild change in conductivity, associated with certain types of neurological events such as when a decision is made. The

researcher explained that galvanic skin response is a common measure used in experiments on decision making that would allow researchers to better understand how they made their decisions.

The researcher then asks the participant to wait while they checked and calibrated the Chart 5 software to ensure the equipment received readings. Full instructions on setting up the galvanic skin response equipment are included in the experimental protocol (Appendix B). After calibrating the software, the researcher then instructed the participant not to touch the second monitor during the rest of the study.

Lead ID Pretest Explanation and Instruction

The researcher directed the participant's attention to the large computer monitor and brought up a page that included a list of thirty words in three columns, each with a slide-bar underneath. The slide bars each had the numbers 1 through 7 clearly visible underneath and the slide set in the center with a value of 4. The number 4 appeared above the slide. At the top of the page was a brief set of instructions (see Appendix A Figure 2).

The researcher then explained to the participant "we would also first like to learn a little a little more about you, everyone is different, and this will help us understand you a little better" pointing to the onscreen measure. The research assistant explained that the measure would allow each person to describe themselves to researchers by rating themselves on a number of personal descriptors. Participants were told this would allow them to get comfortable and assure more accurate readings on the galvanic skin response equipment.

The researcher explained that after the participant clicked on the "submit" Icon at the bottom of the survey they would see a "log-in screen" where they would start the equipment test. When the participant clicked on the "submit" icon button their ratings for each word were automatically saved to an excel file on the computer and the page with the ratings disappeared leaving a log-in screen visible on the large monitor.

Log-on and Matrices Pretest Instructions

After showing the participant the thirty term survey screen, the researcher used the mouse to move the survey screen aside and display the log-in screen. The research assistant said, “This screen will come up after you finish the survey. All you will need to do is to click on the “log-on Icon” to receive instructions for the initial equipment test (see Appendix A Figure 1). A video will start onscreen with instructions on how to complete the puzzles, followed by a few survey questions.”

Matrices Pretest Explanation and Instructions

The researcher made explicit that it was important that the participants do their best to get the correct solutions to each problem in the series during this process. The researcher explained that the participant would have plenty of time to solve all of the puzzles and reiterated that responses would be used to get a baseline galvanic skin response reading, noting that everybody is a little different. The researcher explained that this little task would involve viewing a series of simple black and white shapes, determining a missing pattern in a sequence, and selecting the shape that would complete the pattern. Participants were instructed that they would have a set of eight possible options to choose from and should select the best option by pointing to it with their mouse and clicking on their answer.

The researcher then explained that after finishing the puzzles participants would see a series of simple survey questions that would provide researchers with information about the participant’s experiences with other people. The researcher then explained that a video with instructions would also play prior to the beginning of the task to explain how to complete the task and the survey questions. The researcher asked the participants again to do their best to get the correct answers in order to “ensure we are able to make sense of the rest of the data from the study” and then asked them to do their best to answer the survey questions candidly, adding that each participant should provide their first impressions.

Next the researcher asked each participant if they had any questions. The researcher answered any questions then explained that they would leave the room while the participant completed the survey noting that they would be monitoring the participant's galvanic skin response readings from the control room. The participant was reminded that they could press the black call button to summon a researcher if they had any problems or needed anything. Then the researcher explained that after the participant had finished all the puzzles and saw the screen telling them to wait they should use the black call button to summon the research assistant.

Finally, the researcher again asked the participant if they had any questions and reminded the participant to do their best to get the correct answers on the set of puzzles. The researcher then closed the door to the study room and entered the control room where they were able to see a screen that mirrored what the participant saw on their screen. Another screen mirrored the screen with Chart 5 software running.

Pretest and Data Capture

While the researcher watched the participant's screen and cursor movements, they monitored the galvanic skin response readings while participants completed the thirty descriptors Lead ID measure. The Lead ID measures and screen recordings were saved on an external hard drive. Upon clicking the submit Icon for the leadership identity descriptors measure, participants immediately saw a log-in screen for the ten item matrices pretest and survey questionnaires. Occasional errors in set up occurred at this point, for example miss-entered log-on passwords, and the researcher would be called to the room by the participant at this point via use of the black call button.

Pretest Onscreen Instructions and Data Capture

Logging on to access the pretest puzzles logged participants into the website developed for this study. The website captured data on the answers provided for each question indicating icons the participant selected and applying time stamps to their mouse clicks.

After logging on (see Appendix A, Figure 1), participants saw a screen labeled "Equipment Calibration and Pre-Test Instructional Video" (see Appendix A Figure 3). Across the top of the screen was the title "Center for Leadership Testing and Assessment" and "The University of Iowa" with an official-looking colored seal. The marquee remained in place at the top of the screen and visible throughout the rest of the study. Below the marquee a title said "EQUIPMENT CALIBRATION AND PRE-TEST INSTRUCTIONAL VIDEO" in capital bold letters followed by instructions for the matrices test.

Pretest Puzzle Problems

On the screen the participants saw the first in the series of ten puzzles they would complete provided as an example. Participants heard a voice-over explaining how to solve the puzzle. The ten puzzles were the first ten problems from the (see Appendix A, Figure 4) Ravens Progressive Advanced Matrices cognitive ability test (Raven, Raven, and Court 2004). The video included cursor animations that highlighted the cursor in yellow and darkened the background, and produced expanding ringlets and a pinging sound to indicate clicking of the mouse on various objects. The video next provided directions on how to use the slide-bar to answer each of the survey questions that followed the matrices test (see Appendix A, Figure 3)

The first ten problems from the Raven Progressive Matrices test were selected for use here because they were unlikely to evoke strong emotion from the participants. The problems include a three by three series of shapes each with geometric designs that form a systematically changing pattern (see Appendix A, Figure 4). The last shape in the series, at the bottom right of the nine item series, is blank. Below the series is a selection of eight possible options for completing the series. The test was designed to assess reasoning ability and general intelligence while limiting cultural bias inherent in language. Since the example puzzle was also the same puzzle the participants would see and solve first we also had an indicator of how closely participants paid attention to the instructional video. Including the first problem in the

instructional video may also have formed an incentive for participants to pay closer attention to the later instructional video which gave instructions for completing the six decision task.

After the video ended participants clicked on the “proceed” Icon at the bottom of the screen to start the move forward to the next webpage and begin the matrices problems pretest. This activated a second time stamp and provided a measure of how long participants spent on the first instructions page for possible use in later analysis. Upon selecting a solution from the set of eight possible solutions the screen, the answer was logged in the website database with the unique session identification number and time stamped while the screen automatically advanced to the next puzzle in the series. This occurred for all ten puzzles until the participant reached the screen providing brief instructions for answering a series of survey question.

General Power Feelings Pretest “Experiences with Others” Survey

After finishing the matrices pretest the participants in Study 2 Experiment A, answered an eight item survey designed to measure their personal sense of control and feelings of social power in interactions with others. The scale was adapted from the “personal sense of power scale” derived from Nesler and colleagues (1999) “Scale Measuring Global Power” based on French and Raven’s (1959) definition of social power as the potential of an agent to influence a target. While French and Raven’s (1959) five types of social power confound the social psychological understanding of power and status, the measures selected for this instrument are meant as indicators of a participant's general sense of personal power in their interactions with others.

After finishing the survey items, participants signaled the researcher using the black button on the call box. The researcher entered the room and asked the participant if they had any questions. If biometric equipment had shown some problems the research assistant would make adjustments. The researcher would then say. “OK we are ready to begin today’s study.”

Experimental Manipulation Screens for Conditions

The next screen participants viewed was the experimental manipulation for Study 2 Experiment A. If the computer had been set up to run Condition 1, more important decisions, the participant saw a screen with the same seal and title as they had seen earlier, reading, “Center for Leadership Testing and Assessment” This seal and title remained visible on all pages throughout the entire study and in both conditions. However for Condition 1 an additional title underneath read, “Natural Leadership Intelligence Test: Men.” Below this title was a description in text explaining this portion of the study, and below that a section was titled “Test Instructions: Natural Leadership Intelligence Test” (See Appendix A Figure 8).

In Condition 1, voiceover instructions explained that during the study the participant would be taking the “Early Career Advancement Natural Leadership Intelligence Test.” The participant was informed the test was developed to identify individual strengths and weaknesses in leadership and that this was the same test that major universities and Fortune 500 companies use to assess leadership aptitude in job candidates. The text and voiceover explained that the participant’s score on the test indicated their individual aptitude for leadership. The description ended in red text and a voice that informed the participant that their performance on the test would not affect their pay for the study, but the lab was a certified testing center. They were informed that if they were satisfied with their performance on the test they could have it reported on their University transcripts for future employers to see.

This description was designed specifically to activate a participant’s leadership identity by putting them in the hypothetical role as leader for the duration of the decision task. It also provided a potential evaluation of the quality of their performance in a leadership role.

In Condition 2 the participant saw the same officially looking seal and title as they had seen earlier. However, for this condition an additional title underneath read “Question Quality Evaluation.” Below this title was a description explaining the study (See Figure 9). The introduction explained that researchers needed the help of undergraduates in order to evaluate questions written by new graduate student instructors. The description made clear that the

participants themselves were not being evaluated on their performance but that it was essential they try to get the correct answer so that the evaluation of the graduate student was accurate. The description ended in red text and a voiceover that told participants their performance on the test would not affect their pay for the study, but that the results of these evaluations of the graduate student's performance could be reported on the graduate student's University transcripts for future employers to see.

The instructions for both conditions similarly describe the layout of the decision problems, the goals of the decisions, and how to progress through each decision problem. The final instruction on the page and the audio voice over prompted the participant to click on the proceed icon located on at the bottom of the page to begin the decision task and allow researchers to begin gathering biometric data.

Six Decisions Task

Clicking on a "proceed" icon started the six decision task and recorded the first time stamp of the task. Participants in both conditions saw identical text on the screen laying out their first decision problem. All six problems were stated in three parts: the situation, the problem, and the decision. When the participant finished reading the problem they clicked on the proceed button at the bottom of the screen and another unique time stamp was recorded. Together these two time stamps provide a read time, how long the participant spent looking at and reading the problem before they proceeded to the possible solutions. On the next page the participants saw the title for the problem in bold capital font and below a brief description of the decision, reminding the participants of the specified goal to be achieved by solving the problem correctly. Just below this the three decision options were listed. The decision options were randomized in their order of appearance for each participant in each problem to minimize variance in choices due to ordering effects.

Each of the three options had a brief title in bold and larger font indicating the basic idea for that option. Below the title, a sentence or two described a course of action that could be taken

to solve the problem. Next to each option was a bubble icon that could be clicked to designate the option they chose to solve the problem. This indicated the decision they made. Once this bubble icon was selected a slide-bar appeared below the solution. The participant moved the indicator left to indicate less certainty and right to indicate more certainty. When the participant clicked on the 'proceed' button at the bottom of the solution page, their answer for the problem, their degree of certainty, and a time stamp were recorded. Time stamps were also recorded when the participant selected a bubble icon and when they clicked on the slide or release the slide for the certainty measure. The process was repeated identically through the six decision problems until the participant selected 'proceed' after the solutions page for the sixth decision problem.

The next screen included the titles "Feelings Survey" and "Post Study Questionnaire" followed by instructions. The instructions said, "Before we begin we would like to know a little bit more about how you felt while answering the questions about leadership. Use the slide-bar to select a number between 1 and 10 in response to each brief statement For example:" Below this read "1 =Not at all Likely ←→ Extremely Likely =10." Underneath the participants saw a proceed icon and a time stamp was recorded when it was selected. The survey included eleven questions, four about positive feelings, happy satisfied, excited and engaged, and seven about negative emotions, frustrated, anxious, angry, regretful, disappointed, resentful and uncertain.

Each emotion was rated from one to ten on semantic differential scales using anchoring terms on either end. Times stamps were recorded for each time the partisan clicked the mouse to move the slide-bar indicator and answers to each question as well as time stamps were recorded when the participant clicked on the proceed icon at the bottom of the page. After the final emotions question participants saw another title and instructions page similar to the one for the emotions survey with the title "Impressions of These Decisions."

Importance of Decisions Survey

Following the emotions survey the participants saw a title page similar to the page preceding the emotions survey. The title read, "Impressions of These Decisions" and the

description “Post Study Questionnaire” The directions were identical to those for the emotions survey. The questions ask participants to rate seven questions to indicate the importance of the decisions in the prior six decisions task. This scale also served as an additional manipulation check.

General Power Feelings Posttest “Experiences with Others” Survey

Following directly after the importance of the decisions survey the participants again saw a title page similar to the page preceding the emotions and importance surveys. The title read “Experiences with Others” and the description “Post Study Questionnaire” The survey was identical to the pre-test “Experiences with Others Survey” and the directions were identical to those for the emotions survey. The questions again used a one to seven scale to answer the questions. This scale also served as an additional manipulation check. This served as a check on the stability of the measure of general feelings of personal power (Lammers et al. 2009). After this third and final survey participants reached a page that explained they should take the galvanic skin response leads off their fingers and remove their left arm from the cradle so they could type responses using the keyboard.

Opportunity to Explain Decisions

Instructions on the same screen telling participants to remove the biometric leads attached to their hands explained “At this point we ask you to revisit three decisions you made…” Randomly three of the options the participant selected were presented to the participants asking them to “please explain why they chose this answer.” Only three were selected for participants to address in order to keep the total study time under fifty minutes. The initial instructions page told the participants that this would allow them to explain their answers and asked them why they chose the solution they did. The box provided for this information appeared small in order to limit the response to a brief paragraph; however there was no actual limit on how much the

participant could type into the provided space. The instructions asked the participants why the solution they choose was the best one for the organization.

These answers will be used in latter analysis to test predictions about how likely the participant is to make self-references while answering the questions, speak in the first person, and describe decisions as if they were personally relevant. At the end of this section participants saw a screen that thanked them for their participation, told them the study was complete, provided a session ID number, and asked them to notify the researcher that they had finished the study.

Exit Interview and Debriefing Study 2, Experiment A

Exit interviews began with the researcher entering the room, thanking the participant for being in the study and asking them to move to a table towards the center of the study room where they sat adjacent to the researcher. The researcher brought a logbook, a receipt for the participant to sign, and a twenty dollar gift card contained in an envelope with instructions on its use. The researcher then proceeded to compensate the participant (see Protocol). While the participant was filling out a receipt for compensation, the researcher inquired conversationally “where are you headed next?” This was in fact the first question in the exit interview meant to determine if the participant was in a hurry for an appointment or class that may have caused them to rush through the study. The researcher then asked the participant if they had a few minutes to answers some questions that would help researchers better understand their perspective before explaining the purposes of the study in detail. All participants agreed to answer the exit interview questions.

The answers to these and all following questions were recorded in brief notes in the study logbook by a researcher. Next the researcher asked questions to determine if the participant had been confused or had any technical issues or confusion about study instructions. The researcher then asked the participant if they remembered what had been explained to them and if they could recall what this study was about. Next they were asked if they remembered what researchers

were interested in learning. These questions were intended as between-condition manipulation checks.

Next the researcher asked the participant if they felt surer about any of their decisions and if they could they recall for the researcher what the question was about. This was intended to determine which decision felt most important to the participant. The researcher then asked how important it was for the participant to get the correct answer. This was intended to determine how important the decision felt.

Next participants were asked how excited they were about participating in the study, if they found the study interesting, and if they would have volunteered to participate in the study just for the sake of contributing to science and knowledge. These questions were intended to indicate how many the participants' ratings of the importance of the study were related to initial interest in the topic of leadership and their general interest in participating in studies.

After this the researcher debriefed the participant, explained the two conditions, and told the participant that researchers were interested in learning more about how people use information to make important decisions. Finally the researcher thanked the participant for being in the study and asked them to keep what they had learned during the debriefing confidential. Participants were then shown out of the lab.

Planned Analysis Study 2, Experiment A

Study 2 experiment A tested three specific hypotheses, each with sub-hypotheses. The theory proposes that people will have stronger feelings about decisions that threatened the maintenance of their self-concept. Stronger feelings will cause decisions to feel more important to decision makers. When making decisions with stronger feelings, participants will value their options more and so feel more powerful.

Hypotheses 1 predicts participants making more important decisions will report stronger feelings after making the decisions than participants making less important decisions. This hypothesis will be tested using three sub-hypotheses 1a, 1b, and 1c.

Hypotheses 1 a-c predict participants that indicate stronger feelings about the six-decision task will rate the decisions they made as more important. The strength of emotions were measured by self-reports on a scale from 1 to 7 where 7 always indicated more positive feelings and 1 always indicated more negative feelings. A factor analysis will be conducted the participants answers to the eleven questions to determine if these questions about positive and negative emotions represent different dimensions of emotions. The importance of the decisions was measured using five items from the seven questions indicating importance of the decisions. Only five are included because two questions were included as measures to capture emotions expected as a result of the use of information that is included in study 2 Experiment B and not here in Study 2 Experiment A.

Hypothesis 1a-1c will be tested in two OLS regressions. Condition will be entered as a dummy variable predicting self-reported feelings and importance scale scores. Analyses may be done on both conditions separately, removing the condition dummy variable. This could assess whether leadership identity affected strength of reported feelings and decision task importance more in condition 1, where the threat to leadership identity is greater, than in condition 2, where the threat to leadership identity is minimized. Support for Hypothesis 1 would provide evidence for the theoretical positive relationship between the strength of feelings and perceptions of decision importance. Support for Hypothesis 1a would suggest support for the theoretical assumption that greater threats to identity result in stronger feelings. Support for hypothesis 1a and 1b would provide evidence for the theory by showing the same set of decisions generates stronger feelings when it includes a credible assessment of the performance of a valued identity. Hypotheses 1c would provide support for the theoretical proposition that emotions lead people to determine that the decisions are more important.

Hypotheses 2: Participants making more important decisions and experiencing stronger feelings will report greater certainty in their decisions than participants making less important decisions. This hypothesis will be tested using two sub hypotheses 2a and 2b.

Hypothesis 2a predicts that participants in Condition 1, with a credible threat to leadership identity, will report higher average certainty about the options they choose in the six decision task than participants in condition 2. Hypothesis 2b predicts that participants with higher leadership identity scores will report lower average certainty about the options they choose in the six decision task in Condition 1, but not in Condition 2.

OLS regression will also be used to test Hypotheses 2a-2b. Using Overall Certainty as a dependent measure, Condition will be entered as a dummy variable, with Condition 1 = 0 and Condition 2 = 1. Strength of leadership identity will be entered as a continuous variable ranging from 1 to 7. Separate analyses will then be conducted on each condition to determine if leadership identity strength affects feelings of certainty more in Condition 1 than in Condition 2. Hypothesis 2 will be supported if a significant coefficient for Condition indicates that participants in Condition 2 reported lower certainty in their decisions than participants in Condition 1. Participants in Condition 1 face the possibility of having their identity disconfirmed by their score on the Leadership Intelligence Test and have the opportunity to reduce a greater threat so should feel more certain after they have decided and reduced that threat. Participants in Condition 2 do not face an identity threat and so should feel less uncertainty and so feel less of a change in their degree of certainty after having made the decision. Support for Hypothesis 2b would be reflected by a significant coefficient for Leadership Identity in an OLS regression of Overall Certainty on Leadership Identity in Condition 1, and a non-significant relationship between Leadership Identity and Overall Certainty in Condition 2.

Hypotheses 3a-3c predict participants making more important decisions will prefer fewer choices in a subsequent decision task than participants making less important decisions. This hypothesis will be tested using three sub hypotheses 3a, 3b and 3c.

Hypotheses 3a predicts that participants in Condition 1, immediately after making decisions that are more threatening to the maintenance of their leadership identity will prefer to select from an offering of fewer products, 3 rather than 15, when compared to participants in Condition 2 when controlling for general feelings of personal power and strength of leadership

identity. Hypothesis 3b predicts that participants who score higher of the leadership identity measure will prefer to select from an offering of more products, 15 rather than 3, regardless of condition when controlling general feelings of personal power. Hypothesis 3c predicts participants whose score on the general feelings of power pretest indicate they have greater feelings of personal power will prefer to select from an offering of fewer products, 3 rather than 15, regardless of condition when controlling for the strength of their leadership identity.

Support for Hypotheses 3a-3c would provide evidence for the theoretical proposition that participants view decision options as more valuable when they face a threat to identity. Decisions are situations in which uncertainty is reduced by making a choice. If a decision situation presents a threat to a person's self-concept, then options become a more valuable resource for reducing that uncertainty relative to decision options when threats to the self-concept are minimized. While participants in Condition 1 are expected to have greater uncertainty relative to participants in Condition 2, wielding more valuable options for making decisions, likely makes participants in Condition 1 feel more powerful than participants in Condition 2. This would be supported if OLS regression finds a significant positive coefficient for Condition indicating that participants in Condition 2 indicate they prefer to choose from the offering of more products more than participants in Condition 1. Further, people with leadership identities should feel less powerful in both conditions due to the leadership context of the questions creating uncertainty over the correctness of choices in the task. This would result in a significant and positive coefficient indicating people with a leadership preferred to choose from the offering of more options. Finally, the general feelings of personal power scale scores reported by participants prior to the study will be entered as a control variable. This variable is continuous and ranges from 1-10. The high end of the scale represents feelings of low general personal power. Therefore, a positive and significant coefficient would indicate that people who reported lower general personal power showed their preference for the larger product offering more than people with higher general personal power. Support for this hypothesis represents a validation of the behavioral measure of feelings of power represented by the product choice task.

Taken together, these tests will show whether there is support for propositions relating (1) feelings to importance of decisions, (2) relating identity threat to certainty about decisions, (3) relating threats to identity to behaviors and (4) indicating feelings related to power. Testing these hypotheses can provide support for theoretical mechanisms that may affect decision makers when faced with useful information for making important decisions.

CHAPTER 6: RESULTS OF STUDY 2, EXPERIMENT A

Introduction

Results presented here tested hypotheses predicting that participants making more important decisions will report stronger feelings, greater certainty in decisions, and will prefer fewer choices than participants making less important decisions. Experimental sessions were run in the summer of 2013 with undergraduate men from a large Midwestern university. Participants were randomly assigned to participate in the "Natural Leadership Test" (Condition 1) or the "Evaluation of Graduate Student Questions" (Condition 2). For each participant, pre-test and post-test ratings of personal power, pre-test ratings of leadership identity, post-test ratings of positive and negative emotions, post-test ratings of the importance of the decision task, and certainty of each decision were collected. Participants may chose solutions for the same set of six leadership and organizational problems in each condition. Data were analyzed for predicted differences in the strength of emotions, importance of the task, participant certainty regarding decisions, behavior related to feelings of social power by condition, participant leadership identity, and pre-test feelings of personal power. Prior to presenting hypothesis tests, sample characteristics are discussed and analyses of the reliability and validity of scale measures are presented.

Participants

Fifty participants took part in Study 2, Experiment A. Participants who scored lower than 5 on the Raven Advanced Progressive Matrices test were excluded from analysis, due to lack of engagement and based on post-experiment interviews. Further, four participants were excluded from analyses, three for lack of data, two of those due to equipment failure and another not fluent enough in English to complete the study. One participant was excluded after an exit interview revealed extensive prior knowledge of this study. All participants were male in this initial test of hypotheses. The choice to recruit college men was made due to the cultural link between leadership and men in the U.S. (Ridgeway 2001), and leadership and college students (Alicke

and Govorun 2005). Prior evidence indicates that two thirds of college students think of themselves as leaders so this sample was expected to be more likely to have participants with a salient leadership identity. Given that men's identification with leadership may be culturally determined, initially non-U.S. citizenship was investigated for effects on dependent measures. Participants were also required to be native or fluent English speakers to control for possible cross-cultural differences in the meanings of characteristics included in the Leadership Identity test. No significant effects of being a non-U.S. citizen were found, so all participants were included in analyses so long as they were determined to be engaged in the study. A more homogeneous sample is preferable for experimental control when hypotheses tests are designed to gather evidence related to theoretical predictions (Kalkhoff et al. 2014; Calder, Phillips and Tybout 1981).

Of the forty-six participants included in analysis, ages ranged in age from 18 to 46 with two participants in their thirties, two in their forties, and the rest ranging from eighteen to twenty-three. Over half (52.2%) of this sample consisted of college seniors, nearly a quarter (23.9%) were juniors, a tenth (10.9%) sophomores, another tenth graduate students (10.9%), and only 2.2% were first year students. The large proportion of the sample that consisted of advanced students is likely a result of collecting data over summer sessions. Eighty percent of the sample indicted race as European American, ten percent African American, eight percent Latino American, and two percent Asian American. In this sample sixty-five percent of the participants were reported to have a father with a college degree, of which twenty eight percent had a father with a graduate or professional degree. About eleven percent of the participants' fathers had an associate degree or some college, twenty two percent had a high school diploma, and two percent less than a high school diploma. Sixty-five percent of the participants' mothers were reported to have a college degree with thirteen percent of those also holding professional degrees. About twenty-two percent of the participants' mothers had an associate degree or some college, eleven percent had a high school diploma, and two percent less than a high school diploma.

Factor Analyses and Reliability Tests of Questionnaire Measures

Four variables consist of scales developed to measure the (1) strength of participant's leadership identity (2) strength of positive and negative emotions (3) feelings of personal power (4) and the importance of the leadership and organizational decisions. Three scales were adapted from previous research. The leadership identity measure developed in Study 1 is used here to indicate the strength of individual participant's leadership identity. Principal components factor analysis was used to assess how well these adaptations maintained the validity from previous measures. The principal components factor analysis will indicate how well each of the scales achieved overall consistency between scale items and so increase confidence in the validly of the measures. Cronbach's alpha was computed to determine the reliability of scale items.

Lead ID Scale

The *Lead ID* scale devolved in study 1 was used to measure the strength of participant's self-conceptions of their leader like abilities. This scale consisted of ten items; each measured on a scale from one to seven with one indicating the descriptor was less like them and seven indicating it was more like them. The scale was administered as a pretest prior to experimental manipulation. The ten items consisted of *Mature, Unshakable, Self-Assured, Certain, Independent, Decisive, Assertive, Virtuous, Busy, Good Judgment.*

Principal components factor analysis was run using Statistical Packages for the Social Sciences software. We expect leadership to be multi-dimensional. Study 1 suggests the following dimensions of leadership: (1) ability to rely on oneself for superior insight to determine the best course of action for the group (2) ability to focus on the bigger picture by keepings group goals as the priority and (3) ability to manage conflicting interests. It seems likely these concepts could load onto three or fewer factors and will be commonly co-occurring skill sets.

Given the likely correlation between factors within the *Lead ID* scale identified in Study 1, direct oblimin rotation procedures were used in a principal components factor analysis. This

yielded three factors with eigenvalues greater than 1.00. The first factor (e = 3.063) accounted for 30.63% of total variance explained. The second factor (e = 1.54) accounted for 15.38% of variance. The third factor (e = 1.234) accounted for 12.34% of variance. Together, these three factors account for 58.36% of variance in measures. The first factor consists of the measures for *Decisive, Good Judgment, Independent,* and *Mature*. This factor appears to map onto the first dimension identified above, ability to rely on oneself for superior insight to determine the group's best course of action. The second factor consists of measures for *Assertive, Virtuous, and Busy*. This factor appears to reflect the third dimension identified above, ability to manage conflicting interests. The third factor consists of measures of *Unshakable, Self-Assured,* and *Certain,* which appears to reflect the second dimension, ability to focus on the bigger picture by keeping group goals as the priority. While including three different components the aspects of the measure seem consistent in working together to reflect differing underlying dimensions of leadership. Taken together the items in the scale are acceptably reliable with Cronbach's alpha = .701. This supports the view of that people perceive leadership as consisting of this group of co-occurring and perhaps mutually reinforcing skill sets.

Strength of Emotions

The adapted POSEMOT scale (Lucas and Lovaglia 1998) includes the original nine items, *happy, frustrated, angry, regretful, satisfied, disappointed, resentful, and excited* and an addition two items directly related to theoretically predictable items, *uncertain* and *engaged.* These eleven items were on a one to ten scale where one indicates strong negative feelings and ten indicates strong positive feelings.

A principal components factor analysis was run using Statistical Packages for the Social Sciences software. The strength of emotions scale reflects multiple dimensions of emotion and includes both positive and negative emotions as well as primary and secondary emotions (Kemper 1987). Therefore multiple components are likely to be identified by factor analysis. While the theory would allow for the prediction of specific types of feelings, in Study 2,

Experiment A the focus is on the prediction of stronger overall feelings in Condition 1 as compared to Condition 2 and expected difference perception and behavior that follow from difference in feelings. Because of the coding of scale items to assure that the high end represents more positive emotions and the low to represent more negative emotions we split the measure into three scales with seven items, one with the four positive emotions, and two with differing types of negative emotions. *Anxious, uncertain, and frustrated* were combined into a *distress* scale and *unhappy, resentful, and disappointed* were combined into a *Dissatisfied* scale. The four positive emotions were combined into a positive emotions scale. *Regretful* was excluded from the scales because it did not load onto a common factor with other measures. When included in any of the other scales, *regretful* reduced the reliability of those scales.

The three items in the distress scale loaded on a single factor (e = 1.951) accounting for 65.02% of the total variance explained. A Cronbach's alpha of .728 was calculated for the three items distress scale indicating the scale is reliable. The three items in the dissatisfied scale loaded onto a single factor (e = 2.218) accounting for 73.92% of total variance explained. A Cronbach's alpha of .817 was calculated for the three items in the *Dissatisfied* scale indicating the scale is reliable. The four items in the positive emotions scale loaded onto a single factor (e = 2.133) accounting for 53.31% of total variance explained. A Cronbach's alpha of .697 was calculated for the four items positive emotions scale indicating the scale is moderately reliable.

Importance of These Decisions Scale

A five item importance scale was constructed including the impressions of these decisions measures. Two items were excluded because they were constructed to measure effects only expected in experiment B and future experiments; one that asks participants about making decisions without interference and another that asks them how the decision reflects on them as persons. The five items included asked participants: (1) How concerned were you about what might happen to the organization because of your decisions? (2) How important was it for you to make the best decisions you could? (3) How important was it for you to recognize which option

was best for furthering the organization's goals? (4) How important was it for you to score well on this test? (5) How important was it for you to do your best while making these decisions? The five item scale for Experiment A load on a single factor (e = 2.926) accounting for 58.53 % of total variance. A Cronbach's alpha of .763 was calculated for the five item importance of these decisions scale indicating the scale is reliable.

Descriptive Statistics for Measures Used in Hypotheses Tests

Assessing some key control variables suggest that random assignment to condition effectively controlled for differences between conditions on *Level of Engagement* estimated using the Raven Matrices pretest problems, the strength of leadership identity, and feelings of personal power reported prior to experimental manipulation. The Raven test was designed as a measure of cognitive ability, and is treated as such below as a control variable in the regression testing hypothesis 2 regarding certainty of participants in the decisions they made. Higher scores indicate greater cognitive ability. However, only the 10 easiest problems from the Raven test were used and 6 minutes and 40 seconds were provided for participants to complete test items. In addition the answer to the first problem was given to participants. The test was made intentionally easier in order to use participant's galvanic skin responses during the matrices test as a baseline measure for non-threatening decision situations. Participants who failed to get the first problem correct, or who were observed going quickly through the 10 Raven test problems and getting more than 5 incorrect were deemed "unengaged" based on criteria laid out prior to the study. Exit interviews were used to determine whether these participants were indeed less engaged.

There were no significant differences between conditions on pre-test self-reported decisiveness or certainty. These two measures were included in the *Lead ID* pretest measure although the means for participants in Condition 1 were slightly lower than in Condition 2 for both. This is important because these are later included in the independent measure for strength of leadership identity used in predictions of between condition differences in certainty of

decisions. Pretest differences in self-descriptions of decisiveness could be expected to impact how people made and perceived the decision task independent of the manipulation. In fact the means on these variables in the pretest are slightly lower, opposite of theoretical predictions, so if anything, imply a more conservative test of related hypotheses. The high degree of homogeneity between samples in each condition prior to manipulation suggests that theory-based inferences about differences in dependent variables are more likely to result from theoretically important elements. These elements are affected by differences in experimental treatment of participants between conditions. Descriptive statistics are included in Table 5.

Table 6. Means (St. Dev.) for Dependent Variables, Study 2, Experiment A.

	Certainty	Importance	Lead ID	Powerless Feelings	Product Choice Task	Pos. Emot.	Neg Emot.	M Test
Cond 1	4.51 (.424) N = 24	7.84 (1.46) N = 24	4.88 (.801) N = 24	4.89 (.731) N = 24	7.29 (3.25) N = 24	6.72 (1.06) N = 24	6.82 (1.87) N = 24	8.71 (1.60) N = 24
Cond 2	4.27 (.373) N = 22	7.44 (1.65) N = 21	4.89 (.856) N = 21	5.02 (.819) N = 22	8.64 (2.36) N = 22	6.24 (1.61) N = 21	5.62 (1.86) N = 21	8.68 (1.25) N = 22

The mean of the *Lead ID* measure is 4.88 (s.d. = .818), with a range of 3.44 from a minimum score of 3.00 to the maximum of 6.44 on a seven point scale. The midrange score for the *Lead ID* measure here is calculated to be 4.72 points. Estimates of the normal frequency of above midpoint scores on leadership identity in this population made using data from Study 1 would predict a midrange *Lead ID* score closer to 4.6 with about two thirds of the sample scoring above the midpoint. Here about two thirds score above 4.6 points. However, only about fifty three percent scored above the midpoint for the sample. Between-condition differences in outcome measures are predicted to depend on the interaction between *Lead ID* and level of threat

to the participant's identity. Many participants in Condition 2 had higher than average *Lead ID Scores*. Any weakness in the manipulation that allows these participants' identities to be threatened would weaken between-condition differences on outcome variables. The questions used in both conditions include leadership scenarios and this could be expected to produce some degree of threat to identity in both conditions. The claim that participants cannot be evaluated in Condition 2 is not salient in the minds of participants while making the decisions. If the threat is not salient enough in Condition 1 or the lack of threat isn't salient enough in Condition 2, between condition differences in feelings, importance of the decision task, and behavior expected to result from feelings generated by identity threat may be difficult to detect with simple between-condition comparison.

Comparisons of scores between condition indicated that participants in Condition 1 reported that the task was more important (M = 7.84, s.d. = 1.46) than participants in Condition 2 (M = 7.44, s.d. = 1.65). This suggests that the manipulation of identity threat, and thus reported importance, may have been successful, but the difference in reported importance is very small. Participants in Condition 1 reported they were more aroused and experienced less distress than participants in Condition 2 although were more dissatisfied in Condition 1. Higher scores on the positive emotions scale is in Condition 1 (M = 6.72, s.d. =1.06) than in Condition 2 (M = 6.24, s.d. = 1.61) in line with predictions of Hypothesis 1. Note that higher scores on the positive emotions scale indicate participants reported being more excited, more engaged, more satisfied and happier. Lower scores on *Distress* after making threatening decisions is in line with the predictions that people making important decisions will make them quickly in order to feel better. Appearing to support this interpretation, time spent by participants reading the problems in Condition 1 (M= 106.45 sec, s.d. = 20.60) was less than in Condition 2 (M = 115.87 sec, s.d. = 23.28). Participants in Condition 1 reported less distress (M = 6.82, s.d. = 1.87) than participants in Condition 2 (M = 5.62, s.d. = 1.86) also in line with Hypothesis 1. Note that higher scores on the distress scale indicate less frustration, anxiety, and uncertainty. Participants reported in

Condition 1 that they were more dissatisfied (M = 7.49, s.d. =2.75) than in Condition 2 (M = 7.87, s.d. = 2.24).

Reported overall certainty that the decision option selected was the correct option was greater in Condition 1(M = 4.51, s.d. = .424) than in Condition 2 (M = 4.27, s.d. = .373), in line with Hypothesis 2. In the product selection preference participants decide how much they would prefer to have a larger or smaller selection of choices for products, chip flavors or bottled waters. This is measured as a continuous variable where 1 = absolute preference for the 3 product choice group and 10 = absolute preference for the 15 product choice group. The measure assumes people will report a lower rating to indicate they prefer fewer options to more options. In line with Hypothesis 3, participants in Condition 1 were predicted to indicate they favored fewer choices immediately after finishing the decision task, relative to participants in Condition 2. The ratings of preference for product selection size (column 5) was lower in Condition 1 (M = 7.29, s.d. = 3.25) than in Condition 2 (M = 8.64, s.d. = 2.36).

Overall these differences suggest trends in the direction of the hypotheses, while some of these differences appear weak. To test the significance of these differences Ordinary Least Squares Regressions were calculated controlling for theoretically relevant variables.

Hypothesis Test Results

Tests of Hypotheses 1a-1c: Emotions and Importance of Tasks

Hypotheses 1a predicts that participants that indicate stronger feelings about the six decision task will rate the decisions they made as more important. Ordinary least squares regressions of the importance scale scores on first the positive emotions scale, and next on the distress scale, indicated significant correlations between self-report of emotions and the reported importance of the six decisions (See Table 6). Scores on the four item positive emotions scale were significantly and positively related to reported five item importance of the six decisions (b = .462, S.E. = .160, p = .006, two-tailed). Scores on the three item distress scale were significantly and positively correlated with reported importance of the six decisions (b = .238,

S.E. = .116, p = .046, two-tailed). There was no significant relationship between scores on the three item *Dissatisfaction* scale and ratings on the item *Importance of the Decisions* scale. This supports the assumption that strong feelings are associated with decisions that feel more important to decision makers. We might expect stronger feelings in general in Condition 1 as compared to Condition 2. There is no reason for us to expect participants would report being angry, disappointed, or resentful after making their decisions without any interference. This may be different in experiment B where accessing useful information could change their decisions. This indicates support for Hypothesis 1a.

Table 7. OLS Regression of Importance Scale Scores on Feelings Scale Measures
Study 2. Experiment A.

	Importance of Decision Task	
Positive Emotion Scale	.462** (.160)	--
Distress Scale	--	-.238* (.116)
Intercept	4.651*** (1.061)	8.782*** (.593)
R^2	.162	.089
df	44	44

*Note:****p < .001, ** p < .01, *p < .05, two-tailed

Hypothesis 1b predicts that participants in Condition 1 will report stronger feelings about the six decisions made than participants in Conditions 2. Among the three emotions scales used to measure positive emotions, *Distress, and Dissatisfaction,* only the *Distress* scale scores were significantly different by conditions (See Table 7). Participants in Condition 1 rated themselves as significantly less uncertain, anxious, and frustrated after the six decisions, when compared to participants in Condition 2 (b = 1.20, S.E. = .558, p = .037, two-tailed). Strength of the feelings of distress in Condition 1 are expected to decrease more after making the six decisions in

Condition 1 relative to Condition 2. Strength of feelings of positive emotions in Condition 1 were expected to be significantly higher than in Condition 2 however no significant difference was detected (b = - 481, S.E. =.401, p = .237). This indicates partial support for Hypothesis 1b.

Table 8. OLS Regression of Feelings Scale Ratings on Independent Measures Study 2. Experiment A.

	Positive Emotion Scale	Distress Scale
Condition		
0 = Condition 1	-.481	1.200*
1 = Condition 2	(.401)	(.558)
Intercept	6.719***	4.181***
	(.274)	(.381)
R^2	.032	.097
df	44	44

Note: ***p < .001, **p < .01, *p < .05, two-tailed

Hypothesis 1c predicts that participants in Condition 1 will report the six decisions they made were more important on a five item scale than participants in Condition 2. While differences between conditions on the five item scale *Importance of Decisions* measure were in the predicted direction differences were not significant (b = -.404, S.E. =.464, p = .389). Hypotheses 1c did not receive support using these self-report measures of importance. There are a couple of possibilities for this weak difference between conditions. With stronger feelings between conditions and stronger feelings indicating the decisions were more important it is possible that the manipulation between conditions was too weak or the measure of difference in importance was inadequate. The decisions in both conditions should be regarded as non-trivial, however it seems that with the nature of the decisions involving leadership, it is essential that participants in Condition 2 know that they cannot be evaluated on their leadership ability by how they answered the questions. Exit interviews for participants in Condition 2 included participants

who asked for their score on the leadership test or others who failed post study the manipulation check. No participants in Condition 1 failed the post study manipulation check.

Tests of Hypotheses 2a and 2b: Threats to Identity and Certainty

Hypothesis 2a predicts that participants in Condition 1 will rate themselves as more certain about their decisions than participants in Condition 2. Controlling for *Lead ID* score, High School G.P.A., Matrices Test score for cognitive ability, and year in school the OLS regression coefficient for *Condition* indicates that participants in Condition 1 rated themselves as significantly more certain about that the decision options they choose were correct than participants in Condition 2 (b = -.320, S.E. = .105, p = .004, two-tailed). Lead ID was included because participants with higher leadership identities are likely to experience identity threats differently than participants with lower leadership identities (See Table 8). The student identity may also play a role in how participants in condition 2 perceived the setting, and so High School G.P.A. and year in School were included as controls. Year in school was also included because such a large proportion of the sample was made up of college seniors and graduate students. It is reasonable to assume that the threat to leadership identity is more salient for participants with more salient student identities. This is supported by a significant coefficient for High School G.P.A. indicating that students with higher performance in high school reported being less certain overall (b = -.346, S.E. = .127, p = .010, two-tailed), implying a greater threat to their leadership identity across conditions when controlling for the significant effect of their *Lead ID* score (b = -.149, S.E. =.068, p = .034, two-tailed). Hypothesis 2a receives support with participants in Condition 1 reporting greater *Overall Certainty* than participants in Condition 2.

Hypotheses 2b predicts that participants in Condition 1 will rate themselves as less certain about decisions as the participant's strength of leadership identity, measured by *Lead ID*, increases. We found a nearly significant main effect for *Lead ID* in the regression testing hypothesis 2a (b = -.140, S.E. = .068, p = .034, two-tailed). This suggests that the *Lead ID* measure is predicting lower certainty overall regardless of condition. The theory predicts that,

assuming a perfect between condition manipulations, participants with a more salient leadership identity should experience a threat to that identity only in Condition 1 and not in Condition 2.

Table 9. OLS Regression of Overall Certainty of Leadership Decisions on Condition and Control Variables, Study 2, Experiment A (N = 45).

	Overall Certainty
Condition	
0 = Condition 1	-.320**
1 = Condition 2	(.105)
Leadership Identity Scale Avg.	-.149*
	(.068)
High School GPA	-.346**
	(.127)
Year in School	-.100
	(.059)
Matrices Test Score	-.045
	(.040)
Intercept	4.380***
	(.686)
R^2	.397
df	44

Note: ***p < .001, **p = .01, two-tailed, *p = .05, two-tailed

Interpretation of regression for hypothesis 1a alone makes it difficult to determine if the threat to leadership identity affects the decision maker's reported certainty between conditions. To determine if the effect is present in Condition 1 and not in Condition 2 or present in both, independently separate OLS regressions were calculated for each condition as well. The OLS regression of *Overall Certainty* on *Lead ID* limited to participants in Condition 1 indicated that these participants rated themselves as less certain as *Lead ID* scores increased (b = -.218, S.E. = .103, p = .045 two-tailed). OLS regression of *Overall Certainty* on *Lead ID* limited to

participants in Condition 2 indicated no significant effect of *Lead ID* on *Overall Certainty* (b = -.042, S.E. = .101, p = .685). This provides support for hypothesis 2b indicting that participants' self-ratings of certainty about decisions when making those decisions could threaten the maintenance of their self-concept.

Tests of Hypotheses 3a-3c: Threats to Identity, Feelings of Power, and Preferences for Number of Product Options.

Hypothesis 3a predicts that participants in Condition 1 will demonstrate a preference for a smaller selection of product choices than participants in Condition 2 immediately following the six decision task. Hypothesis 3b predicts that participants with a higher *Lead ID* will demonstrate a preference for a larger selection of product choices immediately following the six decision task. Hypothesis 3c predicts that participants that report higher ratings of personal power prior to experimental manipulation will show a preference for a smaller selection of product choices immediately following the six decision task. Preference for the product group with fewer options was regressed on *Condition*, *Lead ID*, and a pre-test measure of participants' general feelings of personal power (Table 9). This regression controlled for the type of product in the selection, potato chip flavors or bottled waters. *Chips or Water* was entered as a dummy variable with 0 = chips and 1 = water.

Hypothesis 3a was confirmed. Participants in Condition 1 preferred a smaller selection of product options to choose from than participants in Condition 2 (b = 1.427, S.E. = .693, p = .046 two-tailed). Hypotheses 3b was confirmed. As participant's *Lead ID* score increased their preference for a larger selection of product options to choose from also increased (b = 1.141, S.E. = .426, p = .011 two-tailed). Hypothesis 3c was supported. The participants who rated themselves as more powerful on a pre-test measure of their general feelings of personal power (the lower the score on this measure the more personally powerful they felt) were more likely to prefer the smaller number of product options to the larger number of product options (b = 1.944, S.E. = .486, p = .000 two-tailed). The finding for hypothesis 3c that participants, who rated

themselves higher on the scale items measuring their personal feelings of freedom to act without interference, or personal power, were significantly more likely to prefer fewer options. This lends some support to the validity of the product choice measure. Support for Hypothesis 3a suggests that participants in Condition 1 felt more powerful after completing the six leadership decision task than participants in Condition 2 immediately following the six decision task.

Table 10. OLS Regression of Independent Variables on Product Choices Preference Study 2. Experiment A.

	Product Choices Preference
Condition	
0 = Condition 1	1.427*
1 = Condition 2	(.693)
Pretest Global Power Scale Score	1.944*** (.486)
Leadership Qualities Avg. Score	1.141* (.426)
Product Group	
0 = Chips	-1.688*
1 = Water	(.726)
Intercept	-5.604 (3.520)
R^2	.441
df	44

Note: ***p < .001, **p < .01, *p < .05, two-tailed

Hypothesis 3c predicts that participants that report higher ratings of personal power prior to experimental manipulation will show a preference for a smaller selection of product choices immediately following the six decision task. Preference for the product group with fewer options was regressed on *Condition*, *Lead ID*, and a pre-test measure of participants' general feelings of personal power (Table 9). This regression controlled for the type of product in the selection,

potato chip flavors or bottled waters. *Chips or Water* was entered as a dummy variable with 0 = chips and 1 = water.

Hypothesis 3a was confirmed. Participants in Condition 1 preferred a smaller selection of product options to choose from than participants in Condition 2 (b = 1.427, S.E. = .693, p = .046 two-tailed). Hypotheses 3b was confirmed. As participant's *Lead ID* score increased their preference for a larger selection of product options to choose from also increased (b = 1.141, S.E. = .426, p = .011 two-tailed). Hypothesis 3c was supported. The participants who rated themselves as more powerful on a pre-test measure of their general feelings of personal power (the lower the score on this measure the more personally powerful they felt) were more likely to prefer the smaller number of product options to the larger number of product options (b = 1.944, S.E. = .486, p = .000 two-tailed). The finding for hypothesis 3c that participants, who rated themselves higher on the scale items measuring their personal feelings of freedom to act without interference, or personal power, were significantly more likely to prefer fewer options. This lends some support to the validity of the product choice measure. Support for Hypothesis 3a suggests that participants in Condition 1 felt more powerful after completing the six leadership decision task than participants in Condition 2.

Study 2, Experiment A Discussion

These findings support the theoretical proposition that decision options that are useful for maintaining an existing identity or gaining a broadly socially valued identity, are more valuable to decision makers and so lead them to feel more powerful when able to control their options. The findings support Hypothesis 3b. Options likely to be useful for the maintenance of a decision maker's self-concept are likely more valued, because the threat of a greater loss is facing these participants when they select an option for each decision. We could expect to only see this effect occurring in Condition 1 with a perfect manipulation resolving any threat that selecting the wrong option could disconfirm an important identity or selecting correctly could confer a socially valued identity for participants. However, the nature of the decision task and the possible

weak manipulation leaves some uncertainty. Hypotheses tested in Study 2, Experiment B regard the value of options, the maintenance of options, identity threat, and effects of identity-disconfirming information on this outcome measure. These adjustments are made in Study 2, Experiment B, which is detailed below.

CHAPTER 7: STUDY 2, EXPERIMENT B METHODS

Introduction to Study 2 Experiment B

Experiment B is a replication of Experiment A with the addition of useful information about the decision options available to the participants prior to making their decisions. In addition, the experimental manipulation was strengthened between conditions after results and exit interviews from Study 2, Experiment A revealed that some participants had missed the onscreen experimental manipulation either by ignoring the instructions or skipping past them. For Experiment B the between-condition manipulation was removed from the instructions screen and presented by a researcher who then asked follow-up manipulation check questions.

Experiment B Design

Experiment B is identical in procedures and pretests to Experiment A. As in Experiment A there were two conditions, Condition 1, more important decisions and Condition 2, less important decisions. Participants completed the same pretest measures including (1) strength of leadership identity, (2) the Raven Advanced Matrices Test of cognitive ability and as a measure of engagement in the study, and (3) feelings of personal power. These instruments were given prior to the manipulation and organizational leadership decisions task.

The decision task for Experiment B contains an altered information screen prior to participants proceeding to the final decisions screen. This screen includes the same decisions options for each decision used in Experiment A, but adds seven information icons that, when selected, open a pop-up window containing useful information for determining the best decision option for achieving the decision's instrumental goal. Time stamps record when icons are selected and when closed to provide measures of the amount of time in seconds that participants spent looking at useful information. Data is also collected on how many times an information icon was opened, the answers provided for each decision, and all pre- and post-test measures.

The post-test measures in Experiment B are identical to those in Experiment A, including (1) a scale to measure the importance of the decisions, (2) scales to measure participant's emotions after the decisions, and (3) personal feelings of power. After completing surveys, participants were asked to provide a brief paragraph explaining their reasoning for three randomly chosen answers they chose during the decision task. After completing the study, a researcher conducted an exit interview with manipulation checks and debriefed participants.

Variation in Design Element of Information for Experiment B for Conditions 1 and 2

The change in the experimental manipulation is discussed above in the Chapter 5. In experiment B for both Condition 1 and Condition 2 the opportunity to access useful information about decision options was added. The video instructions also included an additional tutorial explaining how to access and use additional information for making better decisions (See Appendix A, Figures 10 and 11) and described the three types of information available. For each decision in the six decision task, the problem was followed by a page presenting three options for solving the problem. These options are the same as those provided in Experiment A (see Appendix A, Figure 13). However, in Experiment B there were seven information icons on each page (see Appendix A, Figure 13) and participants had to proceed past this page to indicate their final decision and their degree of certainty in the option they chose. For each set of options there were icons indicating one piece of general helpful information as well as "pro" and "con" information for each of the three options. The additional information icon was located to the far left of the three options. The "pro" and "con" icons were found underneath the option to which they referred (See Appendix A, Figure 13).

When participants clicked on an information icon, a time stamp was recorded in a separate database. Time stamps indicated the exact time the icon was selected to the hundredth of a second. Clicking on an information icon opened a window covering the area where the three

options appear (See Appendix A Figure 14 – 16). The participant could choose to click a small "x" in the top corner of the pop-up window to close it and another time stamp would record the time. The amount of time between any two such events was later calculated by subtracting the earlier time form the latter. The options were designed to be of varied levels of attractiveness with the least satisfying being the correct option. After completing the six decision task the participants completed post-study measures identical to those in Experiment A.

Conditions for Study 2 Experiment B

Conditions in Study 2, Experiment B similarly vary the importance of the organizational leadership decisions task between conditions by changing the definition of the situation for the decision task. In Experiment B changes were made to the protocol to strengthen the manipulation of decision task importance.

Within Experiment A there are two conditions, Condition 1, "Important Decisions" and Condition 2, "Less Important Decisions". Within Experiment B these two conditions are mirrored, with the same kind of manipulation intended to make the decision task feel less important in Condition 2 than in Condition 1. The between condition manipulation in both Experiments A and B were originally designed to be identical with the exception that experiment B added the opportunity to access useful information helpful for making better decisions. This design was to allow for concurrently running both Experiments A and B. This would have allowed direct comparisons between decisions made under identical conditions with and without the opportunity for participants to access useful information.

However, the two studies were run consecutively and changes were made to the experimental protocol to strengthen the manipulation in Experiment B. In Experiment B, the manipulation instructions were delivered first by a researcher in person, allowing the researcher to follow up with manipulation check questions. In Experiment A, participants heard a recording of the instructions while they were reinforced by text on the screen. In Experiment B the

participant saw an instructional video in place of the audio in Experiment A. Audio instructions were the same and the video demonstrated how to complete the six decision problems and use the additional useful information to get the correct answer. With of the exception of the strengthened manipulation, additional instructional video, and availability of additional information in Experiment B, all else remained identical between the two studies.

In both Experiments A and B, two conditions varied the importance of the six decision task by defining the situation differently. Both conditions included the possibility for gain or loss in respect to some aspect of the participant's self-concept. However, Condition 1 includes a threat to the maintenance of the decision maker's self-concept with an evaluation of their performance in a highly valued social role, leadership. The content of the decision task itself is identical between conditions, and includes a decision being made by a person who has a leadership role. Assuming participants' leadership identity is equally distributed across conditions by random assignment participants in both conditions are expected to feel it is important to make the best possible decision. However, participants in Condition 1 face a real likelihood of disconfirming a leadership identity. If participants experience a threat to the maintenance of their leadership identity, this perceived threat likely varies with the strength of that identity. Assuming that a significant majority of participants across conditions believe they would make a good leader, we can expect differences between conditions when controlling for the strength of the participant's leadership identity.

Condition 1 Experiment B

In Condition 1, important decisions, participants read text on screen and heard recorded audio describing the decision task. A cover story explained that researchers were interested in learning more about participants' physiological responses to different kinds of decisions. The introduction to the task explained that the participant would be taking a leadership ability test while researchers measured their physiological responses through electrical leads attached to

their left hand. The manipulation included the description of the types of decisions participants in each condition were given. In order to increase the perceived validity of the leadership test, the instructions described the decision task as the "Early Career Advancement Natural Leadership Intelligence Test for Men," and explained the test was in use by universities and Fortune 500 companies to gauge leadership aptitude in prospective job candidates. Additionally, the introduction told participants that if they were satisfied with their score on the test they could request that the scores be posted on their official university transcript. Because the six decisions task was described as a test and an indicator of leadership aptitude and intelligence, participants were led to believe that their performance might allow them to claim the highly-valued role of leader. In this way participants could gain or lose in the verification of leadership identity respective of their own self-conceptions.

Instructions also stated the goal in these decisions was to select the best option for the organization. The description included an explanation that the task would include a challenge to their leadership that had to be resolved to solve the problem. Instructions again emphasized that the goal was to select the option that was best for solving the organizations' problems.

Condition 2 Experiment B

Changes to the experimental protocol were also applied to instructions given in Condition 2. A research assistant provided instructions in person and a video explained how to use information to make the decisions. As in Condition 1, instructions explained that researchers were interested in participants' physiological responses. However, the importance of the decisions was reduced relative to Condition 1 by informing participants they would be answering series of questions written by graduate students. Participants were told they would be helping researchers evaluate new graduate students' abilities to develop fair, relevant, and sufficiently difficult questions from using an organization's textbook. As in Condition 2 of Experiment A, instructions explained that the questions were not a test of participants' abilities and would only

help evaluate whether the instructor wrote good questions. All other procedures from Condition 2 of Experiment A were included in Condition 2 of Experiment B.

Instructions in both conditions state the goal of these decisions is to select the best option for the organization. As in Experiment A, the description of each decision explained the problem for the organization and a decision that needed to be made to solve the problem, again emphasizing that the goal was to select the best option for solving the organizations' problems.

Independent Variables Experiment B

Identity Threat in Decision Situations. The importance of decisions was altered between conditions by increasing the level of threat to the participant's leadership identity. In Condition 1 the threat to the participant's leadership identity was increased by defining the six decision task as a standardized test of leadership aptitude. Greater identity threat in Condition 1 was predicted to make the decisions feel more important relative to Condition 2. In Condition 2, threats to participants' identities were reduced by making the decisions an assessment of graduate students' question writing abilities. In analyses the condition is entered as a dummy variable where 0 = Condition 1 and 1 = Condition 2.

Dependent Variables

Preference for Number of Product Choices After Decisions. Immediately after completing the six decision task in both conditions participants received instructions telling them to use a slide-bar to indicate much they would prefer to select from an assortment of three varieties of a product or an assortment of fifteen varieties of the same product (see Appendix A, Figures 18 and 19). The type of product was randomly selected by the online interface to be either potato chip varieties or brands of water. The products were pictured, but labels were blacked out so brands of water and flavors of chips were obscured. The slide-bar indicated a number between one on the far left and ten on the far right, with one unit increments in-between. The instructions explained that 1 indicates they highly prefer choosing from the three product

assortment and 10 indicates they highly prefer selecting from the fifteen product assortment. Hypothesis 3 predicts that participants will prefer to choose from fewer products after making more important decisions than when they make less important decisions.

This measure is adapted from prior research by Inesi et al. (2011). They found that participants who were primed by writing about situations where they had control over others preferred a smaller assortment of products to choose from than participants who were primed by writing about situations where others had control over them. Inesi et al. (2011) predicted that priming feelings of power by writing about having power over others would result in a desire for fewer choices in a subsequent product selection preference task. That research also suggested that feeling less powerful in a prior situation, one where participants write about others having power over them, would result in a desire for more choices in a subsequent product selection preference task. Inesi et al. (2011) proposed that feeling less powerful meant feeling as if options were constrained and so these feelings would lead people to prefer more options in a subsequent situation. Feeling more powerful means feeling as if options were unconstrained and so, participants were expected to prefer fewer options. The theory presented here suggests that the same options for a decision can become more valuable when their exclusion threatens the maintenance of a more valued aspect of the self-concept. Therefore decision makers who made more important decisions should feel more powerful after controlling a more valuable resource. Further, if information has the potential to exclude more valuable options for maintaining important aspects of the self-concept, the information is more likely to be avoided. Being able to control more valued options is predicted to cause participants to feel more powerful. Accessing information could restrict access to valued options necessary for maintaining the self-concept and achieving the decisions instrumental goals, and is predicted to make the decision maker feel less powerful. This disruptive information is predicted to leave a decision maker feeling less powerful after making more important decisions, if accessing useful information indicating that identity confirming options are incorrect.

Average Certainty about Decisions Made. Certainty was measured after the participant selected an option for each decision and before moving on to the next decision. A slide-bar appeared underneath an option after it was selected. A 1 anchored the slide-bar on the far left, indicating low certainty and a 7 indicated high certainty on the far right. The indicator started centered with a "4" visible underneath. The indicators could be clicked and dragged to indicate degree of certainty on the slide-bar (See Appendix A, Figure 17). The degree of certainty and the option selected was recorded as the participant selected the proceed icon at the bottom of each decision's options page. The certainty scores for the six decisions were averaged to produce a measure of overall decision certainty. For this scale, higher scores, closer to seven, indicate greater average certainty about the six decisions. Lower scores, closer to 1, indicated lower overall certainty.

The theory proposes that decisions feel more important when they pose a greater threat to the maintenance of the self-concept because the decision maker has more to lose if they choose wrongly. Feeling a greater threat to the self-concept generates greater uncertainty prior to a decision and generates greater value for options that will maintain their self-concept. The theory also proposes that making a decision reduces uncertainty and causes a decision maker to feel better. Greater threats to the decision maker's self-concept will increase the value of options that the decision maker believes will maintain the self-concept. If threats to the self-concept create greater uncertainty for participants whose leadership identity is at stake, participants are likely to feel more certain after choosing options they believe will maintain that identity.

If some options are in fact more valued than others because they can either confirm or confer a new socially valued identity on the person or undermine it for those who already held the identity, then we could expect to see *Overall Certainty* increase with lower threat and increase with greater threats to identity. Higher leader identity would generate greater uncertainty. The act of deciding in a way that maintains a leader identity under threat should consequently generate greater certainty. The greater threat to the person's identity, the greater the

value of options that maintain that identity and the more certain the person should be after choosing that option.

Information Icons Accessed. This variable was a continuous measure. Each time a participant clicked on an "additional," "pro" or "con" icon, the C4 control center registered which icon was opened, and in which order (See Appendix A Figure 13 -16). The number of icons opened ranged from 0 (none opened) to 42 (all icons opened).

Average Time in Seconds Participants Spent Looking at Useful Information and Critical Information. Each time a participant clicked on an icon, a pop-up window was opened and a time stamp was recorded by the C4 control center (Event 1). When the participant clicked again to close the window, another time stamp (Event 2) was recorded. The time for Event 1 was subtracted from the time for Event 2 to produce the total time an individual window was open. The total time in seconds that participants spent looking at windows for each decision was added and averaged across all six decision situations.

Further, events were recorded for each individual icon type (pro, con, or additional). When an event was recorded that corresponded to the information specifically designed to direct the participant to the correct answer, the difference in time stamps for that window were coded as "time looking at critical information." This information is necessary for analysis of the differential impact of critical information relative to other types of information on reported emotions and product preference ratings.

Time to Answer Decision Problems Overall. A time stamp at the beginning of the first problem and the final time stamp indicating the participant had completed the six decision problems were used to calculate the total overall time participants spent making the decisions. This variable was a continuous variable, calculated in seconds.

Self-Reported Importance of the Decisions and Importance Scale. Participants answered seven questions about the importance of the decisions on scales ranging from 1 to 10, where one indicted either "not important" or "not concerned" and ten indicted "concerned" or "important" (see Appendix A, Figure 21). Items included: (1) *How concerned were you about what might*

happened to the organization because of your decisions? (2) *How important was it for you to make the best decisions you could? (3)How important was it for you to make the decision you wanted to make without outside interference? (4) How important was it for you to recognize which option was the best for furthering the organizations goals? (5) How important was it to you to score well on this test? (6)How concerned were you with how the decisions you made reflect on the kind of person you are? (7) How important was it for you to do your best while making these decisions?*

These questions were designed to measure differences in (1) how important the decisions were in each condition, (2) how important the decisions were in relation to the strength of participants leadership identity, (3) how important these questions were between conditions in relation to pretest strength of leadership identity, and (4) how important organizational goals were relative to personal goals. Participants moved a slide-bar that was initially centered on "4" to answer each question. These measures were summed and averaged to form a scale of "Importance of the Decisions."

Self-report of Positive and Negative Emotions and Emotions Scales. Originally two scales, positive feelings and negative feelings, were adapted from the "POSEMOT scale" (Lucas and Lovaglia 1998) with the addition of two questions about participants level of engagement and level of uncertainty and presented as eleven semantic differential scales asking participants about how they felt while making the series of six decisions (See Appendix A, Figure 20).

Positive emotions were measured with four semantic differential scales. Participants were asked to respond to the following questions presented individually: *(1) How happy did you feel while making decisions during today's study? (2) How satisfied did you feel while making decisions during today's study? (3) How excited did you feel while making decisions during today's study? (4) How engaged did you feel while making decisions during today's study?*

Seven semantic differential scales collected data regarding negative emotions. Participants were asked to respond to the following questions presented individually. *(1) How frustrated did you feel while making decisions during today's study? (2) How anxious did you*

feel while making decisions during today study? (3) How angry did you feel while making decisions during today's study? (4) How regretful did you feel while making decisions during today's study? (5)How disappointed did you feel while making decisions during today's study? (6) How resentful did you feel while making decisions during today's study? (7) How uncertain did you feel while making decisions during today's study? Participants moved a slide-bar that was initially centered on "4" to answer each question. A high rating indicated that the participant experienced more positive feelings (Not frustrated, not angry, not regretful, etc.) and a lower rating indicated that the participant experienced more negative feelings (Very frustrated, very angry, very regretful, etc.). Three questions regarding *anxiety, frustration, and uncertainty* were then averaged to construct the *Distress Scale*. The answers to these questions were reverse coded, so that higher scores corresponded to more negative feelings.

Control Variables

Leadership Identity Strength measure. For the leadership identity measure participants rated themselves on thirty terms using a slide-bar to indicate on a 1 to 7 scale, where 1 indicated the term "does not describe you at all" and 7 indicated the term "describes you very well". The actual scale for leadership identity consisted of ten from the thirty items averaged (see Appendix A, Figure 2). These ten items together were determined by results in study 1 to form a valid indicator of strength of a person's leadership identity. These ten terms were *busy, certain, unshakable, self-assured, decisive, mature, independent, assertive, virtuous, shows good judgment.*

General Feelings of Powerlessness Scale. This measure was adapted from scales developed by Nesler et al. (1999). The scales were originally developed to measure personal feelings of power, based on what these authors referred to as "global social power." Our "feelings of personal power" measure was derived from scales included in the "global social power" measure which included several subscales based on French and Raven's (1959) bases of

power. These subscales had both status and power elements and the questions selected and adapted for this measure were more closely related to Weber's (1922) definition of power as the ability to realize one's own will or gain one's own interest against the resistance of others ([1922] 1946: 180). The scales measured the participants' perceptions that they had a personal capacity to act in accord with their own will or the ability to cause others to act in accord with their will. While these measures can, in some degree, be interpreted in ways that may conflate answers with self-perceptions of status, the scale as a whole is meant only as a measure of personal feelings about one's own power to act without constraint (see Appendix A, Figure 5 and 6). The questions for this scale were taken from three subscales originally. These were the (1) global power (2) resistance and control and (3) compliance subscales. The personal feelings of power scale was made up of the following questions to reflect a person's general sense of their opportunities to act in line with their own will or to cause others to bend to their will: *(1) How likely are others to get what they want from you? (2) How likely are you to get what you want from other people? (3)How easily convinced are to work harder at work on school projects when urged to by others? (4)How likely are your opinions of co-workers or classmates to be affected by the views of others? (5) How likely are you to get the credit you deserve for the work that you do? (6) How much do you worry about how other people think of you? (7) How likely are you to change your mind when others disagree with you? (8) How likely are you to act in accord with the wishes of others even when they conflict with your own?*

The pretest for participant's general feelings of power was included as both a control measure and to address a possible alternative explanation for why people's sense of power was affected in the experiment. The measure could help determine support for or undermine theoretical explanation for suggesting that decision options feel more valuable when the self-concept is threatened. In conjunction with experiment B this control measure may help isolate and support explanations in the theory about what drives the observed effects. The general power pretest indicates how powerful participants perceived themselves to be at the beginning of the study by indicating how much control they believed they had over experiences in their lives.

These measures were captured using a slide-bar and a ten point scale where 1 = not likely 10 = likely or 1 is worried and 10 = not worried. Two questions, number *(2) "How likely are you to get what you want from other people?"* and number *(5)" How likely are you to get the credit you deserve for the work that you do?"* were reverse coded and then all items were averaged for each participant. A higher score indicates a person feels generally less powerful and able to enact their own will and a lower score indicates a person feels generally more powerful and able to enact their own will.

Raven Advanced Matrices Decision Task Pretest. The Raven's Advanced Progressive Matrices Test (Raven, Raven, and Court 2004) was developed as a cross-cultural intelligence test made up of sixty progressively more difficult multiple choice problems. A selection of the first ten problems from the Raven Advanced Matrices Cognitive Ability test was included in the pretests for this study because performance on these problems can indicate a participant's level of engagement in the study. Ample time (6 minutes and 40 seconds) was provided to finish this portion of the study. College students should have little trouble getting a score of 5 or above, and so scores lower than 5 serve as a proxy for engagement on the part of participants. Level of engagement is important because (1) low engagement provides an alternative explanation for not accessing useful information (2) indicates participant is predisposed to treat the following decision questions as a trivial task (3) serves as a control of participants whose lack of engagement leaves them unlikely to be affected by the manipulation or provide useful data. The questions also serve as measures of cognitive ability and will serve to determine a baseline for each participant's galvanic skin response readings during decision-making in later analyses. Comparisons of biometric readings from this initial task and the post-manipulation decision task can serve to determine the relative arousal of participants between conditions and by the strength of their leadership identities.

The design of these problems as the recognition of geometric patterns rather than story problems is useful here because geometric patterns are unlikely to evoke feelings associated with

other socially related meanings that might be found in word problems (See Appendix A, Figure 3 and 4). Feelings that occur while making these decisions can be assumed to result from the level of difficulty of problems. In later analysis not yet conducted the galvanic skin responses measured while answering these problems can serve as a baseline measure for each individuals galvanic skin response while making decisions and the average response while answering could be used to compared to with galvanic skin response readings taken while participants are selecting an option for making each of the organizational leadership decisions. Planned analysis includes between and within each condition assessments of differences in response from baseline readings in respect to the strength of the leadership identity measure for experiment A. Additionally the same test would be applied in experiment B as well as efforts to detect changes in galvanic skin response when participants access various types of useful information to make decisions in experiment B and when they do not.

Average Read Time for Problems. For each decision, a "problem" screen containing only the problem to be solved, the decision to be made, and the goal of the decision was presented to participants. A proceed button on the screen prior to this one recorded a time-stamp indicating the participant began reading the problem. A button on the bottom of the problem screen was also marked proceed. When participants clicked on this button to proceed to view their options for solving the problem, another time stamp was recorded to indicate the participant proceeded to the options. The time difference between the "proceed to options" event and the "began reading problem" event was calculated for each of the six decision problems. Amounts of time (in seconds) reading problems were added and averaged across the six decision problems. This controls for the reading speed of participants as a potential covariate impacting how much information they might have been willing to access prior to making the decision.

Product Group. The product choice measure was developed in line with Inesi et al. (2011) however the variety of products was cut down from four products to two because the

original measure as outlined found no difference between products. However, we controlled for product group and found differences in reported preference for number of choices in respect to product (see Appendix A Figure 18 and 19). *Product Group* was coded as a dummy variable for analysis where "0" was chips choices and "1" was water choices.

Year in School. Year in school was a demographic variable collected prior to participants entering the study room. Participants were recruited over summer and the beginning of fall semester. Participants in summer tended to be more advanced students than participants in the fall, and some of the students during summer session were from a local community college. This variable allows control for experience that might affect certainty in decisions, feelings of power, or leadership identity. It was coded as a 5-level ordinal variable where 1 = Freshman, 2 = Sophomore, 3 = Junior, 4 = Senior, and 5 = Graduate Student.

High School Grade Point Average. A demographics questionnaire asked participants to report their high school grade point average. Grade point average was used as a control in later regression analyses, as it may reflect a participant's ability to make decisions.

Procedures for Experiment B

Initial Pretest Procedures

Procedures for experiment B remained identical to procedures for experiment A up to the manipulation with the exception of setting the log in page to study B. Condition was randomly assigned by coin flip prior to set up. Participants were given the additional instruction to push the black call button to summon the researcher after finishing the Lead ID measure, the matrices pretests, and the following personal power survey. Red text in bold was added to the page that appear immediately after completing personal power survey instructing the participant to "please stop here, push the black call button and wait for the researcher to return.

New Between Conditions Manipulation

When the researcher returned to the study room they first asked the participant if they had any problems, told them that the pretests indicated the biometric equipment was working, and explained they would now begin the main part the study. The researcher then explained that they would be reading directly from a script to assure that everyone heard exactly the same instructions and would be asking a couple follow up questions to make sure the instructions were clear. They then told the participant if they were not able to answer the questions they would read the script over again for them and ask a second time. The follow up questions were in fact a manipulation check and the script varied according to condition (See Appendix B). The follow up questions asked the participant to (1) explain what the researcher were interested in learning about in today's study (2) what were the researchers interested in measuring (3) and what would they be doing for the main part of the study.

In Condition 1, the participant needed to be able to answered the follow questions with some variant of (1) researchers were trying to improve a leadership test (2) researchers are interested in biometric readings of participants while they answer various types of leadership questions (3) they would be taking a leadership aptitude test. In Condition 2, the participant need to answer with some variant of (1) researchers are interested in evaluating the quality of questions produced by graduate students for an online class on complex organizations (2) researchers are interested in biometric readings of the participant while they answer questions written by various students (3) they will be answering questions written by graduate students for an online course in organizations and leadership and this was not a test. Using information gleaned from exit interviews in experiment A, the instruction for Condition 2 emphasized that the participant was not taking a test and there would be no way to determine a score or measure their performance. Despite these instructions some participants in Condition 2 answered that they would be taking a leadership test. If this answer was given the instructions were reread and the questions asked again. No participant needed the instructions read more than twice in either condition. The instructions for participants in Condition 1 included the caveat that if they were

interested in knowing how they scored on the leadership text after the study they could ask the researcher for a unique code and web address they could use to log onto a website later in private and check out their performance.

The participant was instructed to click on the proceed button and follow the onscreen instructions as soon as the researcher lest the room. The text and audio description of the instructions they had just been given and additional instructions on how to answer the decision problems using the helpful information available. This included a short onscreen film of a sample question being answered with text that described they type of information they would see by clicking on various information icons (see Appendix A, Figures 10 and 11).

Post Tests Procedures

After the participant completed the three six decisions task, the product preference task, the posttests for feelings about the decisions, importance of the decisions, and a posttest measure of personal power they saw a screen with red text that instructed them to remove the biometric leads attached to their fingers with Velcro and to remove their arm form padded cradle so they could use the keyboard to explain a few of their answers. Answers from three of the six questions were randomly selected by the computer program and appeared one at a time with a text box below (see Appendix A, Figure 24). The question read “for decision X you answered Y” and the option selected by the participant was shown on the screen with the instructions “please explain why you choose this answer.”

After the participant finished explaining the three answers they reached the final screen for the study with a message that said “Thank you. The study is now complete. Your session key is DLS xxx. Please wait for C.P. Kelley” (see Appendix A, Figure 25) Participants then signaled the researcher by pressing the black call button.

Exit Interview Procedures

When the researcher entered the study room, they began by saying “thank you for being in the study, I need you to fill out a brief form so we can pay you and get you on your way, where are you headed after this?” This first question was in fact part of the exit interview and was meant as a check to determine of the participant had been motivated to finish the study more quickly because they had an appointment or class immediately following the hour their session was scheduled.

The researcher asked the participant to move over to a second table in the room where they had put their phone and book bag prior to beginning the study and sat down across from the participant. Next the researcher handed the participant a clipboard with a pay voucher attached, a pen, and an envelope with a twenty dollar visa card enclosed. The researcher then asked “do you mind if I ask you a few questions about the study before I debrief you on the study, you have already been paid so you are not obligated to answer anything. It will just help us out if you don’t mind.” All participants agreed to answer questions (See Appendix B). The researcher would also note in the log book at this time or if anytime during or after the interview the participant asked for the website address and code to view their scores, from Condition 1, and if any participant from either condition asked how well they had done on the test. If the participant asked about their performance and was in Condition 1 it was noted as a successful manipulation check. If a participant in Condition 2 asked about their performance on the test it was noted as problematic manipulation in the log book however no participants were dropped from the study. Later checks indicated that participants with very high scores on the leadership identity strength measure were more likely to ask about their performance in both conditions.

The researcher then asked participants if they had any problems or difficulties with the study and if so to describe the problem. A few mentioned some technical issues but none had questions about the study content. Next they were asked to explain what the study was about and what the researchers were measuring. This was a manipulation check. The researcher completed the series of exit interview questions thank the participant again for being in the study and for being willing to answer questions afterwards to help out. Finally the researcher debriefed the

participants telling them that the study had two conditions, describing the two, and that what the study was designed to determine was how people used information to make decisions that were more or less important to the participants. The researcher asked the participant to keep the details of the study confidential until the following semester so other had a chance to participate. The researcher explained it was Ok to tell friends they had been in a study where they made decisions in the sociology lab and to tell others whether or not they felt it was a worthwhile experience. The researcher then showed the participant back to the waiting room so they could leave the lab.

Of all the data collected during this study, data on galvanic skin responses, order of information, use, timing of many events, and calculations on exit interview data will be analyzed later for use in future research. The results reported here reflect only the hypotheses presented above as an investigation of the theory.

Planned Analyses

Hypothesis 4 predicts that participants making more important decisions will make decisions more quickly than participants making less important decisions. Hypothesis 4 will be tested with OLS regressions of *Total Answer Time* on *Condition, Lead ID Score, Total Reading Time,* and whether participants were born in the United States. Decision time is likely to be impacted by whether a participant's leadership identity is threatened, so accounting for *Lead ID Score* will allow comparisons between conditions as well as for analysis of the effects of *Lead ID* on total time a participant took to answer questions. The total reading time could reflect participant differences in reading ability rather than differences in their response to the experimental manipulation. Therefore, controlling for reading time is necessary to investigate the effects of *Condition* and *Lead ID Score* on the time spent by participants solving the problems. Finally, given that reading time may also be affected by whether participants grew up reading English, and so *Born in the U.S.* was used as a control variable. Further, it can be predicted that participants experiencing threats to identity are likely to make decisions more quickly than those that are not. Therefore, extended Hypothesis 4 will be tested with separate regressions of *Lead*

ID Score on *Total Answer Time* in each condition. If participants in Condition 1 with higher *Lead ID Scores* make decisions more quickly than participants with lower *Lead ID Scores*, and this relationship is not seen in Condition 2, this provides support to the claim that identity threats are affecting how quickly people with strong leadership identities made their decisions.

Hypothesis 5 predicts that participants making more important decisions will look at less useful information than participants making less important decisions. Further, participants with stronger leadership identities should be more threatened by information, and so look at less information in Condition 1 than participants with weaker leadership identities. Access to information was measured in two ways: (1) How many useful information icons participants opened, and (2) the number of icons that would point them directly to the correct solution, hereafter referred to as critical information. OLS regressions of *Information Icons Opened* and *Total Critical Information Icons Opened* on *Lead ID Score* and *Condition* will be conducted.

Hypothesis 6 predicts that participants making more important decisions (Condition 1) will feel more certain after those decisions than participants making less important decisions (Condition 2). If participants feel positive emotions when they can reduce uncertainty through decision-making, then these positive feelings should be greater when the decision is more important. Further, these positive feelings should indicate to participants they reached the correct solution more when the decisions are more important. As in Experiment A, certainty was measured on a 7-point slide-bar where 1 = very uncertain and 7 = very certain. *Overall Certainty* will be regressed on *Condition* and *Average Total Critical Information Time* (in seconds), as critical information was expected to cast doubt on some options relative to others.

Hypothesis 7 predicts that participants will report stronger feelings when making more important decisions. A related prediction can be made that looking at critical information will result in participants reporting less positive feelings when making more important decisions. Both of these predictions are tested. The positive feelings and distress scale developed for Study 2, Experiment A will be entered into OLS regression. Emotions scales will be regressed on a dummy variable for *Condition*, the continuous variable *Total Critical Information Accessed*, and

Raven Test Score. Hypothesis 7 will be supported if participants in Condition 1, more important decisions, report stronger positive and weaker negative feelings than participants in Condition 2, less important decisions. Further, if critical information reduces the viability of options useful for the maintenance of the decision-maker's self-concept, then looking at more critical information should be related to less positive emotions.

Hypothesis 8 will be tested by analyzing the effect of critical information and leadership identity on how many products participants preferred to choose from in a subsequent decision task. The key difference between Experiment A and Experiment B is that participants in Experiment B have the opportunity to access useful information to make their decisions. If information represents a loss of control over decisions to decision makers, then participants who look at more critical and useful information should feel less powerful and prefer more products than participants who look at less critical information.

Further, participants with stronger leadership identities should find critical and useful information more threatening to the maintenance of their self-concept. This is the case particularly if the decision options that are more valued for maintaining the self-concept could be excluded from consideration by not accessing additional information. If this threat makes participants with stronger leadership identities feel less powerful, this is likely to impact their preference for the number of choices presented in a subsequent decision task, as demonstrated in Experiment A. An OLS regression will investigate whether participants' who look at more critical information and who have stronger leadership identities preferred to choose from fewer products than participants with weaker leadership identities, and whether this effect was observed by condition.

CHAPTER 8: STUDY 2, EXPERIMENT B RESULTS

Introduction

Results presented here tested the following predictions: (1) Participants making more important decisions will make those decision more quickly than participants making less important decisions, (2) Participants making more important decisions and who have higher leadership ID scores will access less useful information for making important decisions than participants making more important decisions who have lower leadership ID scores, (3) Participants making more important decisions will be more certain of their decisions than participants making less important decisions, (4) Participants who access more useful information for making more important decisions will report less certainty than participants who access less useful information for making more important decisions, (5) Participants who access more useful information will report less positive emotions than participants who access less useful information, and (6) Participants who look at more critical information while making decisions will prefer more products than participants who look at less critical information, due to the ability of information to exclude from consideration choices that are consistent with the participant's self-concept. Further, participants with stronger leadership identities in Condition 1, more important decisions, should prefer choosing from an assortment of more products than participants with weaker leadership identities.

Experimental sessions for Study 2, Experiment B were conducted in the Fall Semester of 2013. Participants were undergraduate men at a large Midwestern university. As in Study 2, Experiment A, participants were randomly assigned to participate in the "Natural Leadership Test" (Condition 1) or the "Evaluation of Graduate Student Questions" (Condition 2) (see Appendix A Figure 8a and 8b as well as Appendix D). Measures and procedures for Experiment B were the same as in Experiment A, though as outlined in Chapter 7 the instructions given to participants were altered to strengthen the threat to leadership identity between conditions.

Participants

One-hundred and two participants were recruited for Experiment B. As in Experiment A, all participants were men. Fifty-seven percent of the sample fell between the ages of 17 and 19. Hence, the sample for Experiment B contains a different age distribution than the sample recruited for Experiment A, which consisted of more juniors, seniors, and graduate students. The majority (85.1%) of participants were European American and born in the United States (92.1%). Ten percent of the sample reported their race as African American. Forty-two percent of participants were freshmen, 17% were sophomores, 25% were juniors, 15% were seniors, and 1% (one participant) was a graduate student. Two participants were excluded for equipment failure and for receiving different instructions than other participants. Four participants were excluded for Raven Matrices test scores lower than 5. This yielded ninety-six participant sessions for analysis.

Descriptive Statistics for Measures Used in Hypotheses Tests

Descriptive statistics in Table 10 show that participants who are making more important decisions (Condition 1) open more information icons (M = 19.22, s.d. = 12.65) than participants making less important decisions (Condition 2, M = 15.190, s.d. = 9.141). Participants in Condition 1 also spend more time on average looking at useful information (M = 12.75, s.d. = 13.59) than participants in Condition 2 (M = 9.65, s.d. = 7.85). As in Experiment A, participants making more important decisions also preferred to choose from a smaller assortment of products (M = 7.14, s.d. = 3.12) than participants making less important decisions (M = 7.60, s.d. = 3.167). Participants making more important decisions also took longer overall to complete the decisions than participants making less important decisions. However, participants making more important decisions spent less time in seconds on average looking at critical information (M = 41.57, s.d. = 52.16) than participants making less important decisions (M = 48.47, s.d. = 99.51). These participants in Condition 1 also spent less time reading the problems (M = 108.65, s.d. = 22.14) than participants making less important decisions in Condition 2 (M = 111.68, s.d. =

20.06). Hypothesis tests will be used to determine if leadership identity affects these differences between conditions, with those reporting a higher leadership identity more likely to avoid information in Condition 1, prefer fewer products, and less likely to access useful information for making their decisions.

As a manipulation check, conditions were compared on the seven item importance of decisions measure using a directional independent samples t-test. Results show that participants in Condition 1, more important conditions, reported the decisions were more important than participants in Condition 2, less important decisions (t = 1.817, *d.f.* = 87, p = .037, one-tailed).

Table 11. Means (Standard Deviations) for Dependent Variables
Conditions 1 and 2, Experiment B.

	Average Time Spent on Critical Information Icons, in Seconds	Avg. Read Time for Problems (in Seconds)	Post-Test Positive Feelings Scale	Post-Test Negative Feelings Scale	Time to Answer (in seconds)	Raven Test Score
Condition 1	41.57	108.65	6.87	4.32	817.70	8.63
	(52.16)	(22.14)	(1.45)	(1.94)	(349.59)	(1.35)
	N = 46	N = 46	N = 49	N = 49	N = 46	N = 49
Condition 2	48.47	111.68	6.27	4.85	723.06	8.57
	(99.51)	(20.056)	(1.45)	(1.66)	(221.18)	(1.47)
	N = 44	N = 47	N = 47	N = 47	N = 47	N = 47

Hypothesis Test Results

Hypothesis 4: Time Taken to Make Decisions

Hypothesis 4 predicts that participants making more important decisions will make decisions more quickly than participants making less important decisions. Based on descriptive statistics, it appears that participants in Condition 1, more important decisions, actually took

longer to make decisions than participants in Condition 2, less important decisions. However, it is necessary to investigate the impact of identity on how quickly participants answered. Decision time is likely to be impacted by whether or not the participant's leadership identity was threatened by the decision. If identity threat makes the decisions important for some participants, while the opportunity for gaining a valued identity makes the decisions important for others, these two groups may differ in how long they take to make the decisions. Total answer time is also a function of how long it took participants to read the problems and come to a solution, and this may be impacted by the participant's command of English. *Condition* (0 = Condition 2, 1 = Condition 1), *Lead ID score*, *total reading time*, and whether the participant was *born in the United States* (1 = born in the U.S., 0 = born outside the U.S.) were entered into an OLS regression predicting the total time participants took to finish the decision task.

Table 12. OLS Regression of Average Answer Time on Independent Variables
Study 2. Experiment B.

	Average Time to Answer Scenarios (in seconds)
Leadership Identity Avg. Score	-107.31**
	(40.134)
Condition	118.93*
	(57.883)
Avg. Read Time for Problems (in Seconds)	3.140*
	(1.379)
Born Outside U.S.	-172.89
	(117.69)
Intercept	895.40***
	(249.031)
R^2	.165
df	91

Notes: ***p<.001, **p<.01, *p<.05 (two-tailed)

Results show a significant impact of *Condition* on the total time participants took to make all decisions (b = 118.93, S.E. = 57.883, p = .043, two-tailed) though the result is in the opposite direction to that predicted by Hypothesis 4 (see Table 11). However, the coefficient for *Lead ID*

Score (b = -107.31, S.E. = 40.13, p = .009, two-tailed) shows that participants with higher leadership identity scores took less time to complete the decision task than participants with lower leadership identity scores. When regressions are conducted by *Condition*, the coefficient for *Lead ID Score* is significant in Condition 1 (b = -175.17, S.E. = 58.26, p = .004, two-tailed) but not in Condition 2 (b = -6.202, S.E. = 50.591, p = .903). This suggests that participants in Condition 1 whose identities were threatened by the decision indeed made their decisions more quickly. Therefore, hypothesis 1 is partially supported, in that participants whose identities are threatened make their decisions more quickly.

Hypothesis 5: Identity and Accessing Useful Information

Hypothesis 5 predicts that participants with higher leadership identity scores will access less useful information than participants with lower leadership identity scores. Access to information was measured in two ways: (1) How many useful information icons participants opened, and (2) number of icons that would point them to the correct solution, hereafter referred to as critical information.

OLS regressions of *Information Icons Opened* and *Total Critical Information Icons Opened* on *Lead ID Score* and *Condition* were conducted (see Table 12). Raven test scores were used as an indicator of cognitive ability. If participants with greater cognitive ability are less likely to let feelings affect their behavior during decisions, then higher *Raven test scores* are likely to be correlated with a greater number of information icons opened. The results show that participants with higher *Lead ID Scores* opened significantly fewer information icons during the study (b = -4.257, S.E. = 1.54, p = .007, two-tailed) than participants with lower *Lead ID scores*. *Condition* was a significant predictor of the number of information icons opened, though the coefficient indicates participants opened more information icons in Condition 1, more important decisions (b = 4.634, S.E. = 2.209, p = .039, two-tailed). However, Hypothesis 5 receives some support in that participants theorized to be threatened by useful information, those with higher *Lead ID Scores*, opened significantly fewer pieces of information than participants with a lower

Lead ID Score. Further, the significant impact of *Lead ID Score* in Condition 1 (b = -6.018, S.E. = 2.32, p = .013, two-tailed) is weaker in Condition 2 (b = -2.099, S.E. = 1.947, p = .287, two-tailed), as might be expected given decisions in Condition 2 were less important.

Table 13. OLS Regressions of Information Variables on Lead ID Score
Study 2, Experiment B.

	Useful Information Icons Opened	Total Critical Information Icons Opened
Leadership Identity Score	-4.257** (1.535)	-.606** (.216)
Condition *0 = Cond 2* *1 = Cond 1*	4.634* (2.209)	.677* (.311)
Intercept	35.580*** (9.459)	4.937*** (1.059)
R^2	.109	.113
df	94	94

Note: ***p < .001, **p < .01, *p < .05, two-tailed

The total amount of critical information participants looked at was also regressed on *Lead ID Score* and *Condition*. These findings are similar to those for *total information icons opened*. Participants with a higher *Lead ID Score* looked at significantly less critical information (b = -.606, S.E. = .216, p = .006, two-tailed) than participants with a lower leadership identity score. Participants in Condition 3 on average looked at more critical information icons (b = .677, S.E. = .311, p = .032, two-tailed). Again, the effect of *Lead ID score* on *amount of critical information* is significant in Condition 1 (b = -.770, S.E. = .332, p = .025, two-tailed) and not significant in Condition 2 (b = -.404, S.E. = .270, p = .141, two-tailed). This provides further support to Hypothesis 5.

Hypothesis 6: Certainty of Participants Making More or Less Important Decisions

Hypothesis 6 predicts that participants making more important decisions (Condition 1) will feel more certain after those decisions than participants making less important decisions (Condition 2). If participants feel positively, by reducing uncertainty through decision-making, then these positive feelings should be greater when the decision is more important. Further, these positive feelings should indicate to participants they reached the correct solution more when the decisions are more important. As in Experiment A, certainty was measured on a 7-point slide-bar where 1 = very uncertain and 7 = very certain. *Overall Certainty* was regressed on *Condition* and *Average Total Critical Information Time* (in seconds), as critical information was expected to cast doubt on some options relative to others.

Results indicate that participants who made more important decisions in Condition 1 reported significantly greater certainty (b = .332, S.E. = .145, p = .025, two-tailed) than in Condition 2 (see Table 13). Further, while not significant, the coefficient for *Average Total Critical Information Time* (b = -.013, S.E. = .007, p = .051, two-tailed) indicates that participants who spent a longer time looking at critical information were indeed less certain about their decisions. Separate regressions were run to investigate the impact of *Average Total Critical Information Time* on *Certainty* in each condition. A significant relationship was found between *Certainty* and *Average Total Critical Information Time* in Condition 1 (b = -.020, S.E. = .008, p = .014, two-tailed), but not in Condition 2 (b = .012, S.E. = .012, p = .309, two-tailed).

Hypothesis 7: Important Decisions, Accessing Critical Information, and Reported Feelings

Hypothesis 7 predicts that participants will report stronger feelings when making more important decisions. A related prediction can be made that looking at critical information will result in participants reporting less positive feelings when making more important decisions. Both of these predictions are tested in this section. The positive feelings scale developed for

Study 2, Experiment A was regressed on a dummy variable for *Condition*, the continuous variable *Total Critical Information Accessed*, and *Raven Test Score*. This analysis shows that participants in Condition 1 reported more positive feelings (b = .652, S.E. = .293, p = .028, two-tailed) than participants in Condition 2. This supports Hypothesis 7. Further, a negative and significant relationship is found between *Total Critical Information Accessed* and *Positive Feelings* (b = -.216, S.E. = .094, p = .025, two-tailed). Participants making more important decisions felt more positively after the study, but reported less positive feelings for every piece of critical information they accessed.

Table 14. OLS Regression of Certainty on Condition and Average Time Looking at Critical Information, Study 2, Experiment B.

	Overall Certainty
Condition *0 = Condition 2* *1 = Condition 1*	.332* (.145)
Avg. Total Critical Info Time (in seconds)	-.013 (.007)
Intercept	5.678*** (.123)
R^2	.079
df	99

Notes: ***p<.001, **p<.01, *p<.05 (two-tailed)

Hypothesis 8: Information Use, Leadership Identity, and Product Preference

Hypothesis 8 predicts that participants who access more useful or critical information for making an important decision will prefer to choose from a larger assortment of products than participants who access less useful or critical information. The key difference between Experiment A and Experiment B is that participants in Experiment B have the opportunity to access useful information to make their decisions. If information represents a loss of control over

decisions to decision makers, then participants with stronger leadership identities should find the information more threatening to the maintenance of their self-concept. This is the case particularly if the decision options that are more valued for maintaining the self-concept could be excluded from consideration by accessing additional information. If this threat makes participants with stronger leadership identities feel less powerful, this is likely to impact their preference for the number of choices presented in a subsequent decision task, as demonstrated in Experiment A.

The number of products preferred was regressed on the participants' access of useful information. In a model regressing the number of products preferred on *Condition, Product Group (Chips or Water),* and *Average Time Spent Looking at Critical Information*, there are no significant effects of these variables on *Product Choice Preference.* However, in regressions on each condition separately, *Average Time Spent Looking at Critical Information* significantly predicted the number of products from which participants preferred to choose, but only in Condition 1, more important decisions (b = .070, S.E. = .034, p = .049, two-tailed). This means that for every 15 seconds participants spent viewing critical information in Condition 1, their preference rating for more products went up by a point. This provides support for Hypothesis 8.

Further, given the ways in with the Product Choice Preference measure have been used in past research, it makes sense to isolate the effects of looking at information in the last decisions scenario on product choice preference ratings. *Product Choice Preference* was regressed on *Lead ID Score, Condition, Product Group (Chips or Water),* and *Total information icons opened* for each of the decision scenarios. Of particular interest is the effect of looking at information in Scenario F, "Request for Time Off." The coefficient for *Total Info Used in Decision "Request for Time Off,"* was positive and significant (b = .529, S.E. = .214, p = .015, two-tailed). This provides additional support for Hypothesis 8.

Table 15. OLS Regression of Product Choice Preference on the Amount of Useful Information Accessed, with Controls, Study 2, Experiment B.

	Product Choice Preference
Condition *0 = Condition 2* *1 = Condition 1*	.565 (.715)
Lead ID Score	.481 (.506)
Amount of Info Used, "Bradford Arena"	-.101 (.196)
Amount of Info Used, "Investment Group"	-.236 (.231)
Amount of Info Used, "Promotion Choice"	.087 (.236)
Amount of Info Used, "Employee Complaint"	-.306 (.214)
Amount of Info Used, "New Assistant Director"	.015 (.251)
Amount of Info Used, "Request Time Off"	.529* (.214)
Product Group (Chips or Water)	1.076 (.776)
Intercept	4.820 (2.802)
R^2	.135
df	94

Notes: ***p<.001, **p<.01, *p<.05 (two-tailed)

An OLS regression was also conducted regressing the number of products participants preferred on participant *Lead ID Scores* and *Condition*. Against predictions, there was no significant impact of *Lead ID Score* on *Product Choice Preference*. Participants with higher leadership identity scores preferred more choices in a subsequent task than participants with a lower leadership identity score but this difference was not significant (b = .736, S.E. = .446, p =

.051, one-tailed). However, this weak effect appears to be driven by participants in Condition 2, less important decisions. Participants with stronger leadership identities in Condition 2 preferred to choose from more products than participants with weaker leadership identities (b = 1.070, S.E. = .664, p = .114, two-tailed). No significant impact of *Lead ID* on *Product Choice Preference* was found in Condition 1, though the effect is in the same direction as in Condition 2 (b = .464, S.E. = .607, p = .448, two-tailed). Participants with stronger leadership identity scores preferred to choose from fewer options in both conditions, but these relationships were not statistically significant.

Exit Interview Responses

The exit interview for Experiment B included a number of additional questions. The initial questions served as a manipulation check as described in the design section. Several additional questions assessed elements of the experiment related to the use of helpful information during the six decision task.

After the initial manipulation check questions the researcher next asked participants if, after reading the leadership scenarios, there were any scenarios they felt more surely about than others, and if so to give an example. This question was intended to determine which question each participant might have felt was most important. Most commonly indicated were the (1) Employee request for Time Off, (2) Handling Complainants, and (3) Bradford Arena Problem.

The researcher then explained they were going to ask a couple questions that might sound redundant, like they were asking the same things twice, and requested the participant to listen carefully so they would recognize the difference. The researcher asked “How important was it to you that you give the answer you felt was the right thing to do in each case? In a sense, how much did you want to be “right” while answering the questions? Can you tell me on a scale from 1 to 10?” This was intended as an additional measure of how important the decisions were to the participant. Next the researcher asked “How important was it to you to give the correct answer according to the experts who designed the test? Can you also tell me on a scale from 1 to 10 how

important was it for you to give the answer the experts would say was right?" This question was intended to assess how important it was to the participant to maintain their leadership identity regardless of the additional helpful information they accessed. Not all participants responded to all questions and there was variation in the presentation of the exit interviews.

Participant responses to these questions provide insight into participant motivations during the decision task. Participants in Condition 1 tended to give a higher response rating for giving the answers they felt were correct, and a lower response rating for giving the answer the experts would say was right. Participants in Condition 2 more frequently rated the two responses as equal or nearly equal. The only participants who rated getting the correct answer according to experts as more important than getting to answer how they wanted were in Condition 2. In Condition 2 just over half of the respondents indicated it was more important to answer the way they felt was right, about one third indicted that they wanted to get the correct answer and the reminder rated both responses equally.

At this point some participants gave spontaneous explanations of their answers to these two questions. The participant in Condition 2, session id number 137 gave this response:

> "If I thought I knew the right answer I would look at the additional information to see if I understood the situation and then all the other stuff."

The participant in session 110 (Condition 1) offered this statement:

> "Mostly I focused on the cons between the two (options) I was on the fence about, I peeked at the cons first then looked back over the pros for the better answers. Mostly pros were stuff I already knew"

Next the researcher asked "on a scale from 1 to" 10, how important was it for you to do well, score well, or get a good report on the test overall and why?" This question was an additional manipulation check and was intended to be used in both conditions to compare with leadership identity scores in later analyses.

The next three questions dealt with how information was used asking, "Did you open any of the helpful information icons, the pro, con, and additional information buttons?" While the researcher would immediately know if the participant was being forthright, having just watched

the participant's behavior during the study on the monitor screen in the control room, there was some concern that participants in Condition 1, the "leadership ability test," might have considered looking at additional information, cheating or working against their score. This would have produced a spurious finding of differences in information use between conditions. It was believed that if this were the case, at this point participants might claim they had not used the information nor would under-report how much information they accessed. In Condition 1 no participant reported that they felt they should not use the information or that they felt using the information could negatively impact their score.

The researcher followed up this question by asking participants who looked at information, "…did you use it for making your decisions?" A common response was similar to that given by the participant in session id number 115 (Condition 1):

> "Yes. I looked at the information on three…two pros and two cons for the ones I liked"

The participant in session id number 092 (Condition 2) said:

> "Only on the ones I felt strongly about I didn't…read it all and took most of it onto consideration."

Next the researcher asked "was the information you looked at helpful for making better decisions? Can you explain how it was helpful for you?" All of the participants who looked at information said it was helpful. Some typical responses were like those of the participant in session 097 (Condition 2):

> "Yes, it gave me a different perspective…Maybe on one of them…Don the ad man and the email…I felt pretty strongly about the correct answer already though."

The participant in session 099 reported:

> "Yes, I tried to look at all the pros and cons…yes having the all the information is more important than having just some of it"

In Condition 1, session 100, the participant answered in the following way:

> "Some of it …I read the pros and cons…some was more straightforward than others…it seemed it could go one way or the other… so I only had to read the pros or the con for most."

Another common response to this question is exemplified by the participant in Condition 1, session 110, suggesting why they did not look at all of the useful information before making their decision:

> "Yes, I usually did look, I used it on the first one, the pros told me stuff I already know but the other two options… I might have skipped once I was sure of the answer …I didn't want to get talked out of it."

Most participants explained in differing degrees of detail how the information gave them insights they had not considered and how they didn't want to be confused by the information once they had decided.

Next the participants were asked "did you ever change your mind about an option after reading helpful information?" This was followed up with a request for an example if the participant answered yes. Participants that answered yes gave an example. Several participants in each condition gave examples of changing answers after considering additional information. Future analyses will include comparison of this choice with the strength of leadership identity.

Participants later in the study were asked if they followed any particular strategy when looking at the information. The most common strategy provided was to look at the con information and then the pro information for the options they felt were probably correct, one or two at most, and ignore altogether information about the option they felt was not right. Mention of the use of the additional information icon was rare.

At this point the researcher asked participants "when you decided not to look at helpful information, why was that? All but one participant had skipped at least some useful information. Most respondents replied similarly to this question saying "I don't know why I didn't, I should have." Another common response was "I didn't want to get confused", or "I knew the answer already…."

Next participants were similarly asked "Why didn't you look at all of the helpful information?" Only the participant in Condition 2, session 097 answered that he felt it would take too long. No other participants indicated that they considered time an issue when explaining why they didn't look at information. The majority of participants indicated they were unable to

answer the question or gave some indication they were not sure why they had ignored some information. Several participants noted that they were told they had plenty of time to finish so wouldn't have mattered if they had looked.

The researcher followed up those questions asking participants "what do you think would have happened if you had looked at all the helpful information for all of the possible choices?" Three regular responses given in order of frequency by participants in Condition 1 were (1) "I don't know" and "I should have," (2) "I might have changed my answer and could probably have done better on the test," and (3) "it would not have changed my answer." Participants in Condition 2 gave three similar responses: (1) "I don't know," (2) "I looked at most of it" and (3) "it would not have changed anything."

Participants were the asked "How excited were you to participate in today's study?" followed by "Did you find it interesting?" to indicate the participant's level of engagement. Finally, the researcher asked, "Would you have volunteered to participate in this study, just for the sake of contributing to science and knowledge alone?" to use in conjunction with their *Lead ID Score* to determine if participants had signed up because of their leadership identity and the study title, "Leadership Decisions." Many participants noted they were initially excited to be in a study about leadership. All but two participants reported that the study was interesting. Approximately 20% of participants reported they would have participated just for the sake of contributing to science and knowledge alone.

Discussion: Study 2, Experiment B

Overall, support was found for hypotheses developed from the theory. Participants making more important decisions made decisions more quickly, particularly when the importance of decisions was likely driven by a threat to their self-concept. These participants also considered less information, particularly critical information, to make their decisions. However, participants with weaker leadership identities, who had the opportunity to gain a socially-valued identity by doing well on the leadership test, took longer to make their decisions

and considered more useful information while doing so. It is also important to note that participants with higher leadership identity scores preferred more product choices in a subsequent task, as opposed to participants with a weaker leadership identity.

The impact of information was also in line with theoretical propositions. Consideration of critical information was associated with reduced certainty in the decisions and less positive emotions after the decision. Participants with stronger leadership identities were likely more threatened by looking at useful information than participants with weaker leadership identities, and this likely affected how they reacted to the information available and which they accessed. A discussion of how Experiment A and B results support the theory and a discussion of the factors affecting the importance of decisions for decision makers follows in the next chapter.

While exit interviews were not analyzed statistically the responses related to use of information, manipulation checks, and checks on spurious causes, were supportive of the theoretical assumptions and propositions suggesting that participants that avoided information to make decisions did so in order to avoid answering in a way that would be inconsistent with their identity. Participants generally indicated that information that was ignored or avoided was avoided because it would be identity inconsistent by letting the participant know they had been wrong or indicating an option they would not choose was possibly a better decision.

CHAPTER 9: DISCUSSION AND CONCLUSIONS

Theory Summary

Strong feelings generated by the uncertainty in decision making situations over verification of important aspects of the self-concept make some decisions feel more important than others. The identity-relevance of a decision situation therefore is likely to affect the perceived importance of the decision when the maintenance of an identity could be threatened by how the decision is made. The level of perceived threat to the identity in a decision situation can change how essential is feels to decide on an identity-confirming action quickly, reduce threatening feelings, and make the decision in a way that makes the decision maker feel better without interference. The uncertainty people feel when making a decision that could allow them to gain a valued identity, or to lose an existing identity, is likely to affect how people value the options and information available to them for making decisions. When the value of options useful for maintaining the self-concept increases, as is proposed to happen when a highly-valued identity is threatened, people are motivated to avoid useful information for making the decisions in favor of selecting an option that makes them feel better quickly. This is because the information could constrain the ability of the decision maker to control options that are valuable for maintaining the self-concept. As a result, decision makers feel more powerful making decisions that include options that confirm a highly salient identity. When faced with information that could limit the decision maker's ability to choose options that verify an identity under threat, they are likely to feel less powerful while making the decision. The motivation to maintain valued identities and reduce threatening feelings from decisions is likely to lead people to avoid useful information making important decisions that could be vital for making optimal decisions.

This theory was supported by developing a measure of leadership identity that was used to tests hypotheses in two experiments, A and B, which tasked participants with making a set of organizational decisions. These experiments each included two conditions varying the importance of decisions made by participants by adding or minimizing a credible threat to the

maintenance of a leadership identity. Condition 1, more important decisions, informed participants that their performance on the decision task would indicate their "Natural Leadership Ability." Condition 2, less important decisions, was presented as a "Question Quality Evaluation" that assessed the ability of graduate students to write good quiz questions. Condition 1 therefore included a potential for participants to either gain or lose a valued identity relative to the strength of their existing self-conception as a leader. This made the decisions likely to feel more important in Condition 1 relative to Condition 2. Experiment A investigated whether participants making more important decisions (Condition 1) would report stronger feelings, greater certainty, and prefer fewer choices in a subsequent decision task than participants making less important decisions (Condition 2). Experiment B investigated whether participants making more important decisions would be more likely avoid useful information for making decisions, feel less certain, report stronger negative emotion, and actually prefer *more* choices after looking at information useful for making decisions. Hypotheses generally received support from analyses, detailed below.

Support for the Theory

Study 2, Experiments A and B provided general support for hypotheses developed from the theory. First, participants in both experiments reported stronger feelings when making decisions in Condition 1, more important decisions, than in Condition 2, less important decisions. This supports Proposition 1; making decisions that include an evaluation of the performance of a valued identity produced stronger feelings than making the same decisions when the performance of the identity was not subject to evaluation. Further, the certainty participants expressed regarding their options was also in line with hypotheses. Participants making more important decisions reported they were more certain of their decisions than participants making less important decisions. This suggests support for the assumptions that decision makers will feel less certain prior to making more important decisions and so feel more certain once the decision is made. It also suggests that decision makers place more value on

decision options that maintain their self-concept when making more important decisions. Additionally, analyses for Hypotheses 3 and 8 found that participants' feelings of power were likely affected by (1) the value of options they controlled when making decisions and (2) how much information the participant was exposed to that could constrain their options when making a decision. This led participants making more important decisions to prefer fewer options when they could freely choose an option they preferred and to prefer more options when they considered useful information. This supports the proposition that information likely constrained their options just prior to making their decision. It appears that information indeed affects a participant's feelings of power when making more important decisions and does not when the same decisions are less important and do not threaten their identity.

Additional analysis showed that accessing more information significantly increased a participant's likelihood of making the decision correctly in Condition 1 (b = .022, S.E. = .012, p =.0371 one-tailed) but not in Condition 2 (b = .006, S.E. = .023, p = .404 one-tailed). Further, the pretest measures of feelings of personal power scale in Study 2, Experiment A was a significant predictor of the product preference measure (b = 1.819, S.E. = .500, p = .001) across conditions. This shows that the post-test product preference measure is a valid reflection of the participant's feelings of power after making the six decisions. Participants whose scores indicated they felt less personally powerful preferred the product selection with more choice options. However, pretest feelings of personal power did not predict participants' likelihood of accessing useful information to make decisions in either Condition in Study 2, Experiment B. For Study 2, Experiment B, when additional information was included, the effect of pretest feelings of personal power is not found (b = -120, S.E. = .138, p = .709). This supports the supposition that the product preference measure is indicative of the participant's feelings of power and suggests

feelings of power changed as a result of the availability or use of additional information from Study 2, Experiment A to Study 2, Experiment B.

Particularly important for the theory developed here was the finding that participants who have access to useful information for making more important decisions, and who are experiencing a threat to their leadership identity, were more likely to avoid useful information when they made their decisions. Additionally, the weaker a participant's leadership identity, the more information they used when making more important decisions. These effects were not significant when the same decisions were less important. Because about two thirds of all participants were assumed to see themselves as leaders, we could predict significant differences between conditions on how likely participants were to access useful information. Participants in Condition 2 did use information to make their decisions, while participants in Condition 1 used more or less information relative to the strength of their leadership identity. We might have expected no significant difference between conditions in information used due to this pattern of information use across conditions.

However, because most people have a leadership identity, we could expect a larger proportion, about two thirds, to use less information to make decisions in Study 2B Condition 1. With a perfect manipulation we could expect leadership identity to have no relationship to amount of information used in Study 2, Experiment B, Condition 2. There appears to be a similar, though non-significant relationship between leadership identity and information use in Study 2, Experiment B, Condition 2. Further, when people made more important decisions, they made those decisions quickly, increasing the likelihood that useful information would be avoided. That this effect was observed for participants with *stronger* leadership identities suggests that people who see themselves as leaders have two motives when making decisions:

(1) to verify their self-concept by choosing identity-consistent options, and (2) to choose an option that achieves the instrumental goal of the organization or group. Threats to more salient identities are likely to inflate the value of options that are identity-consistent relative to identity-inconsistent options that might be better for achieving an instrumental goal. Further, the strong feelings attached to this difference in value appear to make decision makers more certain that their preferred option is correct.

Limitations and Future Analyses

The theory proposes that participants experiencing stronger feelings will define decisions as more important, and that the opportunity to gain a valued identity or disconfirm an existing identity will create strong feelings in the decision maker. However, feelings analyzed are only self-report measures of how the participant felt *after* making decisions. It is possible that the strength and direction of feelings experienced by participants in Conditions 1 and 2, while significantly different according to self-report measures, may have been responses to elements of the experimental situation other than the decision problems. During the experiment, galvanic skin response data were collected during each part of study procedures. Further, a baseline set of galvanic skin response readings was collected during a neutral decision task. These data will allow for more precise tests of Hypotheses 1 and 7 regarding feelings experienced by participants at each point, even allowing for identification of specific questions to which participants had particularly strong somatic responses.

Further, the questions themselves, regarding leadership, may have weakened the manipulation of importance between condition in conjunction with recruiting procedures that emphasized leadership as part of the experiment. Those participants with strong leadership identities in Condition 2, less important decisions, may have experienced some level of threat. This could have affected their perception of the value of options in Experiment A as well as their tendency to use or avoid information in Experiment B. This had the potential to weaken

between-condition differences. However, given that the significant impact of *Lead ID Score* on the amount of information accessed and the certainty of decision makers only in Condition 1, this may not have been an issue.

Finally, while support for Hypothesis 8 suggests that accessing useful information may reduce how powerful participants felt, the ability to avoid or access information was given over to the decision maker. This may have weakened the effect of exposure to information on feelings of power in decision makers, and thus had little effect on participant product choice preference. As seen, leadership identity did not significantly predict product choice preference, as had been predicted for participants making more important decisions (Condition 1). A future experiment could compel participants to view information prior to making decisions or not, and investigate how being compelled to view useful information affects participant feelings and product choice preferences when making more or less important decisions. Further, if leadership scenarios were to be used again, pre-tests could screen for participants with strong leadership identities to isolate between-condition differences in measures when all participants see themselves as leaders.

Conclusion

The research presented here suggests that the experiences of General Broderick, detailed in the Introduction, are not uncommon. The importance of his decision, whether or not to leave his command center and relay the information that the levees in New Orleans would hold, may have made it difficult for him to consider all of the information available. This suggests that people in positions of authority, whose socially-valued roles are likely to be important parts of their self-concepts, run the risk of overlooking or simply failing to cognitively process the information that would allow them to make better decisions that affect the fates of many.

Findings from Study 2, Experiments A and B suggest that not everyone will fail to account for information. Those who don't view themselves similarly to traditional leaders and whose identities as leaders are weaker, may be more likely to use information that helps them make better decisions that take account of the best interests of a group or organization. Allowing

those under a leader to be involved in decision-making, while potentially time-consuming, may be a viable strategy for avoiding the kind of information blindness likely to occur when situations threaten the maintenance of the leader's identity.

However, the self-concept is a complex of identities, some more salient and some less. Anyone who is faced with a decision that is personally threatening is likely to be subject to the same inability to consider new information while making related decisions. This means that information avoidance isn't just of concern to organizations, but for individuals facing every day and life-altering decisions. For example, people in dangerous relationships or who take part in risky behaviors such as drug use or crime, may be unable to process information that could preserve their own lives, due to the inability to process information that is inconsistent with their (perhaps unrealistic) self-concepts.

The theory presented here and the research that supports it suggests that decision making is both a cognitive and emotional process that is tied strongly to our self-views. The position a person holds in society may inflate the value of certain options over others when making decisions while a person who occupies another position may devalue the same options. This becomes a bigger problem as the stakes of the decision increase, both for the individual and the organizations and groups to which they belong. This problem can be confounded by the ways existing social structure changes the value individuals attach to options and so change how they perceive those options. This could have significantly positive or negative consequences for their lives. In this way the construction of the self-concept and its effect on decision making may reinforce or exaggerate existing structural inequality over time.

APPENDIX A. FIGURES

Figure A 1. Log-in Screen C4 Experimental Control Center
(Study 2 both Experiment A and B)

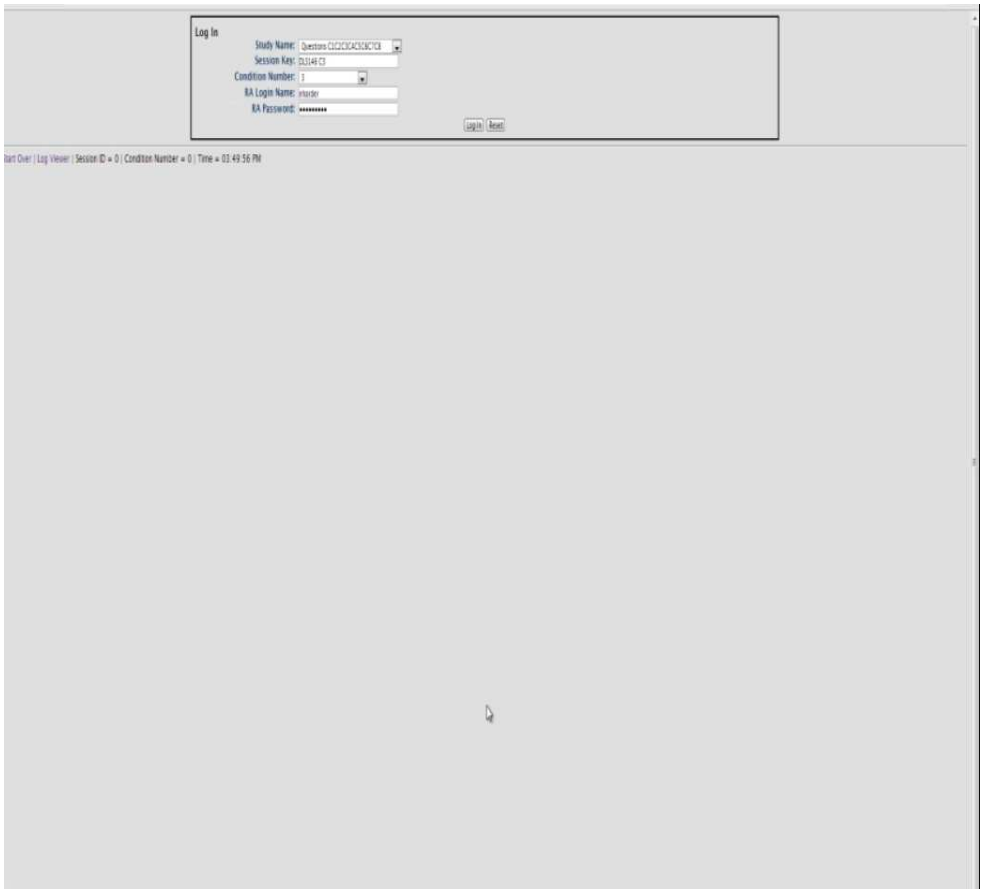


Figure A 2. Leadership Identity Descriptor Measure Screen
(Study 2 both Experiment A and B)

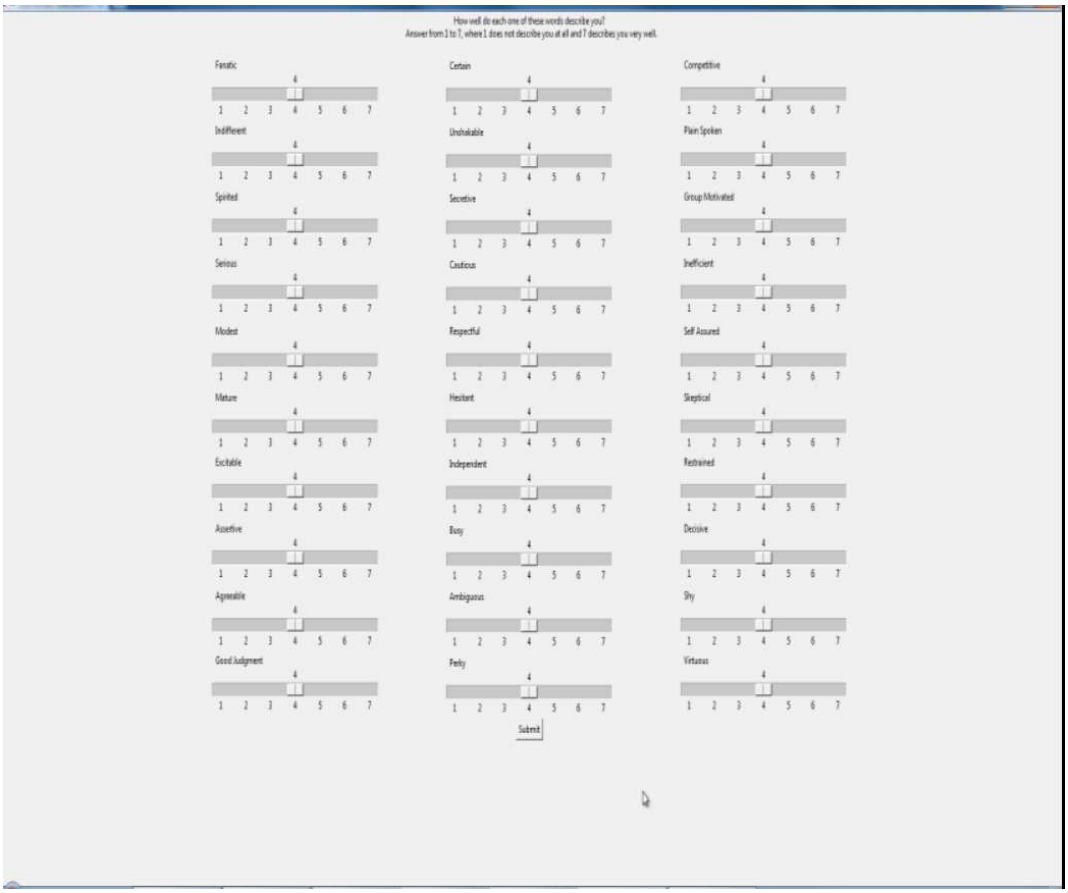


Figure A 3. Initial Matrices Pretest Instruction Screen
(Study 2, Experiments A and B).

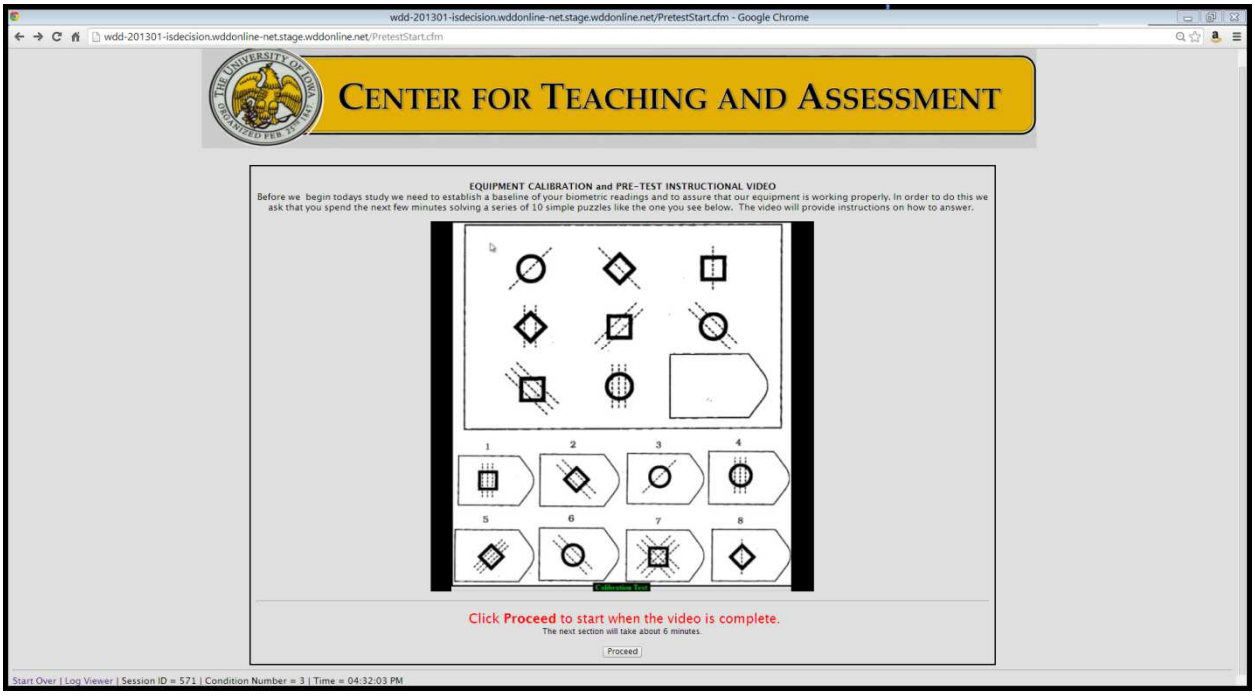


Figure A 4. Matrices Pretest Problem Example
(Study 2 both Experiment A & B).

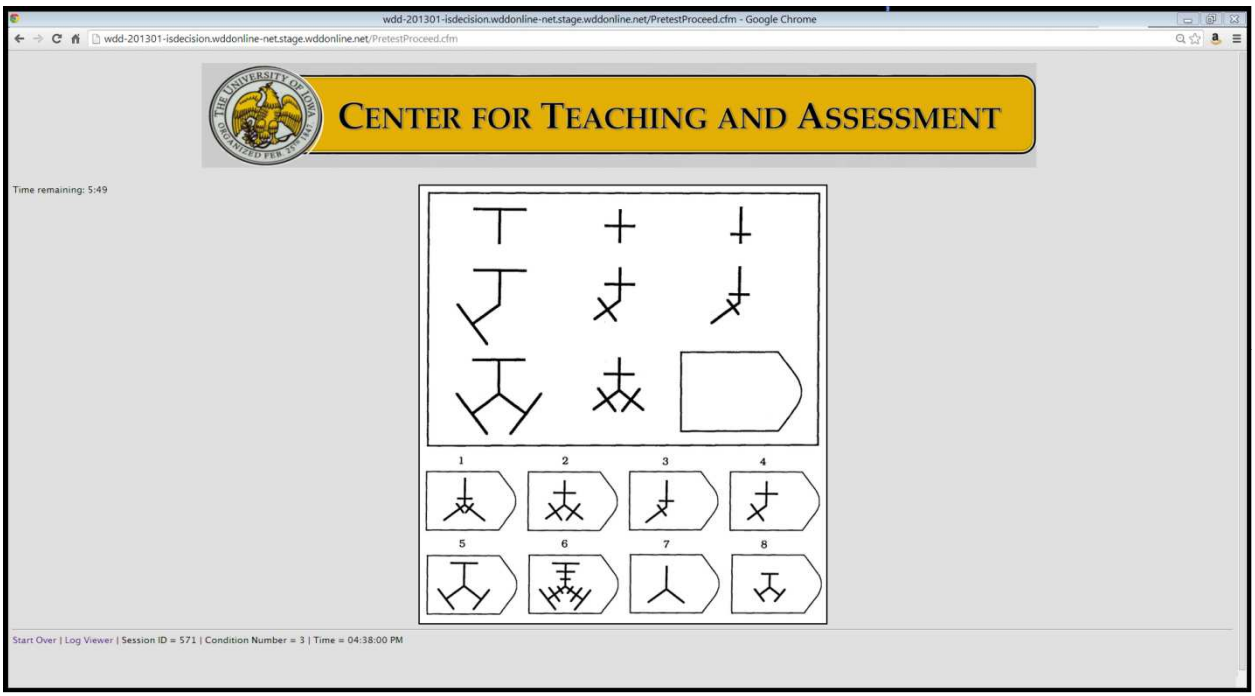


Figure A 5. Pretest Feelings of Personal Power Instructions
"Experiences With Others Survey" (Study 2 both Experiment A & B)

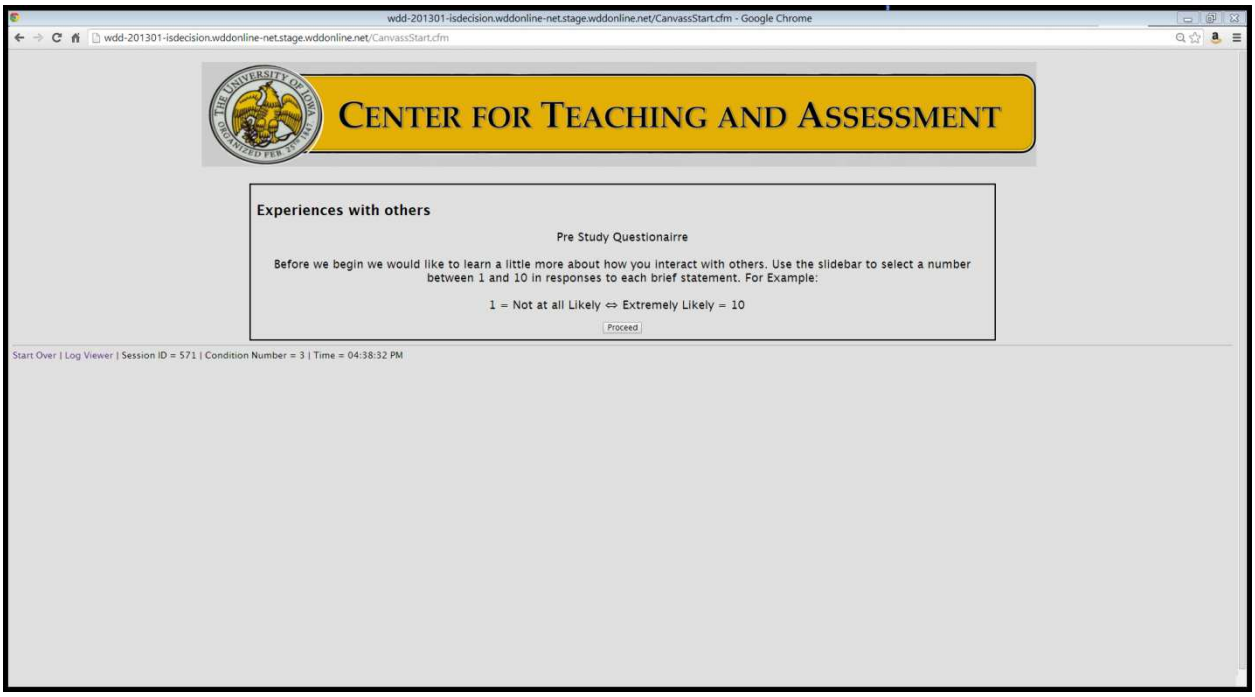


Figure A 6. Pretest Feelings Personal Power Example
"Experiences with Others Survey" (Study 2 both Experiment A & B)

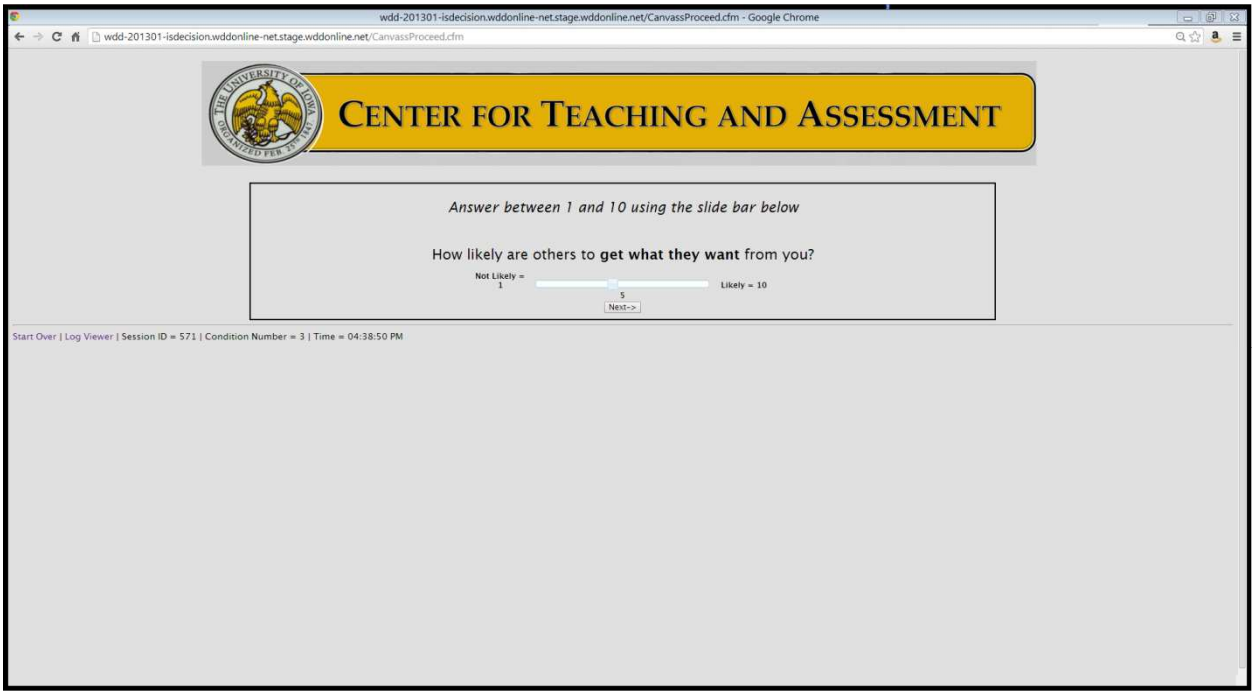


Figure A 7. Pretest End Screen “Stop Wait Screen”
Prior to Experimental Manipulation (Study 2 both Experiment A & B)

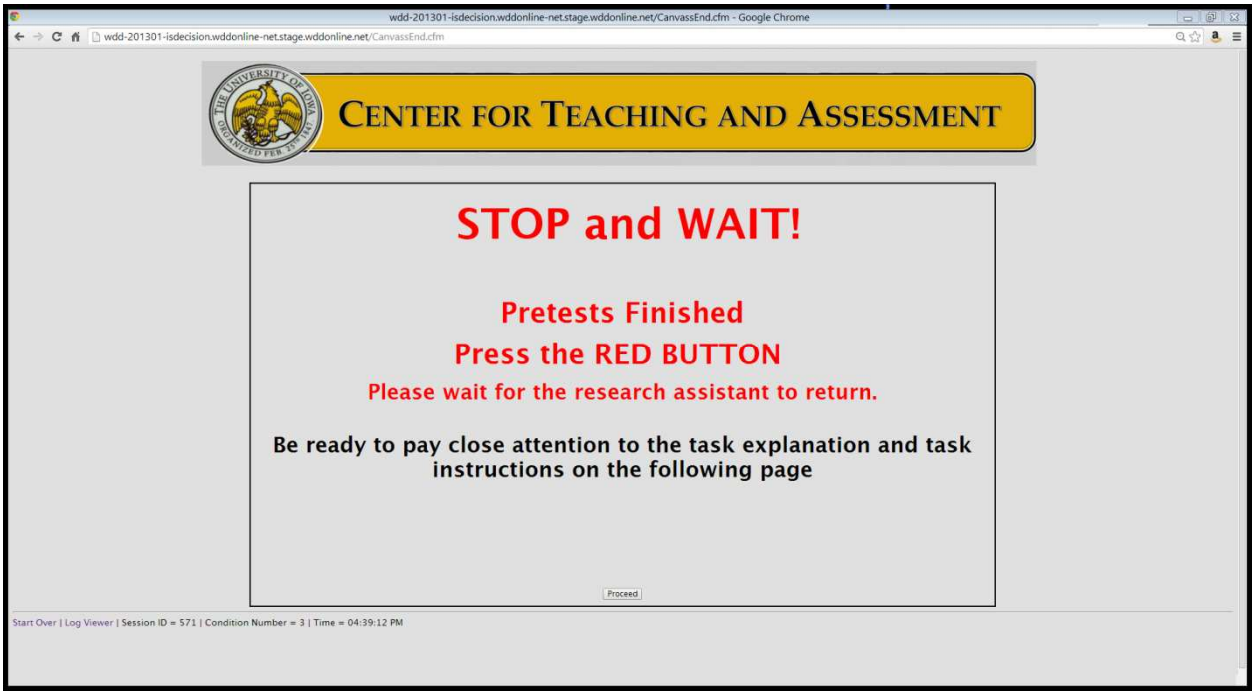


Figure A 8. Instruction Screen, Intuitive “Leadership Test”
Study 2 Experiment A (Condition 1) Experimental Manipulation

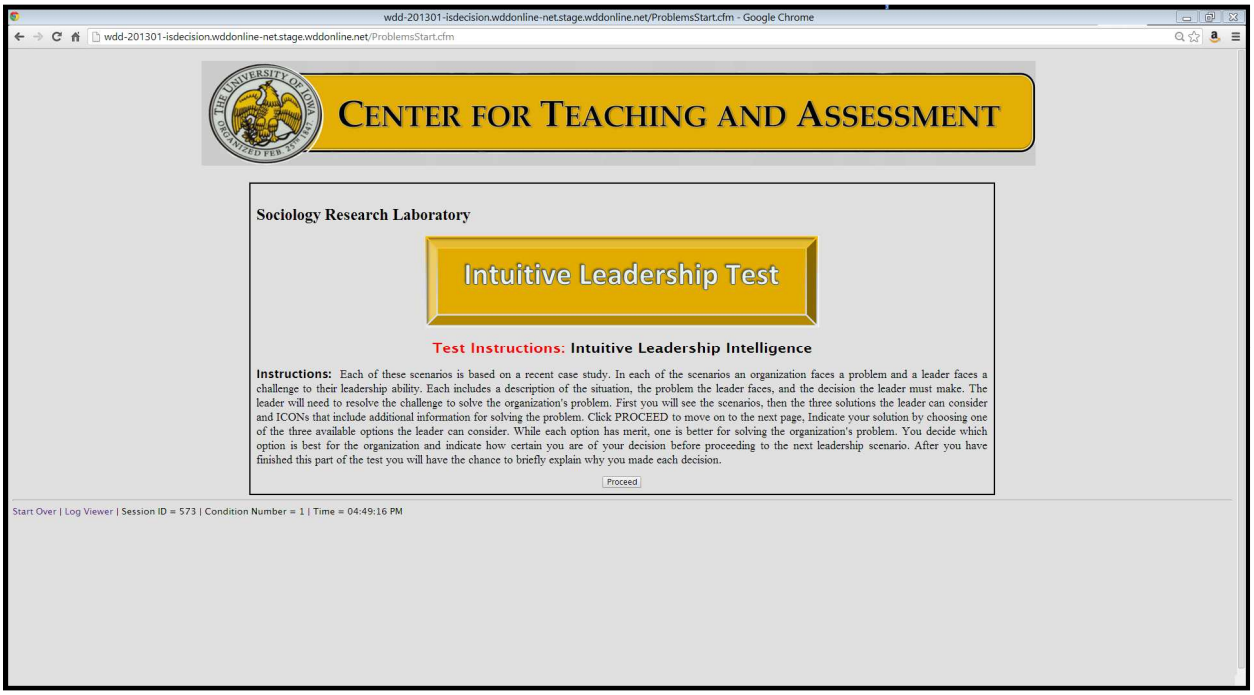


Figure A 9. Instruction Screen, “New Instructor Evalaution”
Study 2 Experiement A (Condtion 2) Experimental Minipulation.

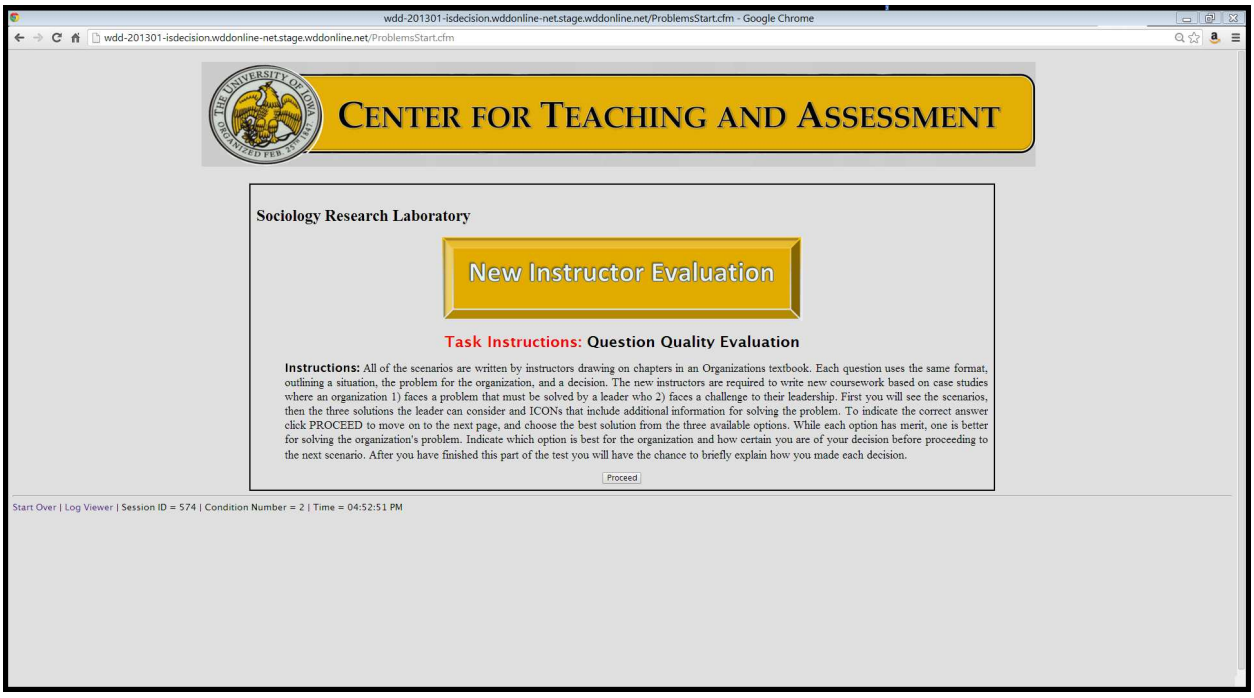


Figure A 10. Instructions Screen, “Leadership Test”
Study 2 Experiment B (Condition 1) Experimental Manipulation

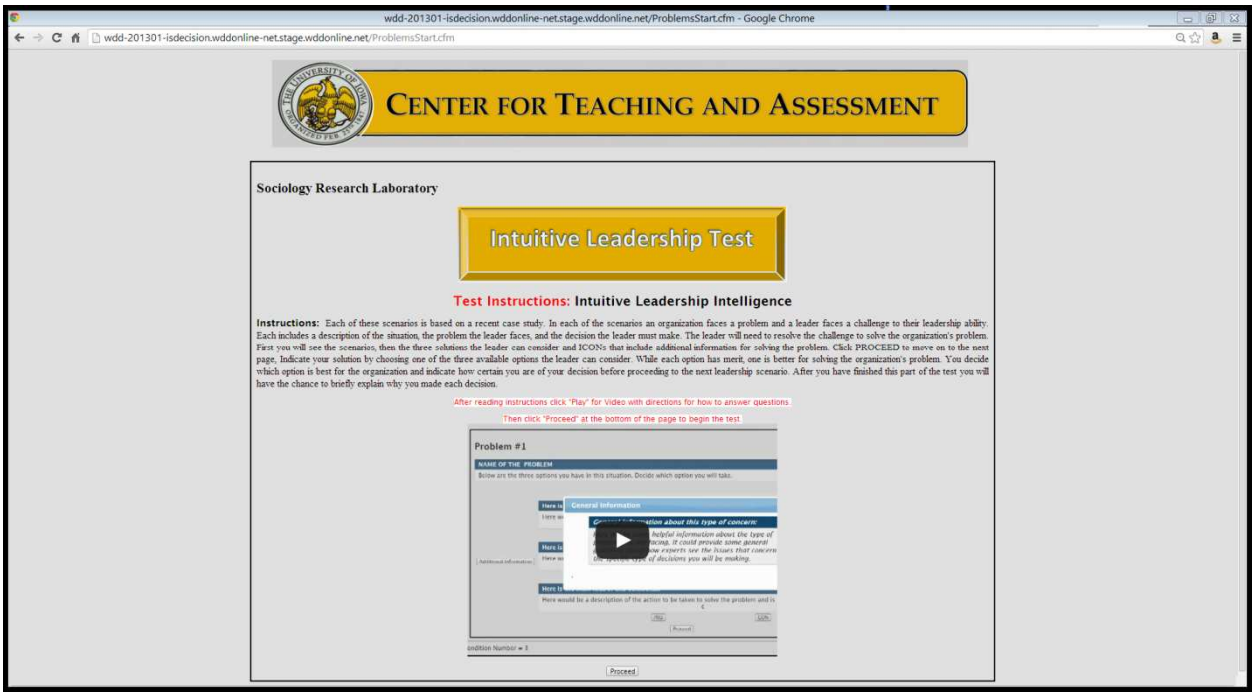


Figure A 11. Instructions Screen, “New Instructor Evaluations”
Study 2 Experiment B (Condition 2) Experimental Manipulation

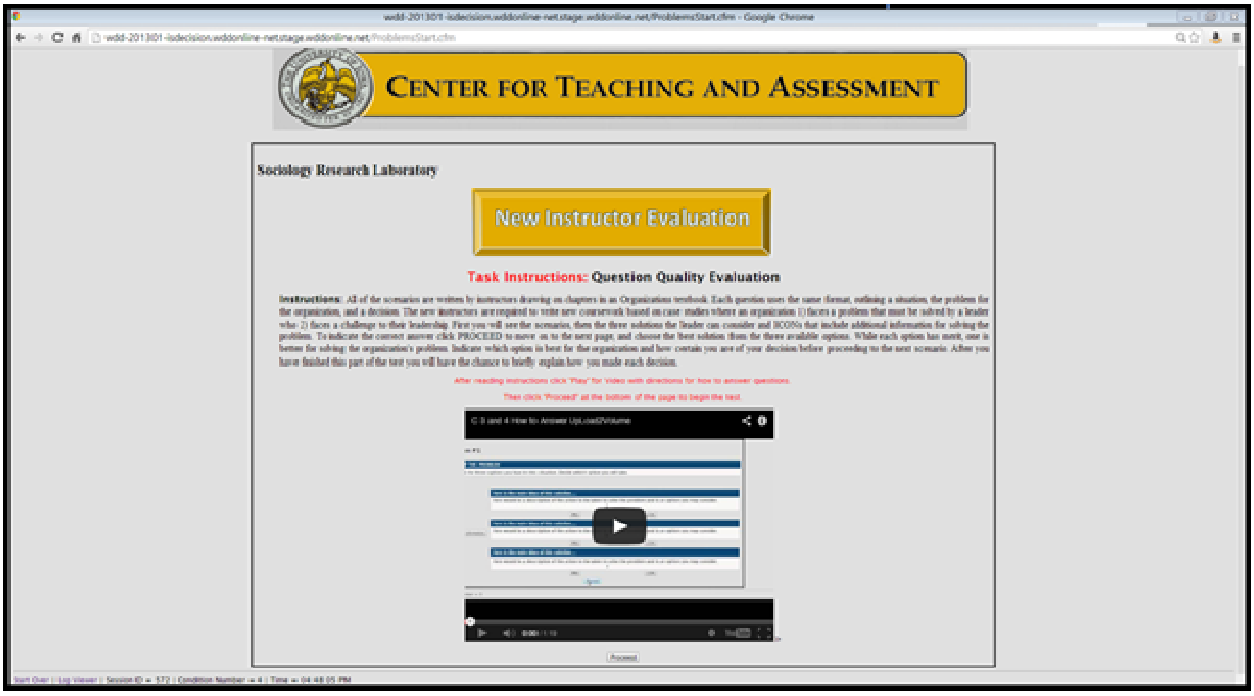


Figure A 12. Initial Presentation of Decision Problem Example
(Study 2 both Experiment A & B)

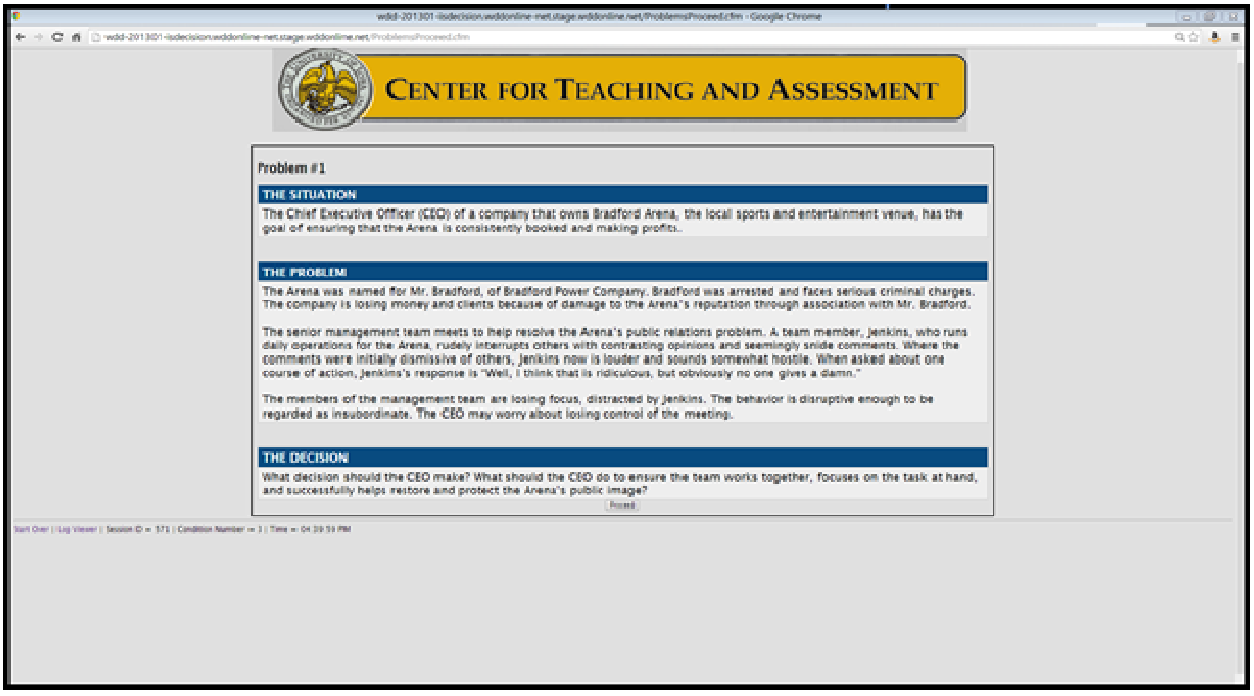


Figure A 13. Decision Options Example
"Useful Information Icons" Screen Example, Study 2 Experiment B only

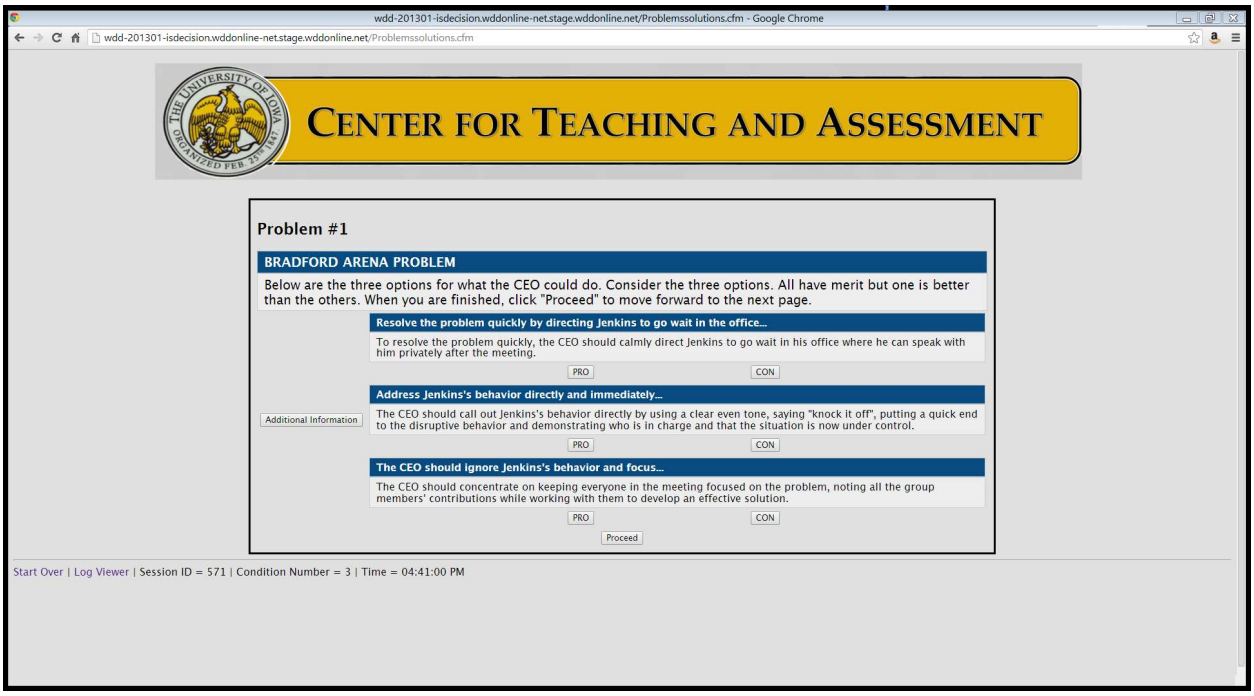


Figure A 14. Decision Options Useful Information Icons Screen
"Additional Information" Icon Open, Study 2 Experiment B Only

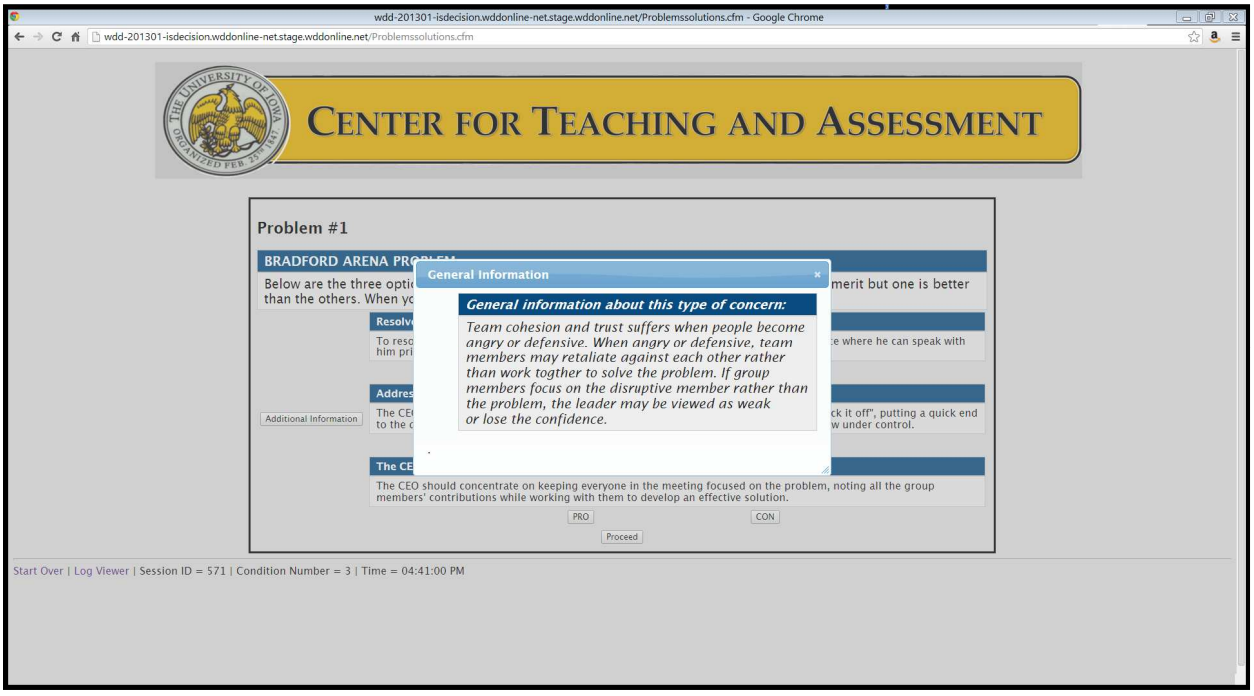


Figure A 15. Decision Options Useful Information Icons Screen Example
"Pro Information" Icon Open, Study 2 Experiment B Only

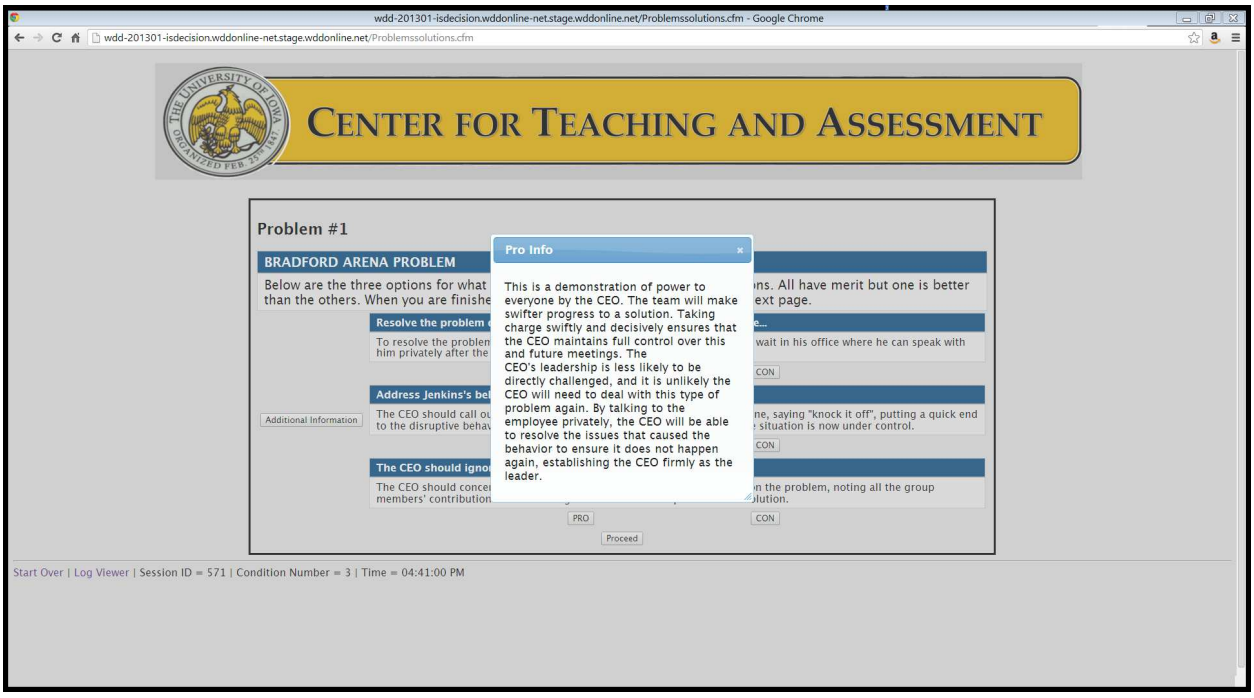


Figure A 16. Decision Options Useful Information Icons Screen Example
"Con Information" Icon Open, Study 2 Experiment B Only

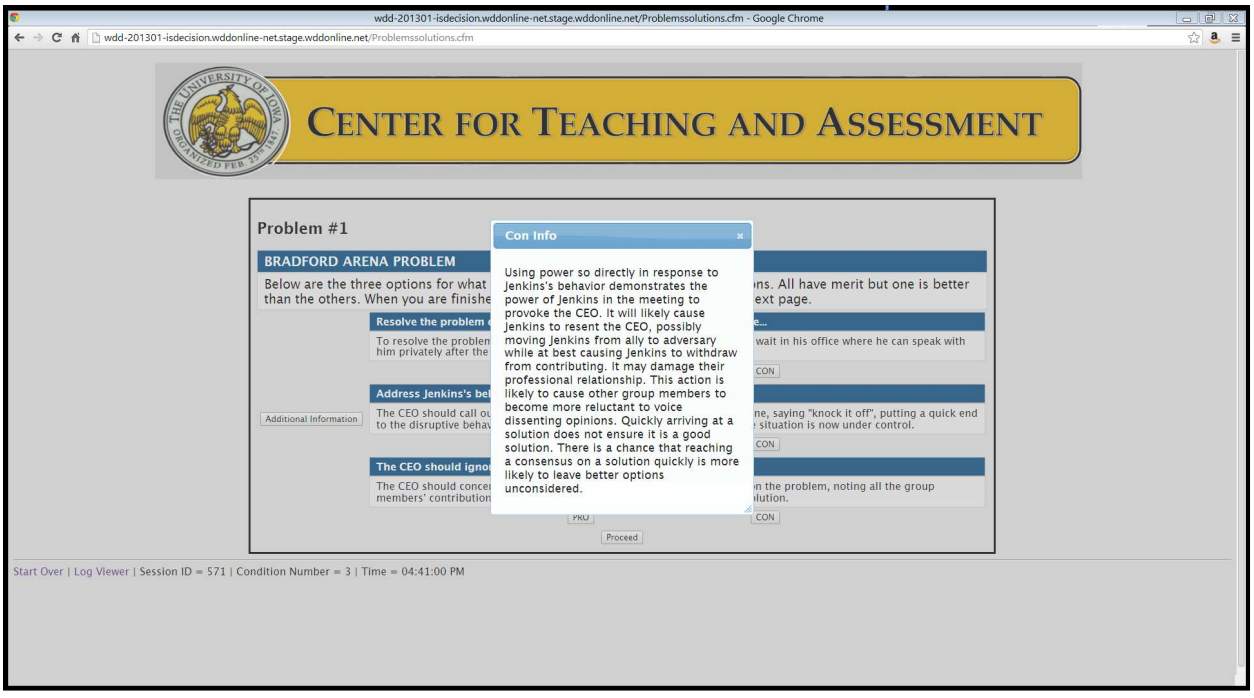


Figure A 17. Decision Option Selection Screen and Certainty Measure Example (Study 2 both Experiment A & B)

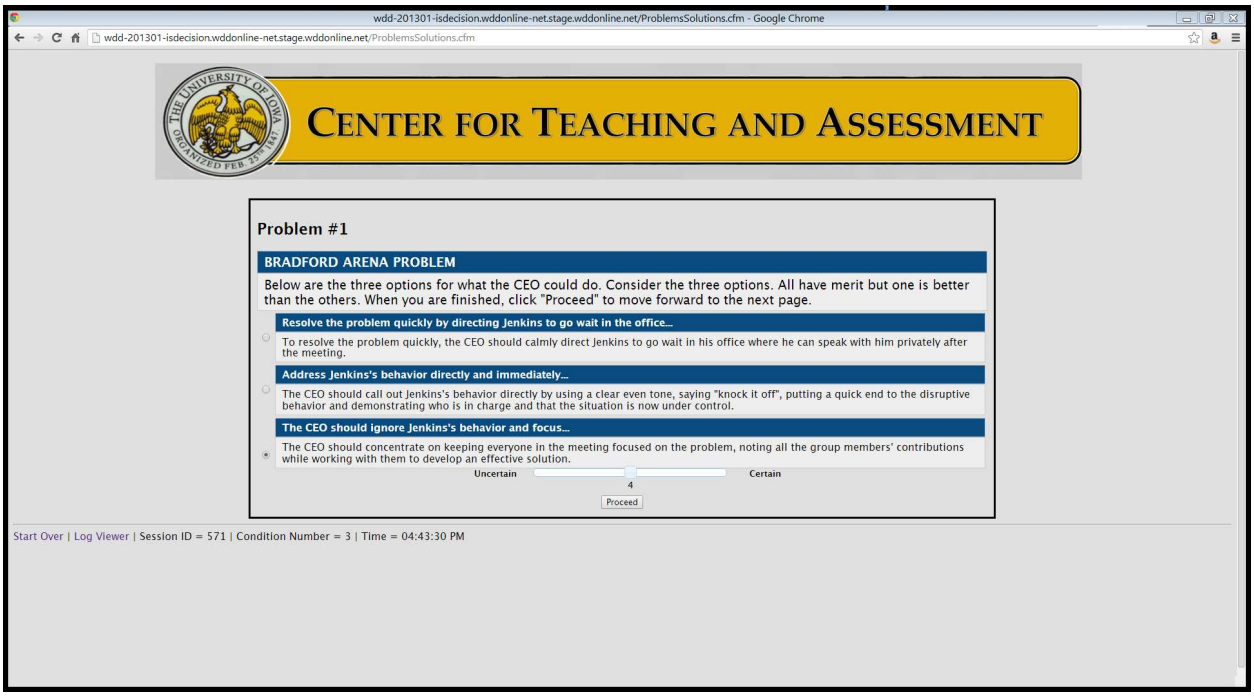


Figure A 18. Product Selection Prefernce Screen “Water Options” (Study 2 both Experiment A & B)

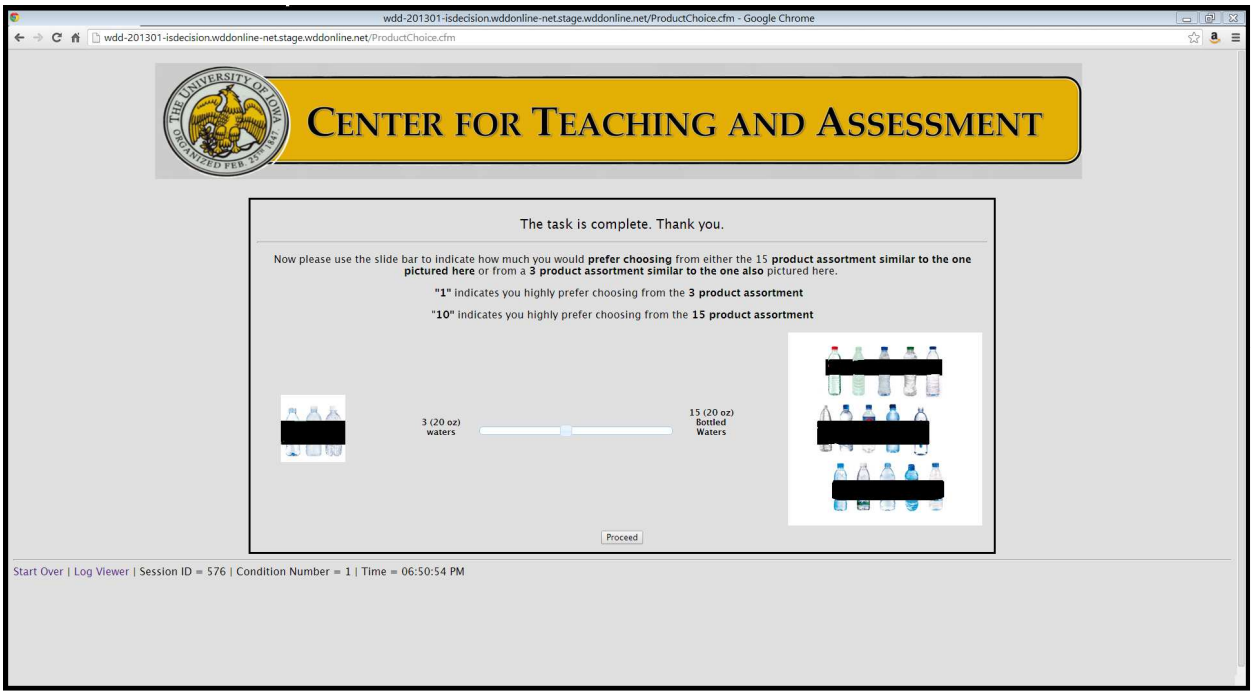


Figure A 19. Product Selection Prefernce Screen “Chips Options”
(Study 2 both Experiment A & B)

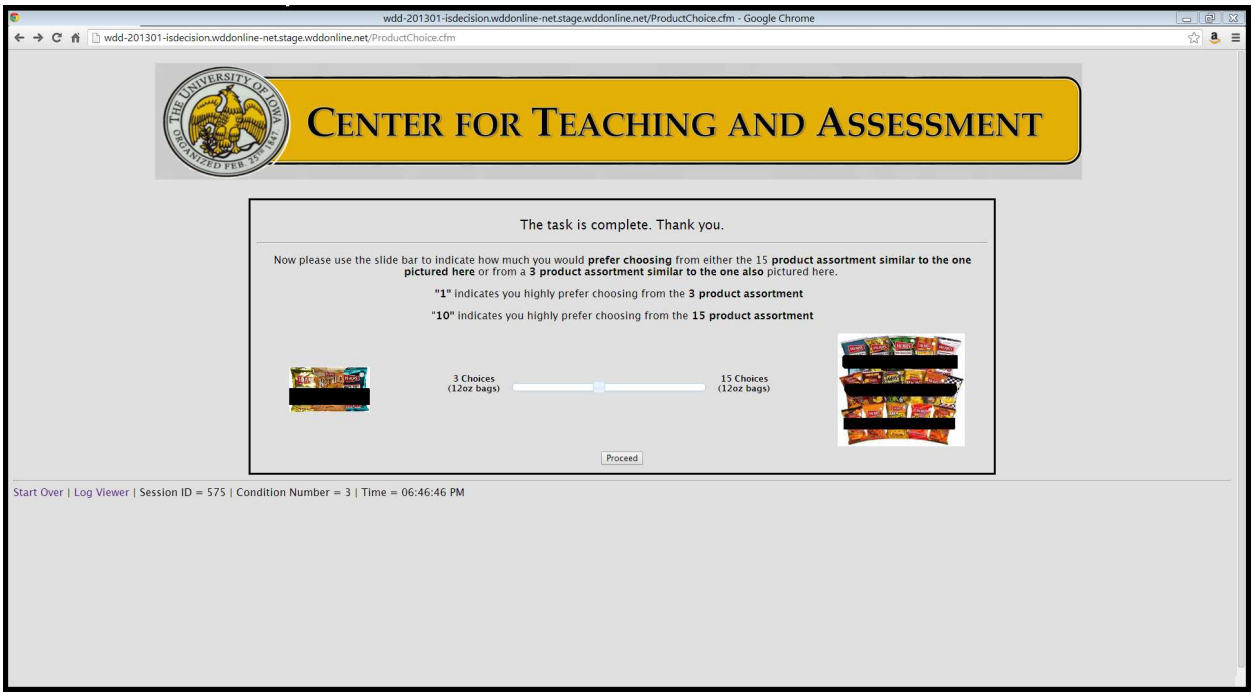


Figure A 20. Posttest Emotions Measure “Feelings Survey” Instructions Screen
(Study 2 both Experiment A & B)

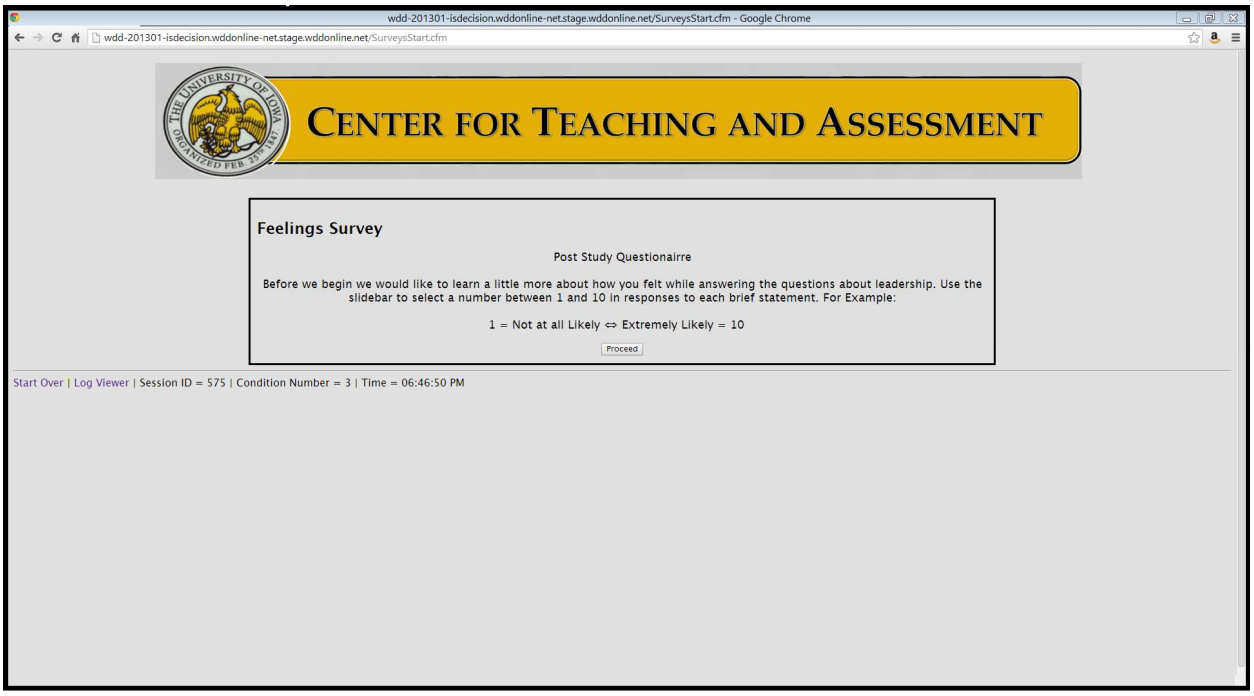


Figure A 21. Posttests Importance of the Decisions Measure
"Impressions of These Decisions Survey" Instructions Screen (Study 2 both Experiment A & B)

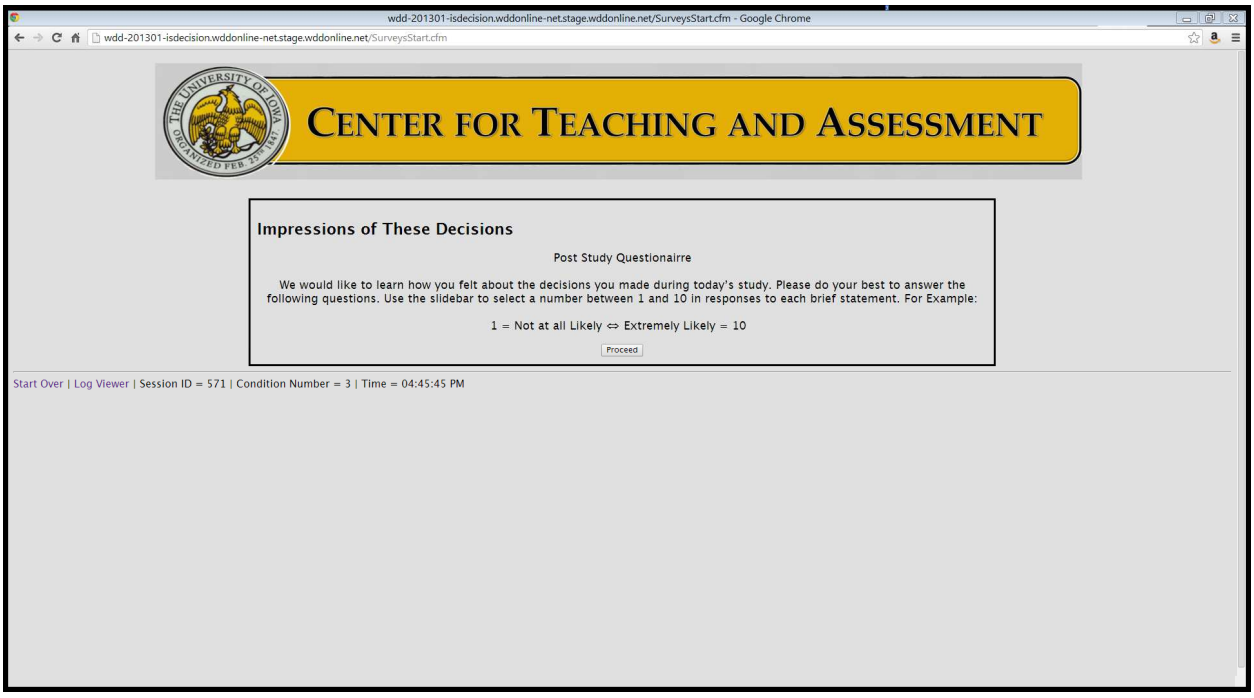


Figure A 22. Posttest Feelings of Personal Power Instructions
"Experiences With Others Survey" (Study 2 both Experiment A & B).

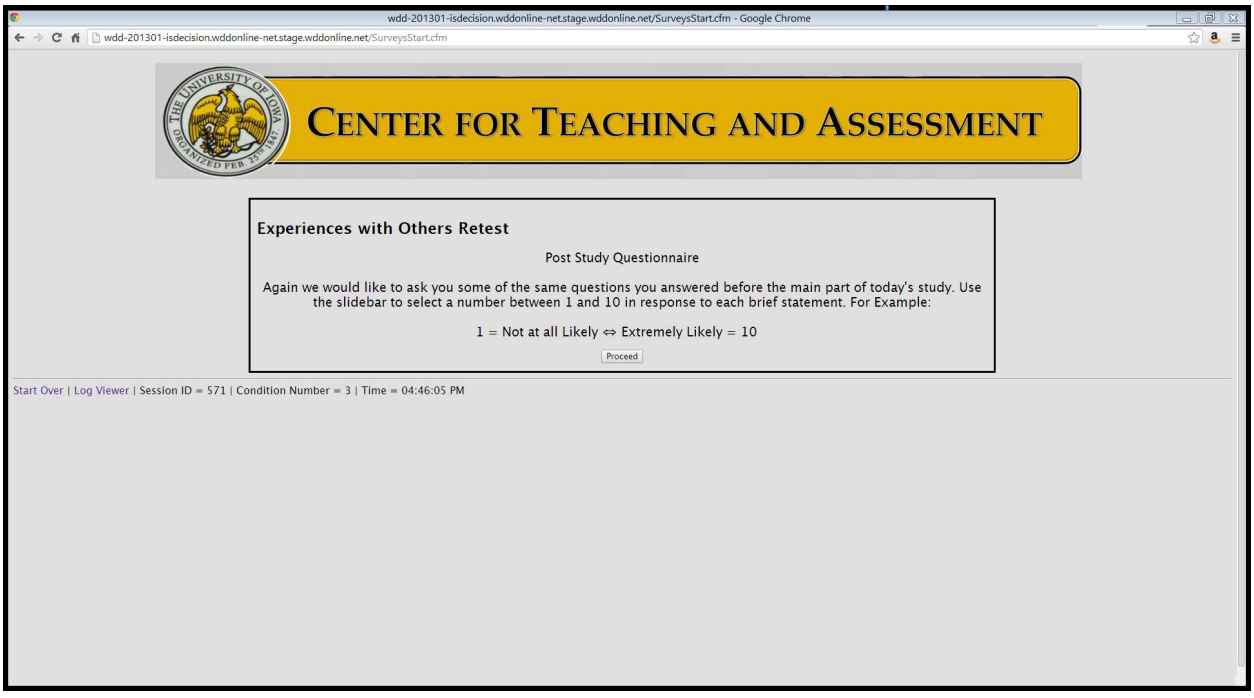


Figure A 23. Instructions for Explanation of Responses Instructions
(Study 2 both Experiment A and B)

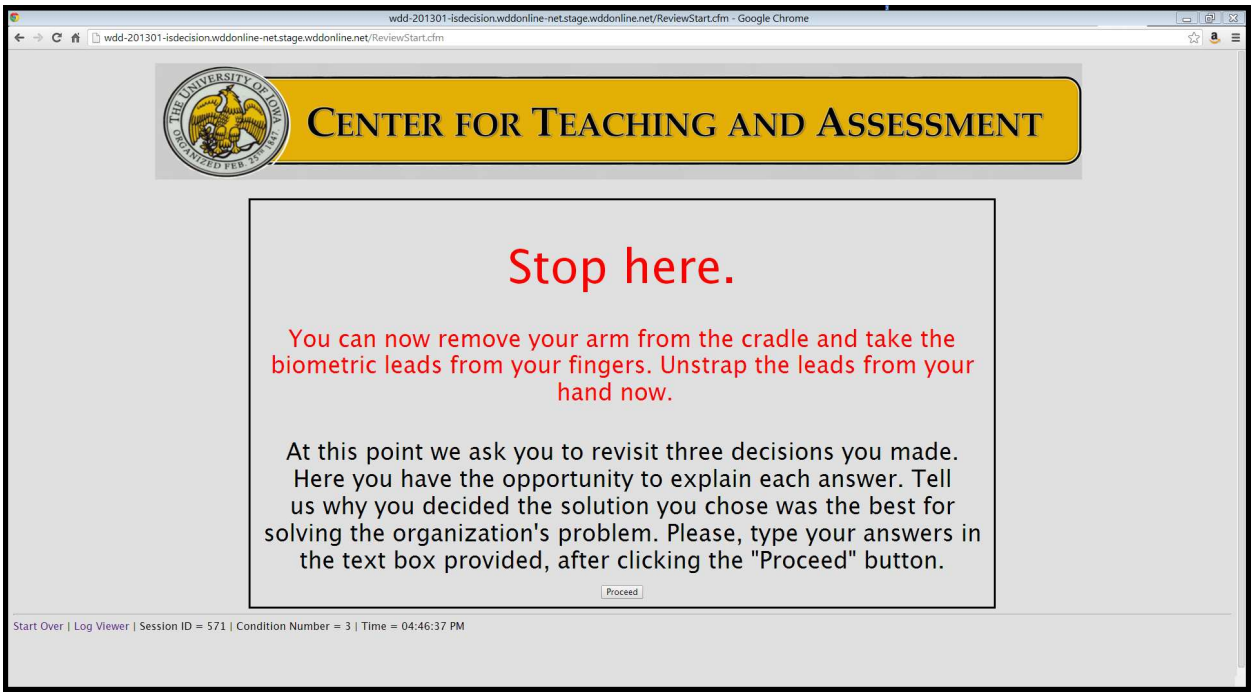


Figure A 24. Responses Explanation Screen Example
(Study 2 both Experiment A & B)

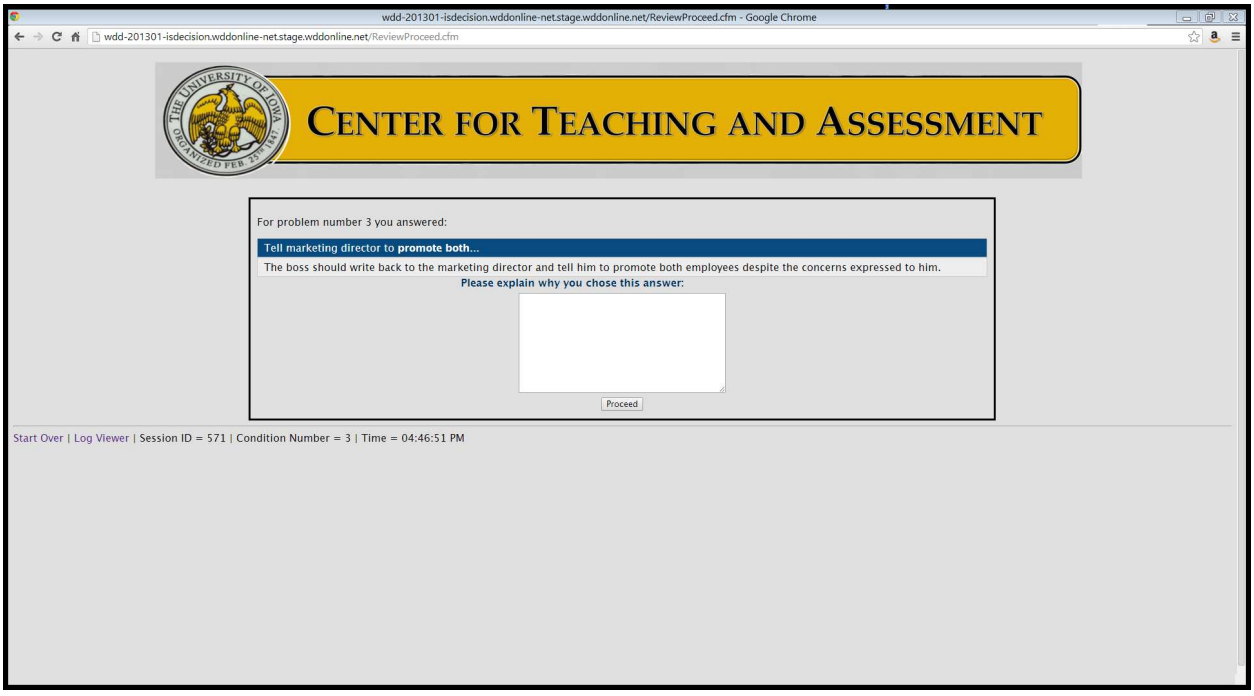
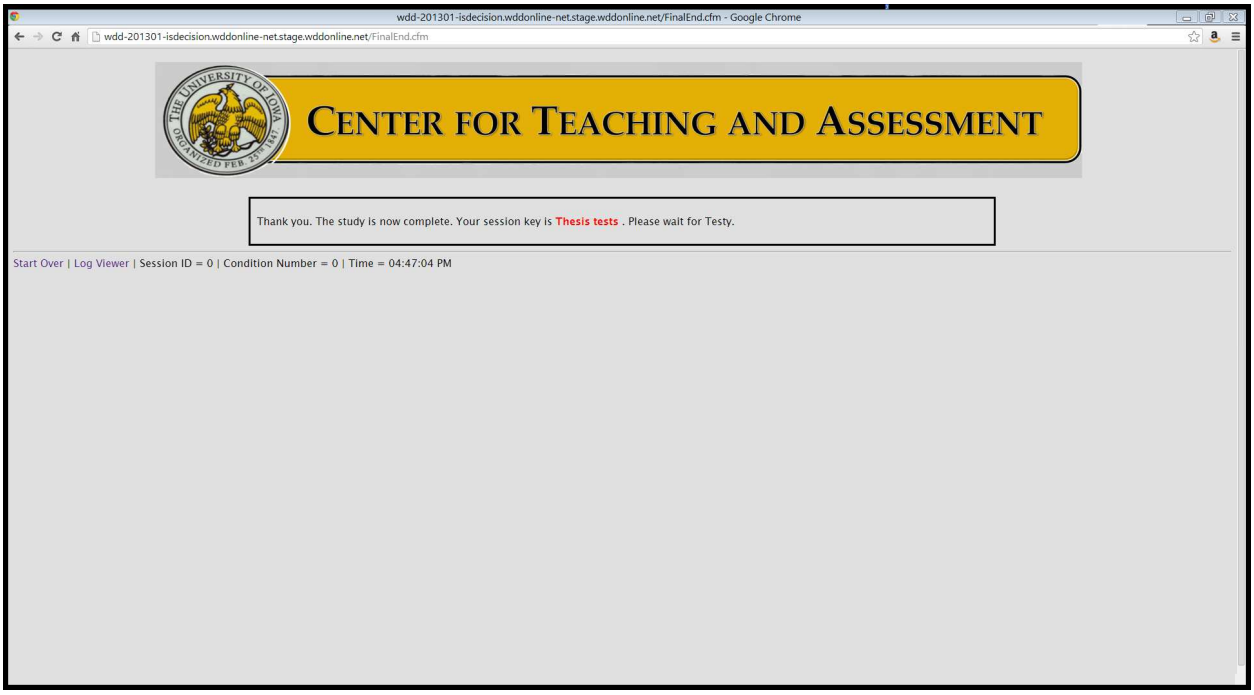


Figure A 25. A Final Screen Prior to Exit Interview
(Study 2 both Experiment A & B)



APPENDIX B. INSTRUMENTS FOR STUDY 1

Recruitment Script

Hello, I am ____ and I am a researcher in the Department of Sociology at the University of Iowa. I would like to invite you to participate in a research study we are conducting on traits people associate with different members of groups. We will pass a questionnaire to each of you. Please do not put any identifying information on these questionnaires. Your professor will not know if you participated and we do not seek to identify you for this study. The top of the questionnaire simply asks for some information about you. The rest of the questionnaire will ask you to think of a type of person you might meet in a group. Then you will be asked to rate a number of traits to indicate how important having those traits are for the person you read about. If you wish to participate, read over the directions and fill out the questionnaires. You may leave blank any question if you do not know an answer or you do not wish to answer the question. Also keep in mind that your first impressions are the most important to us. If you do not wish to participate, please leave all materials blank and turn in the sheets as researchers come around the room to collect them. This study will take approximately 15 minutes.

Instrument 1

Think about what most people feel are desirable or undesirable qualities in an EXCELLENT GROUP MEMBER. Then read each term below and consider how desirable you think most people feel that trait is for an EXCELLENT GROUP MEMBER.

Then rate each quality on a scale from 1 to 7 where:
1= Not at all Desirable 4= Neither Desirable nor Undesirable 7= Highly Desirable

1 2 3 4 5 6 7

____Unpredictable

____Truthful

____Restrained

____Speculative

____Alert

____Opinionated

____Coolness

____Ecstatic

____Encouraging

____Insecure

____Dedicated

____Trustworthy

____Fearless

____Willing to take Risks

____Sensitive to Other's

____Forceful

____Lively

____Peaceful

____Enduring

____Just

____Clear

____Relaxed

____Devout

____Uncertain

____Cooperative

____Ambiguous

____Group-motivated

____Optimistic

____Indifferent

____Respectful

____Strong personality

____Adoring

____Secretive

____Competent

____Hesitant

____Fit

____Straightforward

____Funny

____Feelings

____Courageous

____Complimentary

____Energetic

____Powerful

____Committed

____Empathetic

____Persistent

____Hard working

____Motivated

____Uncorrupt

____Moving

____Demanding

____Flexible

____Adaptable

____Objective

____Encouraging

____Respectable

____Acts as a leader

____Competitive

____Conventional

____Admiring

____Engaged

____Reflective

____Leadership Ability

____Inspiring

____Vital

____Eager to Soothe hurt

____Soft-spoken

____Masculine

____Insightful

____Jealous

____Quiet

____Gentle

____Self-righteous

____Proud

____Frank

____Prepared

____Grateful

____Inefficient

____Humble

____Questioning

____Interested

____Patient

____Tall

____Systematic

____Content

____Likable

____Self-reliant

____Reassuring

____Gullible

____Direct

____Stern

____Strong

____Initiative

____Detail-oriented

____Busy

____Imaginative

____Young

____Willingness

____Listener

____Spirited

____Elite

____Focused

____Animated

____Selfless

____Appreciative

____Compassionate

____Commanding

____Occupied

____Theatrical

____Serious

____Solemn

____Plain spoken

____Diligent

____Excited

____Friendly

____Defends own beliefs

____No harsh language

____Influential

____Cheerful

____High Standards

____Helpful

____Sober

____Tactful

____Mindful

____Honest

____Ambitious

____Passionate

____Consistent

____Loves children

____Earnest

____Tender

____Poised

____Plain looking

____Physical

____Decisive

____Polite

____Thoughtful

____Loyal

____Fair-minded

____Hands-on

1= Not at all Desirable 4= Neither Desirable nor Undesirable 7= Highly Desirable

1 2 3 4 5 6 7

Instrument 2

DO THIS PAGE FIRST, THEN TURN OVER TO COMPLETE
Sex: Male Female (Circle one)
Age: _____
Year in school: _____
Major: _____
High School Grade Point Average: _____
Career Goal: _____

On a scale from 1 to 10, circle the number to indicate how like or unlike you each of these characteristics or statements are, where **1 indicates the word or statements are NOT at all like you** and **10 indicates the word or statements are VERY much like you**.

	Not at all Like Me				Neither Like Or Unlike Me				Very much Like Me	
Decisive	1	2	3	4	5	6	7	8	9	10
Busy	1	2	3	4	5	6	7	8	9	10
Certain	1	2	3	4	5	6	7	8	9	10
Aggressive	1	2	3	4	5	6	7	8	9	10
Cold	1	2	3	4	5	6	7	8	9	10
Dominant	1	2	3	4	5	6	7	8	9	10
Ambiguous	1	2	3	4	5	6	7	8	9	10
Caution	1	2	3	4	5	6	7	8	9	10
Competitive	1	2	3	4	5	6	7	8	9	10
Acts as a Leader	1	2	3	4	5	6	7	8	9	10
Detail-oriented	1	2	3	4	5	6	7	8	9	10
Assertive	1	2	3	4	5	6	7	8	9	10
Agreeable	1	2	3	4	5	6	7	8	9	10
Accommodating	1	2	3	4	5	6	7	8	9	10
Cooperative	1	2	3	4	5	6	7	8	9	10
Athletic	1	2	3	4	5	6	7	8	9	10
Cunning	1	2	3	4	5	6	7	8	9	10
Peaceful	1	2	3	4	5	6	7	8	9	10
Hopeful	1	2	3	4	5	6	7	8	9	10
Independent	1	2	3	4	5	6	7	8	9	10
Fanatic	1	2	3	4	5	6	7	8	9	10
Inefficient	1	2	3	4	5	6	7	8	9	10
Persistent	1	2	3	4	5	6	7	8	9	10
Forceful	1	2	3	4	5	6	7	8	9	10
Humorous	1	2	3	4	5	6	7	8	9	10
Indifferent	1	2	3	4	5	6	7	8	9	10
Excitable	1	2	3	4	5	6	7	8	9	10
Perky	1	2	3	4	5	6	7	8	9	10
Group-Motivated	1	2	3	4	5	6	7	8	9	10

Flexible	1	2	3	4	5	6	7	8	9	10
Dutiful	1	2	3	4	5	6	7	8	9	10
Modest	1	2	3	4	5	6	7	8	9	10
Hesitant	1	2	3	4	5	6	7	8	9	10
Mature	1	2	3	4	5	6	7	8	9	10
Vigorous	1	2	3	4	5	6	7	8	9	10
Shy	1	2	3	4	5	6	7	8	9	10
Spirited	1	2	3	4	5	6	7	8	9	10
Respectful	1	2	3	4	5	6	7	8	9	10
Unpredictable	1	2	3	4	5	6	7	8	9	10
Willful	1	2	3	4	5	6	7	8	9	10
Secretive	1	2	3	4	5	6	7	8	9	10
Skeptical	1	2	3	4	5	6	7	8	9	10
Uncorrupted	1	2	3	4	5	6	7	8	9	10
Reliable	1	2	3	4	5	6	7	8	9	10
Virtuous	1	2	3	4	5	6	7	8	9	10
Self-Assured	1	2	3	4	5	6	7	8	9	10
Restrained	1	2	3	4	5	6	7	8	9	10
Plain-Spoken	1	2	3	4	5	6	7	8	9	10
Unshakable	1	2	3	4	5	6	7	8	9	10
Serious	1	2	3	4	5	6	7	8	9	10
Good Judgment	1	2	3	4	5	6	7	8	9	10

1. If there is a difference of opinion in my group, people often look to me to resolve it.

Not at all Like Me Neither Like Or Unlike Me Very much Like Me

1 2 3 4 5 6 7 8 9 10

2. I am good at getting people to work together.

Not at all Like Me Neither Like Or Unlike Me Very much Like Me

1 2 3 4 5 6 7 8 9 10

3. I can look past immediate problems for the group and help people see the big picture.

Not at all Like Me Neither Like Or Unlike Me Very much Like Me

1 2 3 4 5 6 7 8 9 10

4. I usually can keep in mind the group's goals while working through group tasks.

Not at all Like Me Neither Like Or Unlike Me Very much Like Me

1 2 3 4 5 6 7 8 9 10

5. I feel comfortable giving other people advice and direction.

Not at all Like Me Neither Like Or Unlike Me Very much Like Me

1 2 3 4 5 6 7 8 9 10

6. I am comfortable being the leader when I work with others.

Not at all Like Me Neither Like Or Unlike Me Very much Like Me

1 2 3 4 5 6 7 8 9 10

APPENDIX C. MATERIALS FOR STUDY 2, EXPERIMENT A AND EXPERIMENT B

Recruitment Email Text

Undergraduate Men interested in helping researchers evaluate Intuitive Leadership Decisions are invited to participate in research being conducted now for either paid compensation or sociology class extra credit in the sociology department's Center for the Study of Group Processes, located in the West wing of Seashore Hall. This research investigates how different forms of tests affect how people think and feel. If interested, please log onto the Sona Systems scheduling website at uiowa-soc.sona-systems.com to create a user ID and sign up for an available timeslot in the “Intuitive Leadership” study, Christopher P. Kelley, Principal Investigator. Principal investigator email address: christopher-p-kelley@uiowa.edu; Phone: 319-335-2512.

Demographic Information Questionnaire

First, please answer a few questions about yourself by circling the best answer or filling in the blank. This study is anonymous. Please do NOT include your name or student ID number.

1. Year in School: Fresh Soph Junior Senior Grad

2. Academic Major (for example, mathematics) _____

3. Gender: Male Female

4. What is the highest educational degree attained by your father?

Less than high school High school AA 4-year BA or BS Masters, Law, MD or PhD

What is the highest educational degree attained by your mother?

Less than high school High school AA 4-year BA or BS Masters, Law, MD or PhD

5. What was the approximate family income for the household you lived in during your last year in high school? For example, if you lived with your mother and step-father and they both worked, what was their combined income? (Please guess if you are not sure)

_____

6. Ethnic Background (Please check as many categories as necessary to describe your heritage, or, if you prefer, write it in the space provided):

African American (Black) ____ Asian American____
European American (White) ____ Hispanic ____
Native American (American Indian) ____ Pacific Islander ____

Born outside the United States _____ (Country)
_____

Other_____
_____

7. Age: _____

8. High School Grade Point Average (GPA, 4.0 = A) as well as you can remember:
_____

9. Have you had any courses or specialized training on organizations or leadership in organization. Please list any that apply or write NA for not applicable. (Sports, jobs, clubs).

_____
_____
_____
_____
_____
____

10. Briefly list the formal organizations and extra-curricular actives have you been involved in since you arrived at the University of Iowa and what significant roles have you played in them if any? List any or write NA.

_____
_____
_____
_____
_____
____

11. Briefly list the formal organizations and extra-curricular actives you were involved in prior to attending University of Iowa and what significant roles have you played in them? List any or write NA. (Sports, jobs, clubs)

_____
_____
_____
_____
_____
____

Experimental Protocol Flip-book

DLS Study Protocol v 1.4

Basic information:

Sessions for this study are scheduled through Sona Systems and require at least 2 research assistants in order to run. The study involves setting the participant up in the study room (W14C) and then carefully recording his/her actions in the back lab room (W14F).

Remember:

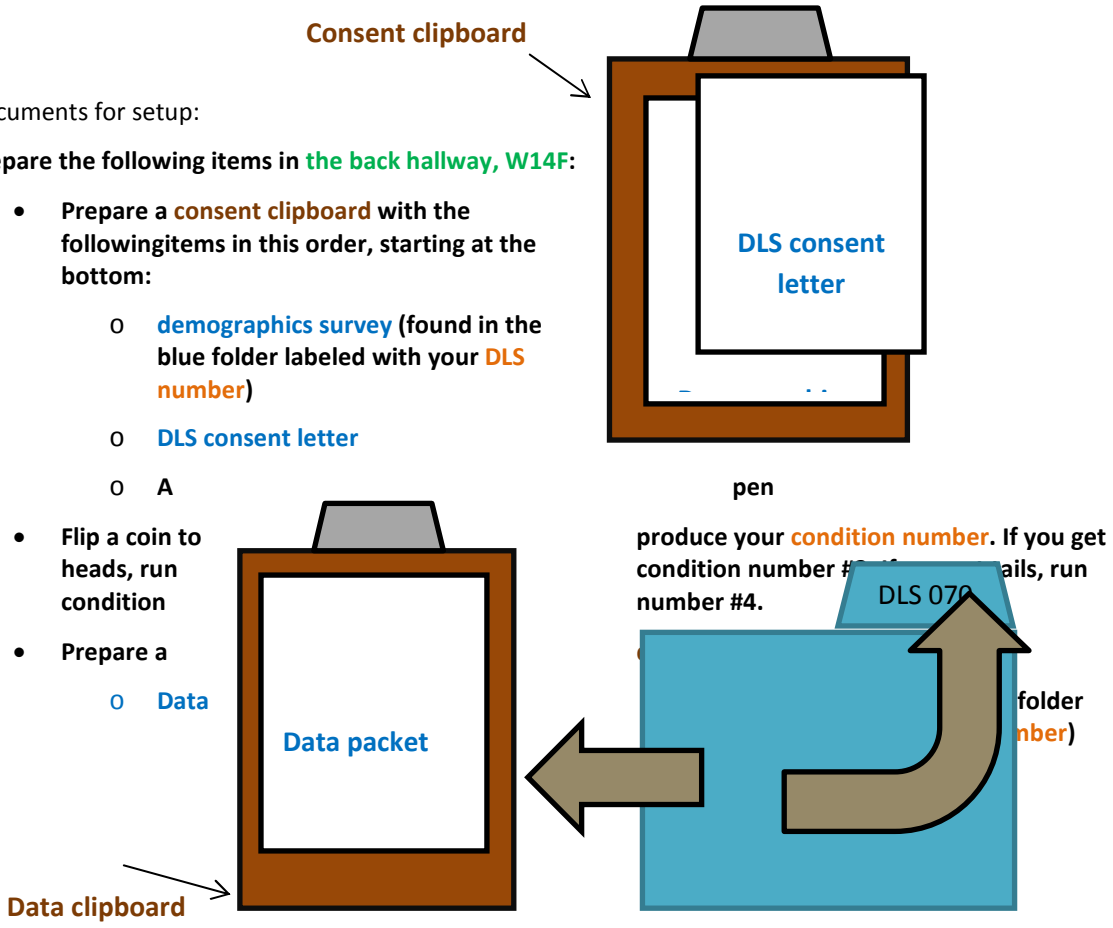
- **The participant must take the study seriously and believe what you tell them (the description varies depending on the condition)**
- **The participant must remain ignorant of the actual nature of the study (until the debriefing)**
- **The participant must not know that he/she is being watched**

These sessions are the most important thing we do in lab and all research assistants are required to learn how to configure the equipment and run the experiment.

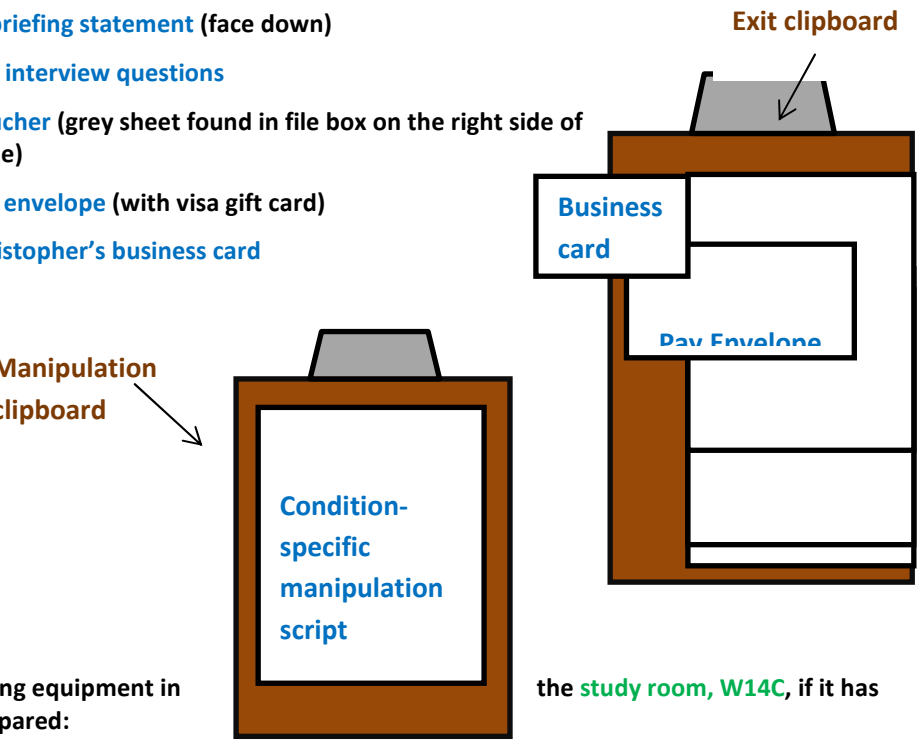
Documents for setup:

Prepare the following items in the back hallway, W14F:

- **Prepare a consent clipboard with the followingitems in this order, starting at the bottom:**
  - **demographics survey (found in the blue folder labeled with your DLS number)**
  - **DLS consent letter**
  - **A pen**
- **Flip a coin to produce your condition number. If you get heads, run condition condition number #[illegible]ails, run number #4.**
- **Prepare a**
  - **Data folder**



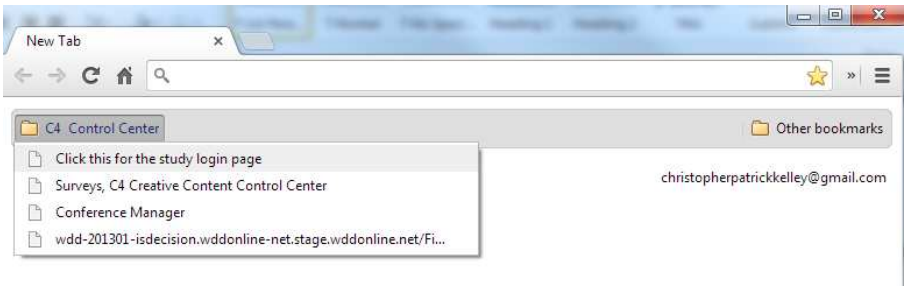
- **Prepare a manipulation clipboard with:**
  - **Condition-specific manipulation script (grab the right one for your condition number)**
- **Prepare an exit clipboard with the following items in this order, starting at the bottom:**
  - **Debriefing statement (face down)**
  - **Exit interview questions**
  - **Voucher (grey sheet found in file box on the right side of table)**
  - **Pay envelope (with visa gift card)**
  - **Christopher's business card**



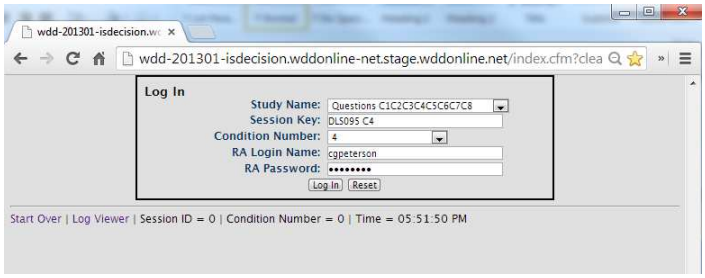
Equipment for setup:

Configure the following equipment in the study room, W14C, if it has not already been prepared:

- **Open Google Chrome and click the bookmark folder "C4 Control Center"**



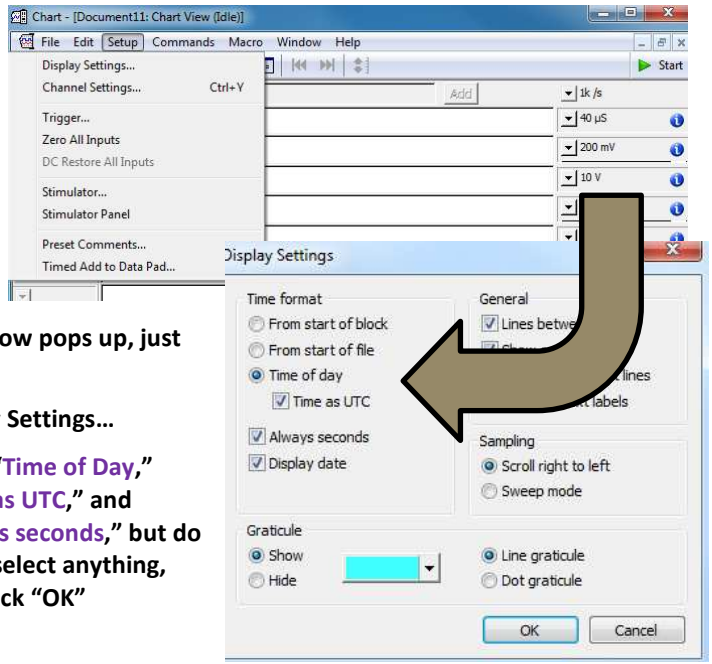
  - **In the drop down menu, click the first link, called "Click this for the study login page."**

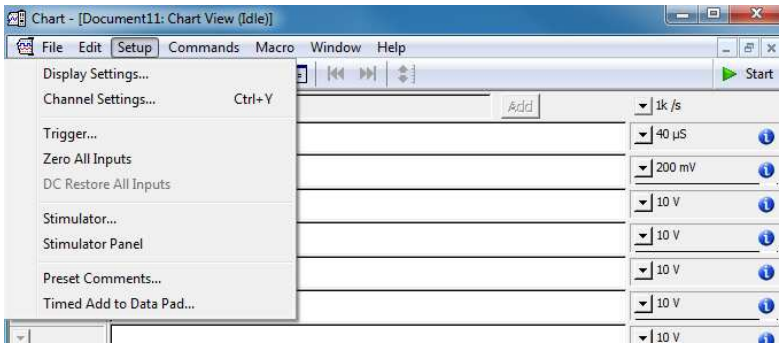


  - **You will be taken to a gray screen asking for more login details. Fill them out <u>BUT DO NOT LOG IN</u>:**

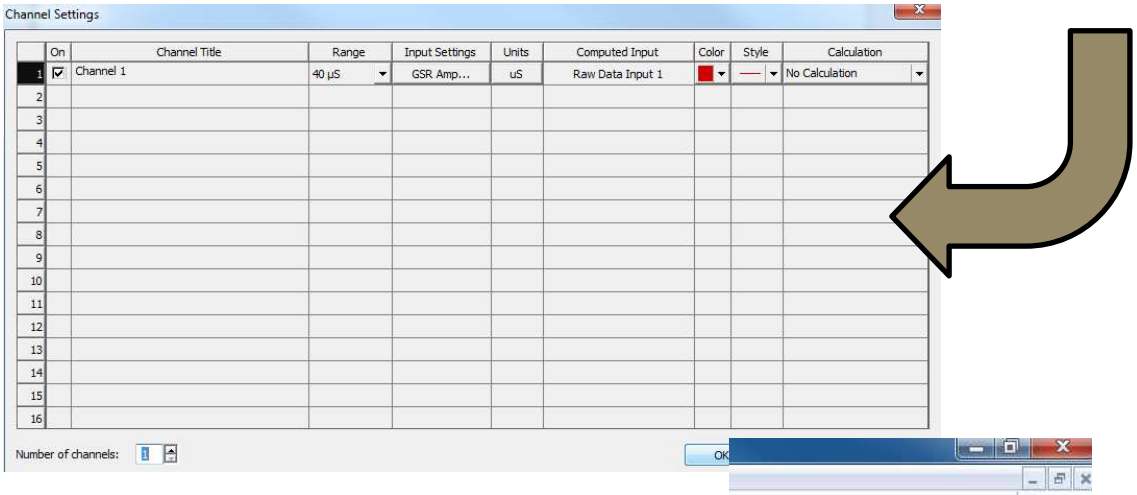
- **Study Name: Questions C1C2C3C4C5C6C7C8**
- **Session Key: DLS number + condition number + participant gender (ex: DLS005 C4 W)**
- **Condition Number: condition number**
- **Ra Login Name: [your Hawk ID]**
- **RA password: cpkstudy1**

- **Ensure that PowerLab (3 stacked beige machines) is turned on using the switch at the back of the machine. It will make noise if it is on.**
- **On the desktop, double-click (open) the program Chart5 for Windows (if it is not already opened)**
  - **Move the program window to the left (small) monitor**
  - **In the program, go: File -> New (if a dialogue window pops up, just hit "OK")**
  - **Setup -> Display Settings…**
    - **Check "Time of Day," "Time as UTC," and "Always seconds," but do not unselect anything, then click "OK"**

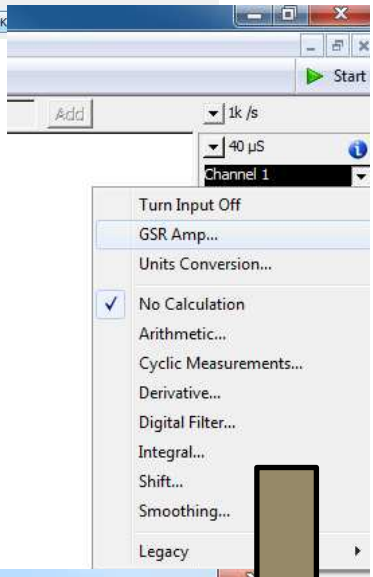


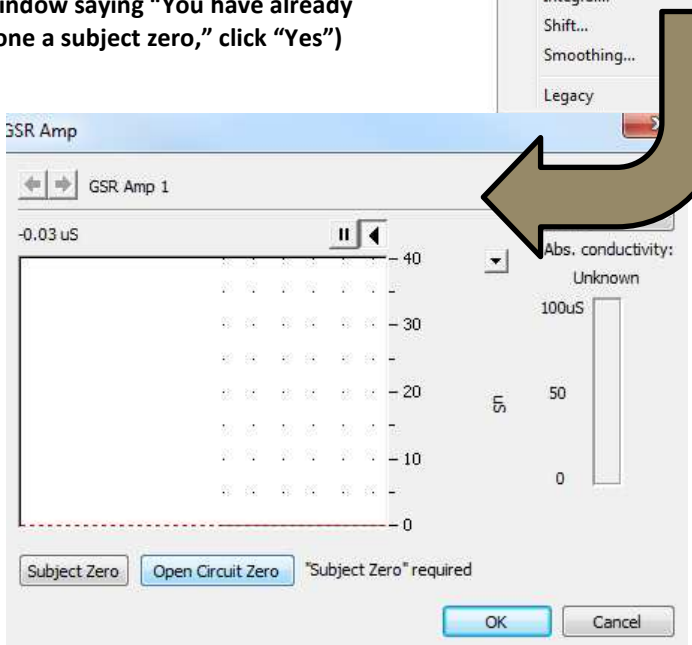


  - **Setup -> Channel Settings…**
    - **Near the bottom, set "Number of channels" to 1 and click "OK"**



- **On the right side of the program, look for "1k /s and 40 µS"**
  - **If not visible, use the scroll-bar inside the program all the way to the right and maximize the chart**
  - **Click the drop down arrow to the right of "Channel 1" and in the drop-down menu click GSR Amp… and a new window will pop up. Click Open Circuit Zero, then click "OK" (if a window saying "You have already done a subject zero," click "Yes")**



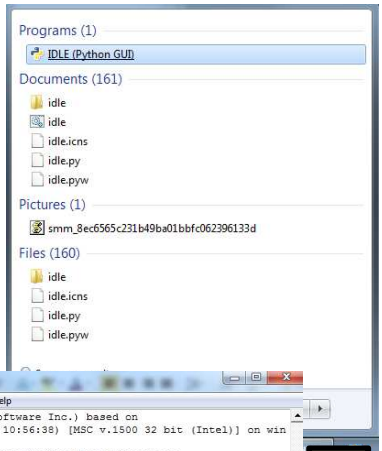


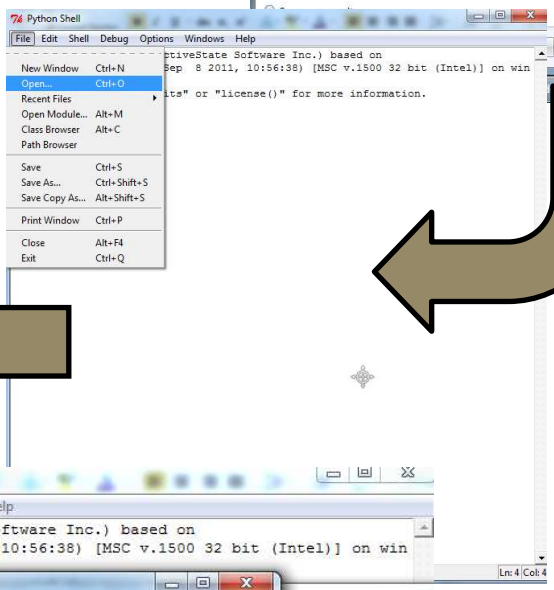
- **On the Desktop, double-click Camtasia Recorder (if it is already open, select in from the Windows taskbar)**

- **Move it to the left (small) monitor**
- **Ensure that the green dotted line appears around the edges of both screens and that a target cursor appears on the main screen, then minimize the program**
    - **The dimensions should be '2944x1080'**

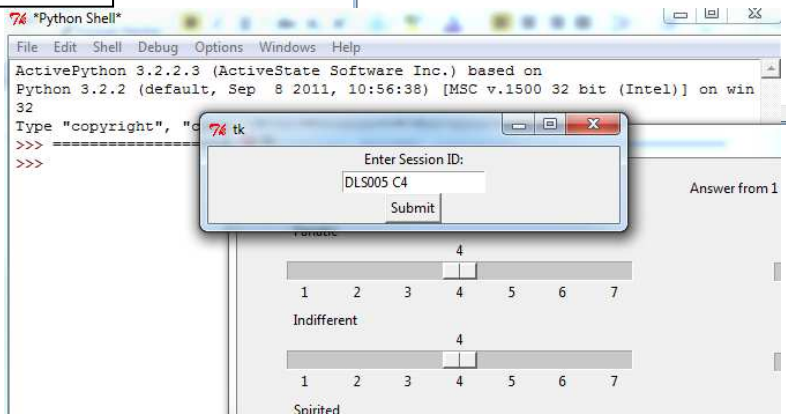
Open the windows start menu and search "idle"

- **Click the first result, "IDLE (Python GUI)"**
- **In the Python Shell program that opens, go File -> Open… in the window that pops up, click "Desktop" on the left and then double-click the file folder "Leadership Program." Then double click the file "Leadership Program.py.py"**
- **Click into the newly opened python program and hit F5**





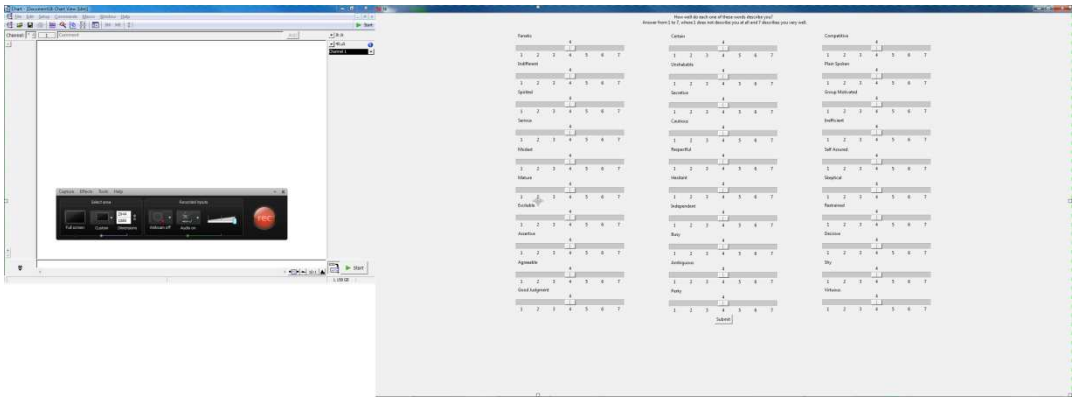
Hit F5



- **After you hit F5, type in the DLS number + condition number + participant gender (ex: DLS005 C4 W) in the small window that asks for "Session ID" and hit "submit."**

- **Arrange the windows in the following order, in preparation for the participant:**
  - **Minimize the small python shell windows**
  - **Maximize the Chrome browser on the big monitor**
  - **Maximize the grey screen with the Traits and Characteristics Pretest on the big monitor, on top of Chrome.**

This is a visual representation of the arrangement of the windows for the beginning of the study:

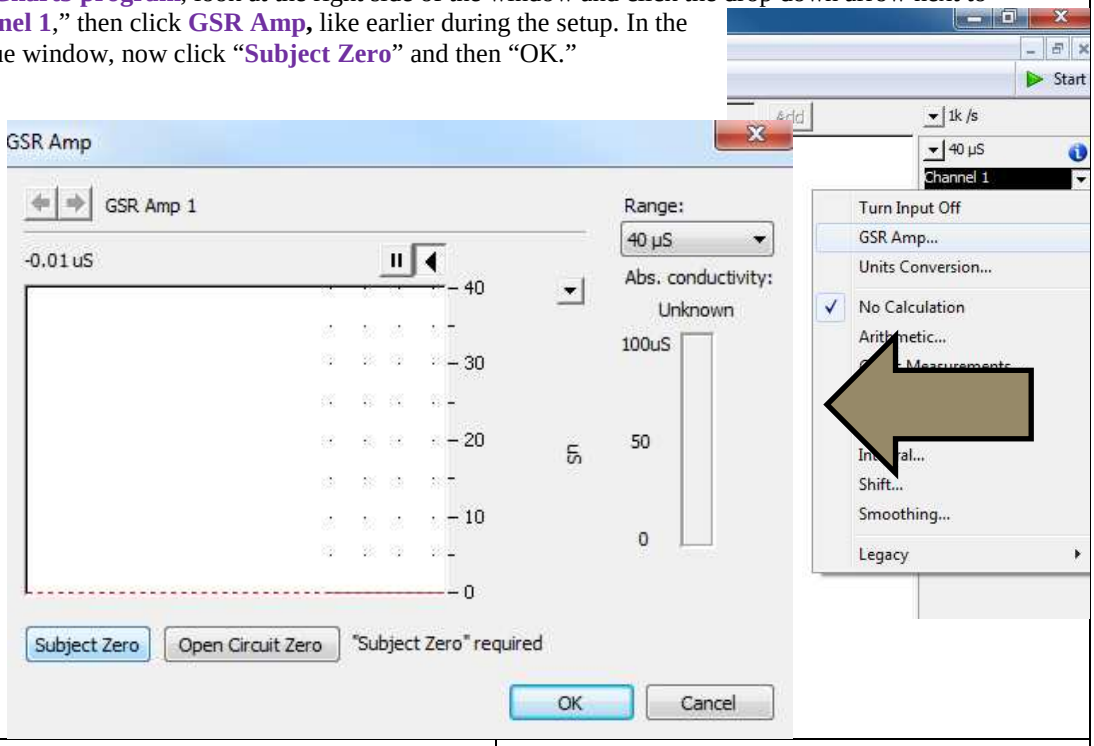


Everything else is minimized. This is what the screens should look like:

Participant arrival:

Alpha Waiting Room **Bring Consent clipboard**	
DO THIS:	**SAY THIS:**
If the participant is not already in the **alpha waiting room**, lead them there and ask them to take a seat.	
	"Hello, are you here for the Leadership Decisions study at [time]?"
Introduce yourself and anyone shadowing you.	
Ensure that the participant is fluent in English. It is essential that they understand what is going on. If they seem like a non-US native, ask them if they have a social security number.	
	"Alright. Before we begin, it's important that we know if we can compensate you for your time today. Do you have a social security number so that we can pay you for participating in today's study?"
If the participant is either non-fluent or lacks a social security number, WE CANNOT RUN THEM.	
	"Thank you for coming. The study you'll participate in today takes about an hour and pays $20 OR will count towards extra credit in a sociology course. If you decide to participate for extra credit, the amount of extra credit will be determined by your instructor. You can only use extra credit once for each class. Your instructor will not know which study you participated in."
Hand the participant the **consent clipboard.**	
	"This is a consent form for your participation in today's study. Please take a few minutes to read it closely. If you understand and consent to participate, go ahead and fill out the demographics survey behind it. We'd like to know a little bit more about you."
	"In today's study, we'll be measuring your galvanic skin response with leads attached to two of your fingers. It's very easy and non-invasive. We just wanted to let you know that we will be taking some biometric readings."

	"Thank you. I'll be back in a few minutes."
Leave room, go to W14F	
In **the back hallway, W14F,** find the **DLS logbook** (grid paper, red cover) and flip to the next blank WHITE page, and put the cardstock sheet beneath the following YELLOW page. Never write in the logbook without doing this. Write, at the top: o Session #: [**DLS number**] o Session ID: This will be displayed in the lower-left corner of the **C4 program** (in **Chrome**) once the participant begins the computer instructions. o Condition: [**condition number**] o RA: [your name] + [anyone shadowing you] o Start time: [scheduled session time] o Date: [date] On the **data clipboard**, fill out the first page of the **data packet** by labeling it with the same information above: Check on participant periodically (through the window in the door) to see if he/she has finished with the **demographics survey**. Once you see that he/she has finished it, return to the **alpha waiting room.**	
Return to Alpha Waiting Room	
DO THIS:	**SAY THIS:**
Check to see that the **demographics survey** is filled out.	"Alright. Do you have any questions about the consent form or about today's study?"
If yes, try to answer his/her questions without giving away more information about the study. If no, continue with the study.	"Alright. Thank you very much for agreeing to participate in today's study. We're ready to begin! Please grab your things and follow me."
Take the participant to the **study room, W14C** and have them leave their phone and bags on the wooden table on the left (North) wall of the room.	"Please leave your things on this table. Please take out your cell phone, and if you wouldn't mind turning it off, put it on the table as well. Since we'll be measuring biometric responses we don't any distractions during the study."
	"Thank you. Go ahead and sit down at the computer."
Strap the GSR leads to the participant's index	"First I'll have you put these leads on your fingers."

finger and ring finger. The metal plates on the leads should tightly press against the finger just past the middle knuckle of the finger, between the middle and second finger knuckles.	
Strap the participant's arm into the holder once the leads are attached.	"Now we'll strap your arm into the holder here. The reason we do this is because people tend to touch their faces a lot, and we don't want the straps to fall off during the study."
Face the left (small) monitor AWAY from the participant so that he/she cannot see what is on the screen.	"We just ask that you keep your arm there until later in the study, when you'll be instructed to take it out."
Grab the computer mouse. You will be using the left (small) monitor, but don't let the participant see what you're doing:	"Let me get you zero'd out real quick."
In the **Chart5 program**, look at the right side of the window and click the drop down arrow next to "**Channel 1**," then click **GSR Amp,** like earlier during the setup. In the dialogue window, now click "**Subject Zero**" and then "OK." 	
Click "**Start**" at the bottom-right of the **Chart5** program. You should see their galvanic skin response, represented by a red line, begin.	

Use Alt-Tab or the Windows Taskbar to bring **Camtasia Recorder** back up. It should appear on the left monitor if setup was done correctly. Click the big red "rec" button to begin recording the screen. A countdown will display on the right (big) monitor. If the participant sees it, just pass it off as recording only the skin response.	"We'll start recording your skin response now. Galvanic Skin Response is used the see how the body reacts when making decisions. So, for example, if someone asks you, 'what flavor ice cream do you want?' your skin will show a response just as you're making the decision." "The first thing we'll have you do is have you rate yourself on how well you think the words on the screen describe you, and then when you're done you'll hit "submit."
Point at the **Traits and Characteristics Pretest** program and see that they understand.	"Next, you'll see a login page. Go ahead and hit "log in," and then you'll watch some instructions about the next activity, which is just a pretest so that we have a baseline for your galvanic skin response." "The instructions are recorded so that everyone receives the exact same information."
Make sure the **white buzzer** (with the red button) at the right of the main monitor is flipped on.	"When you're done with the pretest, there will be a page with a big 'stop' sign telling you to wait. Be sure to stop at that point, and then use the buzzer and we'll come back and start the next part. If you have any questions or problems during the study, just use the buzzer and we'll come back. Give it a try now."
Have the participant press the red button on the **buzzer**.	"Perfect. Sound good? Any questions?"
Exit Room, go to W14F **Bring completed consent clipboard**	
In **the back hallway, W14F**, file the **demographics survey** in the **blue study folder**. Get out the **data clipboard**. You will be filling out the **data packet** while watching the participant's screens. You need to watch carefully because the information you need will sometimes only be displayed on the screen for a few seconds. If you miss something, we can go back and find it in the video, but please try your best to fill out everything as accurately as possible. It is much easier to do this with two people.	

- Record the time that the participant starts the introduction directions in the **Intro Start** box.
    - All times are displayed at the bottom left of the C4 program (Chrome).
- When the participant hits "proceed" the **matrices test** will start; record this time in the **Intro End/ MT start** box on the front page
    - These two timestamps share a box because they are the same time.
- When the participant finishes the **matrices test** he/she will answer some questions about himself/herself. When these questions are complete, and the **STOP page** appears, write down the time in the **MT end** box on the front page.

When the participant arrives at the stop page, grab the **manipulation clipboard** and wait until you hear the buzzer. Wait a few extra moments before returning to **the study room, W14C**, so that the participant believes in the buzzer (and doesn't suspect that we are watching him/her). Don't forget to bring the **logbook** with you.

Return to Study Room

Bring manipulation clipboard and the logbook

DO THIS:	SAY THIS:
Returning to **the study room, W14C**, read the participant the study instructions from the **condition-specific manipulation script**.	See **condition-specific manipulation script**.
When you've finished reading from the script, ask:	"Just to make sure you got all of that, I need to ask you a few questions: 1. What are we studying today? 2. Who are we testing today? 3. Can we link your answers back to you?"
Record their answers in the **logbook**. If they get any of them wrong (inconsistent with the **condition-specific manipulation script**), read the instructions and ask the questions again until they get them right. This may take a couple of tries if the participant is inattentive.	"I'm going to leave the room. When I do, click "proceed." You'll be brought to another video, which will explain how to answer 6 questions. Afterward, there will be 4 questionnaires with sliding-scale answers, and a chance to explain some of your answers to the 6 questions."

Leave Room, go to W14F

Bring manipulation clipboard and the logbook

The participant will now begin the main task of the study. Back in **the back hallway, W14F**, get out the

data packet and:

- Record the time that the participant starts the **condition instructions** in the **instruct start** box,
- Record the time that the participant finishes the **condition instructions** in the **instruct end** box.
- At this point the participant will start by reading about the first problem. Flip to the second page in the **data packet** and:
    - Record the **problem number** and **problem start time**.
    - When the participant moves on to the **choice screen**, records the time in choice screen **(time)**.
    - Depending on the **condition**, there may be options for the participant to find out more information about his/her choices. In this case, there will be a pro and a con for each possible decision as well as a more general information option on the left side.
        - Use ordered numbering (1,2,3…) to record which buttons the participant uses and in which order he/she does so. Example: the participant selects the "pro" for choice #2 first, then the "additional information," and then a "con" for choice #1. You would write '1' in **Pro_2**, '2' in **Add_Info**, and '3' in **Con_1**. If a piece of information is viewed more than once, mark the appropriate box again with the next ordered number.
        - Use a nickname or shorthand to record the order in which the answers appear. Write this down below each of the **small ovals** in the middle of the page. Example: the first choice involves firing someone, the second involves promoting someone, and the third is to do nothing. You could write "fire" below the first oval, "promote" below the second, and "nothing" below the third. This is necessary because the order of the choices is random.
    - When the participant proceeds to the **answer screen**, record the time in **answer screen (time)**.
    - Then record their choice by checking one of the three **small ovals** in the middle of the page. Also record their **level of certainty**.
    - Record the time when they move on to the next problem in **proceed (time)** and in the next **start problem (time)**.
- Repeat the steps above for each of the next 5 questions, making a total of 6 leadership decisions.
- When all six problem questions are done, the participant will see a **power measure test**. Record the time in the last **Proceed (time)** box. Also record which power measure displays (potato chips or bottled water) and their selected number of items in the **power measure** circle.

The participant will arrive at a page that tells them to remove the GSR leads. They will then type out explanations for their six choices. You don't need to write any of this down. It is fun to watch what they write; try to look for stylistic choices (use of passive/active voice, etc.) that show us how they're thinking about the problem. We plan to do some analysis on the writing and the words they choose, so try and think of a related research hypothesis if you're interested.

Check the previous study's **logbook** entry to see which file the exit interview was recorded on (A, B, C, D or E). Then write in the logbook that you will be recording on the next file (if previous was on A, you record on B, if they did E, you do A). Remember which **file letter** you will be recording on.

When his is finished, the participant will press the **buzzer**. Grab the **logbook** and the **recorder** and **exit clipboard** when you return to **the study room, W14C**. Again, wait a few moments before walking back so that he/she does not sense that we already knew he/she was done.

Return to Study Room **Bring logbook, recorder and exit clipboard**	
DO THIS:	**SAY THIS:**
Take participant to **W14B**	"Thanks for your participation. I'll have you follow me to the next room where we'll finish up real quick."
	Please fill out this pay slip for our records. It does ask for your social security number. This is just so that we can show that we ran and paid real people."
	"Do you want payment in money or extra credit?"
	If extra credit, have them write the class and professor they want the extra credit for. It must be a sociology course.
Hand the participant the **voucher**.	If they want money, continue:
	"Here is your payment. It is a $20 prepaid visa, all ready to go."
	"Before you leave, do you mind if we ask you some questions about your participation?"
	If no, ask them politely why, and record the answer in the logbook. Then thank them and politely lead them to the exit. If yes, continue.
	"Thank you. Do you mind if I record your answers so that I don't miss anything? The recording will be deleted after the study is complete."
	If yes, see instructions at left. If no, go through the exit interview questions without the recorder, writing down their responses as best you can.
To begin recording, flip the power switch on the back of the **recorder** to "on." Once the screen is lit up, hit the "menu/folder" button on the front until you get to the **file letter** you wrote down earlier. It is displayed in a circle on the top of the digital screen. Hit the red "rec" button on the side. A red light will turn on at the top. Place the recorder on the table.	
	Say clearly (to the recorder) the **DLS number**.
Begin reading the **exit interview questions**.	See **exit interview questions**.
When the exit interview is finished, begin the	

debriefing. Read the **debriefing statement**. When the debriefing is complete, wrap up the study: Hand the participant Christopher's business card. Help the participant find the exit.	See **debriefing statement**. "Thanks again for taking part in the study. Here is the researcher's business card…" "Contact him if you have any questions, concerns, or want to know the outcome of the study. Sound good?"
Show the participant out	

Post-Study

In the study room, W14C:

- **Alt+Tab or Windows Taskbar to bring Camtasia Recorder back up. Stop the recording and hit "Save and Exit."**
  - **Name the file after your DLS number + condition number + participant gender (ex: DLS 070 C4 W)**
- **Go to Chart5 and hit "Stop" at the bottom-right.**
  - **Then File->Save as…**
  - **Name the file after your DLS number + condition number + participant gender (ex: DLS 071 C3 M)**
- **Set up all the programs again so they are ready for the next study. Use the instructions on the first pages of this protocol.**
- **Log on to Sona Systems**
  - **Click "My Studies," then "Timeslots" next to "Leadership Decisions"**
  - **Find your session timeslot and click "Modify"**
  - **Near the bottom of the page, click the bubble labeled "Participated" and then click "Update Sign-Ups"**

In the back hallway, W14F:

- **Ensure that the data packet and demographics survey are placed back inside the blue study folder.**
  - **File the folder in the plastic bin with the others.**
- **Prepare the room for the next study. Use the directions at the beginning of this protocol.**

Video Rendering Instructions (at the end of the day)

Check which videos have been rendered by navigating to "F:\Produced Session Videos"

Open Camtasia Studio

At the top, go to “Tools” then “sharing” -> “batch production…”

A dialogue window will open. At the bottom of the dialogue, click “Add file/projects”

Hold down “ctrl” and select the videos to be rendered (maximum 8 per batch) in folder “F:\CPKScreenCapt\”

The dialogue will then ask for preset options. Select “HD” from the preset drop-down menu. Then hit “next.”

Ensure that the output folder is set to “F:\Produced Session Videos\” and that the two boxes are checked.

Hit “Finish” to begin rendering.

A new dialogue will open showing the progress of the videos. Do not close this window. Camtasia Studio cannot be used while the videos are rendering.

Onscreen Decision Task Instructions

Test Instructions: Intuitive Leadership Intelligence

Instructions: Each of these scenarios is based on a recent case study. In each of the scenarios an organization faces a problem and a leader faces a challenge to their leadership ability. Each includes a description of the situation, the problem the leader faces, and the decision the leader must make. The leader will need to resolve the challenge to solve the organization's problem. First you will see the scenarios, then the three solutions the leader can consider and ICONs that include additional information for solving the problem. Click PROCEED to move on to the next page, Indicate your solution by choosing one of the three available options the leader can consider. While each option has merit, one is better for solving the organization's problem. You decide which option is best for the organization and indicate how certain you are of your decision before proceeding to the next leadership scenario. After you have finished this part of the test you will have the chance to briefly explain why you made each decision.

Task Instructions: Question Quality Evaluation

Instructions: All of the scenarios are written by instructors drawing on chapters in an Organizations textbook. Each question uses the same format, outlining a situation, the problem for the organization, and a decision. The new instructors are required to write new coursework based on case studies where an organization 1) faces a problem that must be solved by a leader who 2) faces a challenge to their leadership. First you will see the scenarios, then the three solutions the leader can consider and ICONs that include additional information for solving the problem. To indicate the correct answer click PROCEED to move on to the next page, and choose the best solution from the three available options. While each option has merit, one is better for solving the organization's problem. Indicate which option is best for the organization and how certain you are of

your decision before proceeding to the next scenario. After you have finished this part of the test you will have the chance to briefly explain how you made each decision.

Experimental Manipulation Script (Study 2, Experiment B)

Condition 1, Important Decisions Study 2B

I am going to read from this page so everyone in the study hears the same basic instructions. After I am going to ask you a couple questions to be sure you heard and understand what I just explained. Sound ok? Thanks.

During this study you will be taking the **Early Career Advancement Natural Leadership Intelligence Test** for men while we monitor changes on three biometric measure commonly use in research on decision making in order to help improve the tests and increase its accuracy. This test was developed to identify individuals with strong aptitude for leadership is commonly used at major universities, by government agencies, and at Fortune 500 companies to assess the leadership aptitude in hiring and candidates for promotion. While scores have regularly been demonstrated to be a valid and reliable predictor of future leadership performance we feel new data on physiological reactions to leadership decision can help us better understand how good leaders respond in difficult situations. Your performance will not affect your pay for today's study and we do not link your performance linked with personally identifying data so I won't know your score, however if you are interested in knowing how you performed At the end of today's study you will receive a unique code that allows you to log on to a website from home to learn more about your performance and view your scores in private. Again, we do not keep a record of individual scores linked with participants' personal information.

Condition 2, Less Important Decisions

I am going to read from this page to be sure everyone hears the same instructions. Then I will ask you a couple questions about the study to be sure you heard and understand what I explained. You will need to be able to answer these or I will have to read this all again. Sound ok? Thanks.

Today we need your help to evaluate modules for a new approach to online courses being developed by graduate teaching assistants. With research, new ideas, and your help we hope to improve the online learning experience and assure interesting courses and better teaching. The goal is to make online quiz modules that help students learn material in more effective ways and study for exams. Online students surveyed suggested they prefer this type of active learning. To test some ideas we have about why this is true we will be collecting some biometric data while you work. We can use these readings to understand more about how students feel while working on these and other types of online coursework.

Before we begin, it is essential that you know this is NOT a test of your ability in any way and the data being collected is not linked to any information that can identify you. All data is aggregated into a pool for analysis. Again, this is not a test so please don't treat it as one. Rather you are helping us to evaluate new online learning modules and providing insights into how people arrive at correct and incorrect solutions as well as feelings they experience during different types of learning. Your answers cannot affect your pay for today's study and you are not scored on the learning module. However we ask your help in improving online courses by trying to determine the correct answer. Obviously in order to have useful insights into how undergrads experience online learning we do need help from undergraduates who face no risk to themselves or their grades, while still trying to determine the correct solutions. This helps us do a better job of evaluating and improving efforts at online instruction. Because these are early efforts at these types of peremptory teaching quizzes your answers do not necessarily reflect your ability or prior knowledge of the material in this area. We have chosen the topic of leadership and problems in organizations because most undergraduates find these types of situations interesting to understand. By taking part in this study, you are helping us teach graduate students how to be better teachers for other people like you and learn more about how online courses affect students.

Decision Problem Screens

Decision 1

THE SITUATION

The Chief Executive Officer (CEO) of a company that owns Bradford Arena, the local sports and entertainment venue, has the goal of assuring the Arena is consistently booked and making profits.

THE PROBLEM

The Arena was named for Mr. Bradford, of Bradford Power Company. Bradford was arrested and faces serious criminal charges. The company is losing money and clients because of damage to the Arena's reputation through association with Mr. Bradford.

The senior management team meets to help resolve the Arena's public relations problem. A team member, Jenkins, who runs daily operations for the Arena, rudely interrupts others with contrasting opinions and seemingly snide comments. Where the comments were initially dismissive of others, Jenkins now is louder and sounds somewhat hostile. When asked about one course of action, Jenkins's response is "Well, I think that is ridiculous, but obviously no one gives a damn."

The members of the management team are losing focus, distracted by Jenkins. The behavior is disruptive enough to be regarded as insubordinate. The CEO may worry about losing control of the meeting.

THE DECISION

What decision should the CEO make? What should the CEO do to ensure the team works together, focuses on the task at hand, and successfully helps restore and protect the Arena's public image?

Question:

Problem #1

BRADFORD ARENA PROBLEM

Below are the three options for what the CEO could do. Consider the three options. All have merit but one is better than the others. When you are finished, click "Proceed" to move forward to the next page.

Address Jenkins's behavior directly and immediately...

The CEO should call out Jenkins's behavior directly by using a clear even tone, saying "knock it off", putting a quick end to the disruptive behavior and demonstrating who is in charge and that the situation is now under control.

Resolve the problem quickly by directing Jenkins to go wait in the office...

To resolve the problem quickly the CEO should calmly direct Jenkins to go wait in his office where he can speak with him privately after the meeting.

The CEO should ignore Jenkins's behavior and focus...

The CEO should concentrate on keeping everyone in the meeting focused on the problem, noting all the group members' contributions while working with them to develop an effective solution.

Decision 2

THE SITUATION

The leader of a four person investment group holds a monthly meeting where all members propose investments. The group votes on how to re-invest their shared pool of money at the end of each meeting. It is the investment group leader's responsibility to assure group members benefit from their shared knowledge of markets and investing by profiting from the group's decisions.

THE PROBLEM

The group's profit margin has been declining over past months and losses are adding up. The leader decides to review the group's investments and determine how recent decisions lost money for the group. After looking at the proposals that each person brought to the group over the last year, the leader traces the majority of the losses to proposals submitted by the group's newest member. The member was brought into the group because they needed to move into tech markets and needed someone with specialized knowledge of this important new market segment.

THE DECISION

What should the leader do? Which plan is best to help the group get back on track and making money for members and investors?

INVESTMENT GROUP LOSSES

Below are the three options the leader is considering to stem the investment group's losses. Consider the three options. All have merit but one is better than the others. When you are finished, click "Proceed" to move forward to the next page.

- ◉ **ADD A NEW PERSON TO THE GROUP...**
  The leader should propose the group start a search to add an additional new investor with tech market expertise.
- ○ **REPLACE THE WEAK MEMBER...**
  The leader should call a meeting of three strong core group members, report their findings and call for a vote on removing the newest member. The leader can then announce a search for a suitable replacement to handle investments in the tech sector.
- ○ **WAIT FOR THE MARKET TO IMPROVE ...**
  This option resolves the problem by allowing for changes in the market over time because stocks can be unpredictable. Chances are that over the next year the losses could turn to gains.

Decision 3

THE SITUATION

Adam is the director of marketing. His boss, Mike, suggests that he assign the proposal for a new product line to two of his employees, a young man named Dave and woman, Dawn, who are both being considered for promotion. Mike is able to see Dawn and Dave working hard and staying late each night to finish the proposal on short notice. Adam has kept his boss Mike informed of the team's progress. The team's work and its presentation on Monday proved excellent. After seeing the presentation Mike feels that both Dave and Dawn are worthy of promotion. Yesterday Adam, the marketing director, sent his boss Mike a recommendation that Dawn be promoted and Dave passed over. Mike emails Adam to learn why he decided to promote Dawn and not to promote Dave.

THE PROBLEM

Adam replied to Mike's email saying:

> After the presentation Dawn spoke with me privately. She said she felt it important I know she had to finish the presentation herself last Friday. I had let Dave go an hour early Friday after he received a call from his son's school to let him know his five year old had gotten sick and so had missed his ride to daycare. Dawn insists she likes Dave and that Dave does great work but she feels that Dave is not as committed to the job or the product line as her. Dawn felt Dave should not benefit from her work when she had to stay an extra hour Friday to finish up the project. Prior to speaking with Dawn I was inclined to promote both, but Dawn was so insistent I decided to leave Dave off the recommendation.
>
> -Adam

THE DECISION

Mike is considering three options in response to Adam's email. How should he respond to Adam's email recommendation to promote Dawn and not Dave?

THE PROMOTION CHOICE

Below are three options that Mike has settled on for how he should respond to Adam's recommendation and email explanation. Consider the three options. All have merit but one is better than the others. When you are finished, click "Proceed" to move forward to the next page.

Mike should email Adam to **thank him and approve the promotion.**

Mike should email Adam quickly, thank him, and let Adam know he should inform Dawn of her promotion and Dave of his decision not to promote him at this time.

Tell marketing director to **promote both**...

The boss should write back to the marketing director and tell him to promote both employees despite the concerns expressed to him.

Mike should tell Adam to **promote Dave rather than Dawn.**

Mike should write back to Adam explaining that he has decided to promote Dave

and not Dawn because her actions make it clear that she is just not a team player and so not a good candidate for promotion.

Decision 4

THE SITUATION

Tom is Vice President at IDTronic Corporation. He is in charge of the Human Resources Division at IDTronic. The company develops identity theft prevention systems for banks. Tom's division assures that company payroll is met on time, that benefits are properly administered, and assures that federal and state employment regulations are followed. Tom is also responsible for addressing HR issues for all employees of the company. His division also oversees all hiring and disciplinary action below the top executive level for the company. Tom has been with the company for over 10 years, rose quickly through the ranks to his position, is paid well, and now has over 100 people working under his direct supervision.

THE PROBLEM

IDTronic Corporation is growing rapidly, expanding into new markets and going global with increased internet sales. This has led to significantly increased workloads for Tom and his division. Tom has successfully managed a long period of change without increasing staff. He accomplished this by simply replacing outdated technologies and retraining excellent employees for positions requiring new skills. In a period where other divisions of IDTronic have significantly increased costs, Tom has managed to lower costs across the board.

After a week of record sales the President of IDTronic asks Tom to meet with her in her office. Tom assumes the meeting will acknowledge his performance and is excited. However, the President begins the meeting by telling Tom that three employees in his division have recently lodged complaints about his leadership. While these are serious accusations the president has only listed the complaints to Tom as "inconsistencies in his methods of personal supervision". The president tells Tom she cannot stand for this kind of complaint against her head of human resources.

THE DECISION

How should Tom handle the situation with the employees and the company President to assure he remains a valuable employee for the organization and a good leader?

HANDLING COMPLAINTS

How should Tom address the employee complaints about his performance? Consider Tom's three options. One is better than the others. When you are finished, click "Proceed" to move forward to the next page.

First Tom should ask exactly what it is he is accused of...

Tom should ask her what specific acts have been inconsistent so he can consider his actions and improve his leadership.

Learn who complained and address their needs....

Tom should ask the President who complained so he can address their needs in person.

Apologize and promise to improve

Tom should simply apologize to the President for having caused this issue and

assure the President that he will work hard to be a better and more consistent leader in the future.

Decision 5

THE SITUATION

Don has just been appointed the Assistant Director of Marketing at a midsize advertising firm. Assistant Director of Marketing is a one year position that is assigned to an outstanding account executive by the CEO each year. As the Assistant Director, Don is charged with assigning space and resources to employees as needed for meetings, presentations, and work on various projects. All space and resources are allocated from a shared pool of office space, furniture, and equipment. The Assistant Director is tasked with doing whatever they can to help the marketing firm's other Account Executives be successful in keeping their current clients and bringing in new business. Don will take over the job as Assistant Director next week.

THE PROBLEM

Since Don arrived at his new company a year ago he has noticed a number of what he sees as rather inefficient practices, an absence of clear policies, and haphazard attention to government regulations. Don sees this as a result of poor organization and lack of focus by the current AD. The previous AD failed to make changes to address a number of issues that Don noted were important concerns to everyone in the Marketing Department, and problems Don had handled easily as Director at his previous marketing firm. Don also felt there was poor communication between project teams and the Assistant Director. One team of marketers often had no idea what other teams were working on and the director remained mostly focused on projects headed by his team. Several new projects will be starting soon and Don wants to get to work right away. Don had been the Marketing Director at a smaller firm until he joined this firm a year ago because it has more prestige and more opportunity for advancement. This appointment to Assistant Director of Marketing is Don's chance to display his leadership abilities.

THE DECISION

At this point Don needs to make a leadership decision. What will Don do to establish himself as a new leader and demonstrate his leadership abilities as this year's newly appointed Assistant Director of Marketing?

ESTABLISHING A NEW LEADER

Which of the following actions would be best for Don to take in this situation? Consider the three options. All have merit but one is better than the others. When you are finished, click "Proceed" to move forward to the next page.

- Ask for advice from the outgoing Director Don will replace...
  Ask the current director for insights he can offer and what you can do to help everyone get their work done, do their work well, and get what they need to do it...
- Get a head start by sending out email questionnaires....
  Before Don takes over as Assistant Director, he should begin emailing the people in

Marketing asking them what they want and need from him as the new Director. He can use this information to set new policies that he will officially introduce by holding a meeting on his first day as the new Assistant Director.

Plan ahead and establish new procedures that increase efficiency ...

Plan ahead by recognizing existing problems, devise solutions, and work to establish a set of procedures and standard operating practices to increase efficiency and address what Don recognizes as problem areas. Don will be ready to implement these new procedures as soon as he becomes the new Assistant Marketing Director.

Decision 6

THE SITUATION

Three months ago, the President and owner of a mid-sized technology consulting firm hired a MIT graduate, Sarah, as a new technical consultant for both the office and outside clients. She interned with both Google and Apple Computers. Sarah is upbeat, enthusiastic; works well with people at all levels in the company, and gets along well with clients. Since starting, she has brought in new business, helped redesign the company's information network, and increased company productivity. She has also nearly eliminated downtime for clients. She appears to be a future company-wide leader, a possible star. The new hire probationary period has come to an end and Sarah is offered a position as a permanent team member in Friday morning's end of the week meeting. This position includes stock options, a competitive salary, a private office, and a great deal of autonomy at work. It also is likely to demand long hours over the next couple years as she will begin to play a more important role in the company's future and success.

THE PROBLEM

Sarah accepted the offer of a permanent position enthusiastically. She let the company President know that all of her ongoing projects up through the weekend are up to date, and requests the afternoon off to go out with friends who planned a party to celebrate her new permanent position.

THE DECISION

What decision should the company President make? What response should the President give Sarah regarding the request for time off? Consider the three options. All have merit but one is better than the others. Click "Proceed" to move forward to the next page.

REQUEST FOR TIME OFF

How should the President respond to the request? Consider the three options. All have merit but one is better than the others. When you are finished, click "Proceed" to move forward to the next page.

Give the new consultant **more work to do.**

The President should provide the new consultant with more work to do and kindly inform her that the job requires going directly to other people and asking those people how she could help them.

Give the New Consultant time off.

The President should allow the consultant to take the rest of the day off as a small reward that shows the consultant that the President is pleased with her work and that it is important to take some time to

	enjoy success.
	Give time off but **take it out of the paycheck.**
○	The President should give the new consultant the time off requested but take it out of Sarah's pay so she learns the value of her work to the company and does not take the new job for granted.

Exit Interview

1) Did you have any problems, technical issues, confusion, etc., while doing the study? (we want to know if anything went terribly wrong during the study. we're also curious to see if anyone will ever ask "WTF?" was with the 15 water bottles)

2) Do you know what the study was about? (yes or no)Note, we came in and explained it just after you finished the pretest.) Do you recall what we were testing and measuring?

3) After reading each of the leadership scenarios….were their some you felt more sure about answering than others s, before going through all the answers
    a. Which ones?
    b. Can you give me an example?

These next two questions are going to sound like they are redundant, asking the same thing, but if you listen carefully you recognize the difference.

4) How important was it to you that you give the answer you felt was the right thing to do in each case? In a sense, how much did you want to be "right" while answering the questions?
    a. Can you tell me how much from 1 to 10?

5) How important was it for you to give the correct answer according to the experts who designed the test? Can you also tell me on a scale from 1 to 10 how important was it for you to give the answer the experts say was right?

6) On a scale of 1 to 10, how important was it for you do to well, score well, or get a good report on the test, overall?
    a. And why?

7) Did you open any of the helpful information ICONS? (the "Pro", "Con", or "Additional Information" buttons)?
    a. If you did, look at the information did you use it for making you decisions?

8) Was the information you looked at helpful for making better decisions?
    a. Can you explain how it was helpful for you?

9) Did you ever change your mind about an option after reading helpful information?
    a. Can you give an example of that?
    b. Did you have a strategy for accessing useful information?

10) When you decided not to look at the helpful information, why was that?

11) Why didn't you look at all the helpful information?

12) What do you think would have happened, if you had read all the helpful information for the **possible choices?**

13) Do you think reading all of the information, would have changed any **particular** decision that you made?

14) How excited were you to participate in today's study?

15) Did you find the study interesting?

Would you have volunteered to participate in this study, to just for the sake contributing to science and knowledge, alone?

Debriefing Information

Upon completion of the study participants will be told "In today's study we were interested in learning more about how people use helpful information to make more important versus less important decisions. Because of this we needed to include some deception in our description of the six multiple choice questions you answered. In the description of the questions that were answered about leadership one group heard instructions that explained the tests as a leadership ability test, the other group is told that the same tests examines how well graduate students construct tests questions. We propose that people will feel that the tests is more important when it is a tests of their leadership ability and less important when they believe the questions they are answering are not a test of their own abilities. There is no real score for perforce because this was not in fact a real test. So, no scores can or will be reported or recorded anywhere. There is not a score. Do you understand why we felt we needed to tell some people the questions would indicate about their own abilities and others that it was investigating the skills of others in our description of the questions you answered?

We greatly appreciate your help in this study. Thank you.

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