

Modeling antecedents and consequences of deliberative decision making within personnel  
selection

by

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## **Abstract**

While hiring decisions are a frequent organizational occurrence that can substantially impact the decision maker, the organization, and/or society as a whole, employees do not always make optimal hiring decisions. This failure to make optimal decisions may occur because employees do not utilize deliberative processes (e.g., systematically gathering information, evaluating choice alternatives, taking time to decide etc.). Accordingly, the goal of the present study was to propose an integrative model of some antecedents and consequences of deliberative decision making within personnel selection. Data gathered from 322 hiring managers indicated that when managers felt accountable for their hiring decisions and possessed a deliberative decision making style, they were more likely to report making hiring decisions in a deliberative manner. This use of deliberation was, in turn, associated with high quality decisions (i.e., low regret, high satisfaction, and high performance ratings of the person that was hired). The results also indicated the relationship between accountability and decision quality was mediated by deliberative processes. These findings were consistent across multiple hiring decisions. Importantly, these results did not emerge when intuitive processes/style were examined. Collectively, these results help establish the ecological validity of various theories of decision making and specify that deliberative processes are associated with high quality selection decisions. These results can be leveraged by organizations who are interested in encouraging employees to utilize deliberative processes. Given the benefits of deliberative processes, these results may also be leveraged by workers who are interested in achieving higher task performance in their jobs.

# Table of Contents

List of Figures.....	vi
List of Tables.....	vii
Acknowledgements.....	viii
Chapter 1 - Introduction.....	1
Theoretical Framework.....	3
Study Model.....	5
Accountability and Decision Making Processes.....	5
Decision Making Processes and Task Performance.....	9
Decision Making Processes and Decision Satisfaction.....	12
Decision Making Processes and Regret.....	13
Deliberative Decision Making as a Mediator.....	14
Decision Making Styles and Processes.....	15
Decision Making Style-Process Congruence.....	16
Chapter 2 - Method.....	20
Participants.....	20
Procedure.....	20
Phase 1.....	20
Phase 2.....	22
Measures.....	24
Chapter 3 - Results.....	27
Assumption Checking.....	27
Response Quality.....	28
Descriptives Statistics.....	29
Test of Measurement Models.....	30
Test of Hypotheses (Structural Models).....	31
Hypothesis 1.....	32
Hypothesis 2a.....	32
Hypothesis 2b.....	32
Hypothesis 2c.....	32

Hypothesis 3.....	33
Hypothesis 4.....	33
Hypothesis 5.....	34
Hypotheses 6a – 6c.....	34
Test of Alternative Models.....	35
Model Replication.....	36
Alternative Model Comparisons.....	36
Chapter 4 - Discussion.....	39
Theoretical Implications.....	40
Practical Implications.....	42
Limitations and Future Directions.....	44
Conclusion.....	46
References.....	48
Appendix A - Screenshot of Screening Survey.....	69
Appendix B - Screenshot of Hiring Decision 1.....	70
Appendix C - Screenshot of Hiring Decision 2.....	71
Appendix D - List of Study Measures and Items.....	72

## List of Figures

Figure 1. Conceptual Model .....	60
Figure 2. Summary of Model (Table 3, 1A) Results. ....	61
Figure 3. Interaction Between Accountability and Deliberative Style .....	62

## List of Tables

Table 1. Correlations Between Substantive Variables.....	63
Table 2. Summary of Measurement Models and Fit Indices. ....	64
Table 3. Summary of Structural Models and Fit Indices. ....	65
Table 4. Parameter Estimates for Structural Models. ....	66
Table 5. Indirect Effects for Structural Models.....	67
Table 6. Variance Explained by Model Variables.....	68

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## **Chapter 1 - Introduction**

While decision making is a prevalent organizational phenomenon that has the potential to substantially impact the decision maker, the organization, and/or society as a whole (e.g., Dalal & Brooks, 2014; Milkman, Chugh, & Bazerman, 2009), people frequently fail to make optimal decisions (Dalal & Brooks, 2014; Nutt, 2002; Parker & Fischhoff, 2005). Decision making has been identified through taxonomic work as an essential managerial competency (Tett, Guterman, Bleier, & Murphy, 2000). Indeed, most jobs and/or occupations require decision making skills to some extent. Being able to make optimal decisions is, therefore, essential for a person to be successful in many jobs. It is also important for the overall success of an organization. Consider, for instance, a hiring manager that fails to make employee selection decisions in a deliberative manner (e.g., gathering applicant information, systematically considering diverse options, taking time to make the decision etc.). In failing to make deliberative decisions and put much thought into the decision, hiring managers are unlikely to hire the optimal job applicant. Neither the hiring manager nor the organization are likely to benefit from such a situation.

The present study addresses several important issues at the intersection of judgement and decision making (JDM) and industrial-organizational (I-O) psychology research that have not been sufficiently addressed within the extant literature such as (1) the generalizability of JDM theory/findings to naturalistic employee selection decisions, (2) the situations when people will engage in deliberative decision making, (3) and the consequences of deliberation. An examination of these issues, however, can provide important theoretical contributions and also provide some practical suggestions for how organizations can improve their selection processes/systems.

Regarding the first issue, while both theory and laboratory-based research indicate that deliberation results in more optimal decisions (Bishop & Trout, 1999; Milkman et al., 2009; Parker and Fischhoff, 2005; Phillips, Fletcher, Marks, & Hine, 2016), such research has seldom been extended to applied settings such as personnel selection, thereby raising concerns about the ecological validity of theories of deliberation. Consequently, the first goal of this study is to determine whether the beneficial aspects of deliberation (e.g., higher decision performance, increased optimality etc.) can generalize to naturalistic settings (e.g., personnel selection).

Regarding the second issue, while the way a person makes decisions can be due to the person's preferences, the environment, or a combination of the two, little is known about which particular variables interact to predict deliberation within personnel selection (e.g., Murphy, 2014; Pennycook, Fugelsang, & Koehler, 2015). By advancing a person-by-environment (i.e., accountability and decision making style) account of deliberation, this study will offer novel contributions to theory by identifying when people will engage in deliberative decision making in a specific applied setting.

Finally, regarding the third issue, while traditional JDM frameworks typically evaluate the outcome of a decision by comparing it to some normative standard (such as the expected utility of the choice; see Von Neumann & Morgenstern, 1947), this approach is not tenable for selection decisions because such decisions lack clear normative standards. Indeed, the outcomes of selection decisions are complex and multifaceted (see Wood & Highhouse, 2014; Yates & Tschirhart, 2006). Accordingly, different (e.g., non-normative) criteria must be utilized to evaluate the outcomes of deliberative selection decisions (see Milkman et al., 2009). Despite the need to better understand some of the alternative outcomes of deliberative decisions, no studies have integrated such outcomes of deliberative decision making into a unified framework. This

study will thus make additional theoretical advances by denoting specific person-based (e.g., choice satisfaction and regret) and organization-based (e.g., the hired person's job performance) outcomes of deliberative processes within a single model.

From a practical perspective, the lack of extant research examining the role of deliberative decision making within naturalistic settings is concerning, especially considering how essential deliberation is to carry out many job tasks. For instance, since organizations currently have little guidance about how to encourage their workers to make deliberative selection decisions, and the fact that many people have preferences for intuition (Highhouse, 2008; Lodato, Highhouse, & Brooks, 2011), selection decisions will continue to be made in suboptimal (e.g., non-deliberative) ways. If organizations can encourage their employees to engage in deliberation, however, their employees are more likely to have higher job performance (e.g., because they will be more likely to make higher quality selection decisions). Indeed, using more carefully developed/evidence-based selection practices can also increase the productivity and financial success of the organization (Combs, Liu, Hall, & Ketchen, 2006).

### **Theoretical Framework**

It is widely acknowledged that decision making consists of distinct underlying processes. For instance, dual-processing theories of judgement and decision making have long recognized that some decision making processes are characterized as fast, intuitive, and automatic whereas other types of processes are conceptualized as slow, deliberative, and controlled (Evans, 2008; Evans & Stanovich, 2013; Glöckner & Betsch, 2008). While the characteristics of these different modes of processing are well documented (see Evans, 2008), there are differing accounts for when deliberative processes will be activated (e.g., Pennycook et al., 2015). According to default-interventionist models, intuitive processing represents the default mode of

processing/making decisions. To engage in deliberative processing, one must override their initial automatic process in favor of more effortful ones (Kahneman & Frederick, 2002; see also Evans & Stanovich, 2013). This shift to deliberative processing can be accomplished in various ways. For instance, research has indicated that individual differences in reasoning (Stanovich & West, 2000), task instructions/manipulations (Evans, Handley, Neilens, Bacon, & Over, 2010), and environmental factors (Lerner & Tetlock, 1999) can all encourage people to engage in deliberation in certain circumstances. In contrast, parallel-competitive models of decision making emphasize that intuitive and deliberative processes operate in parallel and ‘compete’ to be the dominant response (Sloman, 2002). Thus the main determinant of deliberative processing from this perspective is conflict detection (Pennycook et al., 2015). In other words, people will choose to engage in deliberation to the extent that they are able to detect a potential conflict for a given automatic response (Mata, Ferreira, & Sherman, 2013).

While dual-processing models offer different explanations for when deliberative processing will be activated, these perspectives are similar in that they acknowledge that people shift between automatic and controlled processing. Indeed, this general notion of using different decision making processes in different situations has received considerable empirical support (e.g., Alter, Oppenheimer, Epley, & Eyre, 2007; Milkman et al., 2009; Pachur & Spaar, 2015; Payne, Bettman, & Johnson 1988; Rusou, Zakay, & Usher, 2013). While theory indicates that people will use different decision making processes in different situations, these theories have rarely been extended to specific organizational settings. Accordingly, by using this general dual-processing theoretical framework as a foundation, the following study will both test and augment existing theory by modeling a variety of antecedents and consequences of deliberation within personnel selection.

## Study Model

Figure 1 (located after the references) provides an overview of the study model, variables, and paths. Note that on the left there is an important environmental variable, accountability, and on top there is an important individual difference variable, deliberative decision making *style*. These variables are anticipated to jointly relate to the primary variable of interest, deliberative decision making *processes*. On the right are three important variables that represent indicators of decision quality: perceived task performance, decision satisfaction, and decision regret. Deliberative decision making processes are expected to relate to each of these variables. A person's decision making style is also expected to moderate the relations between all of these paths. Finally, note that deliberative processing is expected to serve as a mediator variable as evidenced by the fact that it links both the left and right side of the model.

### Accountability and Decision Making Processes

As mentioned previously, one of the primary determinants of when people will engage in deliberation is a person's environment (Lerner & Tetlock, 1999; Murphy, 2014; Tetlock, 2002). Social contingency theories of decision making, for instance, emphasize how decision making behavior can be characterized as an attempt by the decision maker to satisfy various constituents (e.g., Tetlock, 2002). Research regarding the notion of situational strength offers support for this assertion. Situational strength refers to "implicit or explicit cues provided by external entities regarding the desirability of potential behaviors" (Meyer, Dalal, & Hermida, 2010, p. 122). Thus the manner in which people make decisions can be a function of whether or not a situation is perceived to be either 'strong' or 'weak'. For instance, if a situation is perceived as strong (e.g., there is a significant demand to engage in certain desirable behaviors) people will tend to make decisions in way that they think is most desirable for some constituent. If the situation is

perceived as weak, however, people will tend to make decisions in their default manner (e.g., because the situation does not demand particular behaviors). Based on these considerations, one such environmental variable that is particularly relevant to organizational settings and likely to induce deliberative processing is accountability.

Accountability is highly relevant to organizational settings as employees are frequently held responsible for their actions by some constituency (Frink & Klimoski, 1998). When people are held accountable, there exists an “implicit or explicit expectation that one’s decisions or actions will be subject to evaluation by some salient audience(s) with the belief that there exists the potential for one to receive either rewards or sanctions based on this expected evaluation.” (Hall & Ferris, 2011, p. 134). The effects of accountability are largely motivational in that accountability encourages people to be more systematic and thoughtful in their actions due to the possibility of having to justify their decisions to some constituency. From this perspective, accountability is a phenomenological construct in that it is concerned with a person’s subjective perceptions of accountability rather than the objective features of the accountability environment (e.g., formal workplace accountability systems; Tetlock, 1985).

Historically, research examining the relations between accountability and decision making did so in laboratory-based experiments by manipulating the perceived accountability of participants (see Lerner & Tetlock, 1999). This research indicated that while accountability can frequently improve decision making, this effect is very contingent on moderator variables (Lee, Herr, Kardes, & Kim, 1999; McAllister, Mitchel, and Beach; Tetlock, 1983; Tetlock, Skitka, & Boetterger 1989; Tetlock & Kim, 1987). For example, Tetlock (1983) found that when people were held accountable to an audience with unknown views, participants engaged in more systematic cognitive processing than when people knew the views of their audience. McAllister

et al. (1979) found that, in a series of business simulations, people were more likely to engage in deliberation when they were held accountable, the decision could not be reversed, and the decision was meaningful. Furthermore, Tetlock & Kim (1987) found that being held accountable prior to the decision task decreased participant's overconfidence in their judgments compared to participants who were held accountable posterior to the decision task.

Another important consideration regarding the effects of accountability concerns whether people are held accountable for the *process* they utilized to make a decision or the *outcome* of the decision itself. Laboratory-based research has indicated that process accountability generally tends to result in higher quality decisions (cf. De Langhe et al., 2011) in comparison to outcome accountability (e.g., Brtek & Motowidlo, 2002; Chang, Atanasov, Patil, Mellers, & Tetlock, 2017; Hagafors, & Brehmer, 1983; Scholten, Van Knippenberg, Nijstad, & De Dreu, 2007; Siegel-Jacobs, & Yates, 1996). For example, Scholten et al. (2007) found that, in a group decision making task, groups who were held accountable for the process they utilized to make the decision made higher quality decisions. Furthermore, this effect was mediated by deliberation (e.g., the group engaged in more systematic information processing). Thus for accountability to improve decision making in laboratory-based paradigms, it is important for people to be held process accountable prior to the decision task to an audience with unknown views (though there are some additional exceptions to this; see Hall, Frink, & Buckley, 2017; Lerner & Tetlock, 1999).

While early research on accountability specified conditions where accountability is more likely improve decision making, such findings are based almost exclusively on laboratory-based experiments. Conceivably, the effects of accountability within naturalistic settings are far more impactful and dynamic (Hall, Bowen, Ferris, Royle, & Fitzgibbons, 2007; Hochwarter et al.,

2007). This is because the accountability pressures that an employee perceives in an organizational setting are more wide-ranging, intense, and long lasting than what is experienced in laboratory-based studies (see Hochwarter et al., 2007; Wallace, Johnson, Mathe, & Paul, 2011). For instance, as soon as participants in a traditional experiment are done with the study, any impact that the accountability manipulation had will cease. In an organization, however, employees will likely feel accountable for a much longer duration. Furthermore, being held accountable at work is much more consequential (e.g., the possibility of being fired/being promoted) than being held accountable in a lab-based study (e.g., receiving research credit). Consequently, many of these previous laboratory-based studies regarding the effects of accountability on decision making can only provide limited insights into how accountability may impact decision making within specific applied settings.

Typically, research on accountability that has been conducted in organizational settings has focused on how accountability influences certain work-related outcomes, such as job satisfaction (Hall, Zinko, Perryman, & Ferris, 2009; Lanivich, Brees, Hochwarter, & Ferris, 2010) and job performance (Hall et al., 2009; Hochwarter et al., 2007; Mero, Guidice, & Werner, 2014). Some research has, however, focused on specific forms of decision making such as self-serving decisions (Pitesa & Thau, 2013; Rus, van Knippenberg, & Wisse, 2012). While this line of research has provided important information concerning the nature of accountability, it has not specified how accountability affects a person's decision processes. Recall that the definition of accountability being used in this study is when people perceive that their *decisions* will be evaluated by some salient audience(s). Accordingly, any outcome of accountability is going to necessarily have a decisional component. While some researchers have speculated that the reason accountability produces positive outcomes (e.g., less self-serving decisions; see Rus et al.,



2012) is because it increases deliberative decision making, this possibility has not been explicitly examined.

Despite the fact that research has not explicitly examined how accountability might affect deliberative decision making within organizational settings, theory suggests that the motivational (i.e., deliberation-inducing) aspects of accountability will extend to personnel selection decisions. Indeed, an integral component of accountability, and an important aspect of social contingency theories of decision making, is the notion of justifying one's decisions to another constituent. Given the potential significance and/or consequences of workplace decision-making (e.g., the potential for promotion, the possibility of being fired etc.), people need to be able to justify their decisions. This is especially true for personnel selection decisions which have the ability to either contribute to/detract from the overall effectiveness of the organization (Combs et al., 2006). Accordingly, deliberation (e.g., gathering applicant information, systematically considering diverse options, taking time to make the decision etc.) is expected to be easier for employees to justify to a constituent than other forms of decision making, such as intuition (e.g., not examining many alternatives, relying predominantly on one's "gut" feelings, deciding quickly etc.), when they make personnel selection decisions. Thus accountability, when perceived to be high, will compel people to engage in deliberative decision making.

*Hypothesis 1:* Accountability will be positively related to deliberative decision making processes (See Figure 1, path 1).

### **Decision Making Processes and Task Performance**

Up to this point, deliberative decision making has been hypothesized to be an outcome of accountability (Figure 1, path 1). It is further expected, however, that these deliberative processes will relate to a variety of outcomes that can serve as indicators of decision quality

(Figure 1, paths 2 through 4). As previously noted, the outcomes of decisions are multifaceted and complex (Milkman et al., 2009; Wood & Highhouse, 2014; Yates & Tschirhart, 2006). Thus in order to determine if deliberation is in fact an optimal way to make personnel selection decisions, it is necessary to examine multiple, diverse outcomes flowing from the use of deliberation.

Overall, theory and research indicate that deliberation frequently results in optimal decisions (e.g., Bishop & Trout, 2004; Bruine de Bruin, Parker, & Fischhoff, 2007; Lake & Highhouse, 2014; Larrick, 2004; Milkman et al., 2009; Parker & Fischhoff, 2005; Ritchhart & Perkins, 2005; Phillips et al., 2016; Tett et al., 2000; Wood & Highhouse, 2014). Indeed, one of the hallmarks of deliberation is that people who engage in deliberative decision making are less likely to make decision errors/succumb to decision biases compared to people who rely on intuition (Evans, 2008; Larrick, 2004; Mata et al., 2013; Milkman et al., 2009; Parker & Fischhoff, 2005). To illustrate, Parker and Fischhoff (2005) have found that deliberation is associated with decision performance (e.g., fewer biases) across a variety of traditional decision making tasks. Additionally, Mata et al. (2013) found that people who use deliberation are less likely to choose an intuitively correct option (that is in fact incorrect) since they spend more time trying to make a correct decision. They argue that there is a metacognitive advantage of deliberative decision making (i.e., being aware of both intuitive and non-intuitive choice options) that enables people to make more optimal decisions in comparison to people who rely primarily on intuition. Moreover, Phillips et al. (2016) found in their meta-analysis that deliberation was positively related to decision performance, but that intuition was negatively related to decision performance. Taken as a whole, both theory and research suggests that deliberation is associated with more optimal outcomes in comparison to other forms of decision making.

In managerial contexts, being able to identify appropriate alternatives, weigh the pros and cons of these alternatives, and make a decision based on a thorough analysis of the decision problem represents an optimal way to make decisions (Tett et al., 2000). Indeed, these characteristics of deliberation (e.g., systematic information search, consideration of relevant alternatives, devoting time to each alternative, and reexamining the information before making the decision) have long been recognized as an essential component of decision performance/quality (Janis & Man, 1977) and cognition more generally (Bishop & Trout, 2004; Ritchhart & Perkins, 2005). This is further reflected by the fact that judgement and decision making is considered both an imperative occupational skill and managerial competency (e.g., Tett et al., 2000). Given these considerations, while the need to be adaptive and make quick decisions using intuition is sometimes important (see Klein, 2008; Lake & Highhouse, 2014), engaging in deliberation will, on average, produce more optimal outcomes. This is especially true in personnel selection given that intuition has been shown to result in suboptimal selection decisions (Highhouse, 2008).

In order to determine if these well-documented and beneficial aspects of deliberation extend to personnel selection decisions, it is necessary to evaluate the outcomes of the deliberative processes that are utilized for selection decisions. Just as in laboratory-based studies, the aim is to evaluate the quality of choices that flow from deliberative processes. One of the ways to evaluate the quality of the decision processes in employee selection is to evaluate the task performance (e.g., ability of the employee to fulfill their required job functions) of the employees that were selected. For instance, if a hiring manager were to use deliberation to hire someone, and the employee they hired turned out to have high task performance, this would provide some indication that deliberation facilitates greater optimality. Thus a hiring manager's

perceptions of the task performance of the employees they hire can serve as an indicator of the quality of the decisions that are made. Based on these considerations and given the numerous advantages of deliberation, people who use deliberation to make selection decisions are expected to make higher quality decisions (e.g., hire employees who go on to exhibit high task performance).

*Hypothesis 2a:* Deliberative decision making processes will be positively related to perceptions of the hired employee's task performance (See Figure 1, path 2).

### **Decision Making Processes and Decision Satisfaction**

In addition to assessing the task performance of the employee that was hired, another way to assess decision quality is by examining choice satisfaction. If people are not satisfied with their selection choices, this may be an indication of low quality decisions. For instance, Milkman et al. (2009) have stated that optimal decision making can be assessed by considering the decision maker's satisfaction with their decision. To the extent that the decision was optimal (e.g., a high quality decision was made), people should remain satisfied with their choice once the results of that choice are known.

Preliminary research has suggested that deliberative decision making is in fact associated with high levels of choice satisfaction (Crossley & Highhouse, 2005; Siebert & Kunz, 2016; Wood & Highhouse, 2014). For example, Crossley and Highhouse (2005) found that when people use deliberation to search for jobs, they tend to have high satisfaction with the process they used to make the decision. Likewise, Wood and Highhouse (2014) found that deliberative decision making was positively related to both self and peer ratings of decision quality (note that their measure of decision quality incorporated choice satisfaction as a criterion of decision quality). Although there are theoretical and empirical reasons to expect that deliberation will

increase choice satisfaction, this issue has not received much attention within the extant literature. One reason for the lack of focus on choice satisfaction is that choice satisfaction represents a non-normative decision criterion. Given the positive features of deliberation that have been described above (e.g., it improves decision quality), people who make deliberative selection decisions are anticipated to be satisfied with their selection choices.

*Hypothesis 2b:* Deliberative decision making processes will be positively related to decision satisfaction (See Figure 1, path 3).

### **Decision Making Processes and Regret**

Another way of assessing decision quality is by determining whether or not people regret their selection decisions (e.g., Connolly & Zeelenberg, 2002; Dalal et al., 2010; Janis & Mann, 1977; Pieters & Zeelenberg, 2005; Reb, 2008). Regret can be conceptualized in a variety of different ways. For example, outcome regret occurs when a decision-maker recognizes that an alternative (e.g., job applicant) other than the one chosen should actually have been the one chosen. Self-blame regret occurs when a decision-maker recognizes that the choice they made is not in fact justifiable (which can be especially relevant if people are held accountable for their decisions; Reb, 2008). If people regret their selection choices, this may provide an additional indication of low decision quality.

In a series of studies examining the relations between deliberation and regret, for instance, Reb (2008) found that deliberation was associated with lower levels of regret. Presumably, people who make deliberative decisions are less likely to experience regret (either outcome or self-blame regret) due to the care they put into making the initial decision. Thus in addition to increased satisfaction, people that make deliberative decisions are also expected to experience lower levels of regret regarding their selection decisions.

*Hypothesis 2c:* Deliberative decision making processes will be negatively related to decision regret (See Figure 1, path 4).

### **Deliberative Decision Making as a Mediator**

So far, the accountability-deliberation (Figure 1, path 1) and deliberation-decision quality (Figure 1, paths 2 through 4) associations have been treated as separate components. Theory indicates, however, that both of these linkages represent important components of the overall decision making process. For instance, the former linkage is concerned with *antecedents* of deliberation while the latter is concerned with the *consequences* of deliberation. Accordingly, a more comprehensive understanding of the decisional processes underlying personnel selection can be derived by integrating these different components of decision making into a single model.

As previously mentioned, holding a person accountable tends to improve their decision quality because there is a possibility that the person will have to justify their decision. This possibility encourages people to engage in deliberative decision making, which tends to yield optimal outcomes. It follows from this that the reason accountability improves decision making is because it encourages deliberation, which is in turn associated with higher decision quality. By conceptualizing deliberative decision making as a mediator, it is possible to combine the previously separate accountability-deliberation and deliberation-decision quality linkages into an integrative model. Indeed, this can also provide an explicit explanation for *why* accountability results in higher quality decisions (i.e., it increases deliberation).

*Hypothesis 3:* Deliberative decision making processes mediate the relationship between accountability and decision quality (task performance, decision satisfaction, decision regret) such that higher perceptions of accountability lead to more deliberate decision

making processes, which in turn lead to higher quality decisions (Figure 1, path 1+2, path 1+3, path 1+4).

### **Decision Making Styles and Processes**

While the environment is an important determinant of how people make decisions, theory and research also indicate that individual differences play an important role in determining how people make decisions (Murphy, 2014; Stanovich & West, 2000). In line with this notion, research suggests that people possess default decision styles (Epstein, Pacini, Denes-Raj, & Heier, 1996; Dalal & Brooks, 2014; Scott & Bruce, 1995; Stanovich & West, 2000), or “characteristic mode[s] of perceiving and responding to decision-making tasks” (Harren, 1979, p. 125). Decision styles can be thought of as a subcomponent of cognitive styles, which describe a person’s generalized way of thinking and reasoning (Frederick, 2005).

A variety of similar terms have been developed to represent the various styles that people are believed to have. For instance, two of the styles that are most relevant to this study identified by Scott and Bruce (1995) are the rational and intuitive decision making styles. Epstein et al. (1996) identified similar styles and referred to them as experiential (i.e., intuitive) and rational (similar to Scott and Bruce, 1995). People with a rational (i.e., deliberative) style will tend to approach decisions situations by considering many options, systematically examining them, and striving to choose the optimal option. In contrast, people with an intuitive/experiential style tend to rely on their ‘gut instincts’ to make a decision. While many additional terms have been developed to describe these intuitive/deliberative styles, all are similar in that they tend to distinguish between automatic and controlled (i.e., deliberative) processing. Accordingly, not only will people make decisions based on their environment, they will also make decisions based

on their default decision style(s). Thus if a person possess a deliberative decision style, they will be more likely to make decisions in a manner consistent with this style.

*Hypothesis 4:* A person's deliberative decision making *style* will be positively related to their deliberative decision making *processes* (See Figure 1, path 5).

### **Decision Making Style-Process Congruence**

Given that both environmental (e.g., accountability) and individual difference (e.g., decision making style) variables are expected to relate to deliberative decision making within personnel selection, specific person-by-environmental interactions are anticipated. Indeed, it is unlikely that either the environment or the person is the sole determinant of how decisions are made. It's more likely that the environment interacts with characteristics of the person to produce unique decision making processes. Put another way, a person's decision making style is anticipated to moderate the overall decision making process. By adopting this person-by-environment perspective, a much more nuanced understanding of the conditions when people engage in deliberation for personnel selection can be derived (see Murphy, 2014).

To understand why this moderation is anticipated, it is important to recognize the distinction between the way in which people *actually make decisions* and the way in which they *generally want to make decisions*. Accountability is expected to encourage people to use deliberative decision making *processes*. Of course, certain people may already have a tendency to use deliberative processes (e.g., they have a deliberative style). Thus these people experience congruence between how they need to make decisions (due to having high accountability perceptions) and how they prefer to make decisions (due to having a deliberative style). Indeed, preliminary research indicates that people experience benefits when their *preferred* mode of processing information/making decisions corresponds to their way of *actually* processing



information/making decisions (Betsch & Kunz, 2008; Brigham, De Castro, & Shepherd, 2007; Chan, 1996; Higgins, 2005). To illustrate, Betsch and Kunz (2008) found in a series of studies that decision process-style congruence caused people to view their choice as more valuable and decreased the amount of regret associated with the choice across different decision tasks. In a more naturalistic study, Brigham et al. (2007) found that decision process-style congruence at work was associated with higher job satisfaction and lower quit intentions among a sample of managers.

Thus while accountability is expected to encourage deliberative decision making, the effects of accountability are probably greater for people that don't generally make deliberative decisions. For people that already have a tendency to make decisions in a deliberate manner, accountability isn't as likely to be of benefit because they already tend to make decisions using deliberation. A person's deliberative decision style is, therefore, expected to moderate the relations between accountability and deliberation such that people with a lower deliberative style are more likely to be affected by accountability. Furthermore, deliberative decision making processes are anticipated to be highest when perceived accountability and a person's deliberative style are both high.

*Hypothesis 5:* A person's deliberative decision making *style* moderates the relationship between accountability and deliberative decision making *processes* such that when a person's deliberative style is low, the relationship between accountability and deliberative processes will be strongest. As deliberative decision making style increases, the relationship between accountability and deliberative processes will weaken (See Figure 1, path 6).

While a person's deliberative decision making style is expected to moderate the relationship between accountability and deliberative decision making processes, it is also possible that their decision making style moderates the relationship between deliberative processes and the various indicators of decision quality (e.g., decision satisfaction, decision regret, and task performance). Indeed, a substantial body of general congruence/fit research suggests that people experience a variety of positive affective, attitudinal, and performance-based outcomes when they perceive a fit between themselves and their environment. For instance, both Greguras and Diefendorff (2009) and Kristof-Brown, Zimmerman, and Johnson (2005) have found that various components of person-environment fit (person-task fit, person-organization fit etc.) are positively related to job performance. Given these findings, it is conceivable that decision process-style congruence will be related to decision quality in that people will be more likely to select high performing workers when they use a decision making process (e.g., deliberation) that corresponds to their preferred way of making decisions (e.g., deliberation).

It is also expected that when people experience decision process-style congruence, they will be more satisfied with their decisions. For example, research on person-environment fit has found that people are more satisfied with their jobs when they experience a fit with their environment (Greguras & Diefendorff, 2009; Kristof-Brown et al., 2005). Likewise, people are more likely to have high job satisfaction when they experience decision process-style congruence (Brigham et al., 2007). Since decision satisfaction is more proximal to the decision making domain than job satisfaction, it is conceivable that when people get to make decisions how they want to make decisions, they experience high levels of decision satisfaction. Likewise, people are expected to experience lower levels of regret in situations of decision process-style

congruence. Preliminary support for this assertion comes from Betsch and Kunz (2008) who found that people who experienced decision congruence also experienced lower levels of regret across a series of decision tasks.

*Hypothesis 6a:* A person's deliberative decision making *style* moderates the relationship between deliberative decision making *processes* and perceived task performance such that perceived task performance is *highest* when deliberative style and deliberative processes are high (Figure 1, path 7).

*Hypothesis 6b:* A person's deliberative decision making *style* moderates the relationship between deliberative decision making *processes* and decision satisfaction such that decision satisfaction is *highest* when deliberative style and deliberative processes are high (Figure 1, path 8).

*Hypothesis 6c:* A person's deliberative decision making *style* moderates the relationship between deliberative decision making *processes* and decision regret such that decision regret is *lowest* when deliberative style and deliberative processes are high (Figure 1, path 9).

## **Chapter 2 - Method**

### **Participants**

The final sample for this study consisted of 322 hiring managers recruited from Amazon's Mechanical Turk (MTurk) platform, which research indicates is a viable source of high quality participant data (Landers & Behrend, 2015). Of these hiring managers, 76% identified as White/Caucasian, 8% as Asian/Pacific Islander, 7% as Black/African American, and 6% as Latino/Latina. Additionally, 48% of participants identified as male/men and the average age was 36 ( $SD = 9.94$ ). Furthermore, 95% of participants were employed full-time and 69% had a bachelor's degree or higher (24% had a master's degree or higher). The average current employment tenure was 8.25 years ( $SD = 5.17$  years) while the average amount of hiring experience was 6.67 years ( $SD = 6.33$  years).

### **Procedure**

In order to ensure that participants met the criteria for this study, a multiphase approach was used to gather data from a sample of working adults with hiring experience. Participants first completed a screening survey to ensure they were eligible to participate in this study (i.e., they have hiring experience; Phase 1). Participants who met the criteria were then invited to complete a second survey in which they completed the majority of measures relevant to the above hypotheses (Phase 2). This procedure is described in detail below.

#### **Phase 1**

In the first phase, participants completed an initial screening survey about their hiring experiences. More specifically, participants were asked: "How many people, if any, have you hired in the past year?" and "If you have hired people within the past year, how many have you had a chance to observe on the job and form an opinion about?" (hereafter referred to as the

“eligibility window”). There are various reasons for why this eligibility window was used. For instance, this eligibility window helps ensure that participants remembered their hiring decision. As length of time increases, it becomes less likely that participants will be able to remember how they actually made the hiring decision (see DeNisi & Peters, 1996). This eligibility window also requires that participants have observed the employee/formed an opinion about the employee – a necessary condition if hiring managers are to evaluate their hiring decisions. Participants who hired at least two people within this eligibility window were permitted to complete the next phase of this study at a later time point. The rationale for examining two hiring decisions is further explained in the next section (Phase 2).

Participants were also asked about their decision making styles (both intuition and deliberation) in this first phase. Since participants would indicate their hiring-specific decision making processes in Phase 2, asking them about their decision making styles during Phase 1 helps minimize the possibility of overly consistent response sets and mono-method bias (and thus a potentially poor fitting measurement model; cf. Spector, 2006). Finally, to ensure that participants provided honest responses and did not identify the purpose of the study (which could cause them to engage in deception in order to be eligible for potential follow-up studies), some additional, distractor-type questions were included in this initial screening survey (e.g., “How many jobs, if any, have you had in the past five years?” and “When looking for a new job, how many applications do you generally submit?”). A screenshot of this screening survey can be seen in Appendix A.

A total of 3,750 people completed this initial screening survey and were compensated \$0.11 for their participation. Of these 3,750 participants, 764 (20%) met the basic criteria for this study (i.e., they hired at least two people within the past year and had the opportunity to

observe/form an opinion of at least two people they hired) and were invited to participate in the follow-up study (Phase 2).

## **Phase 2**

Of the 764 participants who met this study's basic criteria, 476 (62%) completed the second survey and were compensated \$2.00 for their participation. This follow-up survey, which contained the majority of measures for this study, was administered approximately 10 days after the completion of the initial screening survey.

Some additional screening took place in this second survey due to the need for somewhat more stringent criteria (it was assumed participants had hired at least two people within the past year per their responses to the screening survey in Phase 1). Participants were permitted to complete this survey only if they (1) remembered how they made the hiring decision, (2) had a chance to observe the person they hired, and (3) formed an opinion of the person they hired based on their on-the-job observations of them. Participants were provided an opportunity to describe the person they hired in the form of an open-ended response. If participants did not make a hiring decision that met these criteria, they were instructed to select a "Not Applicable" option which would then direct them to the end of the survey. If participants met these criteria, they were permitted to continue with the survey. Of these initial 476 participants, and after also eliminating those who did not provide complete data, 322 (68%) indicated that they made at least one hiring decision within the past year that met these criteria while 262 (55%) indicated they have made at least two hiring decisions within the past year that met these criteria. A screenshot of how this information was presented to participants is provided in Appendices B and C. Note that this information was presented twice – once for participant's most recent hiring decision and again for their second most recent hiring decision.

Prior to viewing this information, participants first completed a measure of accountability specific to their hiring decisions (measures are described in detail below). Once participants completed this measure, they were then asked to think about their most recent hiring decision and indicate if it met the criteria that is described above. If participants made a hiring decision that met these criteria, they then indicated (1) how they made this decision and (2) evaluated the quality of their choice. To assess how they made the decision, participants completed self-report measures of their (1) deliberative and (2) intuitive decision making processes. To measure the quality of the hiring decisions, participants completed self-report measures of their (1) decision satisfaction, (2) regret, and (3) task performance of these person they hired. This process was then repeated for their second most recent hiring decision (but only if they again met the criteria). After completing these measures, participants then completed some additional control (e.g., impression management) and demographic measures. On average, this study took no longer than 20 minutes to complete.

It should be noted that while the primary focus of this study is on deliberative processes, a measure of intuitive processes/style was included in order to fully denote the expected advantages of deliberation within personnel selection and compare alternative models. If it can be shown that deliberation is not only related to decision quality, but related to decision quality *to a greater extent than intuition*, this can offer additional support for this study's hypotheses and clarification concerning the advantages of using deliberation to make selection decisions.

Furthermore, asking participants to provide information about two concrete examples – as opposed to asking them their about general decision processes/quality – is advantageous for various reasons. For instance, this can help reduce the cognitive demands that would be necessary to integrate information (regarding decision processes/quality) across many decisions

(see Krosnick, 1991). Because people may be unable to integrate large amounts of complex information to determine their generalized decision processes/quality, using two concrete examples may enable respondents to provide more accurate information. Additionally, using two concrete examples may also help decrease socially desirable responding, which is a potential source of bias in self-report data (see Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Presumably, most people would indicate that, in general, they are satisfied with their hiring choices, do not regret their hiring choices, and hire high-performers. Asking people to report the processes/outcomes of two recent, concrete examples may, however, compel people to indicate the processes/outcomes of a hiring decision that did not turn out well (perhaps the person has quit, they have low job performance etc.). Given the possibility of socially desirable responding, assessing generalized processes/outcome may, therefore, overly bias results.

Finally, it should be noted that while the goal of this study was to make between-person comparisons of how selection decisions are made, examining two hiring decisions enables some examination of within-person variability with regard to a person's decision making processes/quality. This can provide the opportunity to verify findings across multiple hiring decisions and determine the extent to which it is appropriate to infer generalized decision making processes on the basis of a single hiring decision.

## **Measures**

All substantive variables were measured on a 7-point Likert-type scale ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). The items for these substantive measures can be found in Appendix D. In Phase 1, two single-item measures were included to determine if participants met the eligibility requirements for Phase 2 of this study (e.g., “How many people, if any, have you hired in the past year?” and “If you have hired people within the past year, how many have



you had a chance to observe on the job and form an opinion about?”). To measure deliberative and intuitive decision styles during Phase 1, participants completed the rational and intuitive subscales of the General Decision Making Style (GDMS) measure (Scott & Bruce, 1995). Two additional distractor-type questions were also included (e.g., “How many jobs, if any, have you had in the past five years?” and “When looking for a new job, how many applications do you generally submit?”).

The remaining measures were administered in Phase 2. Accountability was measured using a modified version of Hochwarter et al.’s (2007) 8-item measure of accountability. An example item is, “I am held very accountable for my actions at work”. This was contextualized to state “I am held very accountable for my *hiring decisions* at work.” All measures followed a similar approach. This was done in order to ensure all measures were specific to the personnel selection decision making domain (see Lake & Highhouse, 2014).

Participants also completed a modified version of the Decision Styles Scale (DSS) measure (Hamilton, Shih, & Mohammed, 2016) that was contextualized for the personnel selection decision making processes. Note this measure differs from the measure of decision making style that was used in Phase 1. This was done in order to mitigate concerns with unnecessary item content overlap, which could result in a poor-fitting measurement model. Participants also completed a modified, 3-item measure of Brehaut et al.’s (2003) Decision Regret Scale (DRS) and a 3-item measure of decision satisfaction that was designed specifically for this study. Williams and Anderson’s (1991) measure of in-role job performance was included to measure task performance. Given the possibility of socially desirable responses for decision quality (e.g., Hogan, 1987), a condensed measure of impression management (Blasberg, Rogers, & Paulhus, 2014) was included at the end of the survey in Phase 2. At the end of the survey,

participants completed some basic demographic information such as gender, race, age, tenure, experience, job status (e.g., full-part time), and industry. In order to ensure high quality data, careless responding was measured by embedding two directed-response questions throughout the survey in Phase 2 (e.g., “Please select ‘agree’ when responding to this item”; Meade & Craig, 2012).

## Chapter 3 - Results

To test the model proposed in this study – which specifies a set of theoretically-derived relations among latent variables – a special form of structural equation modeling (SEM) that accommodates moderation and mediation simultaneously was used (see Muller, Judd, & Yzerbyt, 2005; Sardeshmukh & Vandenberg, 2017). The traditional two-step approach – whereby one first tests the measurement model(s) and then the structural model(s) – was also employed (see Anderson & Gerbing, 1988). Prior to conducting these analyses, however, various SEM assumptions were examined.

### Assumption Checking

An examination of univariate outliers (i.e.,  $Z$ -scores  $\geq |3.29|$ ) indicated that there was no variable that contained more than five outliers (the substantive variables can be seen in Table 1; see Appendix D for a list of items [indicators]). To determine whether multivariate outliers were present, Mahalanobis Distance values were computed for the models that were examined (see Table 2 for a summary of these models). Because Mahalanobis Distance values follow a Chi-Square ( $\chi^2$ ) distribution (see Kline, 2016), values that exceed the  $\chi^2$  critical value (in this case,  $\chi^2 [6] = 22.46, p < .001$ ) can be considered multivariate outliers (where degrees of freedom [6] = the number of model variables). These results indicated that no model contained more than six multivariate outliers. Given these findings, outliers do not appear to be a major source of concern. Regarding multicollinearity, there were no unusually large correlations between exogenous (e.g., predictor) variables indicating that multicollinearity does not appear to be a cause for concern. Finally, regarding normality, the results indicated that most substantive variables were slightly negatively skewed, with skewness ranging from -1.80 to 1.89. This is not too surprising given the nature of these variables, though (e.g., most people experience a minimal

amount accountability at work). This may, however, indicate some slight violations of the assumption of univariate and multivariate normality. Collectively, however, these results indicate that no assumptions were seriously violated. As such, no participants were removed from the analyses on the basis of assumption violations (e.g., outliers).

### **Response Quality**

In addition to examining common SEM assumptions, other aspects of response quality were examined in order to increase confidence in the inferences drawn from the below analyses. First, as described above, careless responding (CR) was assessed by embedding two directed-response items (e.g., “Please select ‘agree’ when responding to this item”) throughout the survey (Meade & Craig, 2012). After the various procedures for data screening were completed (described in detail above), the results indicated that only two participants in the final dataset answered both of the CR items incorrectly. It also is worth noting that the “Not Applicable” option that participants could select (see above) may have also screened out some careless responders (i.e., those responding to all items regardless of item content). These findings indicate that CR is not a serious cause for concern within the final dataset. As such, no participants were removed due to CR. This is beneficial because it ensures adequate power (see Kline, 2016).

Second, to ensure that results are not due to measurement confounds, the effects of mono-method bias were examined (cf. Spector, 2006). To examine this issue in detail, Harman’s single-factor test was conducted (see Podsakoff et al., 2003). For this test, all variables are loaded onto a single factor using an unrotated exploratory factor analysis (EFA). Mono-method bias may be present when either a one-factor solution emerges from the analysis or when a single factor can account for the majority of variance/covariance. To determine if mono-method bias was present, an unrotated EFA using principle axis factoring was conducted by allowing all

items (see Appendix D) for each substantive variable (i.e., those listed in Table 1) to load onto a single latent factor. The results indicated that at least 11 factors were needed to explain the variance among the latent constructs (i.e., 11 eigenvalues  $\geq 1$ ). These results also indicated that the first factor accounted for only 19% of the variance. Together, these findings suggest that mono-method bias is not a serious cause for concern (Podsakoff et al., 2003; see also Spector, 2006).

### **Descriptives Statistics**

A summary of the means, standard deviations, reliability estimates, and correlations between all substantive variables can be seen in Table 1. There are several noteworthy aspects of these results. First, a person's deliberative style was significantly related to their use of deliberative processes for the first hiring decision ( $r = .46, p < .01$ ) and second hiring decision ( $r = .33, p < .01$ ). This suggests that hiring managers preferred making hiring decisions in a manner consistent with the general decision making preferences. Because these relationships were not perfect, however, it appears that there are other important factors that drive deliberative decision making within personnel selection.

Second, there was a significant relationship between deliberative processes for the first and second hiring decision ( $r = .56, p < .01$ ) thereby indicating a considerable amount of consistency in participants' use of deliberative processes. This provides some basis for inferring generalized decision making processes (i.e., deliberation) on the basis of single hiring decision. It should be noted that while this is a large relationship, it does suggest that there is still some within-person variability in the use of deliberative processes that cannot be accounted for within the present study.

Third, for the first hiring decision, there was a significant relationship between deliberative processes and (1) regret ( $r = -.31, p < .01$ ), (2) satisfaction ( $r = .36, p < .01$ ), and (3) performance ratings ( $r = .38, p < .01$ ). A similar pattern emerged for the second hiring decision such that there was a significant relationship between deliberative processes and (1) regret ( $r = -.28, p < .01$ ), (2) satisfaction ( $r = .33, p < .01$ ), and (3) performance ratings ( $r = .30, p < .01$ ). Importantly, these relations were always stronger when examined within a hiring decision than across hiring decisions. For example, the relationship between deliberative processes for hiring decision 1 and satisfaction for hiring decision 1 ( $r = .36$ ) was stronger than the relationship between deliberative processes for hiring decision 1 and satisfaction *for hiring decision 2* ( $r = .16$ ). All results followed a similar pattern. This is important to note because it verifies that the measures are functioning properly. A full account of these comparisons can be found in Table 1.

### **Test of Measurement Models**

All measurement models were estimated using Mplus software (Muthén & Muthén, 1998-2017). First, a series of confirmatory factor analysis (CFA) models were estimated using maximum likelihood. This was accomplished by (1) allowing the indicators (i.e., individual items; see Appendix D) to load onto their respective latent constructs and (2) allowing all latent constructs to correlate among each other. A summary of the latent constructs that were included in the model can be seen in Table 2 (Model 1A). Based on common SEM fit conventions (e.g.,  $RMSEA \leq .08$ ,  $CFI \geq .95$ ,  $TLI \geq .95$ ,  $SRMR \leq .08$ ; see Hu & Bentler, 1999; Kline, 2016), the results indicated that the model adequately fit the data ( $\chi^2 = 1088.69 [419], p < .001$ ,  $RMSEA = .07$ ,  $CFI = .90$ ,  $TLI = .89$ ,  $SRMR = .07$ ; see Table 2, Model 1A).

An inspection of the source of model misfit using modification indices indicated that two of the indicators for task performance (Items 6 and 7; see Appendix D) had highly correlated

residual variances. Interestingly, these were also the only items that were reverse-coded. Previous research has indicated that reverse-coded items can often cause problems in CFA estimation (Magazine, Williams, & Williams, 1996) and serve as a source of measurement error (Podsakoff et al., 2003; Roszkowski & Soven, 2010). For these reasons, researchers often recommend against the use of reverse-coded items (DeVellis, 2017; Lindwall et al., 2012). Because there are substantive, empirically-based reasons for the removal of these items (see Kline, 2016), these two reverse-coded items were omitted from all subsequent analyses. A new measurement model was then estimated based on this decision. The exclusion of these two reverse-coded items substantially improved the fit of the measurement model ( $\chi^2 = 666.85$  [362],  $p < .001$ , RMSEA = .05, CFI = .95, TLI = .94, SRMR = .06; see Table 2, Model 1B).

### **Test of Hypotheses (Structural Models)**

Upon deriving a good-fitting measurement model, a structural model was then estimated (corresponding to Model 1B in Table 2). This was again accomplished with the use of Mplus software (Muthén & Muthén, 1998-2017) and estimated with maximum likelihood. In order to compute model fit indices, it was necessary to estimate the structural model *without* the inclusion of the latent moderation effects. The results indicated that the model fit the data well ( $\chi^2 = 674.80$  [368],  $p < .001$ , RMSEA = .05, CFI = .95, TLI = .95, SRMR = .06; Table 3, Model 1A). After assessing the fit of the model, to test the hypotheses, the path coefficients for the primary model were estimated (and moderation effects were estimated). Tests of moderation were accomplished with the use of the “XWITH” command in Mplus (see Sardeshmukh & Vandenberg, 2017). This command permits the specification of latent variable interactions while simultaneously allowing mediation effects to be modeled (deliberative decision making processes in this case). The results

for each hypothesis are described in detail below. These results are also summarized in Figure 2 and Table 4.

### **Hypothesis 1**

Hypothesis 1 stated that accountability will be positively related to deliberative decision making processes (Figure 1, path 1). The results indicated that this hypothesis was supported such that hiring managers with higher accountability perceptions were more likely to report using deliberative decision making processes ( $\gamma = .43$ ,  $SE = .06$ ,  $p < .01$ ).

### **Hypothesis 2a**

Hypothesis 2a stated that deliberative decision making processes will be positively related to perceptions of the hired employee's task performance (Figure 1, path 2). The results indicated that that this hypothesis was supported such that hiring managers who reported using deliberative decision making processes were more likely to rate the task performance of the person they hired as high ( $\beta = .81$ ,  $SE = .13$ ,  $p < .01$ ).

### **Hypothesis 2b**

Hypothesis 2b stated that deliberative decision making processes will be positively related to decision satisfaction (Figure 1, path 3). The results indicated that that this hypothesis was supported such that hiring managers who reported using deliberative decision making processes were more likely to be satisfied with their hiring choice ( $\beta = .76$ ,  $SE = .13$ ,  $p < .01$ ).

### **Hypothesis 2c**

Hypothesis 2c stated that deliberative decision making processes will be negatively related to decision regret (Figure 1, path 4). The results indicated that that this hypothesis was supported such that hiring managers who reported using deliberative decision making processes were less likely to regret their hiring choice ( $\beta = -.86$ ,  $SE = .16$ ,  $p < .01$ ).



### **Hypothesis 3**

Hypothesis 3 stated that deliberative decision making processes mediate the relationship between accountability and decision quality (perceived task performance, decision satisfaction, decision regret) such that higher perceptions of accountability lead to more deliberative decision making processes, which in turn lead to higher quality decisions (Figure 1, path 1+2, path 1+3, path 1+4). To test this hypothesis, a series of indirect effects were calculated. This was accomplished with the use of the “IND” command in Mplus. It should be noted that Mplus is unable to estimate latent variable interactions and indirect effects concurrently. Accordingly, Hypothesis 3 was tested without the inclusion of latent interaction terms. The results indicated that this hypothesis was supported such that there were significant indirect effects between (1) accountability and regret (path 1+2; coefficient =  $-.33$ ,  $SE = .07$ ,  $p < .01$ ), (2) accountability and satisfaction (path 1+3; coefficient =  $.31$ ,  $SE = .06$ ,  $p < .01$ ), and (3) accountability and task performance (path 1+4; coefficient =  $.34$ ,  $SE = .06$ ,  $p < .01$ ) with deliberative decision making processes serving as the mediator (see Table 5). In other words, one of the reasons why accountability results in higher quality hiring decisions is because it facilitates deliberative decision making processes.

### **Hypothesis 4**

Hypothesis 4 stated that a person’s deliberative decision making style will be positively related to their deliberative decision making processes (Figure 1, path 5). The results indicated that that this hypothesis was supported such that hiring managers who reported having a deliberative decision making style were more likely to use deliberative decision making processes for their hiring decision ( $\gamma = .39$ ,  $SE = .06$ ,  $p < .01$ ).

## Hypothesis 5

Hypothesis 5 stated that a person's deliberative decision making style moderates the relationship between accountability and deliberative decision making processes such that deliberative processes are highest when accountability and deliberative style are high but the relationship between accountability and deliberation decision making processes is stronger for those with a low deliberative style (Figure 1, path 6). The results indicated that this hypothesis was supported (latent moderator variable  $\gamma = -.32$ ,  $SE = .08$ ,  $p < .01$ ). To examine this moderation effect in detail, two additional models were estimated for people with a high deliberative style ( $Z$ -scores  $> 0$ ) and low deliberative style ( $Z$ -scores  $< 0$ ). In order for the models to converge properly, moderation terms were not included. The results indicated that for people with a low deliberative style, there was a stronger relationship between accountability and deliberative processes ( $\gamma = .54$ ,  $SE = .10$ ,  $p < .01$ ) than those with a high deliberative style ( $\gamma = .44$ ,  $SE = .08$ ,  $p < .01$ ; baseline model path with all participants,  $\gamma = .44$ ,  $SE = .06$ ,  $p < .01$ ). Deliberative processes were higher, however, when people possessed a deliberative style. These results are illustrated in Figure 3.

## Hypotheses 6a – 6c

Hypotheses 6a – 6c stated that a person's deliberative decision making style moderates the relationship between deliberative decision making processes and perceived task performance, satisfaction, and regret such that perceived task performance and satisfaction are higher (and regret lower) when deliberative processes/style are high (Figure 1, path 7, 8, and 9). The results did not support these hypotheses as there was no significant interaction between deliberative decision making processes and decision making style on (1) regret, (latent moderator variable  $\gamma =$

-.21,  $SE = .16$ ,  $p = .19$ ), (2), satisfaction, (latent moderator variable  $\gamma = .10$ ,  $SE = .13$ ,  $p = .43$ ), or performance (3), (latent moderator variable  $\gamma = .07$ ,  $SE = .12$ ,  $p = .58$ ; see Figure 2, Table 5).

Overall, these results provide support for most of the hypotheses. A person's accountability perceptions, along with having a preference for deliberative decision making, are both positively related to the use of deliberative processes for hiring decisions. These deliberative processes are in turn associated with multiple indicators of decision quality (i.e., high choice satisfaction, low decision regret, and high task performance of the person that was hired). There was mixed support for the moderating effects of decision making style, though. While decision congruence did seem to further encourage the use of deliberation (Hypothesis 5), congruence did not result in better (or worse) decision outcomes (Hypotheses 6a – 6c).

### **Test of Alternative Models**

In order to further support the model that was proposed in this study and verify the above results, a variety of other alternative models were examined. First, the results of the above SEM analysis were replicated by conducting the same analysis on the second hiring decision. This can help rule out alternative explanations for the above findings (e.g., that results are due to something idiosyncratic about first hiring decision) and increase confidence in the pattern of results detailed above. Second, two additional models (for hiring decision 1 and hiring decision 2) that incorporated intuitive style (in place of deliberative style) and intuitive processes (in place of deliberative processes) were also examined. Comparing alternative models is important because it can offer theoretical support for the model that is proposed (see Edwards & Berry, 2010). If, on one hand, the relations between deliberative processes and the other substantive variables (accountability, performance etc.) are no different from the relations between intuitive processes and these variables, this could call into question the appropriateness of the model. On

the other hand, if the relations between deliberative processes and the relevant variables are substantially different (i.e., stronger) than the relations between intuitive processes and such variables, this can increase confidence in the validity and theoretical appropriateness of the proposed model.

### **Model Replication**

To test the first alternative model, the same analysis described above was conducted on the second hiring decision (Table 2, Model 2B). Note that as in the above analysis, reverse coded items were not included in any of the below analyses. As seen in Table 2 (Model 2B) and Table 3 (Model 1B), the measurement and structural models both displayed good fit. Most importantly, the parameter estimates for the structural model were very similar to those for the first hiring decision (see Tables 4 and 5). The main difference was that there was no significant interaction between accountability and deliberative style (i.e., decision congruence; latent moderator variable  $\gamma = -.13$ ,  $SE = .16$ ,  $p = .41$ ) as there was for the first hiring decision. Also, these results tended to have somewhat smaller effect sizes compared to the first hiring decision, though they are still moderate/large effects in an absolute sense. Collectively, these results are consistent with those found for the first hiring decision and help increase confidence in the proposed model. Furthermore, showing that this model is consistent across multiple hiring decisions provides some additional justification for inferring generalized decision making processes on the basis of a single hiring decision.

### **Alternative Model Comparisons**

Next, two additional models were estimated by substituting deliberative processes with intuitive processes and deliberative style with intuitive style. As seen in Table 2 (Models 3B and 4B) and Table 3 (Models 2A and 2B), the measurement and structural models again displayed

good fit. An examination of the parameter estimates for the structural models, however, revealed many notable differences between these models and those that included deliberative processes and deliberative style (see Table 4). For example, these results indicated that for both hiring decisions, there was no significant relationship between intuitive processes and accountability (Hiring decision 1,  $\gamma = -.00$ ,  $SE = .11$ ,  $p = .98$ ; Hiring decision 2,  $\gamma = .09$ ,  $SE = .16$ ,  $p = .58$ ). In fact, the only consistent result across the two hiring decisions was that a person's intuitive style was significantly related to their use of intuitive processes (Hiring decision 1,  $\gamma = .60$ ,  $SE = .07$ ,  $p < .01$ ; Hiring decision 2,  $\gamma = .61$ ,  $SE = .08$ ,  $p < .01$ ) – a rather unsurprising finding. Also, while there was a positive relationship between intuitive processes and satisfaction and performance for the second hiring decision, these effect sizes were much smaller compared to those between deliberative processes and satisfaction and performance. Furthermore, there were no significant indirect effects between accountability and the three indicators of decision quality with intuitive processes as the mediator (see Table 5).

To further compare these alternative models to the primary study model, the amount of variance in the endogenous variables that can be accounted for ( $R^2$ ) by the all model variables was computed (see Table 6). For the three indicators of decision quality (regret, satisfaction, and performance), the results indicated that a substantially larger amount of variance can be explained by the models that include deliberative processes/style than intuitive processes/style. For example, for decision 1 (and the model containing deliberative processes/style), 11%, 16%, and 18% of the variance in regret, satisfaction, and performance was explained by the variables included in the model. In contrast, for decision 1 (and the model containing intuitive processes/style), 2%, 1%, and 0% of the variance in regret, satisfaction, and performance was explained by the variables included in the model. A similar pattern of results emerged for

decision 2. Taken as a whole, the results from these alternative models help increase confidence in the validity of the model that was proposed in this study.

## Chapter 4 - Discussion

Given the importance and prevalence of decision making within organizations, the goal of the present study was to propose a model of some antecedents and consequences of deliberative decision making within personnel selection. Overall, this study's hypotheses were largely supported. When hiring managers possessed a deliberative decision making style and felt accountable for their hiring decisions, they were more likely to report making selection decisions in a deliberative manner. Furthermore, the use of deliberative processes was associated with lower regret, higher satisfaction, and higher performance ratings of the job applicant that was hired. Furthermore, these results suggest that one reason accountability results in higher quality decisions is because it facilitates deliberative processes. This pattern of results was consistent across multiple hiring decisions. Importantly, this pattern of results did not emerge when intuitive processes/style were examined in place of deliberative processes/style, thereby providing additional support for the proposed model.

While the majority of hypotheses were supported, there was mixed support for the presence of decision making style-process congruence. For hiring decision 1, hiring managers who felt accountable and possessed a deliberative style were more likely to use deliberative processes. This was not the case for hiring decision 2, though. Furthermore, there did not appear to be any added benefits of decision congruence on decision quality. While this stands in contrast to some initial research on this topic (e.g., Betsch & Kunz, 2008), there are various potential explanations for this. For example, it is possible that people simply do not make higher quality decisions when making personnel selection decisions in their preferred manner. It is also possible that the deliberation-inducing aspects of accountability are so compelling that a person's deliberative style becomes irrelevant. In other words, managers may already be utilizing

deliberative processes when they are held accountable such that additional deliberation (due to having a deliberative style) is not possible or feasible. Support for this latter interpretation comes from the fact that deliberation increased more for those with a low deliberative style as accountability increased. For those with a high deliberative style, there was a smaller increase in the use of deliberative processes as accountability increased. Future research will be needed to further explore these various possibilities. Despite the mixed support found for decision style-process congruence effects, this study has many important theoretical and practical implications.

### **Theoretical Implications**

From a theoretical perspective, this study makes some important, novel contributions. For example, while both theory and laboratory-based research indicate that deliberation often results in more optimal decisions (e.g., Bishop & Trout, 1999; Phillips et al., 2016), such theory/research has rarely been extended to naturalistic settings such as personnel selection. By showing that deliberation was associated with various indicators of decision quality, this study helps establish the ecological validity of theories of deliberation. For example, dual-process theories of decision making frequently emphasize how deliberation results in high quality decisions (Evans, 2008; Evans & Stanovich, 2013). The results of this study suggest that such findings generalize to applied work settings such as the personnel selection context. In a similar manner, social contingency theories of decision making emphasize how external factors (e.g., accountability) encourage the use of deliberation and often improve decision making (Lerner & Tetlock, 1999; Tetlock, 2002). The results of this study also establish the ecological validity of such perspectives as managers who felt more accountable for their hiring decisions were more likely to use deliberative processes and tended to make higher quality decisions.



By showing that accountability and a person's deliberative decision making style were related to their use of deliberative processes for selection decisions, this study also contributes to person-by-environment perspectives of decision making (e.g., Murphy, 2014). Interestingly, while the results of this study indicated that both accountability and a person's deliberative style were related to deliberative processes for selection decisions, there were no consistent interactions between these variables on managers' deliberative processes or decision outcomes. As noted above, this may be because there are no additive benefits having a deliberative style or because a person's deliberative style is less relevant if they are already making decisions in a deliberative manner. Regardless of why this might be the case (of which future research is needed), this is important because it suggests that deliberation can be engendered by either accountability or a person's deliberative style. Thus one may not have to both hold someone else accountable and ensure they have a deliberative style to engender deliberative processes; the utilization of deliberative processes may come about because of the presence of just one of these antecedents (since there are no additive effects). Whether or not this challenges person-by-environment perspectives of decision making will need to be further investigated. This could be accomplished with the use of experimental designs that incorporate the substantive variables that were examined in the present study (e.g., accountability, deliberation etc.). An examination of decision congruence effects in such settings could clarify if the null findings in this study are due to the constructs themselves or some aspect of the design used in the present study.

It is also worth noting that while employees often have preferences for using intuition to make hiring decisions (Lodato et al., 2011), the results of this study indicated that intuition was seldom associated with high quality decisions (when it was, effect sizes were small). These results are consistent with research showing that intuitive processes lead to suboptimal selection

decisions (Highhouse, 2008). What has remained less clear is the extent to which deliberation is related to the quality of selection decisions. The present study, however, indicated that deliberation was consistently related to high quality selection decisions thus addressing a rather considerable gap within the personnel selection literature.

Finally, this study clarifies why accountability improves decision making by integrating previously unconnected relationships (e.g., accountability-deliberation, deliberation-satisfaction etc.) into a cohesive model. Specifically, this study indicates that accountability improves decision quality because it induces deliberative processes. While the deliberation-inducing aspects of accountability have been theorized to improve decision quality (e.g., Rus et al., 2012), up to this point, this has not been empirically examined. Knowledge of how accountability might relate to decision quality is particularly important because accountability is often viewed as a panacea for many problems, despite the absence of empirical evidence in some cases (see Lerner & Tetlock, 1999). By providing empirical evidence and a theoretically-grounded explanation for why accountability is related to higher quality decisions in an applied context, however, this study provides support concerning the benefits of accountability for improving decision making.

### **Practical Implications**

The findings in this study suggest that it is in an organization's interest for their employees to use deliberative processes when making hiring decisions. For example, hiring managers that reported using deliberative processes were more likely to rate the task performance of the person they hired as high. If employees that are hired on the basis of deliberative processes do indeed have higher task performance, training employees in the use of such processes would be beneficial for an organization's productivity and financial success. This would also be beneficial from the worker's perspective as the use of deliberative processes might

engender higher task performance (and thus greater job security, more opportunities for promotion etc.).

The results of this study also suggest several potential ways for organizations to encourage employees to use deliberative processes. For example, the results indicated that accountability was positively related to managers' use of deliberation. Thus one way to increase deliberation is to increase accountability. It is important to note that accountability, as defined in the present study, is perceptual and not necessarily an objective phenomenon. Consequently, organizations may not necessarily need to develop comprehensive, formal accountability systems for increasing accountability. They could instead focus on ways to create expectations that employees may be required to justify their decisions to another constituent (such as a manager; see Hall et al., 2017). Organizations may accomplish this by introducing simple procedural changes that hiring managers are required to follow. This could entail requiring managers to conduct a structured interview or use an evaluation rubric to rate the applicants on various attributes/qualifications. Presumably, such procedural requirements could induce accountability and thus engender deliberation.

Finally, the results of this study indicated that there was a positive relationship between a person's deliberative style and their use of deliberative processes. Accordingly, it may be beneficial for organizations to select managers on the basis of their deliberative style. Because these managers would already have a proclivity for deliberation, they may be more receptive to using more deliberative selection techniques (e.g., a structured interview, decision aids, cognitive ability tests etc.). Put another way, it will be easier to convince people with a deliberative style to utilize deliberative processes and thus make more optimal hiring decisions.

## **Limitations and Future Directions**

Despite the important theoretical and practical implications of this study, there are some limitations and directions for future research that should be acknowledged. First, causality on the basis of the SEM results cannot be inferred (see Bollen & Pearl, 2013). Despite this limitation, there is considerable empirical, logical, and theoretical support for the model that was proposed in this study. Empirically, the model that was proposed was a good fit for the data. Logically, because decision outcomes (regret, satisfaction, and performance) cannot by definition precede the processes that were used to make the decision (deliberation), this increases confidence in the directionality that was specified in the model. Theoretically, accountability effects people's decision making processes. The inverse direction has not been theorized or examined empirically. Indeed, previous experimental research has consistently demonstrated a causal relationship between accountability and person's decision making processes (e.g., Lerner & Tetlock, 1999). Collectively, while these considerations do not make definitive causal claims appropriate, they do lend support to the plausibility of the model that was proposed in this study.

It should be further noted that a true experimental version of the present study would be very difficult to conduct. For instance, this would require randomly assigning managers from different companies and geographic locations to either a condition where they are held accountable or a condition where they are not accountable and then observing how they make selection decisions over time. Such an approach is probably not feasible. Accordingly, the design that was used in the present study represents an ideal way to address this study's substantive aims despite the inability to make definitive causal assertions.

Second, while not the primary aim of the present study, within-person variance in managers' deliberative processes cannot be fully accounted for. The results did, however, reveal

considerable consistency in how managers make hiring decisions. The proposed model did also replicate across multiple hiring decisions (with the exception of a nonsignificant interaction term). This consistency may be explained by variables that are currently in the model. For instance, when accountability is high, someone may make consistently deliberative decisions. Similarly, if a person has a high deliberative style, they may also make decisions in a consistent, deliberative manner. It is possible, however, that variables other than those included in the present model may be able to account for this consistency. Because hiring managers' decisions were not completely consistent, it may also be the case that variables other than those included in the present study may be able to account for the within-person variability that was observed (e.g., transient external factors such as time pressure). Since the goal of the present study was to focus on between-person, rather than within-person, comparisons of decision making, future research could focus on more clearly delineating the within-person variability in hiring manager's use of deliberation. This could be accomplished the use of longitudinal designs that incorporate additional variables than those included here.

Third, while mono-method bias did not appear to be a major cause for concern, some mono-method effects may have still been present. For example, participants did not appear to differentiate much between the various indicators of decision quality (i.e., regret, satisfaction, and task performance) which could indicate the presence of some mono-method bias. Alternatively, this could reflect a sort of halo effect (e.g., Balzer & Sulsky, 1992) whereby managers used their overall evaluation of the person they hired to form their judgement rather than thinking through the various subtleties of the different dimensions of decision quality. It is also possible that this lack of differentiation could reflect a sort of sunk cost effect (e.g., Arkes & Ayton, 1999). For example, because managers presumably put a lot of effort into making these

decisions, they might be especially motivated to think that they did indeed make a good decision (e.g., cognitive consonance effects). It should be noted, however, that the relations between the three indicators of decision quality were small across both hiring decisions (with the highest being between regret for decision 1 and regret for decision 2,  $r = .24$ ; see Table 1) which indicates that managers were making distinctions across hiring decisions. Furthermore, because few significant relations were observed between intuition and the indicators of decision quality, this can help rule out cognitive consonance confounds (e.g., Hogan, 1987). Future research will be needed to more clearly understand this lack of differentiation and continue determining ways to investigate decision quality, though.

Finally, while managers provided information about the decision processes they used to make their hiring decisions, it is still possible that hiring managers' self-reported information does not reflect their actual behavior. For example, while managers indicated that they utilized deliberative processes, this cannot be behaviorally verified within the present study. It may be beneficial for future research to focus on specific behavioral indicators of deliberative decision making (e.g., decision aids, structured interviews etc.) to further verify the results reported here.

## **Conclusion**

Although hiring decisions are ubiquitous, little research has been conducted on the antecedents and consequences of specific decision processes that managers use. This study helps address this notable gap by proposing a model of some antecedents and consequences of deliberative decision making within personnel selection. By showing what variables are related to a person's use of deliberative processes, and that deliberation results in high quality selection decisions, this study makes important contributions to the applied JDM and I/O psychology

literatures. It is hoped that the information provided within the present study can be leveraged by both organizations and workers to help engender more optimal decision making at work.

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Figure 1. Conceptual Model

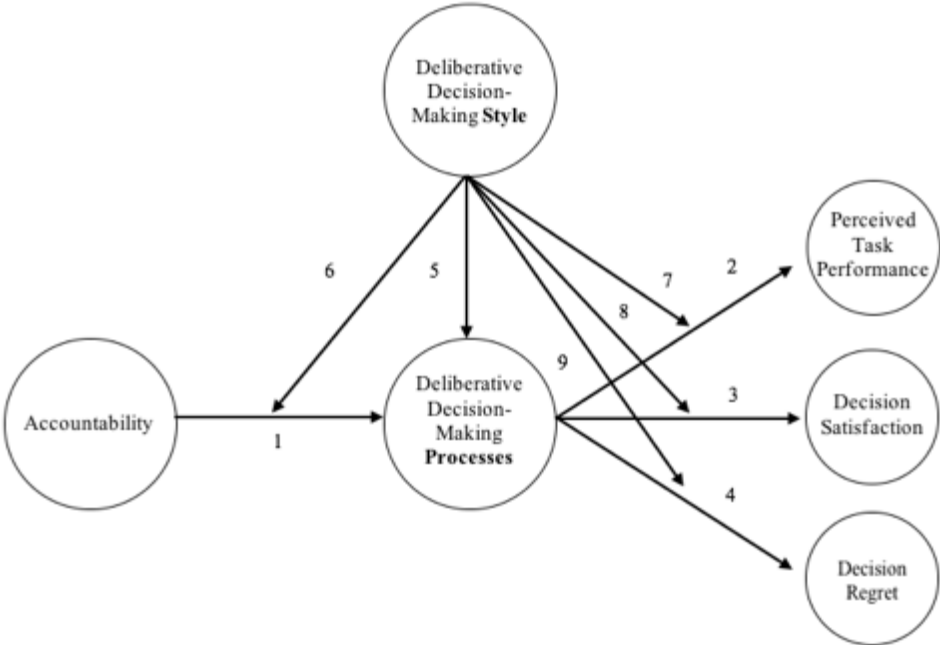
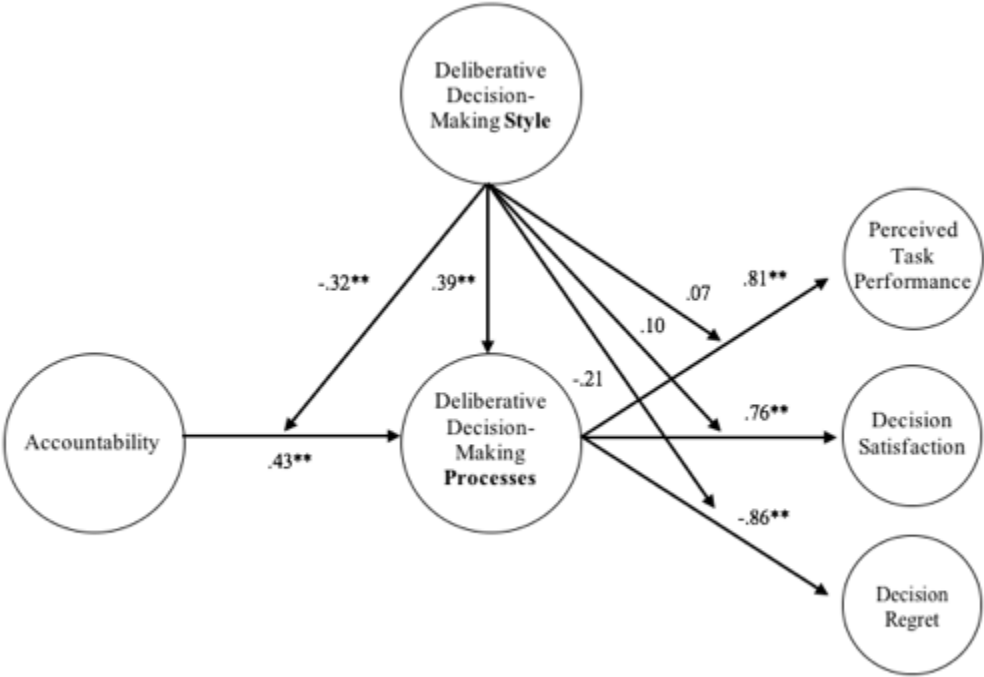
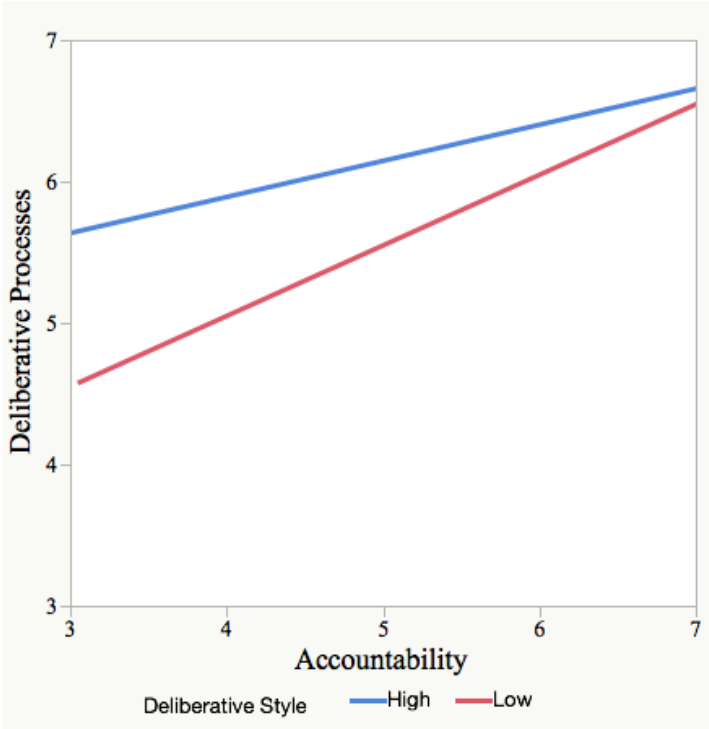


Figure 2. Summary of Model (Table 3, 1A) Results.



**Figure 3. Interaction Between Accountability and Deliberative Style**



**Table 1. Correlations Between Substantive Variables.**

*Correlations, Descriptive Statistics, and Reliability Estimates for Substantive Variables.*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Deliberative Style	5.96	0.78	(.88)												
2. Intuitive Style	4.73	1.31	.03	(.91)											
3. Accountability	5.55	0.85	.23**	.12*	(.81)										
4. Deliberative Processes (D1)	6.09	0.79	.46**	.03	.42**	(.87)									
5. Intuitive Processes (D1)	4.23	1.29	-.12*	.50**	.07	-.14*	(.87)								
6. Regret (D1)	2.27	1.62	-.13*	.12*	-.04	-.31**	.17**	(.93)							
7. Satisfaction (D1)	5.83	1.26	.12*	.04	.16**	.36**	.07	-.68**	(.90)						
8. Performance Ratings (D1)	5.82	1.10	.18**	-.01	.20**	.38**	.04	-.67**	.82**	(.86)					
9. Deliberative Processes (D2)	5.98	0.90	.33**	-.05	.19**	.56**	-.03	-.21**	.22**	.28**	(.90)				
10. Intuitive Processes (D2)	4.04	1.59	-.09	.47**	.06	-.14*	.70**	.16**	-.03	.00	-.21**	(.93)			
11. Regret (D2)	2.76	1.89	-.15*	-.02	-.09	-.16**	.05	.24**	-.02	-.09	-.28**	-.05	(.95)		
12. Satisfaction (D2)	5.32	1.71	.09	.13*	.13*	.16**	.08	.04	.03	.06	.33**	.13*	-.77**	(.95)	
13. Performance Ratings (D2)	5.44	1.36	.13*	.14*	.17*	.15**	.11	.02	-.04	.07	.30**	.15*	-.76**	.87**	(.89)

*Note.* \*  $p < .05$ , \*\* $p < .01$ . Reliability estimates (coefficient alpha) are presented in parentheses along the diagonal. D1 = Hiring decision 1. D2 = Hiring decision 2. For hiring decision 1,  $N = 322$ . For hiring decision 2,  $N = 262$ . The performance ratings for both decisions were computed without using the reverse-coded items as described in the “Test of Measurement Models” section.

**Table 2. Summary of Measurement Models and Fit Indices.***Summary of Confirmatory Factor Analysis Measurement Model Results, Variables included in Each Model and Fit Indices.*

Model	Description	$\chi^2$ (df)	RMSEA	CFI	TLI	SRMR
Model 1A	Accountability, Deliberative Style, Deliberative Processes (D1), Satisfaction (D1), Regret (D1), Task Performance (D1)	1088.69* (419)	.07	.90	.89	.07
Model 1B†	Accountability, Deliberative Style, Deliberative Processes (D1), Satisfaction (D1), Regret (D1), Task Performance (D1); No reverse-coded items	666.85* (362)	.05	.95	.94	.06
Model 2A	Accountability, Deliberative Style, Deliberative Processes (D2), Satisfaction (D2), Regret (D2), Task Performance (D2)	954.65* (419)	.07	.92	.91	.06
Model 2B	Accountability, Deliberative Style, Deliberative Processes (D2), Satisfaction (D2), Regret (D2), Task Performance (D2); No reverse-coded items	675.93* (362)	.06	.95	.94	.06
Model 3A	Accountability, Intuitive Style, Intuitive Processes (D1), Satisfaction (D1), Regret (D1), Task Performance (D1)	1232.84* (419)	.08	.89	.88	.08
Model 3B	Accountability, Intuitive Style, Intuitive Processes (D1), Satisfaction (D1), Regret (D1), Task Performance (D1); No reverse-coded items	786.96* (362)	.06	.94	.93	.06
Model 4A	Accountability, Intuitive Style, Intuitive Processes (D2), Satisfaction (D2), Regret (D2), Task Performance (D2)	996.20* (419)	.07	.92	.91	.06
Model 4B	Accountability, Intuitive Style, Intuitive Processes (D2), Satisfaction (D2), Regret (D2), Task Performance (D2); No reverse-coded items	711.08* (362)	.06	.95	.94	.05

*Note.* \* $p < .001$ . †Primary model used to test structural relations between latent variables (i.e., hypotheses). D1 = Hiring decision 1. D2 = Hiring decision 2. RMSEA = Root Mean Square Error of Approximation. CFI = Comparative Fit Index. TLI = Tucker-Lewis Index. SRMR = Standardized Root Mean Square Residual. For hiring decision 1,  $N = 322$ . For hiring decision 2,  $N = 262$ .



**Table 3. Summary of Structural Models and Fit Indices.**

*Summary of Structural Models (Without Moderation) and Fit Indices.*

Model	Description	$\chi^2$ (df)	RMSEA	CFI	TLI	SRMR
Model 1A†	Deliberative style/processes; hiring decision 1	674.80* (368)	.05	.95	.95	.06
Model 1B	Deliberative style/processes; hiring decision 2	685.97* (368)	.06	.95	.94	.06
Model 2A	Intuitive style/processes; hiring decision 1	807.07* (368)	.06	.93	.93	.08
Model 2B	Intuitive style/processes; hiring decision 2	722.07* (368)	.06	.95	.94	.07

*Note.* \* $p < .001$ . †Primary model used to test structural relations between latent variables (i.e., hypotheses). Reverse-coded items not included in these analyses. RMSEA = Root Mean Square Error of Approximation. CFI = Comparative Fit Index. TLI = Tucker-Lewis Index. SRMR = Standardized Root Mean Square Residual. For hiring decision 1,  $N = 322$ . For hiring decision 2,  $N = 262$ .

**Table 4. Parameter Estimates for Structural Models.**

*Summary of Parameter Estimates for Structural Equation Models.*

Pathway	Hiring Decision 1		Hiring Decision 2	
	Estimate	SE	Estimate	SE
<b>Deliberative Processes</b>				
Accountability → Deliberative Processes	.43**	.06	.30**	.10
Deliberative Style → Deliberative Processes	.39**	.06	.44**	.09
Accountability × Deliberative Style → Deliberative Processes	-.32**	.08	-.13	.16
Deliberative Processes → Regret	-.86**	.16	-.57**	.13
Deliberative Processes → Satisfaction	.76**	.13	.67**	.12
Deliberative Processes → Performance	.81**	.13	.63**	.12
Deliberative Style × Deliberative Processes → Regret	-.21	.16	.04	.17
Deliberative Style × Deliberative Processes → Satisfaction	.10	.13	.10	.16
Deliberative Style × Deliberative Processes → Performance	.07	.12	.08	.16
<b>Intuitive Processes</b>				
Accountability → Intuitive Processes	-.00	.11	.09	.16
Intuitive Style → Intuitive Processes	.60**	.07	.61**	.08
Accountability × Intuitive Style → Intuitive Processes	.01	.09	.25*	.13
Intuitive Processes → Regret	.18*	.07	-.06	.06
Intuitive Processes → Satisfaction	.11	.07	.16*	.07
Intuitive Processes → Performance	.04	.06	.15*	.06
Intuitive Style × Intuitive Processes → Regret	-.03	.05	-.05	.05
Intuitive Style × Intuitive Processes → Satisfaction	.13**	.04	.06	.05
Intuitive Style × Intuitive Processes → Performance	.12**	.04	.09	.05

*Note.* \* $p < .05$ , \*\* $p < .01$ . Parameters represent unstandardized estimates.

**Table 5. Indirect Effects for Structural Models.**

*Summary of Indirect Effects for Structural Equation Models (Without Moderation).*

Pathway	Hiring Decision 1		Hiring Decision 2	
	Estimate	SE	Estimate	SE
<b>Deliberative Processes</b>				
(Accountability → Deliberative Processes) × (Deliberative Processes → Regret)	-.33**	.07	-.17*	.07
(Accountability → Deliberative Processes) × (Deliberative Processes → Satisfaction)	.31**	.06	.19*	.08
(Accountability → Deliberative Processes) × (Deliberative Processes → Performance)	.34**	.06	.18*	.07
<b>Intuitive Processes</b>				
(Accountability → Intuitive Processes) × (Intuitive Processes → Regret)	-.00	.02	-.00	.01
(Accountability → Intuitive Processes) × (Intuitive Processes → Satisfaction)	.00	.01	.01	.03
(Accountability → Intuitive Processes) × (Intuitive Processes → Performance)	.00	.00	.01	.02

*Note.* \* $p < .05$ , \*\* $p < .01$ . Parameters represent unstandardized estimates.

**Table 6. Variance Explained by Model Variables.**

*Summary of the Variance Explained ( $R^2$ ) by Model Variables (Without Moderation).*

Variable	Hiring Decision 1 $R^2$	Hiring Decision 2 $R^2$
<b>Deliberative Processes</b>		
Deliberative Processes	46%	18%
Regret	11%	9%
Satisfaction	16%	13%
Performance	18%	12%
<b>Intuitive Processes</b>		
Intuitive Processes	31%	26%
Regret	2%	0%
Satisfaction	1%	2%
Performance	0%	2%

# Appendix A - Screenshot of Screening Survey

Please respond to the following statements concerning how you generally make decisions:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I double-check my information sources to be sure I have the right facts before making decisions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I make decisions in a logical and systemic way.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My decision making requires careful thought.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When making a decision, I consider various options in terms of a specific goal.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I explore all of my options before making a decision.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
When making decisions, I rely upon my instincts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I make decisions, I tend to rely on my intuition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I generally make decisions that feel right to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I make a decision, it is more important for me to feel the decision is right than to have a rational reason for it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I make a decision, I trust my inner feelings and reactions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How many jobs, if any, have you had within the past 5 years?

When looking for a new job, how many applications do you generally submit?

How many people, if any, have you hired within the past year?

If you have hired people within the past year, how many have you had a chance to observe on the job and form an opinion about?

Continue

# Appendix B - Screenshot of Hiring Decision 1

## First Hiring Decision!



For the next part of this survey, please think about the most recent hiring decision you have made within the past year that meets the following **criteria**:

- 1). You remember *how* you made the hiring decision.
- 2). You have had a *chance to observe* the person you hired on the job.
- 3). You have *formed an opinion* of the person you hired based on your on-the-job observations of them.

Please very briefly describe this hiring decision (e.g., "The person I have in mind is someone I hired about 3 months ago to fill a sales manager position at my company").

"If you have **not** made a hiring decision that meets these criteria, please select the "Not Applicable" option from the drop-down list below and proceed with the survey.

Continue

## Appendix C - Screenshot of Hiring Decision 2

### Second Hiring Decision!



For the next part of this survey, please think about the **second most recent** hiring decision you have made within the past year that meets the following **criteria**:

- 1). You remember *how* you made the hiring decision.
- 2). You have had a *chance to observe* the person you hired on the job.
- 3). You have *formed an opinion* of the person you hired based on your on-the-job observations of them.

Please very briefly describe this hiring decision (e.g., "The person I have in mind is someone I hired about 5 months ago to fill an administrative assistant position at my company").

\*If you have **not** made a hiring decision that meets these criteria, please select the "Not Applicable" option from the drop-down list below and proceed with the survey.

Continue

## Appendix D - List of Study Measures and Items

**Accountability** (Hochwarter et al., 2007):

*Please respond to the following items concerning your hiring decisions at work:*

1. I am held very accountable for my hiring decisions at work.
2. I often have to explain why I make certain hiring decisions at work.
3. Top management holds me accountable for all of my hiring decisions.
4. If my hiring decisions do not go the way that they should, I will hear about it from top management.
5. To a great extent, the success of my immediate work group rests on my hiring decisions.
6. The jobs of many people at work depend on the success or failure of my hiring decisions.
7. In the grand scheme of things, my hiring decisions at work are very important.
8. Co-workers, subordinates, and bosses closely scrutinize my hiring decisions at work.

**Decision Making Style** (Scott & Bruce, 1995; administered during Phase 1):

*Please respond to the following statements concerning how you generally make decisions:*

Deliberative Style:

1. I double-check my information sources to be sure I have the right facts before making decisions.
2. I make decisions in a logical and systemic way.
3. My decision making requires careful thought.
4. When making a decision, I consider various options in terms of a specific goal.
5. I explore all of my options before making a decision.

Intuitive Style:

6. When making decisions, I rely upon my instincts.
7. When I make decisions, I tend to rely on my intuition.
8. I generally make decisions that feel right to me.
9. When I make a decision, it is more important for to feel the decision is right than to have a rational reason for it.
10. When I make a decision, I trust my inner feelings and reactions.

**Decision Making Processes** (Hamilton et al., 2016; administered 2 times to each participant: once for each hired employee that is rated):

*Please indicate you made this [first, second] hiring decision:*

Deliberative Processes:

1. I gathered all the necessary information before committing to this hiring decision.
2. I thoroughly evaluated the decisions alternatives before making this hiring choice.
3. I took time to contemplate the pros/cons or risks/benefits for this hiring decision.



4. Investigating the facts was an important part of my decision making process for this hiring decision.
5. I weighed a number of different factors when making this hiring decision.

*Intuitive Processes:*

6. When making this hiring decision, I relied mainly on my gut instincts.
7. I followed my initial hunch for this hiring decision.
8. I made this hiring decision based on intuition.
9. I relied on my first impressions when making this hiring decision.
10. I weighed feelings more than analysis in making this hiring decision.

**Decision Regret** (Brehaut et al., 2003; administered 2 times to each participant: once for each hired employee that is rated):

*Please provide your thoughts and feelings about this hiring decision:*

1. This hiring decision I made was not the right decision.
2. I regret this hiring choice that I made.
3. I would not make this same hiring choice if I had to do it over again.

**Decision Satisfaction** (designed by author for this study; administered 2 times to each participant: once for each hired employee that is rated):

*Please provide your thoughts and feelings about this hiring decision:*

1. I am generally satisfied with this hiring decision.
2. Overall, I am quite pleased with how this hiring decision turned out.
3. I am exceedingly happy with deciding to hire this job applicant.

**Task Performance** (Williams & Anderson, 1991; administered 2 times to each participant: once for each hired employee that is rated):

*Please provide your thoughts and feelings about this hiring decision:*

1. This employee I hired adequately completes their assigned duties.
2. This employee I hired fulfills responsibilities specified in job description.
3. This employee I hired performs tasks that are expected of him/her.
4. This employee I hired meets formal performance requirements of the job.
5. This employee I hired engages in activities that directly affect his/her performance.
6. This employee I hired neglects aspects of the job he/she is obligated to perform (R)
7. This employee I hired fails to perform essential duties (R)

**Impression Management** (Blasberg, Rogers, & Paulhus, 2014):

*Please respond to the following items concerning various thoughts you have about yourself:*

1. My decisions are sometimes unwise.
2. I have met people smarter than myself.
3. I have mastered every challenge put before me in life.
4. You can't win at everything.
5. My personality has a few problems.
6. I have done things that I don't tell other people about.
7. I don't gossip about other people's business.
8. There have been occasions when I have taken advantage of someone.
9. I have said something bad about a friend behind their back.
10. I sometimes tell lies if I have to.