Accountability and Ideology:

When Left Looks Right and Right Looks Left

Philip E. Tetlock
Leonore Annenberg University Professor
Department of Psychology and Wharton School
University of Pennsylvania
tetlock@wharton.upenn.edu

Ferdinand M. Vieider
Risk & Development Group
Social Science Research Center Berlin (WZB)
fvieider@gmail.com

Shefali V. Patil
Doctoral Candidate, Management
Wharton School
University of Pennsylvania
shefalip@wharton.upenn.edu

Adam M. Grant
Associate Professor of Management
Wharton School
University of Pennsylvania
grantad@wharton.upenn.edu

Abstract

Managers face hard choices between process and outcome systems of accountability in evaluating employees, but little is known about how managers resolve them. Building on the premise that political ideologies serve as uncertainty-reducing heuristics, two studies of working managers show that: (1) conservatives prefer outcome accountability and liberals prefer process accountability in an unspecified policy domain; (2) this split becomes more pronounced in a controversial domain (public schools) in which the foreground value is educational efficiency but reverses direction in a controversial domain (affirmative action) in which the foreground value is demographic equality; (3) managers who discover employees have subverted their preferred system favor tinkering over switching to an alternative system; (4) but bipartisan consensus arises when managers have clear evidence about employee trustworthiness and the tightness of the causal links between employee effort and success. These findings shed light on ideological and contextual factors that shape preferences for accountability systems.

Key Words: accountability, process, outcome, motivated reasoning, ideology, equality, efficiency, attribution errors, trustworthiness.

 "We let our people know what we want them to accomplish. But – and it is a very big but – we do not tell them how to achieve these goals...By giving employees the freedom to find new paths to new solutions, we are unleashing creativity." – William E. Coyne, former senior vice president of research and development, 3M (Coyne, 1997: 54)

"I hold them accountable to run the experiment, but not for the outcome of the experiment." – KR Sridhar, Chief Executive Officer of Bloom Energy (L. Wiseman, 2010: 84)

When organizations make flawed decisions, one rarely needs to wait long for those harmed to demand "more accountability." Commentators have identified accountability deficits as key culprits behind British Petroleum's environmental disaster (Kanter, 2010), the recent financial crisis (Sorkin, 2009), corporate malfeasance at Enron, Arthur Andersen, and Worldcom (Frink & Klimoski, 2004), medical errors (Sharpe, 2004), failures to anticipate national-security threats (Posner, 2005), persistent inequities in employment decisions (Dobbs & Crano, 2001), and abuses of power in global politics (R. W. Grant & Keohane, 2005).

It is, however, one thing to call for accountability—and quite another to choose the right types of accountability to solve the problem at hand. A recurring debate in the sprawling research literature on accountability is between proponents of process vs. outcome forms of accountability, a debate that arises in such diverse domains as intelligence analysis (P.E. Tetlock & B.A. Mellers, 2011), public schools (Chubb & Moe, 1988), auditing (Cohen, Krishnamoorthy, Peytcheva, & Wright, 2011), sales-force management (Cravens, Ingram, LaForge, & Young, 1993), health care (Rubin, Pronovost, & Diette, 2001), and business innovation (Coyne, 1997; Simons, 2005). Under pure process accountability, employees expect to justify efforts and strategies used to generate results. The focus is on inputs, not outcomes. Under pure outcome accountability, the focus flips: employees expect to deliver tangible, end-state results, with little interest in explanations of how they did it (Beach & Mitchell, 1978; Curley, Yates, & Abrams, 1986).

Of course, few accountability systems fit either template perfectly. Managers often prefer hybrid forms of accountability that blend process and outcome metrics in judging employees (P.E. Tetlock & B.A. Mellers, 2011), perhaps because they recognize that each form of accountability has

distinctive pros and cons. Research suggests that process accountability can encourage more nuanced and normatively justifiable thought processes (Brtek & Motowidlo, 2002; Siegel-Jacobs & Yates, 1996; Simonson & Staw, 1992), but complying with process rules can be time-consuming with no assurance of results and potential for inefficiencies (Edmondson, 1999). Outcome accountability can encourage innovative methods of achieving goals (March & Simon, 1958; Weick, 1979), but outcome metrics can send the tacit message "I don't care how you get it done," winking at corner-cutting and gaming (Schweitzer, Ordonez, & Douma, 2004).

Given the importance of the decisions that managers make about process and outcome accountability, it is critical to understand when and why managers prefer one form of accountability over the other. Although little research has explored how managers choose among forms of accountability, agency theorists have prescribed guidelines for how managers should make such choices. For instance, when outcomes are uncertain—i.e., the correlation between agent effort and work outcomes is tenuous—theorists recommend process contracts (Eisenhardt, 1985, 1989; Ouchi, 1979). Coined the "controllability principle" in the accounting and performance management literatures (Antle & Demski, 1988; Bouwens & Van Lent, 2007; Girud, Langevin, & Mendoza, 2008), the core idea is that employees should not be blamed for unfavorable outcomes—or credited with favorable ones—that are due to uncontrollable causes. Doing so rewards the lucky, punishes the unlucky (Adams, 1963; Bertrand & Mullainathan, 2001; Tyler, 1989), and triggers backlash against perceived arbitrariness and unfairness (Baker, Gibbons, & Murphy, 1994).

However sound such advice is in principle, it is difficult to implement. In complex, knowledge-based workplaces, some uncertainty about the controllability of outcomes is inevitable —a point documented in many settings, including health care, where hospital managers gauge how variations in quality of care lead to variations in mortality rates (Mant, 2001); the pharmaceutical industry, where managers judge the performance of R&D professionals trying to produce new chemical compounds (NCCs) that yield "blockbuster" drugs (Cardinal, 2001; Henderson, 1994);

and sales management, where even experienced managers misinterpret volatile time series, over-attributing outcomes to effort and under-attributing them to task-difficulty confounds (e.g., variations in sales territories), in designing accountability systems (Mowen, Keith, Brown, & Jackson, 1985).

To explore how managers make accountability decisions under uncertainty, we turn to ideology as an organizing framework. Many scholars have suggested that ideologies provide managers with psychological toolkits of heuristics that simplify decision making in stochastic environments (Barley & Kunda, 1992; Blau & McKinley, 1979; Jackall, 1988; Kiesler & Sproull, 1982; McKinley, Mone, & Barker, 1998). We focus in particular on how political ideologies – cognitive-affective blends of assumptions about human nature and prescriptions for how, and through what means, society should be ordered (Jost, Federico, & Napier, 2009; Knight, 2006)– provide managers with useful heuristics in coping with high-ambiguity, organizational-design decisions (George, 1980; March, 2010; Tetlock, 2000). Ideologies do so by furnishing confident answers to foundational ontological and ethical questions: Who can be trusted? How controllable are bottom-line outcomes? Given that mistakes are inevitable, which mistakes should we try hardest to avoid: failing to trust the trustworthy or trusting the untrustworthy, or treating the controllable as uncontrollable or vice versa (Tetlock, 1998)?

To explore ideology-accountability linkages, we conducted two studies of working managers. We begin by examining clashing accountability preferences in a high-ambiguity domain, followed by two high-political-profile domains: the debates over the wisdom of holding public-school teachers accountable for students' standardized test scores (an outcome metric) and over the wisdom of holding personnel managers accountable for minority advancement in key jobs (also an outcome metric). Challenging the traditional trait view that ideologies lead to across-the-board accountability preferences (e.g., Tetlock, 2000; Wilson, 1989), we work from the assumption that managers' preferences vary as a function of the answer to the time-honored political question:

whose ox is being gored? In this view, managers are guided by what Sniderman et al. (1991) call the likability heuristic. If the employees constitute a group toward whom managers of a certain ideological persuasion have traditionally been skeptical, then managers will tend to support often-seen-as-tough outcome metrics. If employees constitute a group toward whom managers have traditionally been sympathetic, then managers will tend to support process metrics that protect employees from being unfairly blamed for outcomes beyond their control.

Given the traditional political tensions between the public sector (especially teacher unions) and conservatives (Chambers, Schlenker, & Collisson, 2012; Chubb & Moe, 1990), this theoretical analysis suggests that conservative managers will prefer outcome metrics for evaluating teachers—and liberal managers will prefer process metrics. Conversely, given the traditional political affinity between private-sector firms and conservatism, plus long-standing conservative skepticism of affirmative action (Sniderman & Carmines, 1997), the same theoretical analysis predicts a reversal of these preferences in applying equal employment opportunity laws to corporate America. Liberal managers will now be supportive of outcome metrics for evaluating private-sector EEO compliance, and conservative managers will be supportive of process metrics.

This analysis is also consistent with past work on ideological variation in value priorities, which has repeatedly shown conservatives more likely than liberals to value efficiency over equality (e.g., Baron, 2005; Tetlock, 1986). In the public school domain, supporters of accountability for standardized test scores see it as an efficient mechanism for tracking children's learning and benchmarking quality of teaching, despite the inequities that such measures may impose on teachers (Hanushek, 1986). In the EEO domain, supporters see numerical goals as essential for ensuring equality for traditionally disadvantaged groups and for benchmarking EEO compliance in personnel decisions, despite the inefficiencies and distortions that numerical goals arguably inject into private-sector entities (e.g., Kittilson, 2005).

Building on theories of motivated reasoning we then extend our analysis to explore how

managers of varying persuasions react to evidence that their preferred accountability system has malfunctioned—and that employees have found effective ways of circumventing its intent. Finally, we explore a key implication of the psychological argument that ideology serves as a source of uncertainty-reducing heuristics: namely, that ideology effects will disappear when ambiguity about employee trustworthiness and effort-outcome linkages falls to zero.

Theory and Hypothesis Development

Political scientists often define ideologies as relatively stable, internally consistent belief systems grounded in ontological assumptions about human nature and value-laden assumptions about how to structure society (Knight, 2006). Since the French Revolution, philosophers and social scientists have also posited that ideologies vary on a "left-right" dimension (Knight, 1999). Since the classic work on the authoritarian personality (Adorno, Frenkel-Brunswik, Levinson, & Sanford, 1950), psychologists have hypothesized that attitudes along this left-right axis serve a host of epistemic, existential, and relational functions (Jost, Glaser, Kruglanski, & Sulloway, 2003), which lead conservatives (liberals) to be more (less) supportive of inequality, suspicious of human nature, and punitive toward norm violators (Conover & Feldman, 1981; Jost, et al., 2009). Although the "nurture" of life events plays a key role in shaping these bundles of attitudes, there is also evidence for a "nature" effect: the ideologies of adults can be predicted with surprising accuracy from nursery school behavior (Block & Block, 2006) and have replicable genetic and physiological correlates (Alford, Funk, & Hibbing, 2005; Oxley et al., 2008; Westen, 2007).

In high-ambiguity situations (R. D. Meyer, Dalal, & Hermida, 2010), ideology can sway accountability preferences via a variety of cognitive-affective pathways. First, there are clashing ideological views of the trustworthiness of humanity in general and of various categories of human beings in particular. Psychological work on ideology has long identified the liberal left with a view of humanity as essentially good but corruptible by bad institutions—and identified the conservative right with bleaker assessments of human nature that implies a need for strong institutions to check

our natural depravity (Conover & Feldman, 1981; Costantini & Craik, 1980; McClelland, 1997; Sniderman & Tetlock, 1986).

Insofar as liberal managers see human beings as more trustworthy, and feel more obligation to protect those lower in status hierarchies (Graham, Haidt, & Nosek, 2009; Haidt, 2007), they will prefer process-accountability systems that give employees more benefit of the doubt – and shield them from being unjustly blamed for the uncontrollable. By contrast, insofar as conservative managers see human beings as less trustworthy and see more need to protect institutions from free riders, they will be more suspicious of process accountability—and worried about untrustworthy employees creating façades of good faith (J. W. Meyer & Rowan, 1977) that deflect skeptical inquiries with hard-to-verify claims they are doing all that can be expected (Edelman, 1992; Krawiec, 2004). In this view, conservative managers will be drawn to outcome accountability, which they see as less easily gamed.

Second, ideologies influence views of how likely opposing attributional errors are and which errors should be deemed most distasteful. Surveys suggest that liberals and conservatives view the fundamental attribution error differently: liberals give greater weight to external causes beyond individual control whereas conservatives attribute outcomes more to internal characteristics of the individual (Tetlock, 2000; Tetlock & Mitchell, 1993; Tetlock et al., 2007). For instance, conservatives are likelier to see hard work as tied to individual success and failure as tied to laziness whereas liberals are likelier to see the effort-success links as easily severed by chance and exogenous shocks (Skitka, Mullen, Griffin, Hutchinson, & Chamberlin, 2002). This may be why there is sharp ideological disagreement over the social-safety-net statement, "It is the responsibility of the government to take care of people who can't take care of themselves" (*Pew Research Center*, June 2012).

These results suggest that liberals' proclivity toward external attributions is grounded in an aversion to false-positive errors of holding people accountable for the uncontrollable—an aversion

that will be most pronounced when there is uncertainty about how linked efforts and outcomes are. Given that process accountability is often seen as reducing employees' flexibility in choosing how to pursue goals (Anderson & Oliver, 1987; Eisenhardt, 1985; Ouchi, 1979), managers most sensitive to false-positive errors will be most tolerant of this downside of process metrics.

Conservative managers, by contrast, will be less worried about false-positive errors because they see success and effort as more tightly coupled. Instead, they will worry more about false-negative errors: failing to hold employees accountable for outcomes they could have controlled. Managers with these error-aversion priorities will be more tolerant of the downside risk of outcome accountability, holding employees accountable for the uncontrollable (Gibbons, 1998).

This analysis leads to the following hypothesis:

Hypothesis 1. In situations where no information is available about employee trustworthiness and effort-outcome links, conservative managers will prefer outcome accountability, and liberal managers will prefer process accountability.

"No information" is, of course, an extreme limiting condition. Managers virtually always know something. Moreover, managers often have opinions about organizational priorities that may shape their views of appropriateness of process versus outcome accountability metrics. As noted earlier, who advocates which metrics may well hinge on the relative salience of competing values in efficiency-equality debates that erupt across policy domains[1] (Okun, 1975). Research on values and ideology indicates that conservatives value market efficiency more, and equality less, than do liberals (Jost, Nosek, & Gosling, 2008; Schwartz, 1996; Tetlock, 1986). Insofar as outcome accountability systems are seen as harder to "game" (P.E. Tetlock & B.A. Mellers, 2011),

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[1] The efficiency-equality dimension parallels a key dimension of values in organizational behavior research: hierarchy (stress on legitimacy of unequal distribution of power and resources) versus egalitarianism (stress on subordinating individual interests to public welfare) (Schwartz, 1999). The hierarchy-egalitarianism dimension has been specifically linked to managerial decisions and actions across a variety of cultural contexts (e.g., Smith, Peterson, & Schwartz, 2002). However, we use the efficiency-equality distinction because of its specific relevance to policy issues at the core of the research design of Study 1.

conservative managers should support such systems when efficiency is the foreground value and liberal managers should support such systems when equality is the foreground value.

It follows that in domains in which efficiency values are salient—and equitable treatment of employees fall into the perceptual background —Hypothesis 1 should continue to hold, or hold even more strongly. In such domains (e.g., standardized test scores in public schools, profit margins in private-sector firms), outcome accountability assures conservative managers that the focus is on "getting the job done." However, liberal managers are more sensitive to the unequal and often arbitrary rewards and punishments that such systems can impose (Haidt, 2007; Napier & Jost, 2008) – and are thus less supportive.

By contrast, we should expect a preference reversal in domains in which equality is the salient value, such as EEO enforcement in workplaces– and efficiency is the background value. Liberals have repeatedly been shown more enthusiastic about policies that favor helping historically disadvantaged groups (Sniderman, Tetlock, & Carmines, 1993) – and more convinced of the tenacity of racial prejudice (Sniderman & Piazza, 1993). In designing accountability systems to promote equal employment opportunity, these values and beliefs will predispose liberal managers to favor outcome accountability that creates pressures to achieve numerical goals for hiring and promoting underrepresented groups. This preference may be amplified by liberals' concern that prejudice remains an active force—and that process accountability can be too easily "gamed" by personnel officers who claim compliance but continue to be soft on covert bias (Tetlock & Mitchell, 2009). And conservative managers will now be the skeptics of outcome metrics who worry about adverse side effects on the new background value, efficiency. Conservatives will often view such outcome-oriented systems as illegitimate equalizers in a game that should be played by purely process-based, efficiency-promoting rules (Sidanius, Pratto, Van Laar, & Levin, 2004).

We therefore propose the following hypothesis:

Hypothesis 2. Context moderates the ideology-accountability relationship. (a) In efficiency-salient

domains, conservative managers will prefer outcome and liberal managers will prefer process

accountability (consistent with Hypothesis 1). (b) In equality-salient domains, this preference will

reverse and conservative managers will prefer process accountability and liberal managers will

prefer, outcome accountability.

Thus far, our focus has been on de novo preferences—as if managers choose accountability regimes with no benefit of historical experience of what worked before. However, rational-choice proponents should expect ideology effects to vanish as soon as pragmatic managers have a chance to adjust their initial accountability choices in response to employee reactions to those choices. Put bluntly, economics will trump politics—and reality will trump ideology. This hypothesis has some merit, but is based on the questionable assumption that history teaches unambiguous lessons about which policies do and do not work—and why (March, 2010).

A counter-hypothesis, with roots in the bounded rationality tradition (Simon, 1955), is that managers tend to learn only those lessons from history that they were already ideologically predisposed to learn. According to the cognitive-dissonance principle of least effort (Abelson et al., 1968; Jervis, 1976; Tetlock, 2005), managers cope with dissonant feedback by adjusting as few cognitions as necessary. When confronted by dissonant evidence, conservatives and liberals alike are at risk of motivated-reasoning effects (Kunda, 1999; Tetlock, 2005) that render them, in effect, prisoners of their preconceptions. Thus, managers who initially prefer process or outcome accountability and then discover that employees have subverted their preferred system will opt to tinker on the margins by closing loopholes, not by adopting a system they initially disliked.

When they learn that employees failed to implement promised best-practices for checking racial bias, conservative managers will not suddenly embrace outcome accountability in equality-salient policy domains. Nor will liberals suddenly embrace outcome accountability in efficiency-salient domains when they discover that employees failed to implement promised processes. The motivated reasoning literature tells us to expect each side to seize on the other's failures as support

for more radical reform. Conservative managers will seize on failures of process accountability in efficiency-salient domains to argue for outcome accountability, and liberal managers will seize on failures of process accountability in equality-salient domains to argue for outcome accountability. In this view, we should expect shifting standards of evidence in the service of the dominant belief system: use the failure of systems one dislikes as an argument for a new system but treat the failure of systems one likes as an argument for refining ground rules. We thus propose H3 as an extension of H2:

Hypothesis 3. Confronted by evidence their preferred system has been subverted, managers will favor tinkering over switching. (a) For efficiency-salient policies, conservative managers will thus favor tinkering with outcome metrics over switching to process accountability. (b) For equality-salient policies, liberal managers will thus favor tinkering with outcome metrics over switching to process accountability. (c) However, confronted by evidence that non-preferred systems have been subverted, managers will prefer switching over tinkering.

Our theoretical arguments have thus far only been applied to domains in which either managers know nothing about employee trustworthiness and effort-outcome linkages or managers must rely on ideological schemas to compensate for the lack of direct knowledge about employees. Our arguments imply, however, that when reliable, individuating information becomes available, ideology will quickly lose its power to shape accountability preferences. When there is no ambiguity on which motivated reasoning can operate, research on strong situations suggests that context will trump individual differences (A. M. Grant & Rothbard, in press; House, Shane, & Herold, 1996; Johns, 2006; R. D. Meyer, et al., 2010; Mischel, 1977)—and bipartisan consensus will crystallize on the "right" forms of accountability.

As noted earlier, people often view process accountability as a kinder, gentler approach that protects employees from false-positive attributions of responsibility, and outcome accountability as removing this protection (P.E. Tetlock & B.A. Mellers, 2011). Research on organizational control

systems warns, however, against assuming a necessary connection between one's preferences for process or outcome accountability and one's views on whether the vagaries of effort-outcome links should be borne by management or labor (Eisenhardt, 1985; Jensen & Meckling, 1976). In this view, we should distinguish at least four categories of managerial options: generous and punitive variants of process and outcome accountability.

(a) Opportunity-focused outcome accountability empowers employees to use their creativity to go beyond standard operating routines and gives them chances to benefit from upside uncertainties of effort-outcome links (A. M. Grant & Ashford, 2008; Simons, 2005, 2010).

(b) Punitive outcome accountability sends a no-excuses message to employees (Rodgers, 1993) and shifts the risk of uncertain effort-outcome linkages to employees (Williamson, 1991).

(c) Employee-protective process accountability rewards good faith effort and shifts the downside risk of uncertain effort-outcome links from employees onto management (Scholten, van Knippenberg, Nijstad, & De Dreu, 2007; Siegel-Jacobs & Yates, 1996), with potential benefits of reducing stress and fear of mistakes and failure (Lee, Edmondson, Thomke, & Worline, 2004; Schoemaker, 2011);

(d) Punitive process accountability increases monitoring of processes to prevent faking of good-faith efforts and shifts the risk of uncertain effort-outcome links onto employees (Patil, Vieider, & Tetlock, 2013).

Research on trust and fairness suggests that authorities tend to adopt punitive stances when employees prove untrustworthy (Bushman, Baumeister, & Phillips, 2001; Kramer, 1999; McAllister, 1995; Scott, Colquitt, & Paddock, 2009; Scott, Colquitt, & Zapata-Phelan, 2007). As Ouchi (1979: 846) notes, "People must either be able to trust each other or to closely monitor each other if they are to engage in cooperative enterprises." However, when employees are trustworthy, managers tend to form more communal bonds with them, and to be responsive to their personal needs (Clark, Mills, & Powell, 1986; McAllister, 1995). This literature suggests that when there is

trans-ideological consensus on the trustworthiness of employees, managers across the political spectrum will be indifferent to process and outcome distinctions and endorse forms of accountability that are emotionally congruent with their views of employees: tough, unforgiving systems for the untrustworthy and generous, forgiving systems for the trustworthy (Axelrod, 1984).

Hypothesis 4: (a) When there is clear evidence of employee (un)trustworthiness, accountability preferences will be guided not by ideological priors but rather by situation-specific information. (b) Managers will prefer positive forms of both process and outcome accountability for employees known to be trustworthy, and negative forms of both process and outcome accountability for employees known to be untrustworthy.

This analysis suggests we should expect managers to endorse the most punitive forms of both process or outcome accountability when employees are clearly untrustworthy *and* effort-outcome connections are clearly weak. The combination will enhance the attractiveness of accountability systems that transfer risks from weak effort-outcome links to employees. When we combine low trustworthiness and strong effort-outcome links, managers will still support punitive forms of process and outcome accountability but the effects will shrink (it is, by definition, impossible to transfer risks arising from uncertain effort-outcome links when there is zero uncertainty about those links).

Hypothesis 5: Managers will display particularly strong preferences for punitive forms of both process and outcome accountability when they see situation-specific evidence that employees are untrustworthy and effort-outcome linkages are weak. The role of ideology will however be diminished when such situation-specific evidence is available. Ideology will play no moderator variable role.

We tested these five hypotheses in two studies of working managers. Study 1 examined the effects of ideology on accountability preferences in domains in which there was either ambiguity about, or controversy surrounding, employee trustworthiness and the tightness of effort-outcome

links (Hypotheses 1-3). Study 2 eliminated ambiguity and controversy about employee

trustworthiness and effort-outcome links by directly manipulating both—and tested the power of

these manipulations to shape accountability preferences and to trump the influence of ideology

(Hypotheses 4-5).

<div align="center">Method</div>

Study 1

Participants and Procedure

Seventy-five MBA students and executives in continuing-education courses participated in

class exercises on managerial choices. Participants ranged in age from 29 to 47 (average age of 34;

51 males and 24 females). Participants had, on average, six years of managerial experience (range

from 1 to 19) and held jobs with a median of 6 direct reports (range from 1 to 165). Participants

came mostly from technical backgrounds (75% engineering or physical and biological sciences;

25% other fields, including law, marketing, finance, and human resources). Three participants with

outlier profiles of responses (3-standard-deviation rule) were deleted.

The study involved three repeated-measure independent variables: (1) a high-ambiguity

(unspecified) organizational domain for measuring baseline accountability preferences; (2) an

efficiency-salient domain featuring an active political debate over the wisdom of adopting outcome

metrics (using standardized test scores to benchmark the performance of public school teachers); (3)

an equality-salient domain featuring an active political debate over the wisdom of outcome metrics

(using numerical goals to benchmark the EEO performance of personnel managers). We checked

the validity of the efficiency-equality characterizations of policy domains by obtaining ratings of an

expert panel (see next sub-section). Specifically, participants read the following three, order-

randomized scenarios:

(1) The unspecified or high-ambiguity organizational domain. The CEO of a large company

is considering two types of accountability systems for improving profitability, one known as process

accountability and the other known as outcome accountability.

Process-accountability option: Advocates stress the need to hold employees responsible for *how* they do their work and for implementing "best practices." They say that it is essential to ensure that employees are trying their hardest to accomplish key objectives—and a serious demoralizing mistake to hold them accountable for achieving objectives that are just not under their control.

Outcome-accountability option: Advocates stress the need to hold employees accountable for *what* they actually accomplish. In this view, process accountability too often degenerates into "going through the bureaucratic motions" of adopting formulaic best practices—and failing to incentivize employees to take risks and initiatives essential to actually getting things done.

(2) The efficiency-salient domain: Public schools. The School Board in a large school district—at the 25th percentile for student achievement in its state— is considering one of two basic types of accountability systems for improving performance: one known as process accountability and the other known as outcome accountability.

Process-accountability option: Advocates propose to improve lagging student performance by monitoring the quality of classroom instruction, using indicators such as experts' ratings of the curriculum and teacher performance in classrooms. The process-accountability approach avoids the unfairness of outcome-accountability systems—that focus on student standardized test performance and wind up rewarding or punishing teachers on the basis of factors outside teachers' control. Process-accountability also avoids the problem of mechanical teaching to tests that can take the spontaneity and fun out of both learning and teaching.

Outcome-accountability option: Advocates worry that the process approach fails to provide tough, no-loophole checks on teacher unions and poor school administrators who are skilled at saying the right things and pretending to adopt best practices but who are only interested in feathering their own nests. They believe the real solution for lagging test scores is to monitor student performance on standardized tests. This outcome-accountability approach avoids the unfairness of "process-accountability systems"—that distract attention from the key goal, student learning, and focus attention on the latest fads among education researchers and reward schools for creating more bureaucracies designed to show how up-to-date their teaching methods are.

(3) The equality-salient domain: EEO Enforcement. The CEO of a large company is considering two types of accountability systems for checking racial discrimination: one known as process accountability and the other known as outcome accountability.

Process-accountability option: Advocates propose an evidence-based training program that all managers who make personnel decisions must pass. The program is designed to ensure that managers fully understand that all forms of discrimination are illegal, that they must base their decisions solely on job-relevant performance, and that they need to be vigilant for biases in their judgments. Managers also know that Human Resource professionals will monitor all personnel decisions and hold managers accountable when they suspect bias. Advocates say that it is the best way to guarantee fairness for all employees: judging individual qualifications carefully and not resorting to quotas.

Outcome-accountability option: Advocates worry that process accountability is not powerful enough to check widespread unconscious biases among managers who are skilled at saying the right things and offering smooth justifications for decisions that may really be discriminatory. Their outcome-accountability proposal requires careful studies of the qualified labor-market pools for all jobs. Whenever there is a gap between the percentages of African-Americans in a job and those in the qualified pool, managers are alerted to the problem and told that a substantial fraction of their merit raises each year depends on meeting numerical race-based goals for hiring and promotion.

Manipulation Checks to Ensure: (a) Policy Domains Were Efficiency- or Equality-Salient: (b)

Accountability Policy Options Captured the Process- and Outcome Distinction

We asked a panel of political scientists ($n = 8$) to rate on 9-point scales the degree to which each outcome accountability policy proposal, described as presented to subjects, activated the values of efficiency ("getting the designated job done as well as possible within cost constraints") or equality ("ensuring employees are treated fairly and equitably"). The scale anchors were: 1 = efficiency/equality is the primarily activated value for proponents/skeptics of outcome accountability; 9 = efficiency/equality is the secondarily activated value for proponents/skeptics of outcome accountability; 5 = unsure). As expected, the outcome accountability proposal in the EEO domain received pronounced primary value ratings on equality (M = 1.88, SE = .23) and secondary value ratings on efficiency (M = 6.88, SE = .44), $t(7) = -10.80, p < .01$. The outcome accountability proposal in the public-school domain received pronounced primary value ratings on efficiency (M = 7.50, SE = .50) and secondary value ratings on equality (M = 2.50, SE = .33), $t(7) = 7.07, p < .01$.

We also asked a larger group of raters, 167 business-school undergraduates recruited at a private university on the East Coast, to judge how well each accountability policy option in each domain captured the intended constructs of process and outcome accountability. They were

randomly assigned to domains ($n = 53$ in unspecified domain; $n = 56$ in teacher domain; $n = 58$ in

EEO domain), and provided generic definitions of process and outcome accountability:

> Outcome accountability: Under these systems, employees are evaluated on their ability to obtain bottom-line results (e.g., profits in business; other bottom-line indicators in other pursuits), but are *not* evaluated on the processes, procedures, or means they used to obtain these bottom-line results.

> Process accountability: Under these systems, employees are evaluated on the processes, procedures, or means they used to obtain bottom-line results (e.g., adopting best practices), but are *not* evaluated on whether they actually achieve the bottom-line results.

They were then presented, in randomized order, the process and outcome accountability

scenarios from a given domain and asked to rate each system on two unipolar 7-point Likert-type

scales (one ranging from "not at all describes process accountability" to "very much describes

process accountability" and the other from "not at all describes outcome accountability" to "very

much describes outcome accountability"). They also rated each system on a bipolar 7-point scale

(from "more closely resembles process accountability" to "more closely resembles outcome

accountability"). For each scenario, we collapsed the two unipolar ratings (coded towards the

outcome accountability end) and conducted paired-samples *t*-tests.

In the unspecified domain and on unipolar scales ($\alpha = .83$), the process accountability

scenario was seen as more process (M = 1.82, SE = .16) and the outcome accountability scenario (α

= .82) as more outcome (M = 6.48, SE = .12), $t (52) = -18.55$, $p < .01$. This also held true for bipolar

ratings (process accountability (M = 1.92, SE = .23) vs. outcome accountability (M = 6.64, SE = .

09)), $t (52) = -16.98$, $p < .01$. The same patterns emerged in the public-school and EEO domains:

unipolar ratings of process accountability/public schools ($\alpha = .96$) (M = 1.80, SE = .16) vs. outcome

accountability/public schools ($\alpha = .96$) (M = 5.67, SE = .23), $t (55) = -11.09$, $p < .01$, bipolar

ratings of process accountability (M = 1.88, SE = .21) vs. outcome accountability (M = 5.55, SE = .

26), $t (55) = -9.22$, $p < .01$; unipolar ratings of process accountability/EEO ($\alpha = .94$) (M = 2.84, SE

= .21) vs. outcome accountability/EEO ($\alpha = .93$) (M = 5.55, SE = .19), $t (57) = -8.54$, $p < .01$;

bipolar ratings of process accountability (M = 2.76, SE = .24) vs. outcome accountability (M = 5.72, SE = .19), t (57) = -8.44, $p < .01$.

Independent third-party ratings thus confirmed that our policy-domain choices captured the target construct of efficiency-salience vs. equality-salience and that our scenarios captured the target constructs of process vs. outcome accountability.

Political Ideology Measure

Prior to presenting scenarios, we measured ideological orientations with a 9-point self-identification scale from the National Election Survey (Knight, 2006): managers indicated their political views on a scale anchored at "strongly liberal" (1), "moderate" (5), and "strongly conservative" (9). The left-right model of ideological structure has demonstrated strong theoretical utility and test-retest reliability and validity (Benoit & Laver, 2006; Campbell, Converse, Miller, & Strokes, 1960/1965; Carney, Jost, Gosling, & Potter, 2008; Fuchs & Klingemann, 1990; Jost, 2006; Knight, 1999; Tomkins, 1963). Although there have been challenges to this bipolar measure of ideology by those who argue that left and right represent two independent, unipolar dimensions (Kerlinger, 1984), measures of liberalism and conservatism are rarely uncorrelated (Jost, et al., 2009). The single-item measure has been validated in studies of nursery school behaviors in predicting adult ideologies (Block & Block, 2006), the physiological basis of ideologies (Oxley, et al., 2008; Westen, 2007), and heritability estimates in the range of 50% (Alford, et al., 2005).

Dependent Variables

Participants indicated their preference for accountability systems on two 9-point Likert-type unipolar scales, measuring preferences for weak or strong forms of process and outcome accountability, separately (1= preference for no accountability; 5 = moderate accountability; 9 = preference for intense accountability). They also rated their preferences on a bipolar scale, from pure process accountability (1) to pure outcome accountability (9). We deployed both types of scales because there were no research precedents to guide us and a good deal of uncertainty about

which measurement model better mapped onto our subjects' mental models of accountability:

(a) A single bipolar dimension. In this view, managers tacitly assume that it is possible to have only so much accountability and they see choices between process and outcome as falling along a continuum of forced trade-offs: support for process accountability must fall as support for outcome accountability rises—and vice versa. The endpoints are defined by pure-process and outcome ideal types—and the midpoint by hybrid accountability (balanced-scorecard) efforts to strike compromises that build on the perceived strengths and compensate for the perceived weaknesses of each ideal type. This bipolar model has the advantage of capturing the either-or, hydraulic dynamics of many policy debates but the disadvantage of failing to capture all possible positions that thoughtful observers want to stake out. The midpoint cannot distinguish those who believe it possible to mix strong forms of both process and outcome accountability from those who believe it possible to mix only weak or moderate versions of each. The bipolar scale also offers no home for those who think that employees are over-monitored—and there is simply too much of both process and outcome accountability;

(b) Two unipolar dimensions. In this view, managers do not assume there is a fixed upper bound value on accountability. They see choices between process and outcome as falling along two distinct, perhaps orthogonal, unipolar dimensions, the first anchored by no-process accountability at one end and strong process-accountability at the other, and the second anchored by no-outcome accountability at one end and strong outcome-accountability at the other. This wider measurement net allows us to "catch" otherwise elusive mindsets of would-be organizational designers: those who think it feasible to implement more of both process and outcome accountability and those who worry about too much monitoring and recommend less of both.

Follow-Up Study Design and Measures

In a follow-up session three weeks later, we reminded managers of their original choices and asked them, in a role-playing task, how much they would change their minds about the right balance

between process and outcome accountability if they had been in charge and discovered that employees were gaming the system (six participants were lost due to absences, reducing the sample size to 66). Participants were assigned to a mixed design factorial. In the between-subjects part, half role-played managers in the corporate-EEO domain; the other half did so in the public school domain. In the repeated-measures part, they saw two scenarios (order counterbalanced): those in charge had adopted outcome (or process) accountability and a problem had arisen. Employees had found ways to subvert the system.

In the outcome-accountability scenario, managers indicated on a 9-point Likert-type scale their preferred countermeasure, anchored on one end by (a) developing better outcome metrics of bottom-line performance that are harder to fake, and on the other by (b) moving from outcome accountability toward process accountability metrics that focus more on actual employee behavior than on bottom-line performance. In the process accountability scenario, managers indicated on a 9-point Likert-type scale their preferred countermeasure, anchored on one end by (a) developing better process metrics of employee behavior that are harder to fake, and on the other by (b) moving from process accountability toward outcome accountability metrics that focus on bottom-line performance more than actual employee behavior.

Results

Table 1 presents all means, standard deviations, and zero-order correlations, by organizational domain. Table 2 presents all regression analysis coefficients and test statistics.[2]

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[2] Study 1 also included measures of participants' trust in the relevant role incumbents (public school teachers and EEO officers) (9-point Likert scale: 1 = "no trust"; 9 = "completely trust") and concern for under attribution errors [under-estimating employees' control over important outcomes (9-point Likert scale: 1 = extremely rare; 5 = moderately common; 9 = extremely common)]. Mediation analyses with these two variables did not yield significant results but there were substantial correlations in the predicted directions. In the public school domain, ideology was correlated with trust ($r = -.39$, $p < .01$), with conservatives trusting teachers less. Trust was, in turn, negatively correlated with preference for outcome accountability ($r = -.53$, $p < .01$). Ideology was also correlated with attribution-error aversion ($r = .48$, $p < .01$), with conservatives more averse to under estimating teachers' control over student performance. Aversion to this error was, in turn, positively correlated with preference for outcome accountability ($r = .55$, $p < .01$).In the EEO domain, ideology was also correlated with trust ($r = .60$, $p < .01$), with conservatives trusting personnel managers more; trust was, in turn, negatively correlated with preference for outcome accountability ($r = -.51$, $p < .01$). Conservative ideology was also negatively correlated with concern for under-attribution errors ($r = -.56$, $p < .01$), and concern for these errors was positively correlated with endorsing outcome accountability ($r = .65$, $p < .01$).

Testing Hypotheses 1 and 2 involved a series of regressions of accountability preferences on ideology. Although there were good conceptual grounds for measuring accountability preferences using both unipolar and bipolar scales, the two types of scales had strikingly similar functional relationships with the independent variables – so, to simplify presentation, we report only the bipolar scales here (Table 2 does however include unipolar results).

In the unspecified domain, consistent with Hypothesis 1, liberal managers were likelier to support process measures, and conservative managers to support outcome measures, $F(1, 74) =$ 23.62, $p < .01$. For the public school domain, the same relationship emerged, $F(1, 74) = 19.98, p < .$ 01: conservative managers were more supportive of outcome systems and liberal managers more supportive of process systems. Thus, in the efficiency-salient domain, the pattern predicted by Hypothesis 1 was confirmed (as predicted by Hypothesis 2a). Also, consistent with Hypothesis 2b, we found a reversal of these preferences in the EEO (equality-salient) domain: conservative managers were likelier to support process systems and liberal managers likelier to support outcome systems, $F(1, 74) = 34.55, p < .01$.

To test Hypotheses 3a-c, we conducted a series of regression analyses for each domain and system being subverted. In the public-school domain, liberal managers were likelier than conservative managers to switch to process accountability when they learned that outcome accountability had been subverted ($b = -.48$, s.e. $= .20, t = 2.36, p < .05$). But conservative managers were likelier than liberal managers to switch to outcome accountability when they learned that process accountability had been subverted ($b = .63$, s.e. $= .16$, $t = 3.98, p < .01$).

In the EEO domain, conservative managers were likelier than liberal managers to favor switching to process accountability systems when the outcome accountability system had been subverted ($b = .41$, s.e. $= .14, t = 2.93, p < .01$). However, they were less likely than liberal managers to favor switching to outcome accountability when they were informed that process

accountability had been subverted ($b = -.51$, s.e. $= .23$, $t = 2.42$, $p < .05$).

Table 3 presents two sets of regressions that show what happens when we combine the public-school and corporate EEO data and test the interaction hypotheses. Managers prefer to (a) tinker with malfunctioning preferred systems (e.g., for liberal observers, process systems in schools/outcome systems for corporate EEO; for conservatives, process systems in corporate EEO and outcome systems in schools) (supporting Hypotheses 3a-b); and, (b) abandon malfunctioning non-preferred systems (Hypothesis 3c). In each case the interaction was significant. To facilitate the interpretation of the interaction, we plotted the simple slopes of preferences to switch to the alternate accountability system at one standard deviation above and below the mean of ideology ratings (as recommended by Aiken & West, 1991). Figure 1 plots the results. The accompanying statistical comparison of these slopes to zero strongly supported Hypotheses 3a-c.

Discussion

Political ideology was a robust predictor of accountability preferences, but the direction shifted predictably across domains. In the high-ambiguity baseline domain, conservative managers preferred outcome accountability. But liberal and conservative managers traded places in accountability-design debates in the public-school domain and the corporate EEO domain.

As predicted for public schools, liberal managers favored process accountability that used best practice indicators to evaluate the quality of instruction in classrooms. Conservative managers favored outcome accountability that required schools to improve test scores. In the free-response section of our study where participants could express their thoughts on the pros and cons of process vs. outcome accountability in each domain, there were informal signs of conservative efforts to delegitimize process accountability and liberal efforts to delegitimize outcome accountability. For example, one conservative said he had little faith in the ability of the "bureaucrats" and "unions" to deliver "quality education to kids." Another added: "If you want results, you have to pull their feet to the fire. We care about what children are learning and tests are the best way to find out if they

are." By contrast, liberals worried about good teachers being labeled bad because they had been assigned "difficult classes" and worried about bad teachers being tempted to teach the test. One liberal wrote: "We have to treat teachers as professionals who know best how to evaluate their colleagues."

This pattern reversed in the EEO realm. Here conservative managers favored process accountability, whereas liberal managers favored outcome accountability that mandated numerical goals for minority hiring and promotion. Informal comments may shed some light on these patterns. Liberal managers were explicitly skeptical of pure process metrics that made no reference to numerical goals: "I need to see the numbers. I know we (people at his company) are capable of doing a lot more on the diversity front." and "I know people pay a lot of lip service to diversity but when I look at the faces at the top, I'm afraid I don't trust their hearts (are) in this." In effect, both participants were saying that as long as current demographic inequalities persisted, they would doubt the fairness of process-accountability systems. By contrast, conservative managers preferred process-accountability, even when those systems failed to eliminate disparate impact, which the strongest conservatives attributed to pre-existing differences in human capital, not discrimination. They doubted the fairness and efficiency of outcome-accountability: "It's not fair to ask individual companies to clean up the after-effects of society's failures—there often are not enough qualified minorities" and "Outcome accountability is a fancy name for quotas—and quotas violate my sense of fairness."

The responses to the "would-you-change-your-mind?" questions also reinforce how easy it is to become a prisoner of one's ideological preconceptions in these domain-specific challenges – and how hard it is to persuade managers, locked into an ideological view of the agents and of the right error-aversion priorities, to reconsider their accountability-system preferences in light of evidence that employees are subverting their initially preferred system.

Finally, it is worth noting that our analysis assumes neither that the values of equality and

efficiency always clash (pull people in opposing policy directions) nor that these values exhaust the set of values likely to influence managerial decisions on how to design accountability systems. Our claims are modest: (1) when managers think about how to structure accountability systems in particular domains, the spotlight for some managers seems to be more on "getting the job done" and for others, more on treating employees equally/preventing prejudice; (2) which managers fall in which categories is a joint function of ideological outlook and the degree to which the work setting has become a focal point for policy debates ("politicization").

There is a methodological trade-off between ecological realism and internal validity here. In principle, one could create completely fictional work situations (as we do in Study 2), toward which respondents would have had zero ideological sympathies or antipathies. But we opted in Study 1 to use pre-existing real-world groups toward which liberals and conservatives harbor a variety of value-laden associations. The connection between abstract values, such as efficiency and equality and specific policy preferences is inevitably somewhat loose – and hinges on the specific causal assumptions that respondents make about which policies will have which impact on which groups. It is easy to imagine people who endorse outcome accountability for teachers because they care about promoting equality of opportunity for students—or, for that matter, people who endorse process accountability in EEO efforts because they care about equality of opportunity. The pattern of ideological correlates in Study 1 suggests however that this was not the dominant driver of such support in this sample at this juncture in history.

Study 2

As noted earlier, our predictions about the effects of ideology on accountability preferences rest on the assumption that managers confront a situation in which (a) the trustworthiness of employees is unknown or difficult to gauge and (b) there is no information about the reliability of the effort-outcome linkage. In Study 2, we test Hypotheses 4 and 5 by exploring whether ideology effects completely disappear in experimental conditions that eliminate the usual real-world

uncertainties about employee trustworthiness and effort-outcome reliability—and that disentangle prior real-world associations respondents may have between soft and hard accountability and process and outcome accountability.

Participants and Procedure

Seventy-two executive MBA students participated in this study. The average age was 34.1 years and 22 were female.

The study was a factorial design with two between-subjects independent variables (high vs. low trustworthiness and low vs. high effort-outcome links) and two sets of dependent variables to capture the positive vs. negative evaluative framing of process vs. outcome accountability systems. Subjects were randomly assigned to one of four between-subjects groups.

Research has identified benevolence—the extent to which a trustee is believed to have concern for and commitment to the trustor and his or her interests (beyond egocentric profit motives)—as a central dimension of trustworthiness (Mayer, Davis, & Schoorman, 1995). As such, we manipulated perceived trustworthiness by varying information about employees' motives and attachment to the company.

In the low-trustworthiness condition, participants read that:

"Most employees at company XX appear to have the goal of being paid as much as possible for doing as little as possible."

Subjects in the high-trustworthiness condition learned that:

"Most employees at Company XX appear to be deeply committed to advancing the productivity and profitability of the company."

Subjects assigned to the high reliability of effort-outcome linkage condition were told that:

"Chance plays little role at company XX in determining the connection between how hard employees work and the quality of the end products of their efforts. Employees who work hard and follow prescribed processes can be reasonably confident that the final outcomes of their efforts will advance the profitability of the company."

In the low reliability of effort-outcome linkage, participants read that:

> "Chance plays a substantial role at company XX in determining the connection between how hard employees work and the quality of the end products of their efforts. Employees who work hard and follow prescribed processes cannot be certain that the final outcomes of their efforts will advance the profitability of the company."

All participants rated their approval of four different accountability systems (presented as two repeated-measures). The four combinations read as follows:

> (a) <u>Positive evaluative spin on outcome accountability</u>: "A system that gives employees a chance to benefit from the upside risk of any uncertainty in the effort-outcome connection by exercising their creativity and exploring new processes that improve bottom-line productivity";

> (b) <u>Negative evaluative spin on outcome accountability</u>: "A system that transfers the downside risk of any uncertainty in the effort-outcome connection onto the employees (the rationale being the need to communicate to employees that they cannot hide low-effort inputs by invoking the excuse that the connections between effort and outcome are uncertain)";

> (c) <u>Positive evaluative spin on process accountability</u>: "A system that ensures that employees who do their jobs well will always be rewarded, despite any uncertainty that might exist in the effort-outcome connection (the rationale being the need to show employees that the company values their efforts, even when those efforts do not reliably translate into positive outcomes)";

> (d) <u>Negative evaluative spin on process accountability</u>: "A system that protects the organization from the downside risk of any uncertainty in the effort-outcome connection (the rationale being the need to communicate to employees that they cannot hide low-effort inputs by invoking the excuse that the connections between effort and outcome are uncertain)."

Measures

As in Study 1, prior to presenting accountability systems, we measured managers' political ideologies with a 9-point self-identification scale from the National Election Survey (Knight, 2006): managers were asked to indicate their political views on a scale anchored at "strongly liberal" (1), "moderate" (5), and "strongly conservative" (9).

For the dependent variable, participants rated the strength of the arguments for implementing accountability systems in four different ways on a 9-point Likert-type scale ranging

from 1 ("disagree") to 9 ("agree"), with 5 indicating "neutrality."

Results

Table 4 reports the means and standard deviations for each between-subject condition.

Hypothesis 4 stated that (a) when there is clear evidence of employee (un)trustworthiness, accountability preferences will be guided not by ideological priors but rather by situation-specific information; and, (b) managers will prefer positive forms of both process and outcome accountability for employees known to be trustworthy, and negative forms of both process and outcome accountability for employees known to be untrustworthy. To test Hypothesis 4a, we ran regression analyses and to test 4b, we ran a mixed design analysis of variance.

Consistent with Hypothesis 4a, regression analyses revealed no significant relationships of ideology with endorsements of negative-spin outcome accountability, $F(1, 71) = .002$, ns., positive-spin outcome accountability, $F(1, 71) = .01$, ns, negative-spin process accountability, $F(1, 71) = 2.33$, $p > .10$, and positive-spin process accountability, $F(1, 71) = .17$, ns.

ANOVA revealed a significant effect of trust, $F(1, 68) = 143.25$, $p < .001$. When managers thought employees were trustworthy, they preferred positive (M = 6.82, SE = .13) over negative (M = 3.53, SE = .20) forms of accountability, $t(71) = 9.54$, $p < .01$, but when employees were untrustworthy, they preferred negative (M = 6.25, SE = .17) to positive (M = 4.21, SE = .26) forms of accountability, $t(71) = 5.36$, $p < .01$. Also, form of accountability no longer had a significant effect, $F(1, 68) = 3.54$, $p > .05$, suggesting that managers were indifferent to whether the evaluative spins involved process or outcome accountability. Thus, Hypothesis 4b was fully supported. Figure 2 plots the estimated marginal means of this interaction.

Consistent with Hypothesis 5, the ANOVA revealed a significant interaction between trust and effort-outcome linkage on evaluative spin, $F(1, 68) = 10.22$, $p < .01$. Contrast plots show that, when there was uncertainty about employees' ability to achieve outcomes via good-faith effort, managers exhibited the pattern in Hypothesis 4. For trustworthy employees, managers preferred

positive (M = 7.25, SE = .18) to negative (M = 3.81, SE = .27) forms of accountability, $t(35) = 8.77$, $p < .01$, but for untrustworthy employees, they preferred negative (M = 7.08, SE = .21) to positive forms (M = 4.25, SE = .31), $t(35) = 7.14$, $p < .01$.

Also consistent with Hypothesis 5, a similar, albeit weaker, pattern emerged when there was low uncertainty about employees' ability to achieve desired outcomes. For untrustworthy employees, managers preferred negative (M = 5.42, SE = .14) to positive (M = 4.17, SE = .28) forms of accountability, $t(35) = 4.03$, $p < .01$; for trustworthy employees, managers preferred positive (M = 6.38, SE = .16) to negative (M = 3.25, SE = .26) forms of accountability, $t(35) = 8.95$, $p < .01$. But there was a statistically significant difference, $t(35) = 6.53$, $p < .01$, between managerial support for negative forms of accountability when the effort-outcome linkage was unreliable (M = 7.08, SE = .24) vs. reliable (M = 5.09, SE = .14). Managers were especially supportive of punitive process and outcome accountability when there was low effort-outcome linkage.

Accountability type did not play a moderator-variable role, $F(1, 68) = .64$, $p > .10$, suggesting that participants ceased to care about the distinction between process and outcome accountability. Figure 3 plots the estimated marginal means of the three-way interaction.

Discussion

Ideology and type of accountability (process versus outcome) explained significant fractions of the variance in managerial reactions in Study 1—and negligible fractions of the variance in Study 2. This pattern across studies reinforces the theoretical argument that ideology predicts accountability preferences only when managers operate in high-ambiguity or high-controversy worlds. Ideology has no uncertainty-reducing role to play when, as in Study 2, there was no uncertainty about the trustworthiness of employees and the tightness of effort-outcome linkages.

Study 2 also shows it is possible to disentangle the value-laden associations that are often attached to process and outcome accountability in real-world controversies. Process accountability

need not mean a kinder, gentler form of accountability designed to protect employees from a stochastic work world; it can also be intrusive, suspicious, and heavy-handed. And outcome accountability need not mean a nasty Darwinian form of accountability that transfers risk onto the employees; it can be liberating and challenging. In real-world political debate, however, this malleability of meaning is often hard to observe because the debaters are under both cognitive-dissonance and impression-management pressures to engage in belief-system overkill (Jervis, 1976; Tetlock & Manstead, 1985) – and to define the option space in ways that reinforce their preferred stance. If one's "side" is on record as favoring no-nonsense outcome accountability for a festering problem – be it low minority representation in corporate jobs or low-performing public schools – loyal partisans on one's side of the ideological divide should mobilize the necessary arguments to prevail (e.g., depicting employees as untrustworthy—and stressing how much better outcomes could be if only the employees would 'really try').

However, managers are also accountable to market realities, and ideological justifications for accountability systems often sound shrill and close-minded. Managers thus have to balance theory-driven information processing (essential to fill in the blanks when there is ambiguity) and data-driven processing (essential to be responsive to compelling context-specific evidence of how trustworthy employees are and how tightly coupled employee inputs and outputs are). Study 2 showed that, when this individuating information becomes available, ideological polarization evaporates, as does the linkage between seeing employees as untrustworthy and preferring outcome accountability. Managers simply want forms of accountability – be they process or outcome – that protect their organizations from employees who cannot be trusted and that protect and reward employees who can be trusted. And managers adopt a particularly tough stance toward untrustworthy employees when effort-outcome linkages are unreliable.

There is nothing inherently oppressive about outcome accountability – or permissive about process accountability. Outcome accountability, when framed as opportunity expansion, can be cast

as a catalyst to creativity, not a squelcher (Simons, 2010) – and process accountability, when framed as loss aversion, can be cast as an essential check on untrustworthy employees, not as an open-ended invitation to invent excuses for low output (P.E. Tetlock & B.A. Mellers, 2011).

General Discussion

Management scholars have noted that the big-picture question of how accountability systems emerge in organizations—and the factors that influence choices of systems – remains largely unexplored (as recommended by Aldrich, 1999; Cardinal, Sitkin, & Long, 2004; Kimberly, 1979). Our research contributes to filling this gap by treating ideology as a source of uncertainty-reducing heuristics—and by examining the interplay between ideology and organizational domains in shaping when and why managers favor certain accountability systems.

Our data suggest that when little is known about the trustworthiness of employees and the reliability of input-output connections, managers rely on ideologies for simplifying heuristics in appraising the risks and benefits of accountability systems. Among other things, ideology offers guidance in estimating the trustworthiness of employees, in judging the degree to which employees could control key outcomes if they really tried, and in gauging which inferential mistakes it is better or worse to make.

However, the direction of the correlations between ideology and accountability preferences shifts across domains. Such findings place a key qualification on the work of Tetlock (2000). Conservatives may be inherently suspicious of human nature and – rightly or wrongly – see outcome accountability as harder to game. They may also be more sensitive to false-attribution errors of failing to hold employees accountable for outcomes they could have controlled. However, conservative and liberal managers readily switch places in accountability-design debates as a function of whose core ideological values are at stake in the policy mission. The data also supported the prisoners-of-our-preconceptions hypothesis: managers only tinkered with their initially preferred accountability systems in response to evidence of cheating but abandoned their initially

less preferred systems in response to the same evidence of cheating.

The consequences of managerial reliance on ideologically-driven preferences in low-information or ambiguous settings are substantial. In holding employees accountable for outcomes when the effort-outcome linkage is weak, managers run the risk of triggering perverse reactions. For example, salespeople struggling to hit sales targets can engage in corner-cutting when it comes to customer service, undermining the organization's relationship with a key stakeholder (Gibbons, 1998). In a CEO-simulation in which performance-based incentives purely focused on outcomes, Lefebvre and Vieider (2010) showed that the net result was excessive risk-taking among executives. In such instances of low effort-outcome reliability, process accountability may relieve managers of achieving outcomes they can only partially influence (R. M. Wiseman & Gomez-Mejia, 1998).

However, managerial support for process accountability also runs the risk of infusing unnecessary subjectivity into personnel evaluation (Anderson & Oliver, 1987). In eliminating the inequities linked to simple outcome metrics, managers may choose process measures that inadvertently create new inequities (Tetlock & Mitchell, 2009). From a procedural-justice perspective, managers may be prone to a host of biases when they evaluate employees' complex records (Leventhal, 1980; Thibaut & Walker, 1975). Under such process systems, internal managers have wide latitude in imposing their own ideas of which behaviors lead to valued results – a situation likely to engender debates about the utility and fairness of the processes that have been anointed as worth monitoring. Additionally, there is the risk of process accountability degenerating into bureaucratic ritualism and symbolic compliance (Edelman, 1992).

These risks do not disappear when managers have accurate case-specific evidence about the trustworthiness of their employees and the relationship between employee efforts and outcomes – and can stop relying on ideological heuristics. Substantial bodies of work demonstrate that people react negatively to control systems that depict them as lazy or incompetent (Enzle & Anderson, 1993; Schoorman, Mayer, & Davis, 2007; Sutton & Galunic, 1996). Continuing to treat the

untrustworthy as untrustworthy via punitive variants of process or outcome accountability (as managers in Study 2 opted to do) may result in even more untrustworthy behaviors (Malhotra & Murnighan, 2002), creating a self-fulfilling prophecy. Arguably, these effects would be further enhanced when there is weak effort-outcome reliability (again, Study 2 managers preferred this solution – i.e., imposing punitive oversight especially in low effort-outcome conditions for those labeled untrustworthy). On the other end, managers do not necessarily inoculate themselves against adverse effects when they embrace the more positive forms of process or outcome accountability – here they can fall prey to the "sucker" effect, and continue to trust those who might turn out most willing and able to shirk (Fehr & Schmidt, 2007).

Finally, it is possible that the current results exaggerate the power of ideology because we measured ideology at the start of the session in which we assessed initial accountability preferences. We cannot rule out that some associative priming may have occurred, but we do not see such an effect as a serious threat to the theoretical and practical significance of the results. From a theoretical perspective, an ideology-priming effect could account for the findings only if respondents already had the same associations we hypothesized between liberalism-conservatism and perceptions of workforces in public schools and corporate America. And although a priming interpretation could reduce the generalizability of our results (limiting them to situations in which people have just been reminded of their political views), public opinion research suggests that value priming and issue framing are common influence tactics in real-world debates. When activists try to mobilize their "base" on an issue, they often do so by exhorting their fellow citizens to make the "right" cognitive connections between grand abstractions (party affiliation, ideology) and the concrete issue at hand (Druckman, 2001, 2004; Sniderman, 2000). The job of activists is to nudge or even shove the non-activist, sympathetic public into a correct initial position.

In sum, when managers opt for certain accountability systems over others, they expose themselves and their organizations to complex mixes of risks. Ideology can simplify these trade-

offs, but the price of simplification can be steep.

References

Abelson, R. P., Aronson, E., McGuire, W. J., Newcomb, T. M., Rosenberg, M. J., & Tannenbaum, P. H. (1968). *Theories of cognitive consistency: A sourcebook*. Chicago: Rand McNally.

Adams, J. S. (1963). Towards an understanding of inequity. *The Journal of Abnormal and Social Psychology, 67*(5), 422-436.

Adorno, T. W., Frenkel-Brunswik, E., Levinson, D. J., & Sanford, R. N. (1950). *The authoritarian personality*. New York: Harper.

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage Publications, Inc.

Aldrich, H. (1999). *Organizations evolving*. Thousand Oaks, CA: Sage Publications.

Alford, J. R., Funk, C. L., & Hibbing, J. R. (2005). Are political orientations genetically transmitted. *American Political Science Review, 99*(2), 153-167.

Anderson, E., & Oliver, R. L. (1987). Perspectives on behavior-based verus outcome-based salesforce control systems. *Journal of Marketing, 51*, 76-88.

Antle, R., & Demski, J. S. (1988). The controllability principle in responsibility accounting. *Accounting Review, 63*, 700-718.

Axelrod, R. (1984). *The evolution of cooperation*. New York: Basic Books.

Baker, G., Gibbons, R., & Murphy, K. J. (1994). Subjective performance measures in optimal incentive contracts. *Quarterly Journal of Economics, 109*, 1125-1156.

Barley, S. R., & Kunda, G. (1992). Design and devotion: Surges of rational and normative ideologies of control in managerial discourse. *Administrative Science Quarterly, 37*, 363-399.

Baron, J. (2005). *Rationality and intelligence*. Cambridge: Cambridge Univ Press.

Beach, L. R., & Mitchell, T. R. (1978). A contingency model for the selection of decision strategies.

Academy of Management Review, 3(3), 439-449.

Benoit, K., & Laver, M. (2006). *Party policy in modern democracies*. London: Routledge.

Bertrand, M., & Mullainathan, S. (2001). Are CEOs rewarded for luck? The ones without principals are. *Quarterly Journal of Economics, 116*(3), 901-932.

Blau, J. R., & McKinley, W. (1979). Ideas, complexity, and innovation. *Administrative Science Quarterly, 24*, 200-219.

Block, J., & Block, J. H. (2006). Nursery school personality and political orientation two decades later. *Journal of Research in Personality, 40*(5), 734-749.

Bouwens, J., & Van Lent, L. (2007). Assessing the performance of business unit managers. *Journal of Accounting Research, 45*(4), 667-697.

Brtek, M. D., & Motowidlo, S. J. (2002). Effects of procedure and outcome accountability on interview validity. *Journal of Applied Psychology, 87*(1), 185-191.

Bushman, B. J., Baumeister, R. F., & Phillips, C. M. (2001). Do people aggress to improve their mood? Catharsis beliefs, affect regulation opportunity, and aggressive responding. *Journal of Personality and Social Psychology, 81*(1), 17-32.

Campbell, A., Converse, P., Miller, W., & Strokes, D. (1960/1965). *The American voter*. Oxford, UK: Wiley.

Cardinal, L. B. (2001). Technological innovation in the pharmaceutical industry: The use of organizational control in managing research and development. *Organization Science, 12*(1), 19-36.

Cardinal, L. B., Sitkin, S. B., & Long, C. P. (2004). Balancing and rebalancing in the creation and evolution of organizational control. *Organization Science, 15*(4), 411-431.

Carney, D., Jost, J., Gosling, S., & Potter, J. (2008). The secret lives of liberals and conservatives: Personality profiles, interaction styles, and the things they leave behind. *Political Psychology, 29*(6), 807-840.

Chambers, J., Schlenker, B., & Collisson, B. (2012). Ideology and prejudice: The role of value conflicts. *Psychological Science, in press*.

Chubb, J. E., & Moe, T. M. (1988). Politics, markets, and the organization of schools. *The American Political Science Review, 82*(4), 1066-1087.

Chubb, J. E., & Moe, T. M. (1990). *Politics, markets, and America's schools*. Washington, DC: Brookings Institution Press.

Clark, M. S., Mills, J., & Powell, M. C. (1986). Keeping track of needs in communal and exchange relationships. *Journal of Personality and Social Psychology, 51*(2), 333-338.

Cohen, J. R., Krishnamoorthy, G., Peytcheva, M., & Wright, A. (2011). Will regulatory enforcement and principles-based accounting influence auditors' ethical judgments to constrain aggressive reporting? *Working paper, available at SSRN: http://ssrn.com/abstract=1817684*.

Conover, P. J., & Feldman, S. (1981). The origins and meaning of liberal/conservative self-identifications. *American Journal of Political Science, 25*, 617-645.

Costantini, E., & Craik, K. H. (1980). Personality and politicians: California party leaders, 1960–1976. *Journal of Personality and Social Psychology, 38*(4), 641-661.

Coyne, W. (1997). 3M (Minnesota Mining and Manufacturing Company). In R. Kanter, J. Kao & F. Wiersema (Eds.), *Innovation. Breakthrough at 3M, Du Pont, GE, Pfizer, and Rubbermaid*. New York: Harper Business.

Cravens, D. W., Ingram, T. N., LaForge, R. W., & Young, C. E. (1993). Behavior-based and outcome-based salesforce control systems. *Journal of Marketing, 57*, 47-59.

Curley, S., Yates, J., & Abrams, R. (1986). Psychological sources of ambiguity avoidance. *Organizational Behavior and Human Decision Processes, 38*(2), 230-256.

Dobbs, M., & Crano, W. D. (2001). Outgroup accountability in the minimal group paradigm: Implications for aversive discrimination and social identity theory. *Personality and Social Psychology Bulletin, 27*(3), 355-364.

Druckman, J. N. (2001). On the limits of framing effects: who can frame? *Journal of Politics, 63*(4), 1041-1066.

Druckman, J. N. (2004). Political preference formation: Competition, deliberation, and the (ir) relevance of framing effects. *American Political Science Review, 98*(4), 671-686.

Edelman, L. B. (1992). Legal ambiguity and symbolic structures: Organizational mediation of civil rights law. *American Journal of Sociology, 97*(6), 1531-1576.

Edmondson, A. C. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly, 44*, 350-383.

Eisenhardt, K. M. (1985). Control: Organizational and economic approaches. *Management Science*, 134-149.

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review*, 57-74.

Enzle, M. E., & Anderson, S. C. (1993). Surveillant intentions and intrinsic motivation. *Journal of Personality and Social Psychology, 64*(2), 257.

Fehr, E., & Schmidt, K. M. (2007). Adding a stick to the carrot? The interaction of bonuses and fines. *American Economic Review, 97*(2), 177-181.

Frink, D. D., & Klimoski, R. J. (2004). Advancing accountability theory and practice: Introduction to the human resource management review special edition. *Human Resource Management Review, 14*(1), 1-17.

Fuchs, D., & Klingemann, H. (1990). The left-right schema. In M. Jennings & J. v. Deth (Eds.), *Continuities in political action: A longitudinal study of political orientations in three western democracies* (pp. 203-234). Berlin: Walter de Gruyter.

George, A. (1980). *Presidential decision-making: The effective use of information and a device*. Boulder, CO: Westview Press.

Gibbons, R. S. (1998). Incentives in organizations. *Journal of Economic Perspectives, 12*(4), 115-

132.

Girud, F., Langevin, P., & Mendoza, C. (2008). Justice as a rationale for the controllability
principle: A study of managers' opinions. *Journal of Accounting Research, 19*, 32-44.

Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of
moral foundations. *Journal of Personality and Social Psychology, 96*(5), 1029-1046.

Grant, A. M., & Ashford, S. J. (2008). The dynamics of proactivity at work. In B. M. Staw & R.
Sutton (Eds.), *Research in organizational behavior* (Vol. 28, pp. 3-34). Greenwich, CT: JAI.

Grant, A. M., & Rothbard, N. P. (in press). When in doubt, seize the day? Security values, prosocial
values, and proactivity under ambiguity. *Journal of Applied Psychology*.

Grant, R. W., & Keohane, R. O. (2005). Accountability and abuses of power in world politics.
American Political Science Review, 99(1), 29-43.

Haidt, J. (2007). The new synthesis in moral psychology. *Science, 316*(5827), 998-1002.

Hanushek, E. A. (1986). The economics of schooling: Production and efficiency in public schools.
Journal of Economic Literature, 24(3), 1141-1177.

Henderson, R. (1994). The evolution of integrative capability: Innovation in cardiovascular drug
discovery. *Industrial and Corporate Change, 3*(3), 607-630.

House, R. J., Shane, S. A., & Herold, D. M. (1996). Rumors of the death of dispositional research
are vastly exaggerated. *Academy of Management Review, 21*(1), 203-224.

Jackall, R. (1988). *Moral mazes: The world of corporate managers*. New York: Oxford University
Press.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs
and ownership structure. *Journal of Financial Economics, 3*(4), 305-360.

Jervis, R. (1976). *Perception and misperception in international politics*. Princeton, NJ: Princeton
University Press.

Johns, G. (2006). The essential impact of context on organizational behavior. *Academy of*

Management Review, 31(2), 386-408.

Jost, J. T. (2006). The end of the end of ideology. *American Psychologist, 61*(7), 651-670.

Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual Review of Psychology, 60*, 307-337.

Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological bulletin, 129*(3), 339-375.

Jost, J. T., Nosek, B. A., & Gosling, S. D. (2008). Ideology: Its resurgence in social, personality, and political psychology. *Perspectives on Psychological Science, 3*(2), 126-136.

Kanter, R. M. (2010). BP's Tony Hayward and the failure of leadership accountability, *Bloomberg News*.

Kerlinger, F. (1984). *Liberalism and conservatism: The nature and structure of social attitudes*. Hillsdale, NJ: Erlbaum.

Kiesler, S., & Sproull, L. (1982). Managerial response to changing environments: Perspectives on problem sensing from social cognition. *Administrative Science Quarterly, 27*, 548-570.

Kimberly, J. R. (1979). Issues in the creation of organizations: Initiation, innovation, and institutionalization. *Academy of Management Journal, 22*, 437-457.

Kittilson, M. C. (2005). In Support of Gender Quotas: Setting New Standards, Bringing Visible Gains. *Politics & Gender, 1*(4), 638-645.

Knight, K. (1999). Liberalism and conservatism. In J. Robinson, P. Shaver & L. Wrightsman (Eds.), *Measures of social psychological attitudes* (Vol. 2, pp. 59-158). San Diego, CA: Academic Press.

Knight, K. (2006). Transformations of the concept of ideology in the twentieth century. *American Political Science Review, 100*(4), 619-626.

Kramer, R. M. (1999). Trust and distrust in organizations: Emerging perspectives, enduring questions. *Annual Review of Psychology, 50*(1), 569-598.

Krawiec, K. (2004). Organizational misconduct: Beyond the principal-agent model. *Florida State University Law Review, 32*, 571-616.

Kunda, Z. (1999). Social cognition: Making sense of people. *Psychological Bulletin, 108*, 480-498.

Lee, F., Edmondson, A. C., Thomke, S., & Worline, M. (2004). The mixed effects of inconsistency on experimentation in organizations. *Organization Science, 15*(3), 310-326.

Lefebvre, M., & Vieider, F. (2010). Reining in excessive risk taking by executives: Experimental evidence. *GATE Working Paper No. 1006*.

Leventhal, G. (1980). What should be done with equity theory? In K. Gergen, M. Greenberg & R. Willis (Eds.), *Social exchange: Advances in theory and research* (pp. 27-55). New York: Plenum.

Malhotra, D., & Murnighan, J. K. (2002). The effects of contracts on interpersonal trust. *Administrative Science Quarterly, 47*, 534-559.

Mant, J. (2001). Process versus outcome indicators in the assessment of quality of health care. *International Journal for Quality in Health Care, 13*(6), 475-480.

March, J. G. (2010). *The ambiguities of experience*. Ithaca, NY: Cornell University Press.

March, J. G., & Simon, H. A. (1958). *Organizations*. Oxford, England: Wiley.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review, 20*(3), 709-734.

McAllister, D. J. (1995). Affect-and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal, 38*(1), 24-59.

McClelland, J. (1997). *A history of Western political thought*. London: Routledge.

McKinley, W., Mone, M. A., & Barker, V. L. (1998). Some ideological foundations of organizational downsizing. *Journal of Management Inquiry, 7*(3), 198-212.

Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology, 83*, 340-363.

Meyer, R. D., Dalal, R. S., & Hermida, R. (2010). A review and synthesis of situational strength in the organizational sciences. *Journal of Management, 36*(1), 121-140.

Mischel, W. (1977). On the future of personality measurement. *American Psychologist, 32*(4), 246-254.

Mowen, J. C., Keith, J. E., Brown, S. W., & Jackson, D. W. (1985). Utilizing effort and task difficulty information in evaluating salespeople. *Journal of Marketing Research, 22*, 185-191.

Napier, J. L., & Jost, J. T. (2008). Why are conservatives happier than liberals? *Psychological Science, 19*(6), 565-572.

Okun, A. M. (1975). *Equality and efficiency: The big tradeoff*. Washington, DC: The Brookings Institution.

Ouchi, W. G. (1979). A conceptual framework for the design of organizational control mechanisms. *Management Science*, 833-848.

Oxley, D. R., Smith, K. B., Alford, J. R., Hibbing, M. V., Miller, J. L., Scalora, M., . . . Hibbing, J. R. (2008). Political attitudes vary with physiological traits. *Science, 321*(5896), 1667-1670.

Patil, S. V., Vieider, F., & Tetlock, P. E. (2013). Process and outcome accountability. In M. Bovens, R. E. Goodin & T. Schillemans (Eds.), *Oxford Handbook of Public Accountability*. New York: Oxford University Press.

Posner, R. (2005). *Remaking domestic intelligence*. Stanford: Hoover Institution Press.

Rodgers, T. (1993). *No-excuses management: Proven systems for strating fast, growing quickly, and surviving hard times*. New York: Doubleday Business.

Rubin, H. R., Pronovost, P., & Diette, G. B. (2001). The advantages and disadvantages of process based measures of health care quality. *International Journal for Quality in Health Care, 13*(6), 469.

Schoemaker, P. J. H. (2011). *Brilliant mistakes: Finding success on the far side of failure*.

Philadelphia, PA: Wharton Digital Press.

Scholten, L., van Knippenberg, D., Nijstad, B. A., & De Dreu, C. K. W. (2007). Motivated information processing and group decision-making: Effects of process accountability on information processing and decision quality. *Journal of Experimental Social Psychology, 43*(4), 539-552.

Schoorman, F. D., Mayer, R. C., & Davis, J. H. (2007). An integrative model of organizational trust: Past, present, and future. *Academy of Management Review, 32*(2), 344-354.

Schwartz, S. H. (1996). *Value priorities and behavior: Applying a theory of integrated value systems.* Paper presented at the The Ontario symposium: The psychology of values, Mahwah, NJ.

Schwartz, S. H. (1999). Cultural value differences: Some implications for work. *Applied Psychology: An International Review, 48*, 23-48.

Schweitzer, M. E., Ordonez, L., & Douma, B. (2004). Goal setting as a motivator of unethical behavior. *Academy of Management Journal, 47*(3), 422-432.

Scott, B. A., Colquitt, J. A., & Paddock, E. L. (2009). An actor-focused model of justice rule adherence and violation: The role of managerial motives and discretion. *Journal of Applied Psychology, 94*(3), 756-769.

Scott, B. A., Colquitt, J. A., & Zapata-Phelan, C. P. (2007). Justice as a dependent variable: Subordinate charisma as a predictor of interpersonal and informational justice perceptions. *Journal of Applied Psychology, 92*(6), 1597-1609.

Sharpe, V. A. (2004). *Accountability: Patient safety and policy reform*. Georgetown: Georgetown University Press.

Sidanius, J., Pratto, F., Van Laar, C., & Levin, S. (2004). Social dominance theory: Its agenda and method. *Political Psychology, 25*(6), 845-880.

Siegel-Jacobs, K., & Yates, J. F. (1996). Effects of procedural and outcome accountability on

judgment quality. *Organizational Behavior and Human Decision Processes, 65*(1), 1-17.

Simon, H. A. (1955). A behavioral model of rational choice. *Quarterly Journal of Economics, 59,* 99-118.

Simons, R. (2005). *Levers of organization design: How managers use accountability systems for greater performance and commitment*. Boston, MA: Harvard Business School Press.

Simons, R. (2010). Accountability and control as catalyst for strategic exploration and exploitation: Field study results. *Harvard Business School (working paper 10-051).*

Simonson, I., & Staw, B. M. (1992). Deescalation strategies: A comparison of techniques for reducing commitment to losing courses of action. *Journal of Applied Psychology, 77*(4), 419-426.

Skitka, L. J., Mullen, E., Griffin, T., Hutchinson, S., & Chamberlin, B. (2002). Dispositions, scripts, or motivated correction?: Understanding ideological differences in explanations for social problems. *Journal of Personality and Social Psychology, 83*(2), 470-487.

Smith, P. B., Peterson, M. F., & Schwartz, S. H. (2002). Cultural values, sources of guidance, and their relevance to managerial behavior: A 47-nation study. *Journal of Cross-Cultural Psychology, 33*(2), 188-208.

Sniderman, P. M. (2000). Taking sides: A fixed choice theory of political reasoning. In A. Lupia, M. D. McCubbins & S. L. Popkin (Eds.), *Elements of reason: Understanding and expanding the limits of political rationality*. New York: Cambridge University Press.

Sniderman, P. M., Brody, R., & Tetlock, P. E. (1991). *Reasoning about politics: Explorations in political psychology*. Cambridge, UK: Cambridge University Press.

Sniderman, P. M., & Carmines, E. G. (1997). *Reaching beyond race*. Cambridge, MA: Harvard University Press.

Sniderman, P. M., & Piazza, T. (1993). *The scar of race*. Cambridge, MA: Harvard University Press.

Sniderman, P. M., & Tetlock, P. E. (1986). Reflections on American racism. *Journal of Social Issues, 42*(2), 173-187.

Sniderman, P. M., Tetlock, P. E., & Carmines, E. G. (1993). Prejudice and politics: An introduction. In P. Sniderman, P. E. Tetlock & E. G. Carmines (Eds.), *Prejudice, politics, and the American dilemma*. Stanford: Stanford University Press.

Sorkin, D. (2009). Sense of ownership can improve accountability, *New York Times*.

Sutton, R., & Galunic, D. (1996). Consequences of public scrutiny for leaders and their organizations. In B. Staw & L. Cummings (Eds.), *Research in organizational behavior* (pp. 201-250). Greenwich, CT: JAI Press.

Tetlock, P. E. (1986). A value pluralism model of ideological reasoning. *Journal of Personality and Social Psychology, 50*(4), 819-827.

Tetlock, P. E. (1998). Close-call counterfactuals and belief-system defenses: I was not almost wrong but I was almost right. *Journal of Personality and Social Psychology, 75*(3), 639-652.

Tetlock, P. E. (2000). Cognitive biases and organizational correctives: Do both disease and cure depend on the politics of the beholder? *Administrative Science Quarterly, 45*, 293-326.

Tetlock, P. E. (2005). *Expert political judgment: How good is it? How can we know?* Princeton: Princeton University Press.

Tetlock, P. E., & Manstead, A. S. (1985). Impression management versus intrapsychic explanations in social psychology: A useful dichotomy? *Psychological Review, 92*(1), 59-77.

Tetlock, P. E., & Mellers, B. A. (2011). Intelligent management of intelligence agencies: Beyond accountability ping-pong. *American Psychologist*, 1-13.

Tetlock, P. E., & Mellers, B. A. (2011). Structuring accountability systems in organizations: Key trade-offs and critical unknowns. In B. Fischhoff & C. Chauvin (Eds.), *Intelligence Analysis: Behavioral and Social Scientific Foundations* (pp. 249-270). Washington, DC: National Academies Press.

Tetlock, P. E., & Mitchell, G. (1993). Liberal and conservative approaches to justice: Conflicting

    psychological portraits. In B. Mellers & J. Baron (Eds.), *Psychological perspectives on*

    justice: Theory and applications (pp. 234). Cambridge: Cambridge University Press.

Tetlock, P. E., & Mitchell, G. (2009). Implicit bias and accountability systems: What must

    organizations do to prevent discrimination? In B. Staw & A. Brief (Eds.), *Research in*

    organizational behavior (Vol. 29, pp. 3–38). New York: Elsevier.

Tetlock, P. E., Visser, P. S., Singh, R., Polifroni, M., Scott, A., Elson, S. B., . . . Rescober, P. (2007).

    People as intuitive prosecutors: The impact of social-control goals on attributions of

    responsibility. *Journal of Experimental Social Psychology, 43*(2), 195-209.

Thibaut, J., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale, NJ:

    Lawrence Erlbaum Associates.

Tomkins, S. (1963). Left and right: A basic dimension of ideology and personality. In R. White

    (Ed.), *The study of lives* (pp. 388-411). New York: Atherton.

Tyler, T. (1989). The psychology of procedural justice: A test of the group-value model. *Journal of*

    Personality and Social Psychology, 57(5), 830-838.

Weick, K. E. (1979). *The social psychology of organizing* (2 ed.). Reading, MA: Addison-Wesley.

Westen, D. (2007). *The political brain: The role of emotion in deciding the fate of the nation*. New

    York: Perseus Books Group.

Williamson, O. E. (1991). Comparative economic organization: The analysis of discrete structural

    alternatives. *Administrative Science Quarterly, 36*, 269-296.

Wilson, J. (1989). *Bureaucracy: What government agencies do and why*. New York: Basic Books.

Wiseman, L. (2010). *Multipliers: How the best leaders make everyone smarter*. New York, NY:

    HarperBusiness.

Wiseman, R. M., & Gomez-Mejia, L. R. (1998). A behavioral agency model of managerial risk

    taking. *Academy of Management Review, 23*(1), 133-153.

TABLE 1
Study 1 Means, Standard Deviations, and Zero-Order Correlations by Domain

Unspecified Domain:

Variable	M	SD	1	2	3	4
1. Political ideology	5.10	1.55	1.00			
2. Process accountability support (unipolar)	5.40	.96	-.22	1.00		
3. Outcome accountability support (unipolar)	5.57	.80	.32**	-.08	1.00	
4. Process vs. outcome accountability support (bipolar)	5.17	1.07	.60**	-.27*	.65**	1.00

Public School Domain:

Variable	M	SD	1	2	3	4
1. Political ideology	5.10	1.55	1.00			
2. Process accountability support (unipolar)	5.13	1.11	-.33**	1.00		
3. Outcome accountability support (unipolar)	5.88	1.22	.52**	.61**	1.00	
4. Process vs. outcome accountability support (bipolar)	5.33	.93	.55**	-.64**	.77**	1.00

Equal Employment Opportunity (EEO) Domain:

Variable	M	SD	1	2	3	4
1. Political ideology	5.10	1.55	1.00			
2. Process accountability support (unipolar)	5.85	1.25	.37*	1.00		
3. Outcome accountability support (unipolar)	5.00	1.44	-.46**	-.51**	1.00	
4. Process vs. outcome accountability support (bipolar)	4.81	1.16	-.61**	-.50**	.74**	1.00

Change in Accountability Preferences:

Variable	SD	2	3
1. Political ideology	1.55		
2. Switch preferences (when outcome system subverted)	1.17	1.00	
3. Switch preferences (when process system subverted)	1.40	-.09	1.00

Notes. * $p < .05$; ** $p < .01$.

TABLE 2
Study 1 Regression Analyses by Domain

Unspecified Domain:

	Process Accountability (Unipolar)	Outcome Accountability (Unipolar)	Process-Outcome Accountability (Bipolar)							
	B	**SE**	**β**	**T**	**B**	**SE**	**β**	**t**	**B**	**SE**	**β**	**t**
Age	.01	.03	.05	.41	-.03	.03	-.09	-.78	-.01	.04	-.03	-.27
Gender	.19	.22	.10	.84	-.23	.22	-.12	-1.03	-.24	.24	-.12	-.97
Ideology	-.13	.07	-.22	-1.89*	.21	.07	.35	3.07***	.40	.08	.63	5.116**

Public School Domain:

	Process Accountability (Unipolar)	Outcome Accountability (Unipolar)	Process-Outcome Accountability (Bipolar)							
	B	**SE**	**β**	**T**	**B**	**SE**	**β**	**t**	**B**	**SE**	**β**	**t**
Age	.02	.04	-.07	-.59	.08	.04	.21	1.77	.05	.03	.17	1.43
Gender	.19	.28	.08	.69	-.01	.30	.00	-.03	-.10	.23	-.05	-.45
Ideology	-.24	.09	-.33	-2.47**	.39	.09	.54	4.21***	.29	.06	.57	4.81***

Equal Employment Opportunity (EEO) Domain:

	Process	Outcome	Process-Outcome Accountability (Bipolar)

Accountability and Ideology

	Account ability (Unipolar)	e Account ability (Unipolar)										
	B	SE	β	T	B	SE	β	t	B	SE	β	t
Age	-.05	.05	-.13	-1.10	.07	.05	.15	1.30	.02	.04	.06	.51
Gender	.13	.31	.05	.43	-.18	.35	-.06	-.52	.13	.29	.05	.45
Ideology	.32	.10	.40	3.12***	-.45	.11	-.49	-4.14***	-.49	.11	-.66	-4.28***

Notes. * p < .10; ** p < .05; *** p < .01

TABLE 3

Regression Coefficients for Ideology x Domain Interactions on Preferences for Switching Accountability Systems

	DV: Preferences for Switching to Process Accountability Systems when Outcome Accountability System Subverted			
	B	*SE*	*B*	*T*
Ideology	-.58	.27	-.78	-2.16*
Domain	-2.95	.91	-1.26	-3.25**
Ideology x Domain	.50	.17	1.45	2.95**

	DV: Preferences for Switching to Outcome Accountability Systems when Process Accountability System Subverted			
	B	*SE*	*B*	*T*
Ideology	1.91	.34	2.12	5.71**
Domain	5.82	.93	2.01	6.03**
Ideology x Domain	-1.13	.19	-2.54	-5.92**

*Notes.* * $p < .05$; ** $p < .01$

Accountability and Ideology

TABLE 4
Study 2 Means and Standard Deviations by Condition

Condition	Negative Evaluative Form of Outcome Accountability	Positive Evaluative Form of Outcome Accountability	Negative Evaluative Form of Process Accountability	Positive Evaluative Form of Process Accountability
Low trustworthiness, low effort-outcome reliability ($n = 18$)	7.00 (1.46)	3.78 (1.44)	7.17 (1.04)	4.72 (1.13)
Low trustworthiness, high effort-outcome reliability ($n = 18$)	5.22 (.94)	4.89 (.96)	5.61 (.70)	3.44 (1.15)
High trustworthiness, high effort-outcome reliability ($n = 18$)	3.06 (.94)	6.44 (.92)	3.44 (1.15)	6.33 (1.03)
High trustworthiness, low effort-outcome reliability ($n = 18$)	4.11 (1.64)	6.89 (1.08)	3.50 (1.04)	7.61 (1.01)

Note. Standard deviations are in parentheses.

FIGURE 1
Simple Slopes for Ideology x Domain Interaction Effects on Preferences for Switching Accountability Systems

Preferences for Switching to Process Accountability Systems when Outcome Accountability System Subverted
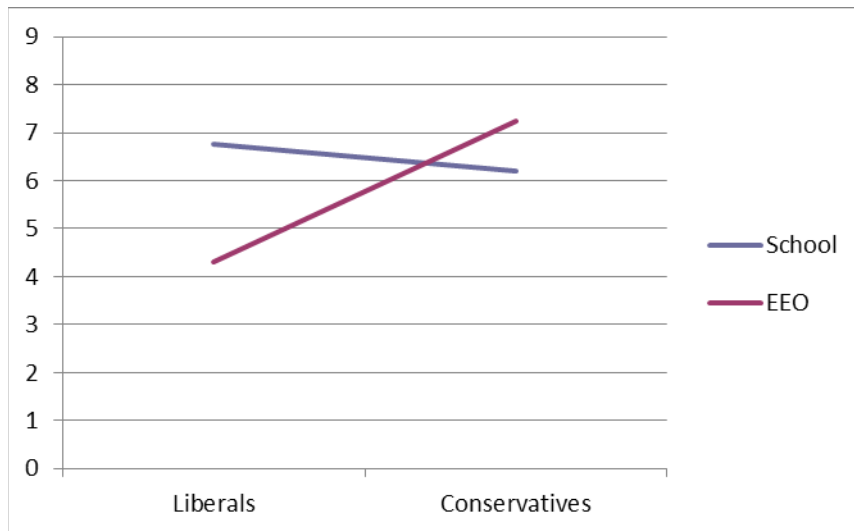
Preferences for Switching to Outcome Accountability Systems when Process Accountability System Subverted
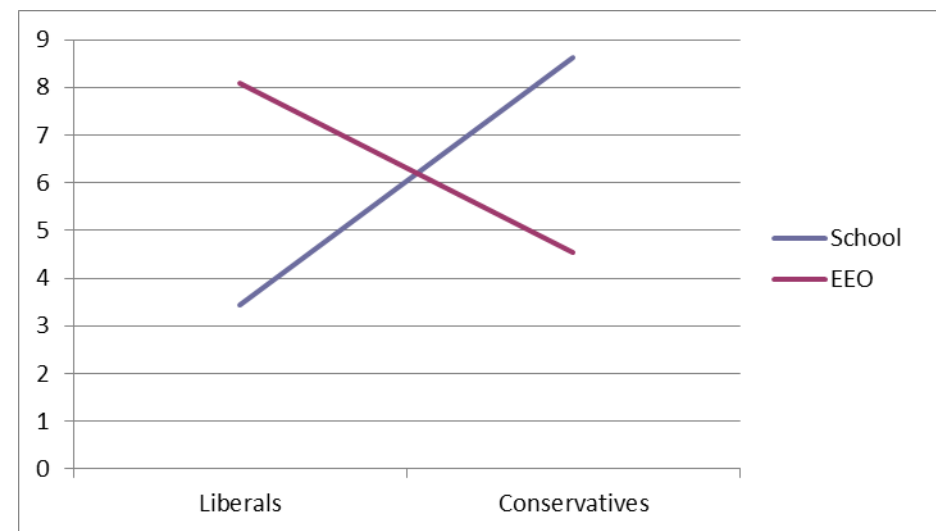
FIGURE 2

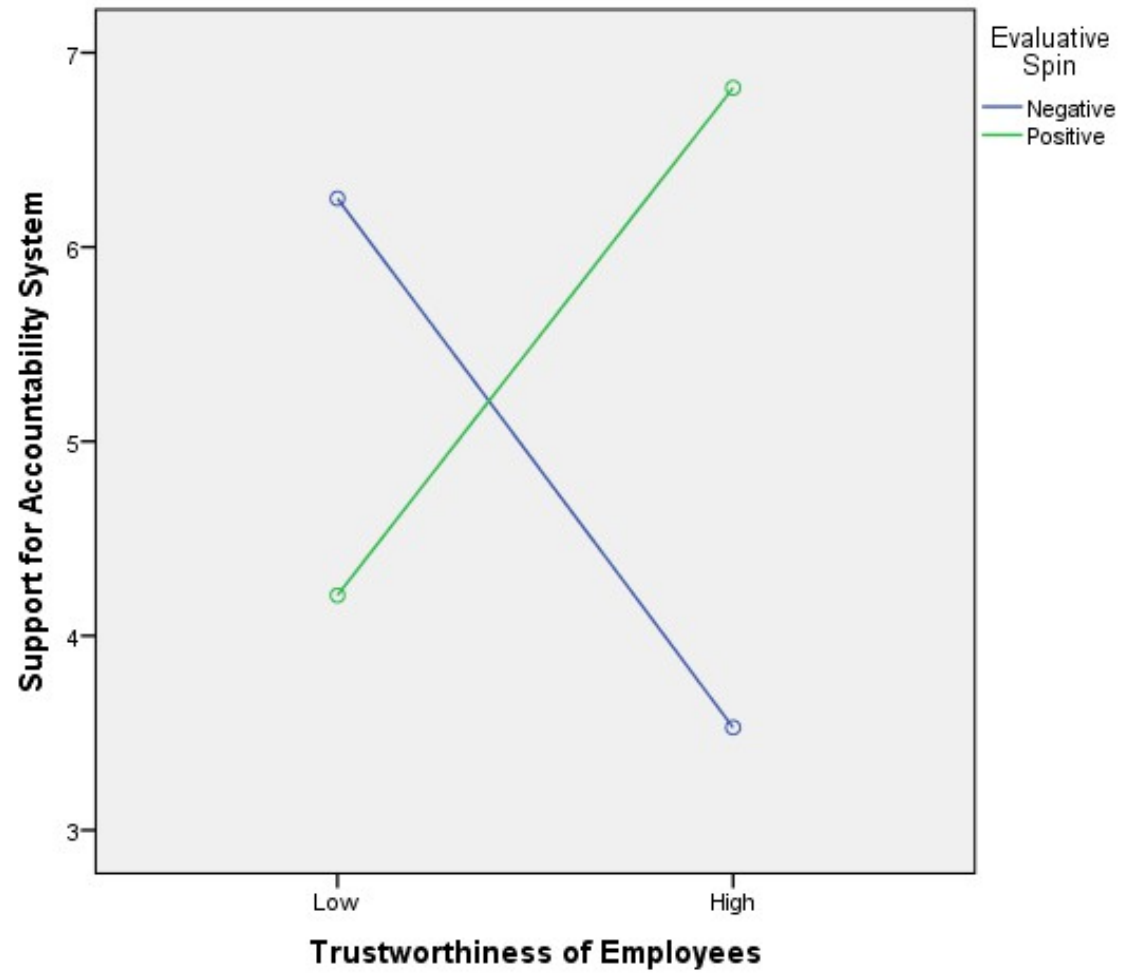Study 2 Estimated Marginal Mean Plots of Trust x Evaluative Spin Interaction

FIGURE 3
Study 2 Estimated Marginal Mean Plots of Trust x Effort-Outcome Reliability x Evaluative Spin Interaction