A Matter of Perspective:
Mitigating the Outcome Effect in Auditor Performance Evaluations

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ABSTRACT

Prior research shows that the outcome effect in auditor performance evaluations can create a *disincentive* to exercise professional skepticism. We experimentally demonstrate that perspective taking improves this evaluation process by significantly reducing the influence of the outcome effect. In a common audit setting in which a staff auditor exhibits appropriate skeptical behavior but identifies no misstatement, supervising auditors prompted to take the perspective of the staff auditor prior to conducting a performance review evaluate the staff's performance higher than auditors not prompted to consider the staff's perspective. Importantly, we also find that perspective taking equalizes auditors' propensity to appropriately rate staff performance as "above expectations" when proper skepticism is exhibited, regardless of the audit outcome (misstatement present or absent) resulting from the skeptical behavior. We provide confirming evidence that perspective taking has the cognitive effect of increasing supervisor attention to the staff's decision process and the affective effect of increasing supervisor empathic concern for skeptical staff who identify no misstatement. However, it is the cognitive effect of perspective taking, not the affective effect, that serves to mitigate the outcome effect. Overall, we demonstrate that audit firms can use perspective taking to help properly align reward structures with desired auditor behavior.

Keywords: *Perspective taking, outcome effect, outcome bias, professional skepticism, decision quality, empathic concern, performance evaluation, audit, experiment*.

I. INTRODUCTION

Professional skepticism is a necessary precondition to exercising sound professional judgment and is essential for delivering a high-quality audit (PCAOB 2012; Glover and Prawitt 2013). And yet, auditors' failure to exercise appropriate levels of professional skepticism continues to draw global criticism from audit regulators and standard setters (IFIAR 2016, 2017; PCAOB 2017). Central features of the audit environment, such as budgetary and deadline pressure, maintaining satisfactory client relationships, and a firm's tone at the top messaging, are often cited as inhibiting auditor skepticism (PCAOB 2012; IFAC 2017). Adding to this concern, recent research identifies the auditor performance evaluation process as another, unintentional, mechanism that can serve to *disincentivize* professional skepticism. This result is particularly concerning as the PCAOB identifies the "[implementation and maintenance of] appraisal, promotion, and compensation processes that enhance rather than discourage the application of professional skepticism" as being essential for audit firms' quality control system (PCAOB 2012, p. 2). We propose a simple, yet powerful intervention to improve how auditors approach the performance evaluation process in order to realign firm reward structures with desired auditor behavior.

Chief among the problems associated with the auditor performance evaluation system is that, rather than capture staff auditor performance during an engagement, these performance reviews often reflect other, uncontrollable features of the audit engagement (Andiola, Bedard, and Westerman 2019). For example, Brazel, Jackson, Schaefer, and Stewart (2016) and Brazel, Gimbar, Maksymov, and Schaefer (2019) demonstrate that evaluators reward audit staff who exhibit proper skepticism that leads to the detection of a misstatement (a positive outcome) but penalize staff who exercise professional skepticism that ultimately does not identify a

misstatement (a negative outcome). Equally troubling, Brazel et al. (2016) also provide evidence that auditors expect to receive lower performance evaluations if they incur time and client relationship costs to follow up on inconsistencies that identify no material misstatements, leading them to conclude that "…the anticipation of outcome effects may, at times, cause auditors to forgo skeptical behavior" (p. 1597). This threat to audit quality is corroborated by recent qualitative studies that find that subordinate auditors view the performance evaluation process as "fundamentally flawed" (Andiola et al. 2019). In response to this perceived lack of fairness, auditors are left with feelings of frustration, anger, and powerlessness that can cause them to rely on impression management techniques to appease their supervising auditor or, worse yet, to be demotivated to improve their performance (Andiola and Bedard 2018; Andiola et al. 2019).

Our intervention to realign performance evaluation results with desired skeptical behavior draws on cognitive and social psychology theories of perspective taking (Davis, Conklin, Smith, and Luce 1996; Galinsky and Moskowitz 2000). Perspective taking is the cognitive process of inferring another individual's thoughts, emotions, motivations and intentions by actively considering the other person's point of view (Davis et al. 1996; Galinsky and Moskowitz 2000; Ku, Wang, and Galinsky 2015). Prior psychology studies suggest that effective perspective taking improves individual judgment and decision-making processes across a variety of contexts. Instructing individuals to envision a scenario from the perspective of another decreases stereotyping and in-group favoritism (Galinsky and Moskowitz 2000; Galinsky, Wang, and Ku 2008), reduces anchoring effects (Galinsky and Mussweiler 2001), and motivates individuals to seek more disconfirming evidence (Todd, Galinsky, and Bodenhausen 2012). In an accounting setting, prior research indicates that perspective taking improves auditors' ability to detect when a misstatement is likely to be intentional in nature (Hamilton 2016) and their ability to use the

work of specialists to evaluate fair value measurements (Joe, Wu, and Zimmerman 2017). Auditors with a higher perspective-taking disposition are also better able to determine whether reported earnings are materially misstated (Church, Peytcheva, Yu, and Singtokul 2015).

We propose that instructing supervising auditors to actively consider the perspective of a staff auditor prior to evaluating the staff's performance can successfully mitigate undesirable outcome effects that disincentivize professional skepticism by focusing the supervisors on the judgments and actions the staff actually made and, therefore, draw their attention to the quality of the staff auditor's decision-making process rather than its outcome. The accounting literature largely supports a cognitive explanation for outcome effects, such that outcome knowledge systematically influences a performance evaluation in the direction (positive or negative) of the outcome (Tan and Lipe 1997; Mertins Salbador, and Long 2013). We expect that perspective taking will mitigate this effect by moving the evaluator's focus away from outcome-consistent information cues and toward decision process quality information cues. Our approach to mitigating outcome effects is novel because, instead of focusing on restructuring how the initial audit task was performed by the staff auditor, as attempted by prior studies, our intervention changes how evaluators approach and conduct their performance reviews.

We investigate the potential debiasing effects of perspective taking using a 2 × 2 between-subjects experiment. Practicing audit seniors with experience conducting performance evaluations are tasked with evaluating the performance of a hypothetical staff auditor under their supervision. Adapted from Brazel et al. (2016, 2019), we provide information about the engagement, the staff auditor, and the staff auditor's performance on a substantive analytical procedure related to revenue. Across all conditions, trends in the financial data are consistent with the reported revenue balance. However, nonfinancial measures suggest risk that revenue

may be materially misstated. In all conditions, the staff auditor exercises appropriate professional skepticism by further investigating the inconsistency, and, in doing so, incurs audit engagement costs commonly associated with exercising professional skepticism (Nelson 2009; PCAOB 2012; Brazel et al. 2016, 2019).

We manipulate the outcome of the staff's additional investigation as whether a material misstatement is detected (positive outcome) or no misstatement is detected (negative outcome) in the revenue account. We also manipulate the presence or absence of a perspective-taking prompt provided to the senior auditors immediately prior to conducting their performance evaluation of the staff auditor. The perspective-taking manipulation instructs the auditors to imagine for a moment that they are the staff auditor on the engagement, to consider the audit and events as if the events were happening to them, and to imagine as clearly and vividly as possible everything that they would be thinking in that role. They then evaluate the staff auditor's performance on the engagement, describe the reasons for that evaluation, and answer questions about the empathic concern they feel toward the staff auditor.

We find results consistent with perspective taking mitigating the effects of outcome bias on auditors' evaluations of appropriate skeptical behavior. When the outcome is that no misstatement is detected, supervising auditors prompted to take the perspective of the staff auditor provide higher performance ratings than auditors not prompted to consider the perspective of the staff auditor. Perspective taking does not, however, further elevate the staff's performance rating in the positive outcome condition of when the staff detects a misstatement, so it does not merely inflate performance ratings. Importantly, we find that perspective taking equalizes supervising auditors' propensity to rate staff performance as "above expectations"

when proper skepticism is exhibited, regardless of audit outcome, narrowing the relative performance evaluation gap observed by prior auditor performance evaluation studies.

Consistent with theory, we show both cognitive and affective consequences of perspective taking. Our results indicate that perspective taking has the cognitive effect of increasing supervisor attention to the staff's decision process and the affective effect of increasing supervisor empathic concern for skeptical staff who identify no misstatement. Empathic concern is the emotional response felt towards another's hardship (Davis 1980; Batson 1987) and is sometimes referred to in the literature simply as "empathy" (Longmire and Harrison 2018). Importantly, we show that it is the cognitive effect of perspective taking, not the affective effect, that serves to mitigate outcome effects in auditor performance evaluations. While perspective taking increases empathic concern consistent with psychology theory, empathic concern does not affect auditor performance evaluations in the negative outcome condition when the staff does not identify a misstatement, implying that the increased performance evaluations from perspective taking are due to supervisors changing their focus from uncontrollable outcomes to controllable process choices rather than supervisors inflating performance evaluations out of affective reactions such as liking or pity. Collectively, we provide encouraging results demonstrating that perspective taking does not arbitrarily increase performance evaluation ratings regardless of context. Instead, perspective taking changes how auditors conduct performance evaluations when it is most desirable to do so—when the status quo would otherwise lead to biased performance evaluations that punish desired skeptical behavior.

This study makes several important contributions to the accounting literature, to the psychology literatures on perspective taking and outcome bias, and to audit practice. Our findings and theory development provide new insights into psychology and accounting research

on outcome bias, as prior research in judgment and decision making has struggled to find effective techniques to mitigate it (Mertins et al. 2013; Savani and King 2015; Brazel et al. 2019). Our results not only substantiate the results and concern by Brazel et al. (2016, 2019) that auditor performance evaluations contain a downward outcome bias when proper skeptical behavior leads to a negative audit result, but, of greater significance, we demonstrate how a theory-based, yet simple perspective-taking intervention can improve the performance evaluation process and incentivize professional skepticism in audit staff.

Our streamlined perspective-taking manipulation also contributes to the literature. It is easy to use and relevant to auditors, yet also adaptable, so it is likely to be effective across a variety of accounting and audit contexts. Prior auditing research has incorporated perspective taking (Altiero, Kang, and Peecher 2019 Hamilton 2016; Church et al. 2015), but, importantly, these prior studies were either unsuccessful at manipulating perspective taking (Hamilton 2016), relied on time-consuming role-playing exercises to simulate perspective taking that may not be practical to use with busy professionals (Church et al. 2015; Altiero et al. 2019), or examined dispositional tendencies to adopt another's perspective (Church et al. 2015). Future research could use an intervention similar (or even identical) to ours in order to manipulate perspective taking and investigate its effects.

Our findings also have clear practical implications for audit firms. In a recent Harvard Business Review article, Deloitte estimated that it was spending close to 2 million hours a year conducting staff performance reviews (Buckingham and Goodall 2015). In addition to quantifying the significant firm investment placed on the performance review process, Deloitte determined that 62% of the variance in its performance ratings could be accounting for by *evaluator* characteristics, with only 21% of it accounted for by actual staff performance. Our

findings indicate that perspective taking is an effective debiasing strategy that improves the performance evaluation process by helping to ensure that performance ratings measure the performance of the audit staff, rather than these "idiosyncratic rater effects."

II. THEORY AND HYPOTHESES

Outcome Effect

The outcome effect occurs when supervisors use the outcomes of decision makers' choices to evaluate the quality of those choices rather than purely evaluating the decision making process (Tan and Lipe 1997).[1] The outcome effect is a manifestation of attribution theory (Lipshitz 1989). Individuals are more likely to attribute the cause of their own failures to factors external to themselves and outside their control, yet attribute the cause of the failures of others to factors internal to them and within their control (Jones and Harris 1967; Ross 1977). This effect is sometimes referred to as the "outcome bias," because the evaluator is using information—the result or the outcome of the decision—that was unavailable to the decision maker at the time the decision was made (Baron and Hershey 1988). When the outcome, however, is informative about the quality of the decision, incorporating it into the evaluation of the decision maker can be useful. On the other hand, when the outcome is *not* informative about the quality of the decision, incorporating it into the evaluation of the decision maker can cause inappropriate punishment for uncontrollable negative outcomes and thereby misalign performance evaluations and desired subordinate behavior (e.g. Mertins et al. 2013; Brazel et al. 2016, 2019). In this study, we are

[1] The outcome effect is related to but distinct from hindsight bias. Hindsight bias occurs when knowledge of an event after the fact causes someone to revise their ex-ante probability of the likelihood of that event occurring upward (Fischhoff 1975). The outcome effect is specific to outcome knowledge changing someone's evaluation of a decision maker who made a choice before the outcome was known and can occur even when the probabilities for the different outcomes were known with certainty in advance (like the roll of a dice or flip of a coin) (e.g. Baron and Hershey 1988). In Section IV, we analyze measures to confirm that the outcome effect is the phenomenon observed in our study (see footnote 10).

interested in a setting in which the outcome is not informative and the use of outcome information results in biased evaluations.[2]

Since the outcome effect relates to the evaluation of a decision maker, it is often observed in the results of subordinate performance evaluations. Prior research shows this effect across a wide variety of professions. Nurses (Mitchell and Kalb 1989), auditors (Brazel et al. 2016), and even officers in the Israel Defense Forces (Lipshiz 1989) punish subordinates more on their evaluations when they know that those subordinates' decisions led to negative outcomes than when they did not know the outcome of the subordinates' decisions. This threat to the appropriateness of employee performance evaluations by outcome information has significant, real world implications for companies. Performance evaluations affect employee motivation, performance, and productivity, so evaluations that reward or punish employees based on uncontrollable outcomes rather than on the quality of their decisions can have harmful individual and organizational consequences (Mackenzie, Wehner, and Correll 2019). Both annual and engagement level evaluations affect auditor compensation and so "are likely to have significant effects on an auditor's behavior, motivation, and overall job satisfaction" (Andiola 2014 p. 4).

Because of its possible negative consequences on important outcomes like performance evaluations and audit negligence litigation decisions, many attempts have been made to mitigate the outcome bias within accounting research. It, however, has proven difficult to mitigate (e.g., Mertins et al. 2013; Brazel et al. 2016, 2019). For example, the curse of knowledge, which is the inability to disregard information previously obtained (Kennedy 1995; Earley et al. 2008), includes the outcome effect and impacts auditors and MBA students when they perform analytical procedures. Despite theoretical support that the outcome bias has both motivational

[2] See Mertins et al. (2013) for a thoughtful review of the outcome effect in accounting and when the use of outcome information is appropriate and when it represents a bias.

and cognitive causes, Kennedy (1995) finds that the motivational intervention of increased accountability does not mitigate the effect but that the cognitive intervention of providing counter-explanations (i.e., explanations for why the outcome could have been different) does have a positive mitigating effect.

Evidence from auditor litigation studies also demonstrates the relevance of the outcome bias and the difficulty in reducing or eliminating it. Kadous (2000, 2001) and Clarkson, Emby, and Watt (2002) both find that jurors punish audit firms more harshly when negative outcomes are known than when they are not. Relatedly, the outcome bias contributes to the "expectations gap" between auditors and their constituents such that auditors are held to unreasonably high societal standards (Kinney and Nelson 1996). Fortunately, providing jurors with explicit instructions that the use of outcome information is "inappropriate and unfair" or that auditors found guilty could have severe consequences has been shown to reduce outcome bias, although merely warning them about the bias and instructing them not to act in accordance with it does not reduce it (Clarkson et al. 2002).[3] Performing a higher quality audit also does not protect the auditor from outcome bias-induced levels of punishment (Kadous 2000). Evidence shows that auditor experience does not mitigate the curse of knowledge (Kennedy 1995) and that even audit partners are susceptible to the outcome bias (Emby, Gelardi, and Lowe 2002).

In an auditor performance evaluation setting, Brazel et al. (2016, 2019) show outcome bias in auditor evaluations of appropriately skeptical audit staff. They find, repeatedly, that audit supervisors punish audit staff when the staff's additional investigation of an unusual account fluctuation does *not* identify a misstatement and that they reward audit staff whose identical

[3] Clarkson et al. (2002) refer to the outcome effect as "hindsight bias." We use "outcome effect" language to refer to their study, because their study applies to both theoretical settings and the outcome bias is of greatest interest to us here.

investigation *does* identify a misstatement. Interestingly, they also find that several features of the audit environment do not mitigate this effect. Neither increasing the evaluating seniors' involvement in the staff's decision process nor consulting with the audit committee prior to the staff's additional investigation were effective at reducing outcome effects in auditor performance evaluations (Brazel et al. 2016). Attributing the budget overruns incurred by the staff's appropriate skeptical behavior in the budget file also does not mitigate it (Brazel et al. 2019). This pattern of results suggests that mitigating outcome bias in auditor performance evaluations is particularly difficult, in part, because auditors are acutely aware of the significant costs (i.e., budgetary overruns, strained relationships with management, etc.) that are often incurred when an additional investigation into an unusual account fluctuation is performed (Nelson 2009; PCAOB 2012; Brazel et al. 2016). Thus, when evaluating audit staff when the outcome of the staff's additional investigation is negative (i.e., the staff identifies no misstatement in the account based on the additional investigation), the staff is held responsible for failing to foresee the clear consequences of the decision to extend the investigation (Mertins et al. 2013; Brazel et al. 2016).

Perspective Taking and Outcome Effect Mitigation

We propose that the addition of a simple perspective-taking exercise at the beginning of the performance evaluation process could mitigate the outcome bias. Perspective taking is "the active cognitive process of imagining the world from another's vantage point or imagining oneself in another's shoes to understand their visual viewpoint, thoughts, motivations, intentions, and/or emotions" (Ku, Wang, and Galinsky 2015). Note that perspective taking is an "active cognitive process." That is, perspective taking changes how an evaluator conducts a performance evaluation by cognitively restructuring the judging task.

This cognitive restructuring effect of perspective taking is particularly relevant for combatting the outcome effect. Recent evidence from psychology shows that cognitive approaches, such as changing elements of the evaluation task (Sezer, Zhang, Gino, and Bazerman 2016) and the way that evaluators think about the task (Savani and King 2015), affect the degree of outcome bias exhibited. Sezer et al. (2016) find that, in a joint-evaluation setting (i.e., a setting where an evaluator judges the performance of multiple individuals simultaneously rather than sequentially), an intervention designed to help individuals more carefully consider others' thought processes, including the intentions behind their decisions, is an effective method to mitigate the outcome bias. Their strategy prompts evaluators to make preliminary judgments of the decisions before the outcome is known. This preliminary step makes the decision makers' intentions salient and increases the evaluators' weighting on them (Sezer et al. 2016). Unfortunately, it is not always possible for evaluators to make preliminary assessments before knowing the outcome, especially in an audit setting where engagement performance reviews are often conducted at the conclusion of the audit (Andiola 2014; Andiola et al. 2019).

Another cognitive approach to mitigating the outcome bias identified by psychology research is to put evaluators in an "event construal" frame of mind (Savini and King 2015). When evaluators focus on events, rather than choices or actions, they exhibit the outcome effect less, even when they focus on events unrelated to the evaluation context (Savini and King 2015). These findings, as well as the finding that counter-explanations can reduce the curse of knowledge (Kennedy 1995), demonstrate the effectiveness of cognitive interventions to mitigate the outcome effect.

Perspective taking affects cognition and improves decision making across a variety of contexts (Ku et al. 2015). Because perspective taking involves actively contemplating another's

viewpoint, it encourages evaluators to change from their typical mental routines and processing strategies to more active and systematic information processing (Todd et al. 2012; Ku et al. 2015). In doing so, perspective taking has been shown to be an effective debiasing strategy for mitigating stereotyping, in-group favoritism, anchoring effects, among others (e.g., Galinsky and Moskowitz 2000; Galinsky and Mussweiler 2001; Galinsky et al. 2008b; Todd et al. 2012). Accounting studies also demonstrate the potential benefits of perspective taking for evaluating management's reported earnings (Church et al. 2015; Hamilton 2016) and evaluating the work of specialists when auditing complex fair value measurements (Joe et al. 2017). This type of intervention strategy differs from prior attempts to mitigate outcome bias in performance evaluations because it focuses on changing how evaluators approach and conduct their evaluations rather than changing how the initial task is performed by the staff.

We expect that perspective taking will reduce the outcome effect since it too should reorient attributions made by evaluators to focus on the intentions of the decision maker and the uncontrollability of the outcome (Todd et al. 2012; Ku et al. 2015). This approach recognizes that the outcome bias, which occurs when evaluators hold decision makers accountable for the uncontrollable outcome of their decisions, is a specific case of attributing causation for the result to characteristics of the decision maker rather than to external factors. Since prompting an event lens of outcomes (Savani and King 2015) and a focus on intentions (Sezer et al. 2016) both reduce the outcome effect, perspective taking is also likely to reduce it because the assignment of attributions (e.g., dispositional versus situational) changes with changes in cognitive processing (e.g. Forgas 1998), and perspective taking involves attention to the other person's intentions (Hamilton 2016; Ku et al. 2015).

Thus, we predict that perspective taking will lead to higher performance evaluations for staff exhibiting appropriately skeptical behavior (i.e., conducting additional investigation into the inconsistency in reported revenues) when the outcome of the staff's investigation identifies no misstatement in the revenue account (i.e., a negative outcome). We also predict that perspective taking will not arbitrarily inflate staff performance evaluations when the staff's investigation identifies a material misstatement in revenues (i.e., a positive outcome). That is, we expect perspective taking to successfully mitigate the outcome bias associated with negative audit outcomes without unnecessarily inflating performance evaluations associated with positive audit outcomes. This discussion leads to our first hypothesis, as depicted in Panel A of Figure 1:

> **Hypothesis 1:** *Perspective taking will reduce outcome effects in auditor evaluations through higher performance ratings of audit staff whose appropriate skeptical behavior identifies no misstatement, without inflating performance ratings of audit staff whose appropriate skeptical behavior identifies a misstatement.*

Perspective Taking Mechanism for Mitigating the Outcome Effect

Although a cognitive process, perspective taking generates both cognitive and affective consequences (Ku et al. 2015), so we expect to observe both. Cognitively, perspective taking "changes how people think by enhancing recall, information processing, and cognitive complexity" (Ku et al. 2015 p. 86). Perspective taking's shift in information search and retention is particularly pertinent to outcome effect mitigation, since the effect operates through an overreliance on outcome-congruent cues (Mertins et al. 2013). Consistent with the theory that changing evaluators' cue reliance could mitigate the outcome effect, Frederickson, Peffer, and Pratt (1999) find that performance evaluation systems that focus on decision *quality* information, rather than decision outcome information, reduces the effect of outcome knowledge on performance evaluations. We expect that perspective taking can similarly mitigate the outcome effect by shifting evaluator focus from an overreliance on outcome cues to an incorporation of

decision process quality cues. These decision process quality cues are facts about what the staff auditor did in the course of the audit engagement, and they are held constant at the same high level across all our conditions. Sam, the staff auditor, always makes the appropriate skeptical judgment and always takes the appropriate skeptical action. Because perspective taking increases reliance on hypothesis-consistent information (Todd et al. 2012), it should increase evaluator recall and reliance on the decision process quality cues when those cues are inconsistent with the implicit hypothesis that the outcome valence is indicative of the decision process quality. In the misstatement-found conditions, this high decision process quality is consistent with the positive outcome that Sam experiences, so we do not expect perspective taking to alter evaluator attention to decision process quality cues, because those high-quality cues are consistent, rather than inconsistent, with the positive outcome of uncovering a misstatement. In the no-misstatement condition, however, we expect perspective taking to increase evaluator attention to the decision process quality cues, because they are inconsistent with the outcome, and we expect attention to decision process quality to correspond to the seniors' performance evaluations. This discussion leads to our next hypothesis, as depicted in Panel B of Figure 1:

> **Hypothesis 2a:** *Perspective taking will lead to greater attention to decision process quality information cues when those cues are inconsistent with the outcome, i.e., when evaluating audit staff whose appropriate skeptical behavior identifies no misstatement, without influencing auditors' attention to decision process quality cues when those cues are consistent with the outcome, i.e., when evaluating audit staff whose appropriate skeptical behavior identifies a misstatement.*

In addition to cognitive effects, perspective taking also generates affective consequences, including empathy (Ku et al. 2015), notably for individuals in distress (Batson, Early, and Salvarani 1997; Skorinko, Laurent, Bountress, Nyein, and Kuckuck 2014). Empathy is "an other-focused emotional response that allows one person to affectively connect with another" and to understand and connect with the other's feelings and emotional state (Galinsky, Maddux, Gilin,

and White 2008, p. 378). When that other person is in distress, taking that person's perspective will increase the perspective taker's feelings of "empathic concern," e.g. feelings of sympathy and compassion (e.g., Batson et al. 1997; Cialdini, Brown, Lewis, Luce, and Neuberg 1997; Galinsky et al. 2008a; Todd and Galinsky 2014). Since auditors expect to receive lower performance evaluations when they incur the costs of professional skepticism without achieving the positive outcome of finding a misstatement (Brazel et al. 2016), we expect perspective taking to increase evaluator empathic concern toward the skeptical staff auditors who identify no misstatement, formally stated as follows (see Panel C of Figure 1):

> **Hypothesis 2b:** *Perspective taking will lead to greater empathic concern in auditors evaluating audit staff whose appropriate skeptical behavior identifies no misstatement, without influencing empathic concern in auditors evaluating audit staff whose appropriate skeptical action identifies a misstatement.*

Although perspective taking generates cognitive and affective consequences, we expect that it is the cognitive consequence that mitigates the outcome effect in auditor performance evaluations.[4] While performance evaluations can be influenced by affective mechanisms such as likeability (Cardy and Dobbins 1986; Kaplan, Petersen, and Samuels 2008) and interpersonal affect (Judge and Ferris 1993; Antonioni and Park 2001), evidence suggests that successful outcome effect mitigators will be cognitive instead of affective in nature (Mertins et al. 2013). Even when the cause of the outcome effect is affective, such as when jurors increase auditor penalties due to their negative affect, the effect is mitigated through instructions that reduce the impact of this affect on cognition (Kadous 2001). Prior research also suggests that cognitive restructuring tasks can supersede the impact of affective reactions on behavior (Kaplan et al.

[4] We recognize that affective and cognitive mechanisms influence one another (e.g., Zajonc 1980; Forgas 1981), but we focus on them separately for clarity.

2008). Since perspective taking can refocus evaluator attention to outcome-inconsistent—and therefore affect-inconsistent—cues of decision process quality, we propose the following:

> **Hypothesis 3:** *The mitigation in outcome effects through perspective taking is driven by auditor evaluators' greater attention to decision process quality information cues, not greater empathic concern.*

[Insert Figure 1 about here]

III. METHOD

Participants

Our participants are 72 audit senior associates with an average of 43 months of audit experience who completed the study using an online instrument administered via Qualtrics. We recruited auditors from the following three categories of audit firms: 1) Big-Four firms, 2) non-Big-Four international or national firms, and 3) regional firms. Similar to Simon, Smith, and Zimbelman (2018), personal contacts from 11 firms agreed to email an invitation that we drafted that included links to our case administered by Qualtrics. Sixty-percent of our participants identified themselves as working for a Big-Four firm. Fifty-three percent of the participants are male. Our participants also report having significant experience with the context of our experimental case: 89% have performed analytical procedures related to revenue; 80% have reviewed analytical procedures related to revenue; 94% indicate they have experience conducting performance evaluations. These experience levels compare favorably to the auditor participants in Brazel et al. (2016), the auditor outcome bias study upon which our instrument is based, and indicate that our participants have the requisite experience to complete our task. None of these demographic or experience variables differ significantly across conditions nor are they significant as covariates or influential in the main results.

Experimental Design and Independent Variables

We examine our hypotheses with a 2 × 2 between-subjects experiment. Participants were given the role of lead senior associate on a hypothetical audit engagement of Madison, Inc., a publicly traded manufacturing company with multiple operating divisions. Participants were informed that their main task was to evaluate the performance of a third-year staff member, Sam, who worked under their supervision. The case materials, adapted from Brazel et al. (2016), provided participants with general background information about the audit engagement, an overview of the Sporting Goods division that Sam, the audit staff, was responsible for testing, and the results of substantive analytical procedures related to the revenue account for the Sporting Goods division prepared by Sam.[5]

The substantive analytical procedure incorporated both prior-year financial information and industry financial trends to develop an expectation for current-period revenues for the Sporting Goods division. This information supported the reported divisional revenue growth for the period under audit. For the current-year audit, the case materials also describe nonfinancial measures, including changes in number of Sporting Goods Division employees and changes in product space, which Sam incorporated into the analytical procedures that previously were not considered in prior audit periods. The trend of these nonfinancial measures was inconsistent with the financial information and industry trends as well as reported revenues for the Sporting Goods division. The financial and nonfinancial information was held constant across all experimental conditions. Additionally, in all conditions, participants were informed that Sam chose to investigate the inconsistency in the nonfinancial measures. Thus, consistent with Brazel et al. (2016, 2019), we hold the staff auditor's skeptical judgment (issue identification) and skeptical

[5] We thank the authors for graciously providing us with their experimental materials.

action (deciding to conduct additional investigation) constant between conditions. Importantly, had Sam followed the prior year audit program and relied exclusively on the financial information and industry trends, then the inconsistency in reported revenues would not have been identified. Participants are also informed that investigation into the inconsistency caused Sam to go over budget and potentially strain relationships with management. That is, Sam's appropriate skeptical behavior caused the engagement team to incur common costs of professional skepticism (Nelson 2009; PCAOB 2012).

After reading the case, participants were tasked with providing a performance evaluation of Sam (discussed below). Participants then completed a post-experimental questionnaire that included questions related to our process measures, manipulation check questions, and, lastly, demographic questions. Participants were able to move forward or backward throughout the case materials until they reached the manipulation check questions included in the post-experimental questionnaire, at which point they could not refer back and had to respond from memory.

Outcome Manipulation

We manipulated the outcome of Sam's additional investigation into the inconsistency in reported revenues at two levels, following Brazel et al. (2016, 2019). In the positive outcome condition, participants were informed that Sam identified a material misstatement in the revenue account. Specifically, participants were told that Sam discovered that the inconsistency was related to outsourcing some operations overseas. However, after conducting additional inquiries and collecting additional audit evidence, Sam determined that *a material misstatement existed* in this revenue account due to the overseas division prematurely recognizing revenue. In the negative outcome condition, Sam conducted an identical investigation into the inconsistency as described above and attributed the inconsistency to outsourcing overseas; however, Sam

determined through additional inquiry and collection of additional audit evidence that there were *no misstatements* in reported revenues. This outcome manipulation captures a feature common to the audit environment: auditors exercising appropriate professional skepticism do not always detect a material misstatement.

Perspective-Taking Manipulation

We manipulated the perspective-taking (PT) variable by varying the presence or absence of instructions provided to participants after they read the case materials and immediately prior to their performance evaluation of Sam. Participants assigned to the PT-present condition were provided with the following prompt:

> Before beginning your evaluation, imagine for a moment that you are Sam on the Madison, Inc. audit engagement. In your mind's eye, trade places with Sam and consider the audit as if the events were actually happening to *you*. Imagine as clearly and vividly as possible everything that *you* would be thinking in that role.

Participants were then asked to spend a few minutes writing how they, as Sam, would experience the Madison, Inc. audit. Specifically, they were asked to focus on what they would be thinking—their thoughts, motivations, intentions, and/or emotions.

Our perspective-taking instructions are briefer than those used in prior psychology literature (e.g. Galinsky and Moskowitz 2000; Mazzocco, Rucker, Galinsky, and Anderson 2012); however, they retain the essential features of those manipulations. In particular, our perspective-taking instructions prompted participants to imagine themselves in the role of the staff auditor on the Madison, Inc. engagement to better understand the audit staff's visual viewpoint, thoughts, and motivations they would experience in that role. In prior research, participants are typically shown a picture of the target and asked to write a narrative essay about a day in the life of the individual. It is unlikely that a similar perspective-taking intervention could reasonably be adopted by accounting firms, and thus we decided on a shorter set of

procedures to considerably reduce the duration of the task. Given that audit professionals typically start out as a staff auditor and are then promoted through the ranks, the participants in our study are tasked with taking the perspective of someone in a role that they themselves have likely occupied earlier in their careers. We expect this previous experience to make the perspective-taking task easier for the supervising auditors and therefore strengthen its effectiveness in improving the performance evaluation judgment of audit staff. Participants in the PT-present condition spent, on average, 5.6 minutes completing the perspective-taking task.

To confirm the efficacy of our perspective-taking instructions, a research assistant blind to experimental condition and hypotheses categorized the written items as whether they were indicative of perspective taking (i.e., whether the written items included consideration of the thoughts, beliefs, and/or feelings of Sam and/or participants' interpretation of the circumstances described in the case). Participants provided, on average, 4.0 written statements indicative of perspective taking, indicating that they attended to our manipulation.[6] Additional manipulation check questions included in the post-experimental questionnaire are discussed in Section IV.

Dependent Variables

Following Brazel et al. (2016, 2019), our primary dependent variable is participants' performance evaluation of Sam. Auditors evaluated Sam's performance on an 11-point Likert-type scale ranging from -5 (Below Expectations) to +5 (Above Expectations) and the midpoint labeled "Met Expectations." We use this variable to test Hypothesis 1, with higher values indicating better performance and ratings at or below zero indicating unsatisfactory performance.

[6] Example statements indicative of perspective taking include: "I would feel pressured to roll the revenue workpapers forward based on the large team emphasis on the budget;" "My motivations would be a desire to grow within the audit firm and build my professional reputation;" "I would probably be thinking that in this instance, I did a good job of critically looking at the information to identify contradictory evidence."

To test H2a, we measured auditors' attention to decision-process quality information cues through a free response question in which we asked participants to briefly describe their reasoning for the performance evaluation they gave Sam. Recall that the decision process quality cues are held constant at the same high level across all our conditions. One of the authors, blind to experimental condition, and a doctoral student with auditing experience, blind to hypotheses and experimental condition, independently coded the responses. The reasons were coded as (1) a *decision process quality cue* if it related to the decision-making process Sam conducted, the appropriate mindset or motivation Sam demonstrated, or the appropriate behavior or intention behind Sam's actions, (2) an *outcome item* if it related to an unnecessary cost that Sam incurred on the audit, whether Sam found a misstatement, or an action (or inaction) that caused these costs during the audit, or (3) *other* (e.g., a generic case fact that is unrelated to either of the previous coding categories). The coders initial agreement rate was 90.6 percent and Cohen's kappa was 0.86 ($p < 0.001$). The coders met to resolve their coding differences and the resolved data is used in the analysis. We use the proportion of items coded into the first category to total items to measure auditors' attention to decision process quality information cues.

To test H2b, we measured auditors' level of empathic concern they felt toward Sam using a six-item scale developed by Batson (1987, 1991) and rigorously validated by prior psychology research (e.g., Batson et al. 1995; Batson et al. 1997; Cialdini et al. 1997; Twenge, Baumeister, DeWall, Ciarocco, and Bartels 2007). Each statement involves auditors' current feelings toward Sam, elicited with separate 7-point Likert-type scales and anchored by 1 (Not at all) and 7 (Very much).[7] Participants' average response across the six items is a measure of their current level of empathic concern felt toward Sam, with higher scores indicating greater levels of empathy.

[7] The six items are: (1) How sympathetic do you feel toward Sam? (2) How moved do you feel toward Sam? (3) How compassionate do you feel toward Sam? (4) How tender do you feel toward Sam? (5) How warm do you feel

Control Variables

We include two control variables in each of our analyses that prior research indicates may influence our results.[8] Following Hamilton (2016), we include a time-based measure of participant effort. This measure represents the number of minutes that participants spent on the experimental task, excluding the additional time participants in the PT condition spent completing the perspective-taking manipulation. Additionally, Savani and King (2015) find that priming individuals to consider person-environment interactions as being driven by external factors outside of one's control can reduce outcome effects. Thus, we include a related locus of control measure in each of our analyses that captures the extent participants perceive that, when they are evaluated at work, they are held responsible for circumstances outside of their control.[9]

IV. RESULTS

Manipulation Checks

Participants responded to two manipulation check questions via a post-experimental questionnaire. All but three auditors correctly identified the outcome of the staff's investigation (misstatement versus no misstatement).[10] To test whether our perspective-taking intervention

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toward Sam? (6) How softhearted do you feel toward Sam? Based on participants' responses, we obtain a Cronbach's alpha of 0.95, which indicates high reliability.

[8] Our hypothesis test results are qualitatively unchanged (all p-values < 0.05) if we exclude either control variable or both control variables.

[9] Correlation tests indicate that locus of control is not significantly correlated with either of the two independent factors (both $p > 0.10$), while the time measure is marginally correlated with *Perspective Taking* ($p = 0.075$) and not significantly correlated with *Outcome* ($p > 0.10$). The marginal significance with *Perspective Taking* is driven by one participant in the *Perspective Taking* condition who opened the Qualtrics link but did not begin the study until multiple days later. When this outlier is removed, the time measure is no longer significantly correlated with *Perspective Taking* ($p > 0.10$) and the results of our reported results strengthen. Thus, we do not exclude the participant from subsequent analyses.

[10] Similar to Brazel et al. (2016), we analyze a measure of hindsight bias included in our post-experimental questionnaire to confirm that we successfully manipulated the outcome effect phenomenon and not the closely related hindsight bias. Specifically, participants were asked ''Based on the information available to Sam prior to his investigation, how likely is it that a misstatement was present in the Sporting Goods Division's revenue account?'' Differences in participant responses in the two misstatement conditions would potentially indicate the presence of hindsight bias. That is, a participant belief that a misstatement was more (less) likely present in the revenue account if a misstatement was (was not) detected. Consistent with an effective outcome effect manipulation, we find no differences between experimental conditions ($t_{70} = 0.138$, $p = 0.890$).

was successful in prompting participants to consider the staff's perspective when conducting their performance evaluation, we adapted a measure from Hamilton (2016). Specifically, participants were asked "To what degree did you imagine what Sam [the staff auditor] was thinking and experiencing when conducting your performance evaluation" (-5 = Not at all; +5 = Very much). Auditors in the PT condition were more likely to consider Sam's perspective (mean = 2.80) than auditors who were not provided with perspective-taking instructions (mean = 1.24; $t_{70} = 3.15$, $p = 0.002$).[11] As an additional test of our perspective-taking manipulation, we also evaluated whether auditors responded to our perspective-taking prompt by writing their responses in the first person (versus third person) (Galinsky and Ku 2004; Galinsky et al. 2008b; Mazzocco et al. 2012). Consistent with an effective perspective-taking manipulation, all but one of the participants responded by using first person pronouns.[12]

Auditors' Performance Evaluation

Hypothesis 1 examines whether perspective taking improves the auditor performance evaluation process by mitigating outcome bias. Table 1, Panel A, provides descriptive statistics for auditors' performance evaluation of the audit staff described in the case materials. The results of a 2 × 2 ANCOVA model with auditors' performance evaluation as the dependent variable are reported in Panel B, and Panel C reports the results of planned comparisons to test Hypothesis 1.

[Insert Table 1 about here]

Hypothesis 1 predicts a specific ordinal interaction, such that perspective taking will lead to higher performance evaluation ratings of audit staff exhibiting appropriate skeptical behavior that identifies no misstatement in the revenue account (a negative outcome) without impacting

[11] We report two-sided p-values except for tests for directional hypotheses, for which we report one-sided p-values.
[12] Results strengthen if we exclude participants who failed either manipulation check. However, we include all participant responses in our reported results.

the performance evaluation ratings of audit staff exhibiting identical skeptical behavior that does identify a misstatement (a positive outcome). The graphical results illustrated in Figure 2, Panel A are consistent with the hypothesized pattern, and the planned interaction contrast is also significant ($p < 0.001$).[13] Follow-up simple effects show that the mean performance evaluation is higher in the perspective-taking condition when the outcome of the staff's investigation identifies no misstatement (PT-present = 1.95, PT-absent = 0.53; $F_{1,66} = 5.12$, $p = 0.014$, one-tailed), but not when the outcome of the staff's investigation identifies a misstatement (PT-present = 3.09, PT-absent = 2.96; $F_{1,66} = 0.06$, $p = 0.815$, two-tailed).

[Insert Figure 2 about here]

Brazel et al. (2016, 2019) interpret their findings of outcome bias as indicating that auditors who exhibit appropriate skeptical behavior are punished when the skeptical behavior identifies no misstatement in the account balance. The authors use the term "punished" because both informal conversations with firm representatives and a survey they conducted of audit senior associates indicates that being rated as having *met expectations* would rank auditors in the bottom half of their peer group and be an indicator of relatively poor performance.[14] To address whether perspective taking mitigates this outcome bias in relative performance evaluation, we compute a new performance evaluation measure based on whether the auditors in each experimental condition rated the staff auditor's performance as "Above Expectations" (i.e., a performance evaluation rating higher than zero). We coded this performance evaluation measure dichotomously: evaluations rating the staff's performance as "Above Expectations" coded = 1;

[13] The planned contrast with weights [+1, -3, +1, +1] tests the hypothesized ordinal interaction specified in Hypothesis 1. The residual between-cells variation is also insignificant ($F_{2,66} = 1.52$, $p = 0.226$), indicating that the hypothesized contrast explains the data well (Guggenmos, Piercey, and Agoglia 2018).
[14] See Brazel et al. (2016) pages 1159-1160 and their related footnotes 16 and 17 for a more complete discussion.

evaluations indicating the staff's performance "Met" or was "Below Expectations" coded = 0.[15] The results of this additional analysis of Hypothesis 1 are reported in Table 2, and a graphical representation of the results is illustrated in Panel B of Figure 2. Table 2, Panel A, provides the descriptive statistics, Panel B reports the results of a general linear model (GLM) with a logit link and a binomial distribution, and Panel C reports the results of planned comparisons.

[Insert Table 2 about here]

The planned contrast in Panel C confirms that, as predicted, auditors are significantly less likely to reward appropriate skeptical behavior in the PT-absent/no misstatement condition (only 47.4% of auditors rated the staff "Above Expectations") than auditors in all other conditions (percentages rating the staff "Above Expectations" range from 85.7% to 93.8%; $\chi^2_1 = 12.54$, $p < 0.001$, one-tailed). More importantly, we find that perspective taking equalizes auditors' propensity to reward staff performance that demonstrates appropriate skeptical behavior, regardless of the audit outcome (positive or negative) resulting from the skeptical behavior. That is, auditors were equally likely to rate the staff "Above Expectations" in the PT-present/no misstatement condition (85.7%) as either of the positive outcome conditions when the staff identified a misstatement (PT-present = 93.8%; $p = 0.476$ and PT-absent = 91.3%; $p = 0.779$). These cumulative results support Hypothesis 1, indicating that perspective taking improves the performance evaluation process by mitigating outcome bias toward auditors with negative outcomes without inappropriately inflating evaluations of auditors with positive outcomes.

Attention to Decision Process Quality Information Cues

Hypothesis 2a predicts that perspective taking leads to greater attention to decision process quality information cues when those cues are *inconsistent* with the outcome (i.e., when

[15] Results are not sensitive to whether we code performance evaluations of "Met Expectations" as 1 or 0.

audit staff identify no misstatement) without influencing auditors' attention to decision process quality cues when those cues are consistent with the outcome (i.e., when audit staff identify a misstatement). Descriptive statistics are reported in Table 3, Panel A, for auditors' attention to decision process quality information cues. Panel B reports the results of a 2 × 2 ANCOVA model and planned contrasts are reported in Panel C.

[Insert Table 3 about here]

The graphical results illustrated in Figure 3, Panel A, are consistent with the hypothesized pattern predicted in Hypothesis 2a. The planned interaction contrast is also significant ($p < 0.001$), and follow-up pairwise contrasts provide further support for the predicted nature of this interaction effect.[16] Notably, auditors in PT-present/no misstatement condition demonstrate greater focus on decision process quality information cues (mean = 0.59) than auditors in the PT-absent/no misstatement condition (mean = 0.33; $F_{1,66} = 8.77$, $p = 0.002$, one-tailed), while perspective taking does not change auditors already high focus to decision process quality cues when the staff 's skeptical behavior identifies a misstatement (PT-present = 0.67, PT-absent = 0.72; $F_{1,66} = 0.53$, $p = 0.470$, two-tailed). These results support Hypothesis 2a and indicate that perspective taking improves auditors' focus towards more diagnostic, decision process quality information cues (and, therefore, focus less on outcome-consistent cues) when the staff's appropriately skeptical behavior identifies no misstatement (a negative outcome).

Empathic Concern Measure

Hypothesis 2b predicts that perspective taking increases evaluator empathic concern toward staff who exhibit appropriate professional skepticism but identify no misstatement

[16] We use a custom contrast with weights [+1, -3, +1, +1] to test the predicted ordinal interaction specified in Hypothesis 2a. The residual between-cells variation is also insignificant ($F_{2,66} = 0.26$, $p = 0.770$), indicating that the hypothesized contrast explains the data well (Guggenmos et al. 2018).

without influencing evaluator empathic concern when the staff's skeptical behavior identifies a misstatement. Table 4, Panel A, provides the descriptive statistics for auditors' assessed empathic concern toward the staff auditor. The results of a 2 × 2 ANCOVA model are reported in Panel B, and planned contrasts testing Hypothesis 2b are reported in Panel C.

[Insert Table 4 about here]

The graphical results illustrated in Figure 3, Panel B, are consistent with the hypothesized pattern, and the planned interaction contrast is also significant (p = 0.005, one-tailed).[17] When the staff's skeptical behavior identifies no misstatement, auditors in the PT-present condition feel greater empathic concern (mean = 4.66) than auditors in the PT-absent condition (mean = 3.54; $F_{1,66} = 4.25$, p = 0.022, one-tailed), while perspective taking does not increase empathic concern when the staff 's skeptical behavior identifies a misstatement (PT-present = 3.43, PT-absent = 3.26; $F_{1,66} = 0.12$, p = 0.728, two-tailed). Further, auditors' empathic concern assessment in the PT-present/no misstatement condition (mean = 4.66) is significantly higher than both of the positive outcome conditions when the staff identifies a misstatement (PT-present = 3.43; p = 0.015, one-tailed and PT-absent = 3.26; p = 0.005, one-tailed). These collective results support Hypothesis 2b.

[Insert Figure 3 about here]

Test of Theorized Model for Mitigating the Outcome Effect

We estimate a multi-group path analysis to further examine the information processing strategies employed by auditors in both outcome conditions and to test Hypothesis 3. The model results reported in Figure 4 provide additional corroborating support for Hypothesis 2a and 2b.

[17] We use a custom contrast with weights [+3, -1, -1, -1] to test the predicted ordinal interaction specified in Hypothesis 2b. The residual between-cells variation is also insignificant ($F_{2,66} = 1.16$, p = 0.320), indicating that the hypothesized contrast explains the data well (Guggenmos et al. 2018).

As expected, in the negative outcome condition, perspective taking positively influences auditors' attention to decision process information cues (Link 1: +0.34, p = 0.021, one-tailed, and Link 2: +0.29, p = 0.042, one-tailed, respectively), without influencing auditors' cognitive and affective responses in the positive outcome condition (both p-values > 0.545).

Recall that Hypothesis 3 predicts that the mitigation of outcome effects through perspective taking is driven by evaluators' greater attention to decision process quality information cues, not greater empathic concern. Consistent with this prediction, in the negative outcome condition, greater attention to decision quality information cues positively affects auditors' performance evaluation judgments (Link 3: +0.63, p < 0.001), while greater levels of empathic concern do not influence auditors' performance evaluation judgments (Link 4: +0.11, p = 0.418). Collectively, this result provides support for Hypothesis 3 and indicates that cognitive mechanisms, not affective mechanisms such as empathic concern, are necessary to mitigate outcome effects in auditor performance evaluations.

[Insert Figure 4 about here]

Analysis of Potential Alternative Explanation of Perspective-Taking Results

One potential alternative explanation for our results is that perspective taking increases the level of effort that auditors exert in conducting their performance evaluation, and thus effort, not perspective taking, improves auditors' evaluative judgment of Sam. In contrast to this alternative explanation, prior literature shows that the curse of knowledge bias, which includes biases caused by outcome knowledge, cannot be removed by simply increasing participant effort (e.g., Kennedy 1995; Earley et al. 2008). Instead, cognitive-restructuring interventions are needed to remove this hard-wired bias that "is more data-related than effort-related" (Kennedy 1995, 253). Consistent with this argument, in untabulated analyses, we find that controlling for

participant effort via the total time spent on the case (including time spent responding to the perspective-taking manipulation prompt) does not change any of our reported results.

Perspective taking is also integral to social functioning (Galinsky and Moskowitz 2000) and is positively influence by an individual's cognitive capacity, "the ability to perceive, differentiate, and integrate information" (Ku et al. 2015, p. 83). Given that auditors must be high in cognitive capacity to successfully perform the critical thinking and integrative skills required to conduct an audit, it is unlikely that perspective taking (in our context) is a very effortful task for them. Consistent with this notion, additional untabulated analyses of auditors' performance-evaluation free responses does not indicate that perspective taking increases the extent of elaboration auditors provide relative to the auditors who were not prompted to perspective-take, in terms of total word count ($p = 0.863$) or total items documented ($p = 0.253$).[18] Thus, we conclude that it is unlikely that participant effort, in and of itself, is driving our results.

V. CONCLUSION

This study investigates whether the cognitive process of perspective taking can improve auditor performance evaluations and promote appropriate skeptical action by staff auditors. We contribute to the psychology and accounting literature on the outcome effect by showing that the addition of a short, easy perspective-taking task at the beginning of the performance evaluation process can reduce outcome bias and make the treatment of staff auditors who choose the same appropriate skeptical action but who experience different misstatement outcomes more equitable. Our findings indicate that supervisors still reward auditors whose actions result in the discovery of misstatements, but, when they do a perspective-taking exercise, they also appropriately reward auditors who exercise proper, costly skepticism but whose actions do not lead to a detected

[18] The Outcome Condition × Perspective Taking interaction effect is also insignificant in both models (both p-values > 0.33, untabulated).

misstatement. Supervisors who do not perform the perspective-taking exercise, on the other hand, punish auditors who identify no misstatement in the account balance with a lower performance rating, corroborating the outcome bias documented by Brazel et al. (2016, 2019). Given that auditors anticipate performance-evaluation punishment for costly professional skepticism and this anticipation can pressure auditors to reduce their skepticism (Brazel et al. 2016), mitigating the punishment for skepticism could reduce this anti-skepticism pressure and increase skeptical behavior as auditors will be able to be confident that it will be rewarded even if no misstatement is uncovered. Relatedly, the pressure for skeptical staff to avoid punishment by "eating hours" could be lowered by outcome effect mitigation.

Reducing the punishment threat in performance evaluations for costly skeptical behavior could also make firm rewards for skeptical behavior, which have been found to be ineffective at increasing skeptical behavior due to lack of perceived credibility of the reward (Brazel, Leiby, and Schaefer 2018), credible. Our perspective-taking intervention, therefore could improve professional skepticism through multiple pathways. It incentives professional skepticism by increasing the performance evaluation reward of costly skeptical action by removing the dependence of that reward on finding a misstatement. It could also improve professional skepticism indirectly by making motivational interventions, which have not improved skepticism under the current audit setting of outcome-biased evaluations, effective. This possibility is particularly promising since auditors who have personally experienced rewards for professional skepticism exhibit more willingness to take costly skeptical actions (Brazel et al. 2018). Future research could investigate if that is indeed the case.

We also contribute to the literature on perspective taking, both in psychology and auditing. We are the first study, to our knowledge, to successfully mitigate the outcome bias by

prompting perspective taking. Moreover, most of the psychology literature on perspective taking uses students as participants, and we answer the call to test whether "actual managers" respond to perspective taking in similar ways, albeit still in an experimental rather than organizational setting (Ku et al. 2015), by using professional auditors as participants. Demonstrating that professional auditors can respond to a perspective-taking intervention also extends the relatively scant audit literature on perspective taking with a methodological contribution, as prior studies have had difficulty successfully arousing perspective taking in auditors without requiring lengthier role-playing exercises to simulate its effects (e.g., Altiero et al. 2019) or using dispositional measures of perspective taking (e.g., Church et al. 2015). Future research could use an intervention similar (or even identical) to the one used in our experiment to investigate other audit areas that would benefit from debiasing strategies, including evaluating the appropriateness of management's chosen accounting method (Hackenbrack and Nelson 1996; Kadous, Kennedy, and Peecher 2003) and considering management's preferences when evaluating the severity of internal control weaknesses (Earley, Hoffman, and Joe 2008).

Lastly, we provide evidence that perspective taking mitigates the outcome effect by increasing evaluator reliance on information about the quality of the staff auditor's process. Alternative explanations, such as increased evaluator leniency due to empathic concern or a mere increase in evaluator effort, are not consistent with our pattern of results. A limitation of our study is that we only investigate perspective taking in an audit performance evaluation context. Future research could examine whether perspective taking interventions could improve other important, interpersonal aspects of auditing, such as collaborating with other auditors or geographically-dispersed/outsourced teams, communicating with a client's audit committee, and evaluating management-preferred audit outcomes.

REFERENCES

Altiero, E. C., Y. J. Kang, and M. E. Peecher. 2019. Motivated Perspective Taking: Why Auditors Asked to Take an Investor's Perspective Assess Negative Audit Adjustments as Less Material. Working paper, University of Central Florida, University of Illinois at Urbana-Champaign, and University of Massachusetts, Amherst.

Andiola, L. M. 2014. Performance feedback in the audit environment: A review and synthesis of research on the behavioral effects. *Journal of Accounting Literature* 33 (1): 1–36.

Andiola, L. M. and J. C. Bedard. 2018. Delivering the "tough message": Moderators of subordinate auditors' reactions to feedback. *Accounting, Organizations and Society* 70: 52–68.

Andiola, L.M., J. C. Bedard, and K. D. Westermann. 2019. It's not my fault! Insights into subordinate auditors' attributions and emotions following audit review. *Auditing: A Journal of Practice & Theory* 38 (1): 1–27.

Antonioni, D., and H. Park. 2001. The relationship between rater affect and three sources of 360-degree feedback ratings. *Journal of Management* 27 (4): 479-495.

Baron, J., and J. C. Hershey. 1988. Outcome bias in decision evaluation. *Journal of personality and social psychology* 54 (4): 569–579.

Batson, C. D. 1987. Prosocial motivation: Is it ever truly altruistic? In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* 20: 65–122. New York: Academic Press.

Batson, C. D. 1991. *The altruism question: Toward a social-psychological answer*. Hillsdale, NJ: Erlbaum.

Batson, C. D., S. Early, and G. Salvarani. 1997. Perspective taking: Imagining how another feels versus imagining how you would feel. *Personality and Social Psychology Bulletin* 23 (7): 751–758.

Batson, C. D., T. R. Klein, L. Highberger, and L. L. Shaw. 1995. Immorality from empathy-induced altruism: When compassion and justice conflict. *Journal of Personality and Social Psychology* 68 (6): 1042–1054.

Brazel, J. F., C. Gimbar, E. Maksymov, and T. J. Schaefer. 2019. The outcome effect and professional skepticism: A replication and attempt at mitigation. *Behavioral Research in Accounting* (in press).

Brazel, J. F., S. B. Jackson, T. J. Schaefer, and B. W. Stewart. 2016. The outcome effect and professional skepticism. *The Accounting Review* 91 (6): 1577–1599.

Brazel, J. F., Leiby, J. and T. R. Schaefer. 2018. Do Rewards Encourage Professional Skepticism?. Working paper, North Carolina State University, University of Georgia, and University of Missouri – Kansas City.

Buckingham, M. and A. Goodall. 2015. Reinventing performance management: How one company is rethinking peer feedback and the annual review, and trying to design a system to fuel improvement. *Harvard Business Review* (April): 40–50.

Cardy, R. L. and G. H. Dobbins. 1986. Affect and appraisal accuracy: liking as an integral dimension in evaluating performance. *Journal of Applied Psychology* 71 (4): 672–678.

Church, B. K., M. Peytcheva, W. Yu, and O.-A. Singtokul. 2015. Perspective taking in auditor-manager interactions: An experimental investigation of auditor behavior. *Accounting, Organizations and Society* 45: 40–51.

Cialdini, R. B., S. L. Brown, B. P. Lewis, C. Luce, and S. L. Neuberg. 1997. Reinterpreting the empathy–altruism relationship: When one into one equals oneness. *Journal of Personality and Social Psychology* 73 (3): 481–494.

Clarkson, P. M., C. Emby, and V. W. S. Watt. 2002. Debiasing the outcome effect: The role of instructions in an audit litigation setting. *Auditing: A Journal of Practice & Theory* 21 (2): 7–20.

Davis, M. H., L. Conklin, A. Smith, and C. Luce. 1996. Effect of perspective taking on the cognitive representation of persons: A merging of self and other. *Journal of Personality and Social Psychology* 70 (4): 713–726.

Earley, C. E., V. B. Hoffman, and J. R. Joe. 2008. Reducing management's influence on auditors' judgments: An experimental investigation of SOX 404 assessments. *The Accounting Review* 83 (5): 1461–1485.

Emby, C., A. M. Gelardi, and D. J. Lowe. 2002. A research note on the influence of outcome knowledge on audit partners' judgments. *Behavioral Research in Accounting* 14 (1): 87–103.

Fischhoff, B. 1975. Hindsight ≠ Foresight: The effect of outcome knowledge on judgment under uncertainty. *Journal of Experimental Psychology: Human perception and performance* 1 (3): 288–299.

Forgas, J. P. 1981. Epilogue: Everyday understanding and social cognition. In *Social cognition: Perspectives on everyday understanding,* edited by J.P. Forgas, Vol. 26, 259–270. San Diego, CA: Academic Press.

Forgas, J. P. 1998. On being happy and mistaken: mood effects on the fundamental attribution error. *Journal of Personality and Social Psychology* 75 (2): 318–331.

Frederickson, J. R., S. A. Peffer, and J. Pratt. 1999. Performance evaluation judgments: Effects of prior experience under different performance evaluation schemes and feedback frequencies. *Journal of Accounting Research* 37 (1): 151–165.

Galinsky, A. D. and G. Ku. 2004. The effects of perspective-taking on prejudice: The moderating role of self-evaluation. *Personality and Social Psychology Bulletin* 30 (5): 594–604.

Galinsky, A. D., W. W. Maddux, D. Gilin, and J. B. White. 2008a. Why it pays to get inside the head of your opponent: The differential effects of perspective taking and empathy in negotiations. *Psychological Science* 19 (4): 378–384.

Galinsky, A. D. and G. B. Moskowitz. 2000. Perspective-taking: Decreasing stereotype expression, stereotype accessibility, and in-group favoritism. *Journal of Personality and Social Psychology* 78 (4): 708–724.

Galinsky, A. D. and T. Mussweiler. 2001. First offers as anchors: The role of perspective-taking and negotiator focus. *Journal of Personality and Social Psychology* 81 (4): 657–669.

Galinsky, A. D., C. S. Wang, and G. Ku. 2008b. Perspective-takers behave more stereotypically. *Journal of Personality and Social Psychology* 95 (2): 404–419.

Glover, S. M. and D. F. Prawitt. 2013. *Enhancing Auditor Professional Skepticism*. Monograph produced by the Standards Working Group of the Global Public Policy Committee. Available at: https://www.iaasb.org/system/files/meetings/files/20150615-iaasbagenda_item_10-b-gloverprawitt_enhancing_auditor_professional_skepticism-final.pdf

Guggenmos, R. D., M. D. Piercey, and C. P. Agoglia. 2018. Custom contrast testing: Current trends and a new approach. *The Accounting Review* 93 (5): 223–244.

Hackenbrack, K. and M. W. Nelson. 1996. Auditors' incentives and their application of financial accounting standards. *The Accounting Review* 71 (1): 43–59.

Hamilton, E. L. 2016. Evaluating the intentionality of identified misstatements: How perspective can help auditors in distinguishing errors from fraud. *Auditing: A Journal of Practice & Theory* 35 (4): 57–78.

International Federation of Accountants (IFAC). 2017. *Toward enhanced professional skepticism: Observations of the IAASB-IAESB-IESBA professional skepticism working group*.

International Forum of Independent Audit Regulators (IFIAR). 2016. *2015 inspection findings survey, The Netherlands*.

International Forum of Independent Audit Regulators (IFIAR). 2017. *2016 inspection findings survey, The Netherlands*.

Joe, J. R., Y.-J. Wu, and A. B. Zimmerman. 2017. Overcoming communication challenges: Can taking the specialist's perspective improve auditors' critical evaluation and integration of the specialist's work? Working paper, University of Delaware, Texas Tech University, and Northern Illinois University.

Jones, E. E., and V. A. Harris. 1967. The attribution of attitudes. *Journal of Experimental Social Psychology* 3 (1): 1–24.

Judge, T. A., and G. R. Ferris. 1993. Social context of performance evaluation decisions. *Academy of management journal* 36 (1): 80–105.

Kadous, K. 2000. The effects of audit quality and consequence severity on juror evaluations of auditor responsibility for plaintiff losses. *The Accounting Review* 75 (3): 327–341.

Kadous, K. 2001. Improving jurors' evaluations of auditors in negligence cases. *Contemporary Accounting Research* 18 (3): 425–444.

Kadous, K., S. J. Kennedy, and M. E. Peecher. 2003. The effect of quality assessment and directional goal commitment on auditors' acceptance of client-preferred accounting methods. *The Accounting Review* 78 (3): 759–778.

Kaplan, S. E., M. J. Petersen, and J. A. Samuels. 2008. Effects of subordinate likeability and balanced scorecard format on performance-related judgments. *Advances in Accounting* 23: 85–111.

Kennedy, J. 1995. Debiasing the curse of knowledge in audit judgment. *The Accounting Review* 70 (2): 249–273.

Kinney, W. R., and M. W. Nelson. 1996. Outcome information and the" expectation gap": The case of loss contingencies. *Journal of Accounting Research* 34 (2): 281–299.

Ku, G. C. S. Wang, and A. D. Galinsky. 2015. The promise and perversity of perspective-taking in organizations. *Research in Organizational Behavior* 35: 79–102.

Lipshitz, R. 1989. "Either a medal or a corporal": The effects of success and failure on the evaluation of decision making and decision makers. *Organizational Behavior and Human Decision Processes* 44: 380–395.

Longmire, N. H., and D. A. Harrison. 2018. Seeing their side versus feeling their pain: Differential consequences of perspective-taking and empathy at work. *Journal of Applied Psychology* 103 (8): 894–915.

Mackenzie, L., J. Wehner, and S. Correll. 2019. Why most performance evaluations are biased, and how to fix them. *Harvard Business Review* (January). Available at: https://hbr.org/2019/01/why-most-performance-evaluations-are-biased-and-how-to-fix-them.

Mazzocco, P. J., D. D. Rucker, A. D. Galinsky, and E. T. Anderson. 2012. Direct and vicarious conspicuous consumption: Identification with low-status goods increases the desire for high-status goods. *Journal of Consumer Psychology* 22: 520–528.

Mertins, L., D. Salbador, and J. H. Long. 2013. The outcome effect–A review and implications for future research. *Journal of Accounting Literature* 31 (1): 2–30.

Mitchell, T. R., and L. S. Kalb. 1981. Effects of outcome knowledge and outcome valence on supervisors' evaluations. *Journal of Applied Psychology* 66 (5): 604–612.

Nelson, M. W. 2009. A model and literature review of professional skepticism in auditing. *Auditing: A Journal of Practice & Theory* 28 (2): 1–34.

Public Company Accounting Oversight Board (PCAOB). 2012. *Maintaining and Applying Professional Skepticism in Audits*. Staff Audit Practice Alert No. 10. Washington, D.C.: PCAOB.

Public Company Accounting Oversight Board (PCAOB). 2017. *Staff inspection brief, information about 2017 inspections*. Washington, D.C.: PCAOB.

Ross, L. 1977. The intuitive psychologist and his shortcomings: Distortions in the attribution process. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology* 10: 173–220. San Diego: Academic Press.

Savani, K. and D. King. 2015. Perceiving outcomes as determined by external forces: the role of event construal in attenuating the outcome bias. *Organizational Behavior and Human Decision Processes* 130: 136–146.

Sezer, O., Zhang, T., Gino, F., and M. H. Bazerman. 2016. Overcoming the outcome bias: Making intentions matter. *Organizational Behavior and Human Decision Processes* 137: 13–26.

Simon, C. A., J. L. Smith, and M. F. Zimbelman. 2018. The influence of judgment decomposition on auditors' fraud risk assessments: Some trade-offs. *The Accounting Review* 93 (5): 273–291.

Skorinko, J. L., S. Laurent, K. Bountress, K. P. Nyein, and D. Kuckuck. 2014. Effects of perspective taking on courtroom decisions. *Journal of Applied Social Psychology* 44 (4): 303–318.

Tan, H.-T. and M. G. Lipe. 1997. Outcome effects: The impact of decision process and outcome controllability. *Journal of Behavioral Decision Making* 10: 315–325.

Todd, A. R., A. D. Galinsky, and G. V. Bodenhausen. 2012. Perspective taking undermines stereotype maintenance processes: Evidence from social memory, behavior explanation, and information solicitation. *Social Cognition* 30 (1): 94–108.

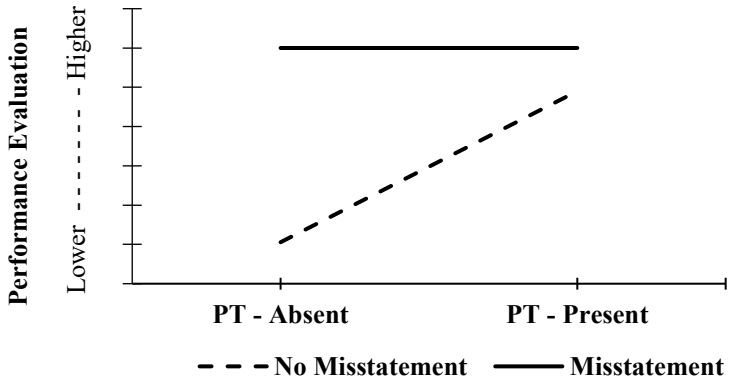
Twenge, J. M., R. F. Baumeister, C. N. DeWall, N. J. Ciarocco, and J. M. Bartels. 2007. Social exclusion decreases prosocial behavior. *Journal of Personality and Social Psychology* 92 (1): 56–66.

Zajonc, R. B. 1980. Feeling and thinking: Preferences need no inferences. *American psychologist* 35 (2): 151–175.

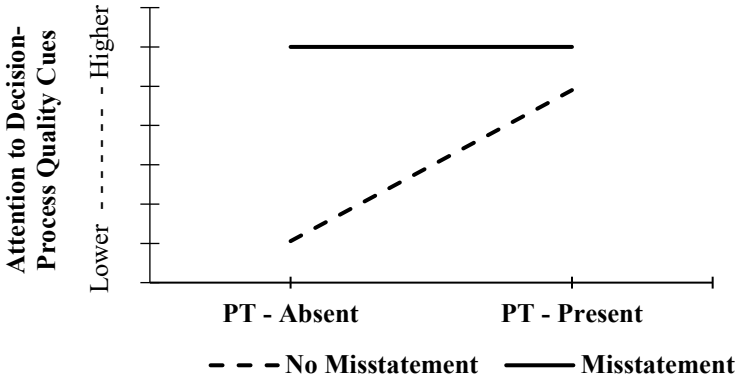
FIGURE 1

Graphical Representation of Hypothesized Results

Panel A: Hypothesis 1: Auditors' performance evaluation



Panel B: Hypothesis 2a: Auditors' attention to decision-process quality information cues



Panel B: Hypothesis 2b: Auditors' empathic concern ratings

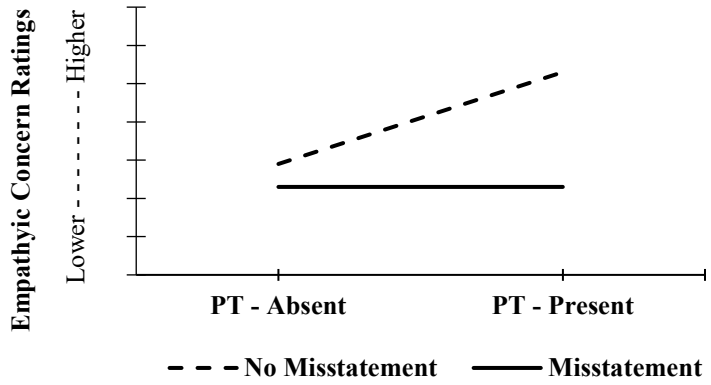
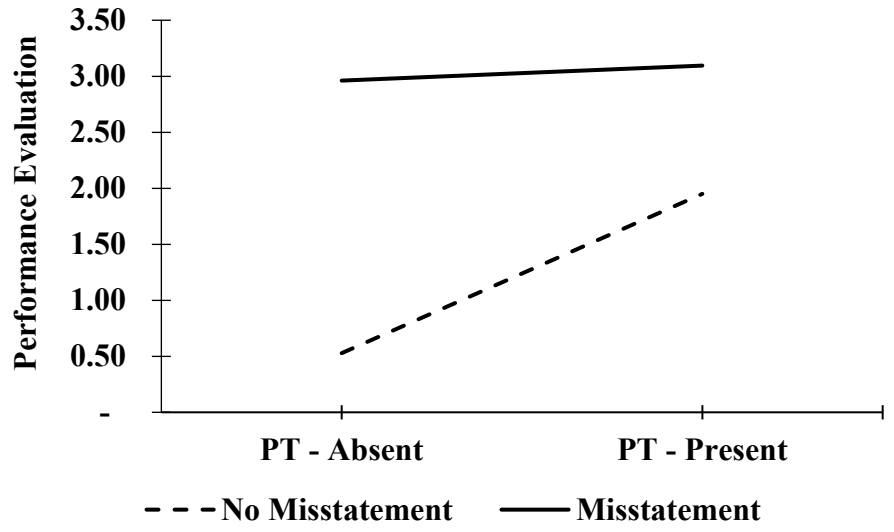


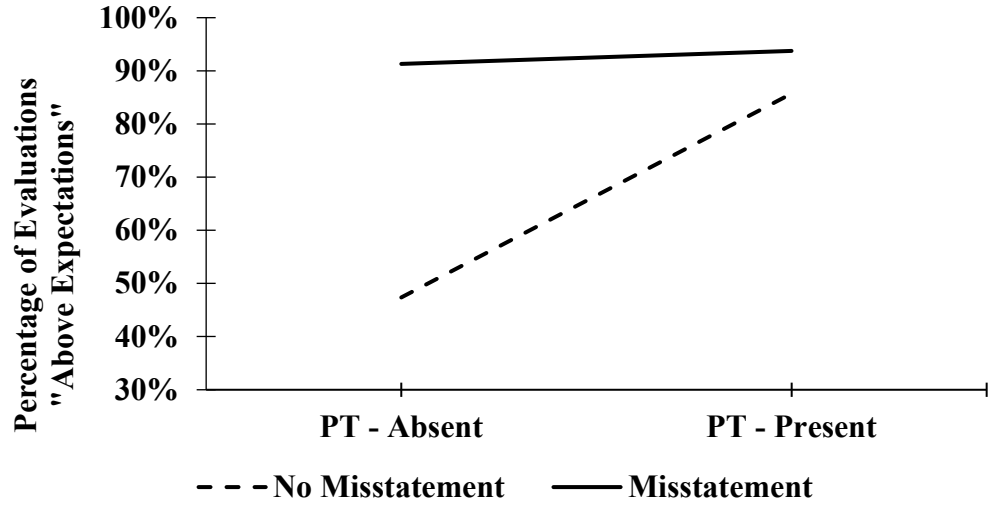
FIGURE 2

Graphical Representation of Performance Evaluation Results

Panel A: Cell Means for Performance Evaluation by Experimental Condition



Panel B: Percentage of Participants Evaluating the Staff Auditor "Above Expectations"



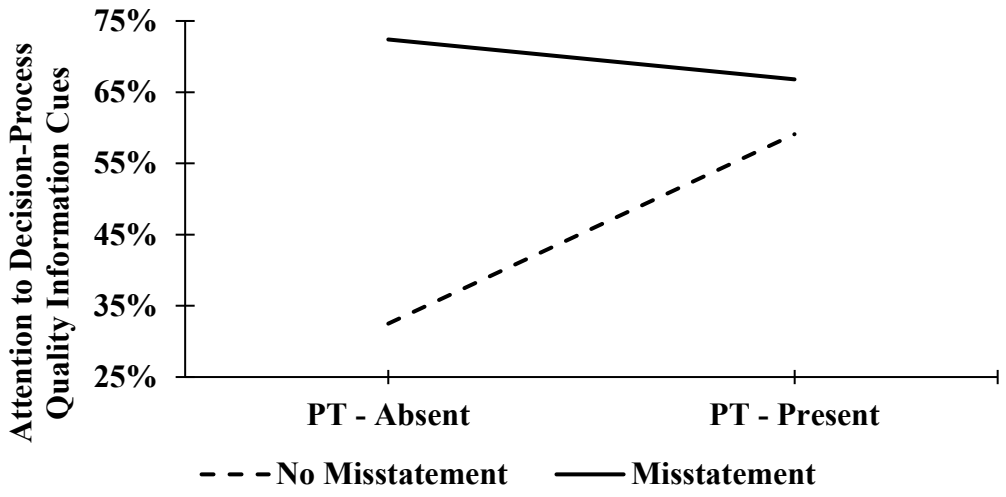
The dependent variable in Panel A is auditors' overall performance evaluation of the staff auditor, elicited on an 11-point scale (-5 = Below Expectations; 0 = Met Expectations; 5 = Above Expectations). The dependent variable in Panel B is the percentage of auditors who evaluated Sam, the third-year staff auditor described in the case materials, as "Above Expectations" (i.e., a performance evaluation rating higher than zero).

See Table 1 for independent variable descriptions.

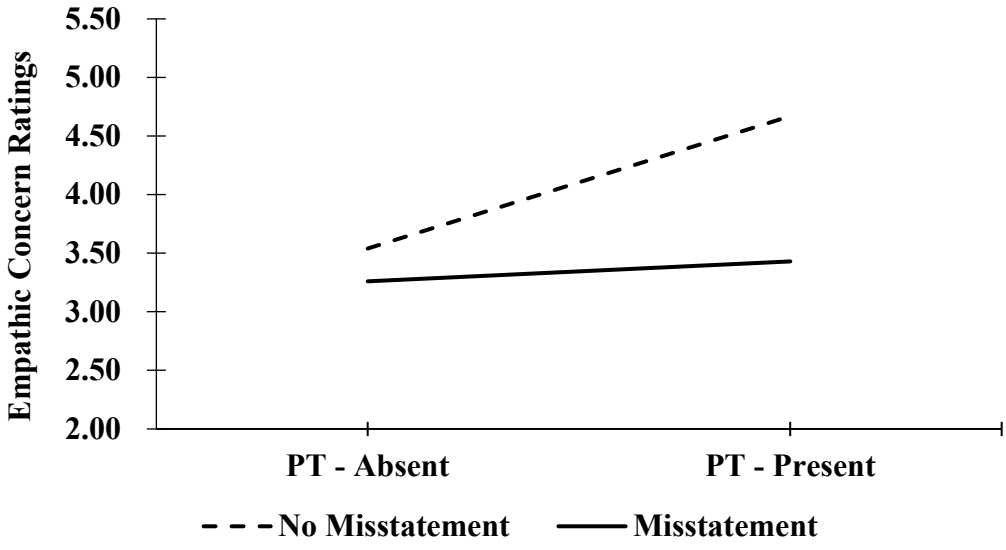
FIGURE 3

Graphical Representation of Results for Perspective Taking Mechanisms

Panel A: Hypothesis 2a: Auditors' attention to decision process quality information cues



Panel B: Hypothesis 2b: Auditors' empathic concern ratings

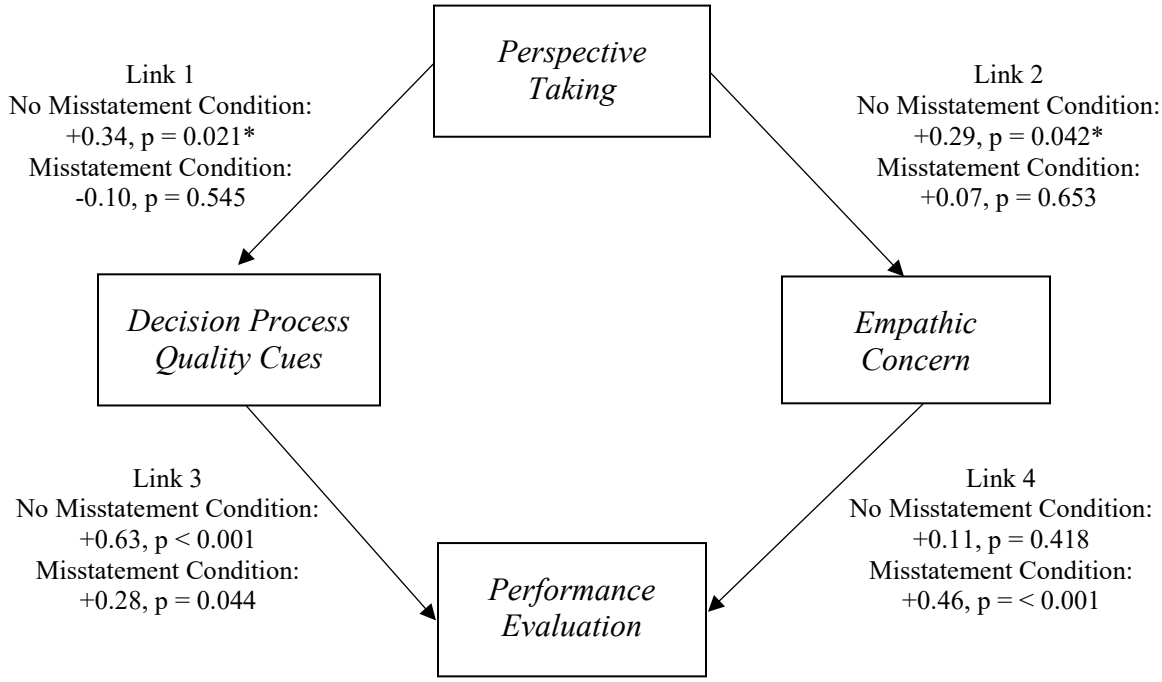


The dependent variable in Panel A auditors' attention to decision process quality information cues, measured as the proportion of items listed in participants' performance evaluation free response memo coded as a decision process quality cue relative to all items listed in their response. The dependent variable in Panel B is auditors' empathic concern toward Sam, using Batson's (1987) six-item Empathic Concern scale. We report the mean empathy ratings.

See Table 1 for independent variable descriptions.

FIGURE 4

Path Model of Mechanisms Affecting Auditor Performance Evaluations



Notes:

This figure shows the results of a multi-group path analysis testing how perspective taking affects auditors' attention to decision process quality information cues and empathic concern, which, in turn, influence their performance evaluation of a staff auditor under varying outcome conditions. The model reports standardized path coefficients for each link. For parsimony, the model excludes covariates because they do not impact the significance of the path coefficients reported, yet reduce model fit.

*One-tailed p-value, reflecting directional prediction.

Model Statistics:
Comparative Fit Index = 1.00 Chi-square = 3.50, df = 4, p-value = 0.478
RMSEA < 0.01

Perspective Taking	=	Dichotomous variable manipulating as the presence (*Perspective Taking* = 1) or absence (*Perspective Taking* = 0) of a perspective-taking prompt provided to participants prior to performing their performance evaluation of Sam.
Decision Process Quality Cues	=	Measure of the proportion of decision process quality information cues participants documented as part of their performance evaluation of Sam to total items documented.
Empathic Concern	=	Measure of auditors' empathic concern toward Sam using Batson's (1987) six-item Empathic Concern scale. For each item, participants responded on a seven-point Likert scale, anchored by 1 = Not at all to 7 = Very Much. Analyses are performed using the mean empathic concern rating computed for each participant.
Performance Evaluation	=	Participants' overall performance evaluation of Sam elicited on an 11-point scale (-5 = Below Expectations; 0 = Met Expectations; 5 = Above Expectations).

TABLE 1

Auditors' Performance Evaluation

Panel A: Descriptive Statistics: LS Means, (Standard Error), Number of Observations

	Perspective Taking				
Outcome Condition	**PT - Present**		**PT - Absent**		**Overall**
No Misstatement	[A]	1.95 (0.48) n = 14	[B]	0.53 (0.39) n = 19	1.24 (0.30) n = 33
Misstatement	[C]	3.09 (0.42) n = 16	[D]	2.96 (0.35) n = 23	3.03 (0.27) n = 39
Overall		2.52 (0.31) n = 30		1.75 (0.26) n = 42	

Panel B: Analysis of Covariance

Source	**df**	**SS**	**MS**	**F**	**p-value**
Outcome Condition	1	52.59	52.59	18.95	<0.001
Perspective Taking	1	9.79	9.79	3.53	0.065
Outcome Condition × Perspective Taking	1	6.58	6.58	2.37	0.129
Covariates:					
Time	1	10.22	10.22	3.68	0.059
Locus of Control	1	22.97	22.97	8.28	0.005
Error	66				

Panel C: Planned Contrast and Follow-Up Tests

Source	**Cells**	**df**	**F**	**p-value**
Planned Contrast (1, -3, 1, 1)	--	1	21.80	<0.001*
Pairwise Contrasts:				
PT Present/Absent, No Misstatement	[A – B]	1	5.12	0.014*
PT Present/Absent, Misstatement	[C – D]	1	0.06	0.815
No Misstatement/Misstatement, PT Absent	[D – B]	1	21.71	<0.001*
No Misstatement/Misstatement, PT Present	[C – A]	1	3.12	0.082
PT Absent/No Misstatement vs. PT Present/Misstatement	[C – B]	1	20.52	<0.001*

The dependent variable is auditors' overall performance evaluation of the staff auditor, elicited on an 11-point scale (-5 = Below Expectations; 0 = Met Expectations; 5 = Above Expectations). This measure is covariate-adjusted for participant effort, as measured by the total time (in minutes) participants took to complete the experiment, excluding additional time the PT-Present Condition spent completing the perspective taking manipulation, and perceived locus of control. Locus of control is measured as the extent to which participants perceive that, when they are evaluated at work, they are held responsible for events and circumstances outside of their actual control, elicited on an 11-point scale (0 = Never; 5 = Occasionally; 10 = All the Time).

Outcome Condition was manipulated between-subjects as whether Sam's investigation led to the conclusion that a material misstatement existed in the revenue account or led to the conclusion that there were no misstatements in the revenue account. Perspective Taking was manipulated between-subjects as the presence or absence of a perspective-taking prompt provided to participants prior to performing their performance evaluation of Sam.

*We use a p-value from a one-tailed test for this directional prediction. All nonindicated p-values are two-sided.

TABLE 2

Evidence of Rewarding Appropriate Professional Skepticism through Perspective Taking

Panel A: Proportion (Percentage) of Participants Evaluating the Staff Auditor "Above Expectations"

	Perspective Taking Condition				
Outcome Condition	**PT - Present**		**PT - Absent**		**Overall**
No Misstatement	[A]	12/14 85.7%	[B]	9/19 47.4%	21/33 63.6%
Misstatement	[C]	15/16 93.8%	[D]	21/23 91.3%	36/39 92.3%
Overall		27/30 90.0%		30/42 71.4%	

Panel B: General Linear Model (GLM) (Logit Link, Binomial Distribution)

Source	**df**	**χ^2**	**p-value**
Outcome Condition	1	4.72	0.030
Perspective Taking	1	2.11	0.146
Outcome Condition × Perspective Taking	1	0.99	0.321

Panel C: Planned Contrast and Follow-Up Tests

Source	**Cells**	**df**	**χ^2**	**p-value**
Planned Contrast (1, -3, 1, 1)	--	1	12.54	<0.001*
Pairwise Contrasts:				
PT Present/Absent, No Misstatement	[A – B]	1	4.53	0.017*
PT Present/Absent, Misstatement	[C – D]	1	0.08	0.779
No Misstatement/Misstatement, PT Absent	[D – B]	1	7.95	0.002*
No Misstatement/Misstatement, PT Present	[C – A]	1	0.51	0.476
PT Absent/No Misstatement vs. PT Present/Misstatement	[C – B]	1	6.20	0.006*

The dependent variable is the proportion of auditors who evaluated Sam, the third-year staff auditor described in the case materials, as "Above Expectations" (i.e., a performance evaluation rating higher than zero). This auditor performance evaluation measure is dichotomous, with performance evaluations indicating Sam was Above Expectations coded = 1; auditor performance evaluations indicating that Sam "Met" or was "Below" Expectations (i.e., a performance evaluation less than or equal to zero) coded = 0.

See Table 1 for independent variable descriptions.

*We use a p-value from a one-tailed test for this directional prediction. All nonindicated p-values are two-sided.

TABLE 3

Attention to Decision Process Quality Information Cues

Panel A: Descriptive Statistics: LS Means, (Standard Error), Number of Observations

	Perspective Taking				
Outcome Condition	**PT - Present**		**PT - Absent**		**Overall**
No Misstatement	[A]	0.59 (0.07) n = 14	[B]	0.33 (0.06) n = 19	0.46 (0.04) n = 33
Misstatement	[C]	0.67 (0.06) n = 16	[D]	0.72 (0.05) n = 23	0.70 (0.04) n = 39
Overall		0.63 (0.05) n = 30		0.53 (0.04) n = 42	

Panel B: Analysis of Covariance

Source	**df**	**SS**	**MS**	**F**	**p-value**
Outcome Condition	1	0.93	0.93	16.38	<0.001
Perspective Taking	1	0.18	0.18	3.15	0.081
Outcome Condition × Perspective Taking	1	0.41	0.41	7.22	0.009
Covariates:					
Time	1	0.19	0.19	3.29	0.074
Locus of Control	1	0.18	0.18	3.12	0.082
Error	66				

Panel C: Planned Contrast and Follow-Up Tests

Source	**Cells**	**df**	**F**	**p-value**
Planned Contrast (+3, -1, -1, -1)	--	1	26.26	<0.001*
Pairwise Contrasts:				
PT Present/Absent, No Misstatement	[A – B]	1	8.77	0.002*
PT Present/Absent, Misstatement	[C – D]	1	0.53	0.470
No Misstatement/Misstatement, PT Present	[D – B]	1	28.52	<0.001*
No Misstatement/Misstatement, PT Absent	[C – A]	1	0.68	0.411
PT Present/No Misstatement vs. PT Absent/Misstatement	[C – B]	1	17.91	<0.001*

The dependent variable measures auditors' attention to decision process quality information cues, measured as the proportion of items listed in participants' performance evaluation free response memo coded as a decision process quality cue relative to all items listed in their response. This measure is covariate-adjusted for participant effort, as measured by the total time (in minutes) participants took to complete the experiment, excluding additional time the PT-Present Condition spent completing the perspective taking manipulation, and perceived locus of control. Locus of control is measured as the extent to which participants perceive that, when they are evaluated at work, they are held responsible for events and circumstances outside of their actual control, elicited on an 11-point scale (0 = Never; 5 = Occasionally; 10 = All the Time).

See Table 1 for independent variable descriptions.

*We use a p-value from a one-tailed test for this directional prediction. All nonindicated p-values are two-sided.

TABLE 4

Empathic Concern Scores

Panel A: Descriptive Statistics: LS Means, (Standard Error), Number of Observations

	Perspective Taking				
Outcome Condition	**PT - Present**		**PT - Absent**		**Overall**
No Misstatement	[A]	4.66 (0.41) n = 14	[B]	3.54 (0.34) n = 19	4.10 (0.26) n = 33
Misstatement	[C]	3.43 (0.36) n = 16	[D]	3.26 (0.30) n = 23	3.34 (0.24) n = 39
Overall		4.04 (0.27) n = 30		3.40 (0.23) n = 42	

Panel B: Analysis of Covariance

Source	**df**	**SS**	**MS**	**F**	**p-value**
Outcome Condition	1	9.46	9.46	4.56	0.036
Perspective Taking	1	6.73	6.73	3.24	0.076
Outcome Condition × Perspective Taking	1	3.58	3.58	1.73	0.193
Covariates:					
Time	1	3.00	3.00	1.45	0.233
Locus of Control	1	2.36	2.36	1.14	0.290
Error	66				

Panel C: Planned Contrast and Follow-Up Tests

Source	**Cells**	**df**	**F**	**p-value**
Planned Contrast (+3, -1, -1, -1)	--	1	7.21	0.005*
Pairwise Contrasts:				
PT Present/Absent, No Misstatement	[A – B]	1	4.25	0.022*
PT Present/Absent, Misstatement	[C – D]	1	0.12	0.728
No Misstatement/Misstatement, PT Present	[A – C]	1	4.90	0.015*
No Misstatement/Misstatement, PT Absent	[B – D]	1	0.39	0.535
PT Present/No Misstatement vs. PT Absent/Misstatement	[A – D]	1	7.34	0.005*

The dependent variable measures auditors' empathic concern toward Sam, the third-year staff auditor described in the case materials, using Batson's (1987) six-item Empathic Concern scale. For each item, participants respond on a seven-point Likert scale, anchored by 1 = Not at all to 7 = Very Much. Analyses are performed using the mean empathy rating computed for each participant. This measure is covariate-adjusted for participant effort, as measured by the total time (in minutes) participants took to complete the experiment, excluding additional time the PT-Present Condition spent completing the perspective taking manipulation, and perceived locus of control. Locus of control is measured as the extent to which participants perceive that, when they are evaluated at work, they are held responsible for events and circumstances outside of their actual control, elicited on an 11-point scale (0 = Never; 5 = Occasionally; 10 = All the Time).

See Table 1 for independent variable descriptions.

*We use a p-value from a one-tailed test for this directional prediction. All nonindicated p-values are two-sided.