



# Masters of the universe: How power and accountability influence self-serving decisions under moral hazard

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Masters of the Universe: How Power and Accountability Influence Self-Serving Decisions  
under Moral Hazard

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### Abstract

This paper provides an answer to the question of why agents make self-serving decisions under moral hazard and how their self-serving decisions can be kept in check through institutional arrangements. Our theoretical model predicts that the agents' power and the manner in which they are held accountable jointly determine their propensity to make self-serving decisions. We test our theory in the context of financial investment decisions made under moral hazard using others' funds. Across three studies, using different decision-making tasks, different manipulations of power and accountability, and different samples, we show that agents' power makes them more likely to behave in a self-serving manner under moral hazard, but only when the appropriate accountability mechanisms are not in place. Specifically, we distinguish between outcome and procedural accountability and show that holding agents accountable for their decision-making procedure reduces the level of self-serving decisions under moral hazard and also curbs the negative consequences of power. Implications for decisions under moral hazard, the psychology of power, and the accountability literature are discussed.

*Keywords:* moral hazard; accountability; power; investment decisions; unethical behavior.

Specialization and division of labor define modern social life. Consequently, many people relegate potentially life-changing decisions to agents who decide on their behalf. These agents are often tempted to make these decisions in a self-serving manner (Cupach & Carson, 2002; Kurland, 1996; Ross, 1973; Sharma, 1997). Consider a hedge fund manager who typically invests others' money and earns a performance-based commission in case of financial gains, but does not lose any personal funds if the investment produces a financial loss (Ackermann, McEnally, & Ravenscraft, 1999; Stulz, 2007). When facing a risky investment opportunity, the hedge fund manager has the incentive to invest as much of others' funds as possible because doing so increases the investors' potential gains without increasing potential losses. This situation is referred to as moral hazard (e.g., Holmstrom, 1979; Pauly, 1968) and occurs whenever there is potential for "actions of economic agents in maximizing their own utility to the detriment of others in situations where they do not bear the full consequences...of their actions" (Kotowitz, 2008). Because moral hazard is so pervasive, organizations try to contain the potential for self-serving behavior through institutional arrangements (rules, laws, customs) that make agents accountable for their decisions (Abbott, 1983; Gaumnitz & Lere, 2002).

Extant models of behavior under moral hazard are predicated on rational choice theory. Accordingly, they predict that all agents will make self-serving decisions under moral hazard, and if made accountable, all agents will face more costs in doing so, and engage in less self-serving decisions (e.g., Herweg, Muller, & Weinschenk, 2010; Holmstrom, 1979; Pauly, 1968). Yet, this explanation is not fully supported by empirical findings: Not all individuals make self-serving decisions under moral hazard (Chiappori, Durand, & Geoffard, 1998; Dionne & St-Michel, 1991; Miller & Whitford, 2002), and not all accountability systems reduce self-serving behavior (Conlon & Parks, 1990; Dickinson & Villeval, 2008; Tosi, Katz, & Gomez-Mejia, 1997).

The goal of this paper is to elucidate which individuals are more likely to make self-serving decisions under moral hazard, and how such problematic behavior can be effectively contained by accountability. We answer these questions by integrating the approach/inhibition theory of power (Keltner, Gruenfeld, & Anderson, 2003) and the social contingency model of judgment and choice (Lerner & Tetlock, 1999, 2003; Tetlock, 1985). This theoretical integration leads to predictions that power makes agents behave more self-servingly under moral hazard, but only when appropriate regulatory mechanisms are not in place. We emphasize the difference between accountability for outcomes and accountability for decision-making procedures (Lerner & Tetlock, 1999; Siegel-Jacobs & Yates, 1996), and propose that making agents accountable for their decision-making procedure is a more effective way of limiting self-serving decisions under moral hazard, and that this accountability type also offers a way to contain the self-serving consequences of power.

We test our theory by examining how individuals make financial investment decisions under moral hazard on behalf of others. As much as half of all American families' funds are invested by agents (U.S. Census Bureau, 2010) and these decisions have profound implications for people's (financial) fate and the economy overall, making financial investment decisions under moral hazard a particularly relevant and representative context in which to test our theory (Dowd, 2009; Hellmann, Murdock, & Stiglitz, 2000; Pauly, 1968). We report three studies in which we operationalized power, accountability, and investment decisions in different ways, allowing for a robust test of our theory.

Our research makes several theoretical and empirical contributions. By proposing and testing a model explaining under which conditions individuals are more likely to make self-serving decisions under moral hazard and how such behavior can be contained, our work advances extant theories of behavior under moral hazard (e.g., Herweg et al., 2010; Holmstrom, 1979; Pauly, 1968). In so doing, our research also contributes to the

understanding of unethical and otherwise problematic behaviors in organizations more generally (Kish-Gephart, Harrison, & Treviño, 2010). We also address a problematic aspect of the literature on the psychological consequences of power (Guinote & Vescio, 2010; Keltner et al., 2003). Previous research has largely examined the effects of power without taking into consideration institutional arrangements that constrain its potentially self-serving consequences (Fiske & Berdahl, 2007). Yet, groups and organizations purposefully design accountability systems to keep self-serving behavior by the powerful in check (Beu & Buckley, 2001; Rawls, 2005; Rus, 2009). We demonstrate that power has different psychological effects depending on the manner in which the powerful are made accountable. We show that when the right social structures are in place, power is not necessarily a corruptive force. We also contribute to the accountability literature (Lerner & Tetlock, 1999) by challenging the appropriateness of outcome accountability as the dominant form of accountability for regulating behavior in organizations and the broader society (Merchant & Van der Stede, 2007; Rynes, Gerhart, & Parks, 2005). Finally, our research may inform practitioners who want to regulate problematic employee behaviors (Beu & Buckley, 2001; Treviño, Butterfield, & McCabe, 1998).

### **Power and Self-Serving Decisions under Moral Hazard**

An important feature of decision making under moral hazard is the power of the agent, defined as the “capacity to modify others’ states by providing or withholding resources or administering punishment” (Keltner et al., 2003, p. 265). For example, some financial investors feel more powerful than others and claim to feel like “Masters of the Universe” (Das, 2011; McGee, 2011; Wolfe, 1987), perhaps because they control larger portfolios than others, belong to the market-leading firm, or simply because they are the “stars” in their company (Cohan, 2011; Kroijer, 2010). We argue that the psychological consequences of

power may help explain agents' propensity to make self-serving decisions under moral hazard.

How does power affect the propensity to make self-serving decisions under moral hazard? The approach/inhibition theory of power (Keltner et al., 2003) suggests that power makes individuals more focused on rewards and willing to pursue their personal interests, even when this comes at the expense of others' interests. These psychological consequences of power are presumed to occur because the powerful are less constrained in their actions by their social context and are therefore free to focus on their own outcomes, which affects their psychology and behavior. Previous research examining behavior in different situations is consistent with this theory. For instance, Gruenfeld, Inesi, Magee, and Galinsky (2008) found that power increases individuals' tendency to objectify other people and consider them as a means to achieving their own personal goals. Following this theory, we predict that:

*Hypothesis 1:* Power leads to more self-serving investment decisions under moral hazard.

A problematic aspect of past research on power is that it examined the consequences of power without taking into consideration the institutional arrangements that are intended to constrain its potentially self-serving consequences. Yet, groups and organizations purposefully design accountability systems to keep such tendencies in check (Beu & Buckley, 2001, 2004; Grant & Keohane, 2005; Montesquieu, 1748; Rawls, 2005). For instance, political power is regulated through the democratic process and the accountability to voters. It is possible that such institutional arrangements change how power affects individuals. In this vein, Fiske and Berdahl (2007) note that "More research needs to study power in context—not as an individual attribute or orientation that exists independent of a social relationship but as a socially relative and situated phenomenon. By studying power in the context of actual interacting social systems...research can also shed light on how the effects of power on

individual tendencies manifest themselves in the presence of others” (p. 688). In this research, we examine whether accountability systems can be used to restrain the self-serving consequences of power. Below, we propose how different accountability systems can be used both to regulate self-serving decisions under moral hazard as well as to limit the negative consequences of power.

### **Accountability as a Regulatory Mechanism**

The social contingency model suggests that accountability, defined as the “expectation that one may be called on to justify one’s beliefs, feelings, and actions to others” (Lerner & Tetlock, 1999, p. 225), is a universal feature of decision making; no decision with potentially negative social consequences takes place in a vacuum. Instead, individuals’ behavior is regulated by holding them accountable for their decisions (Lerner & Tetlock, 2003; Semin & Manstead, 1983; Tetlock, 1985). For instance, organizations regulate problematic behaviors using both formal and informal systems, such as performance evaluation systems and codes of ethical conduct, that “communicate behavioral and accountability expectations” (Kish-Gephart et al., 2010, p. 7).

Two main types of accountability have been distinguished: procedural accountability and outcome accountability (Lerner & Tetlock, 1999; Siegel-Jacobs & Yates, 1996). Procedural accountability means that individuals have to account for the ways in which judgments and decisions were made. Under outcome accountability, the results of individuals’ decisions are the criteria by which decisions are assessed. Research on organizational control systems is consistent with this conceptualization and suggests that, in organizations, the appropriateness of employees’ decisions is assessed either based on the outcomes of the decisions or on the procedure used to make the decision (Eisenhardt, 1985; Ouchi, 1977; Thompson, 1967).



Past research on behavior under moral hazard has argued that it is often more efficient to make the agent accountable for outcomes because they can be easier to observe (Eisenhardt, 1989; Harris & Raviv, 1979; Holmstrom, 1979; Shavell, 1979). Consistent with this idea, most organizations rely on outcome-based accountability systems (Merchant & Van der Stede, 2007; Rynes et al., 2005). For instance, hedge fund managers' investment decisions are assessed based on the gains they make, rather than on the process used to reach the decision (Ackermann et al., 1999; Stulz, 2007).

In contrast, we propose that procedural accountability might be a more effective way to regulate self-serving decisions than is outcome accountability. Research shows that outcome accountability and procedural accountability direct one's focus toward different aspects of decisions (Siegel-Jacobs & Yates, 1996; Simonson & Staw, 1992). Outcome accountability directs the decision maker's focus primarily toward the expected outcome of the decision, at the expense of analyzing the appropriateness of the decision itself. On the other hand, procedural accountability makes it more likely for the decision maker to consider how the decision itself appears to others. For this reason, we expect procedural accountability to be relatively more effective than outcome accountability in limiting self-serving decisions under moral hazard.

Consider the example of an investor who is deciding whether to place others' funds in a potentially problematic project and who can earn a commission in case the investment generates profits, but who does not suffer a loss in case of failure. Under procedural accountability, the investor will anticipate that he or she will have to explain whether the decision itself is appropriate. As the investor is likely to know that the very act of making a reckless investment could be judged as inappropriate by those whom he or she is representing, the investor should be less likely to make a self-serving decision under procedural accountability (Beu & Buckley, 2001; Lerner & Tetlock, 1999). In contrast, such "preemptive

self-criticism” (Tetlock, 1983, p. 81) is less likely to occur under outcome accountability, where the decision maker might justify the decision by referring to a possible positive outcome of the decision, making it relatively more likely for the decision maker to engage in self-serving behavior under outcome accountability than under procedural accountability. We predict:

*Hypothesis 2:* Procedural accountability, compared to outcome accountability, leads to less self-serving investment decisions under moral hazard.

The hypothesized reduction in self-serving decisions as a result of procedural accountability (compared to outcome accountability) may be greater for powerful individuals, as research shows that they tend to respond to such changes in situational focus more strongly (Guinote, 2007, 2008, 2010). For instance, Guinote (2008) found that powerful individuals, compared to powerless individuals, acted in ways that are more consistent with an experimenter-induced situational focus, such as reporting more work-related activities when answering what they would do in an imagined internship situation and more social-related activities when answering what they would do in an imagined social situation. These findings suggest that although it can be expected that procedural accountability, compared to outcome accountability, will decrease individuals’ self-serving decisions regardless of the level of power, this decrease should be stronger for the powerful due to their increased responsiveness to changes in the situational focus (Guinote, 2007, 2008, 2010). This means that the increase in self-serving decisions as a function of power should be weaker under procedural accountability than under outcome accountability. We predict that:

*Hypothesis 3:* Accountability type moderates the effect of power on self-serving decisions under moral hazard such that power leads to more self-serving decisions under outcome accountability, but this effect is attenuated under procedural accountability.

## Study 1: Financial Investment Recommendations

### Methods

**Participants and design.** Undergraduate students ( $N = 152$ ,  $M_{age} = 21.04$ ,  $SD = 1.67$ ; 59% female) volunteered to participate in the experiment at the end of international business class sessions. We asked participants to respond individually to the experimental materials, using pen and paper. The packages were randomly ordered and distributed in advance based on a 2 (power: high vs. control) X 2 (accountability: procedural vs. outcome) between-subjects design.

### Procedure and materials

**Power manipulation.** Participants' sense of power was manipulated using a priming procedure (Galinsky, Gruenfeld, & Magee, 2003). Participants wrote a narrative essay about an incident in their lives, ostensibly as part of a study focusing on past experiences. In the *high power condition*, participants recalled an incident in which they had power over another individual or individuals; in the *control condition*, they recalled a trip to a grocery store.

**Financial investment decisions under moral hazard.** Next, participants were informed that they would take part in an unrelated study examining behavior in an organizational setting. They were instructed to respond to a scenario involving an investment opportunity under moral hazard:

An investor working for a large financial services company is presented with an opportunity to invest his clients' funds in a new project. There is scant information regarding the project, other than favorable comments from the person promoting the project, but this situation is not completely uncommon in this industry. There is no penalty if money is lost, and the investor is entitled to a sizeable commission if the investment generates profit. The investor has a limit of €1M for this transaction.

**Accountability manipulation.** Consistent with previous research (Brtek & Motowidlo, 2002; Siegel-Jacobs & Yates, 1996), before responding to the scenario, participants in the *procedural accountability* condition were told: “After the experiment, you will have to explain to the researchers the decision-making procedure used to respond to the scenario,” and participants in the *outcome accountability* condition were told: “After the experiment, you will have to explain to the researchers your responses to the scenario focusing on the expected outcomes.”

**Dependent variable.** Participants indicated an amount in euros between 0 and 1,000,000 that they thought the investor should invest in the project.

**Manipulation checks.** Following previous research (Brtek & Motowidlo, 2002; Siegel-Jacobs & Yates, 1996), the effectiveness of the accountability manipulation was checked using the following two questions: “When you made your decision, did you believe you were going to have to justify the outcome of your decision to researchers?” and “When you made your decision, did you believe you would have to justify the process of reaching the decision to researchers?” (1 = *definitely did not believe* to 7 = *definitely believed*).

## Results and Discussion

**Manipulation checks.** Power X accountability ANOVAs indicated that the level of felt procedural accountability was higher in the procedural (than outcome) accountability condition ( $p < .001$ ) and the level of felt outcome accountability was higher in the outcome (than procedural) accountability condition ( $p < .001$ ). No other effects were significant ( $ps > .327$ ).<sup>1</sup>

**Power and accountability.** Figure 1 displays recommended investment amounts per condition. An ANOVA revealed a significant main effect of accountability: under outcome accountability ( $M = €472,750.00$ ,  $SD = €125,497.10$ ), participants recommended larger investments than under procedural accountability ( $M = €357,039.47$ ,  $SD = €141,341.61$ ),  $F(1,$

148) = 31.87,  $p < .001$ ,  $\eta^2 = .177$ . The interaction between power and accountability was significant,  $F(1, 148) = 5.86$ ,  $p = .017$ ,  $\eta^2 = .038$ . Simple effects analysis revealed that participants primed with power recommended significantly larger investments when they were accountable for the outcomes of their decisions (power:  $M = €535,868.42$ ,  $SD = €117,450.43$ ; control:  $M = €409,631.58$ ,  $SD = €99,734.08$ ),  $F(1, 148) = 18.96$ ,  $p < .001$ ,  $\eta_p^2 = .113$ , but not when they were accountable for the decision-making procedure (power:  $M = €370,526.32$ ,  $SD = €153,740.70$ ; control:  $M = €343,552.63$ ,  $SD = €128,393.97$ ),  $F(1, 148) = 0.87$ ,  $p = .354$ ,  $\eta_p^2 = .006$ . This pattern of results supports Hypotheses 1–3.

[Insert Figure 1 about here]

### **Study 2: Lawyers Recommend Self-Serving Investments**

Study 2 extended the findings of Study 1 by testing our theory among a sample of lawyers. Lawyers are one of the so-called traditional professions who are trained and regulated by professional bodies to perform tasks of important social value and to act as guardians of their clients' interests (Abbott, 1988; Spencer, 1896). Lawyers regularly face situations in which they have an opportunity to make self-serving decisions at the expense of the interest of those whom they are representing (Sharma, 1997) and they are trained and professionally obligated to avoid self-serving decisions under moral hazard. Therefore, by testing our predictions among this sample, we provide a conservative and ecologically valid test of our theory.

### **Methods**

**Participants and design.** We sent e-mails to 507 lawyers and asked them to participate in an online study on legal decision making. We obtained their contact information through the website of their bar association. Thirty-nine email addresses were invalid, leaving a total of 468 valid requests. Sixty-three lawyers completed the study (13.46% response rate). Mean age was 32.24 ( $SD = 6.72$ ) and 57.14% were male. Participants followed a link to an

online study where they were randomly assigned to one of the two accountability conditions (outcome vs. procedural).

### **Procedure and materials**

**Power measure.** We measured power with items developed by Anderson and Galinsky (2006) to assess individuals' subjective sense of power. Consistent with past research (See, Morrison, Rothman, & Soll, 2011), we used four items (1 = *disagree strongly*, 7 = *agree strongly*): "I can get people to listen to what I say," "I can get others to do what I want," "I think I have a great deal of power," "If I want to, I get to make the decisions,"  $\alpha = .89$ .

**Financial investment decisions under moral hazard.** Next, we asked participants to consider how they would respond if they had been hired by a foreign investor to assess potential legal risks associated with a prospective investment in a hotel complex:

A legal analysis has been performed and you are now expected to make a recommendation on whether the investor should go ahead with the investment or not. Several potential legal issues that could threaten a smooth development of the project (which is what the investor is hoping for) have been discovered. There is a chance for several minor legal complications, such as those related to construction permits, and there is also a possibility of major complications, such as possible property-related claims from third parties. If the project is financially profitable, you will be compensated for your services by receiving a percentage share of the investor's profit from the project. In case the project fails, however, you will not suffer a financial loss.

**Accountability manipulation.** Before responding to the scenario, in the *procedural accountability* condition, participants read: "Your decisions will be assessed by your organization based on the decision-making procedure you followed when making the decision." In the *outcome accountability* condition, they read: "Your decision will be assessed by your organization based on the outcomes the decision produces."

**Dependent variable.** Participants then indicated whether they, as lawyers, would recommend that the investor proceed with the investment under these circumstances (1 = *definitely would not recommend*, 7 = *definitely would recommend*).

**Manipulation checks.** Finally, we checked the effectiveness of the accountability manipulation by asking: “Will your decision be assessed focusing on the outcome of the decision?” and “Will your decision be assessed focusing on the decision-making procedure?” (1 = *disagree strongly*, 7 = *agree strongly*).

## Results and Discussion

**Manipulation checks.** We regressed the two manipulation checks on the accountability manipulation, the power measure, and their interaction. The accountability manipulation was successful: The level of felt procedural accountability was higher in the procedural (than outcome) accountability condition ( $p < .001$ ) and the level of felt outcome accountability was higher in the outcome (than procedural) accountability condition ( $p < .001$ ). Power had no effect ( $ps > .618$ ) and did not interact with accountability ( $ps > .333$ ).

**Power and accountability.** We regressed participants’ willingness to recommend the investment on their sense of power, the accountability manipulation (0 = outcome, 1 = procedural), and their interaction (variables were mean centered for interpretational purposes; Aiken & West, 1991). Procedural accountability (compared to outcome accountability) significantly decreased participants’ willingness to recommend the investment,  $b = -0.81$ ,  $p = .011$ . The interaction between power and accountability was significant,  $b = -0.50$ ,  $p = .049$ , and an analysis of conditional effects revealed that power significantly increased participants’ willingness to recommend the investment under outcome accountability,  $b = 0.50$ ,  $p = .004$ , but had no effect under procedural accountability,  $b = 0.01$ ,  $p = .972$  (see Figure 2 for simple slopes within the two accountability conditions). The results thus support Hypotheses 1–3.<sup>2</sup>

[Insert Figure 2 about here]

### **Study 3: The Boss Invests Other Participants' Money**

Study 3 extended previous studies in several ways. Instead of measuring self-serving investment decisions under moral hazard using hypothetical situations, in Study 3, participants were given an opportunity to invest other participants' participation fees. Therefore, participants' self-serving decisions under moral hazard ostensibly had a tangible impact on other people. Another goal of Study 3 was to constructively replicate our results using different manipulations of the independent variables. In Study 3, we manipulated power structurally, by assigning participants to either a high power role ("manager") or a neutral role ("coworker"). We also used a different accountability manipulation. We asked participants to justify their decisions to the ones who were, by design, affected by their investment decisions—i.e., other participants (de Kwaadsteniet, van Dijk, Wit, De Cremer, & de Rooij, 2007). This manipulation is a more ecologically valid manipulation of accountability, as participants are more likely to believe that those judging their behavior care about the appropriateness of their decisions (De Cremer & Barker, 2003; Kerr, 1999).

#### **Method**

**Participants and design.** One hundred and four undergraduate students ( $M_{age} = 20.48$ ,  $SD = 0.57$ ; 58.65% male) participated in a lab experiment for a show-up fee and an opportunity to earn additional monetary compensation. They were tested individually, each seated in front of a computer. All instructions and materials were presented on the computer screen. Participants were randomly assigned to conditions of a 2 (power: high vs. control) X 2 (accountability: procedural vs. outcome) between-subjects design.

#### **Materials and procedure**

**Power manipulation.** Power was manipulated by announcing that in an upcoming task, participants would act either as managers who were supervising and making decisions that would affect their subordinates (high power condition), or as coworkers who would be



working together with their peers and having an equal decision-making authority (control condition; e.g., Fast, Gruenfeld, Sivanathan, & Galinsky, 2009). To strengthen the manipulation, participants were provided with badges, folders, and bogus task reports, all indicating their role (manager or coworker) and emphasizing their decision-making authority (e.g., “You are in charge” vs. “You work together with others”) in the upcoming task. We informed participants that each group consisted of them plus five other participants. Following the power manipulation, participants were told they would engage in an unrelated task while waiting for other participants to join them for the group task.

***Financial investment decisions under moral hazard.*** Next, all participants were told that they had been randomly selected to decide on an investment opportunity (“the investor”) with which the group was presented. Specifically, participants were told that the group had the opportunity to invest any portion of their participation fees, with a 50% chance of doubling their participation fees and a 50% chance of losing them. The only exception would be the investor, who would not invest his or her own money (and, hence, could not suffer a loss), but would be awarded an “investor’s fee,” in case of a financial gain, in the amount of 20% of the total gains (e.g., €5 if the investor invested the maximum amount of €25 from the other five group members’ participation fees and then won). This setup ostensibly put participants under moral hazard as they had an incentive to invest as much as possible of others’ funds, while they were insulated from losses themselves.

***Accountability manipulation.*** Prior to making their investment decisions, participants in the procedural (outcome) accountability condition were told: “You will have to explain your investment decision, focusing on how you made the decision (on the outcomes of the decision), to other group members.”

**Dependent variable.** Following the accountability manipulation, participants indicated how much of other group members' participation fees they wanted to invest, ranging from 0 = *none* to 25 = *everything*.

**Manipulation checks.** Finally, participants responded to two questions: "When you made your decision, did you believe you were going to have to justify the outcome of your decision to other group members?" and "When you made your decision, did you believe you would have to justify the process of reaching the decision to other group members?" (1 = *definitely did not believe* to 7 = *definitely believed*).

## Results and Discussion

**Manipulation checks.** Power X accountability ANOVAs indicated that the level of felt procedural accountability was higher in the procedural (than outcome) accountability condition ( $p < .001$ ) and the level of felt outcome accountability was higher in the outcome (than procedural) accountability condition ( $p < .001$ ). No other effects were significant ( $ps > .461$ ).

**Power and accountability.** Investment amounts were submitted to a 2 (power: high vs. control) X 2 (accountability: procedural vs. outcome) ANOVA. Means are presented in Figure 3. There was a significant main effect of accountability such that participants made larger investments under outcome accountability ( $M = 12.96$ ,  $SD = 6.69$ ) than under procedural accountability ( $M = 6.00$ ,  $SD = 4.95$ ),  $F(1, 100) = 37.62$ ,  $p < .001$ ,  $\eta_p^2 = .273$ . The interaction between power and accountability was significant,  $F(1, 100) = 5.15$ ,  $p = .025$ ,  $\eta^2 = .049$ , such that power led to significantly larger investments under outcome accountability (power:  $M = 14.62$ ,  $SD = 7.08$ ; control:  $M = 11.31$ ,  $SD = 5.96$ ),  $F(1, 100) = 4.25$ ,  $p = .042$ ,  $\eta_p^2 = .041$ , but not under procedural accountability (power:  $M = 5.08$ ,  $SD = 5.18$ ; control:  $M = 6.92$ ,  $SD = 4.64$ ),  $F(1, 100) = 1.32$ ,  $p = .253$ ,  $\eta_p^2 = .013$ . This pattern of results supports Hypotheses 1–3.

[Insert Figure 3 about here]

### **General Discussion**

Three studies provide support for our theory. Power leads to more self-serving decisions under moral hazard, and procedural accountability, compared to outcome accountability, leads to less self-serving decisions under moral hazard and curbs the negative consequences of power.

Our findings contribute to the understanding of self-serving behavior under moral hazard (e.g., Holmstrom, 1979; Pauly, 1968) and unethical behavior in organizations more generally (Kish-Gephart et al., 2010). We advance past explanations, which did not explain why some individuals abuse their position under moral hazard while others refrain from such behavior (Chiappori et al., 1998; Dionne & St-Michel, 1991; Miller & Whitford, 2002). Past research also did not explain why some accountability arrangements deter self-serving behavior while others fail to do so (Conlon & Parks, 1990; Dickinson & Villeval, 2008; Tosi et al., 1997). Our findings demonstrate that decision makers' power and the manner in which they are held accountable can help explain these questions. We sought to provide a robust test of the hypothesized causal relations (Berkowitz & Donnerstein, 1982; Mook, 1983) and future research is needed to examine the relative explanatory power of this model in the field. Our findings also emphasize the potential for future research to examine the psychological consequences of other factors that define situations involving moral hazard. Research could draw on recent findings in moral psychology (e.g., Gino, Ayal, & Ariely, 2009) to examine how an agent's propensity to engage in self-serving behavior is affected by the salient examples of other agents and thus to model behavior under moral hazard on a wider scale.

Our results also contribute to the power literature (e.g., Anderson & Galinsky, 2006; Malhotra & Gino, 2011) by demonstrating the importance of considering people's broader social context for understanding the psychological consequences of power (Fiske & Berdahl,

2007). Past research found that power can lead to more problematic behavior (e.g., greater risk taking, see Anderson & Galinsky, 2006) and we found similar results when participants were accountable for the outcomes of their decisions. However, when people are held procedurally accountable, power does not cause problematic behavior. Future research should consider whether the psychological consequences of power (and perhaps many of the findings that have been documented in previous research) change when the powerful are made procedurally accountable for their actions .

Our results are also relevant for the accountability literature. Scant work has been done on the effect of different types of accountability on unethical behavior (Beu & Buckley, 2001, 2004; Kish-Gephart et al., 2010). Our research demonstrates the potential of accountability research to contribute to the understanding of such behavior. More importantly, by demonstrating that procedural accountability is more effective at regulating problematic behavior than is outcome accountability, our findings challenge the appropriateness of outcome accountability as the dominant form of accountability in organizations (Merchant & Van der Stede, 2007; Rynes et al., 2005). Future research could compare the effectiveness of the two types of accountability in other domains of organizationally relevant interpersonal behavior, such as interpersonal deviance and free-riding.

Finally, our findings have important practical implications. A direct implication of our finding is that basing different organizational systems intended to deter problematic employee conduct on procedural accountability should be more effective than relying on the outcome accountability model. Organizations should therefore base their regulatory mechanisms on procedural rather than outcome accountability, including their codes of conduct (Somers, 2001), practices related to the enforcement of these norms (Beets & Killough, 1990), and sanctioning systems (Tenbrunsel & Messick, 1999).

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Figures

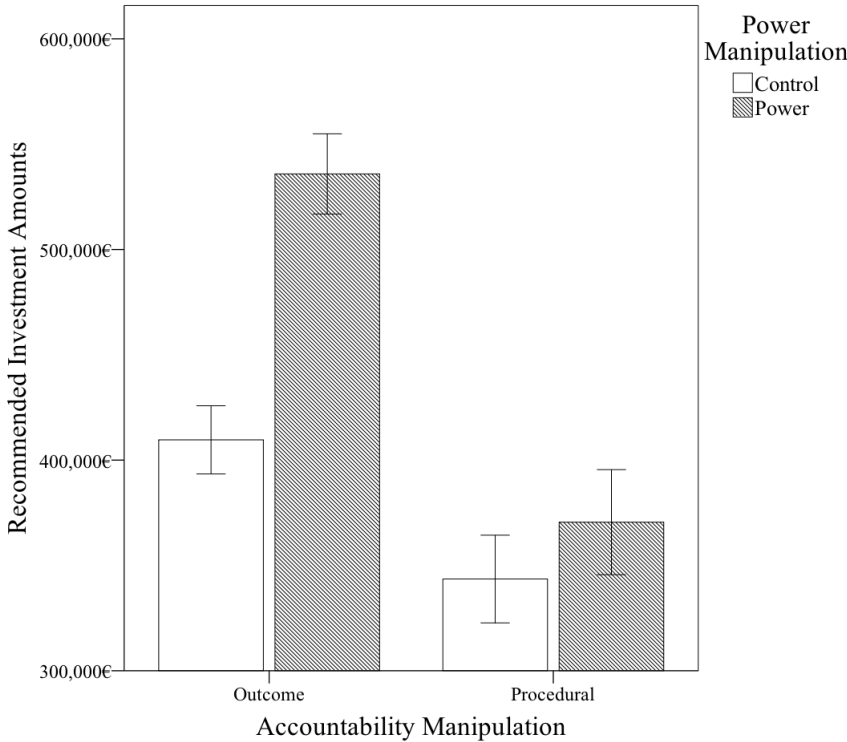


Figure 1. Study 1 Mean Recommended Investments under Moral Hazard by Power and Accountability. Error Bars Represent Standard Errors.

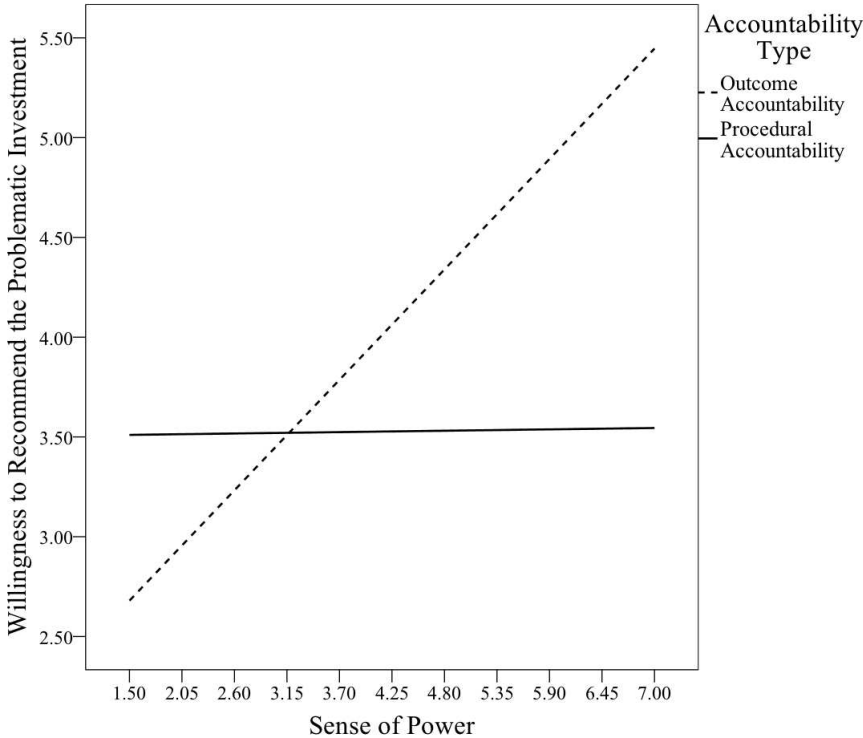


Figure 2. Study 2 Simple Slopes for Lawyers' Willingness to Recommend the Investment Under Moral Hazard.

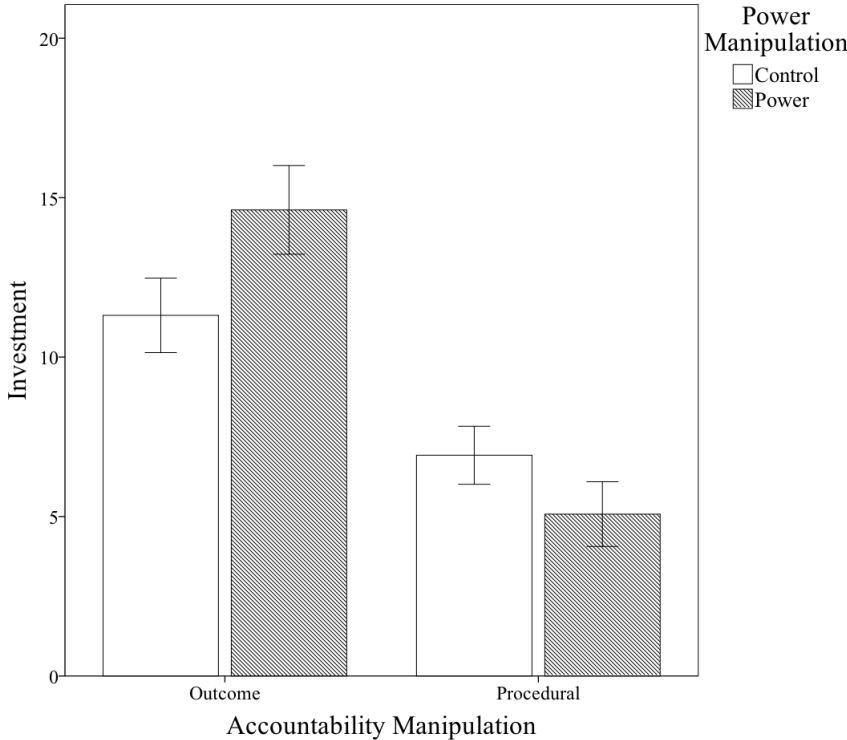


Figure 3. Study 3 Mean Investments Under Moral Hazard by Power and Accountability. Error Bars Represent Standard Errors.



### Footnotes

<sup>1</sup> We did not include a power manipulation check in our studies because we used manipulations that were extensively validated (e.g., Fast et al., 2009; Galinsky et al., 2003; Guinote, 2007, 2008; See et al., 2011). Nevertheless, we checked the effectiveness of the power manipulation used in Study 1 in a supplementary data collection with 158 participants ( $M_{\text{age}} = 30.13$ ,  $SD = 11.31$ , 53.42% male) from an online subject pool representative of the U.S. population (Buhrmester, Kwang, & Gosling, 2011). After the power manipulation, participants responded to four-items (1 = *strongly disagree* to 7 = *strongly agree*): “Right now, I feel... ‘in charge’ (Weick & Guinote, 2010), ‘I have a great deal of power’ (Kraus, Chen, & Keltner, 2011), ‘influential’ (Ng, 1980), ‘independent’ (Duguid & Goncalo, 2012),  $\alpha = .82$ . Participants in the power condition felt more powerful ( $M = 5.17$ ,  $SD = 1.00$ ) than did participants in the control condition ( $M = 4.67$ ,  $SD = 1.12$ ),  $p = .007$ .

<sup>2</sup> We selected the outcome accountability condition as a conservative (Cooper & Richardson, 1986) and ecologically valid (Merchant & Van der Stede, 2007; Rynes et al., 2005; Tetlock, 1985) control condition. We also conducted two supplementary data collections that constructively replicated Studies 1 and 2 and included an additional no-accountability control condition, in which the sentence informing participants that they would have to justify their decision was omitted (Brtek & Motowidlo, 2002; Siegel-Jacobs & Yates, 1996). Participant characteristics of the supplementary data collection replicating Study 1 are described in Footnote 1. Participants of the supplementary data collection replicating Study 2 were 109 (non-overlapping) lawyers ( $M_{\text{age}} = 37.39$ ,  $SD = 8.92$ , 67.00% male) recruited using the same procedure as in Study 2. Consistent with our reasoning, both studies found that power led to more self-serving decisions under *both* the outcome accountability and no accountability conditions. As in Studies 1–3, the effect of power was only attenuated in the

procedural accountability condition. Detailed results of these two supplementary data collections are available from the first author.