

## ABSTRACT

The Presence of Automaticity in the Performance Evaluations of Auditors

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Automaticity is “the control of one's internal psychological processes by external stimuli and events in one's immediate environment, often without knowledge or awareness of such control” (Bargh and Williams, 2006). Automaticity has been shown to be present in varying degrees in tasks that generally are thought to be fully cognitive, and current studies in psychology have challenged the assumptions that cognitive thought is the primary process in deliberative tasks. An example of a task that would have been considered fully deliberative would be a performance evaluation. Auditors are trained to be deliberate and professional when completing objectives, and most auditors would consider performance evaluations to be deliberative and fully cognitive task processes. This exploratory paper seeks to examine the presence of automaticity in varying degrees within the performance evaluation of auditors and highlight areas of future research in auditor performance evaluations in order to improve on current evaluation processes.

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PRESENCE OF AUTOMATICITY IN THE PERFORMANCE EVALUATIONS OF AUDITORS

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## CHAPTER ONE

### INTRODUCTION

#### Overview

Performance evaluations provide the basis for employees to determine whether the work they are producing is in line with the company's goals and their own goals. A good performance evaluation allows employees to see where their weaknesses are, where their strengths are, and what goals have been accomplished or need to be accomplished. The supervisor's completion of a performance evaluation is generally thought to be a high-cognitive task that involves awareness and deliberation, especially in the auditing profession where independence and objectivity are highly desired attributes.

However, research in psychology reveals that even high-cognitive tasks can possess elements of automaticity (Bargh and Ferguson, 2000). According to Bargh and Williams (2006), automaticity "refers to control of one's internal psychological processes by external stimuli and events in one's immediate environment, often without knowledge or awareness of such control; automatic phenomena are usually contrasted with those processes that are consciously or intentionally put into operation" (p. 1). Results from the current exploratory study indicate there are automated processes in performance evaluations, such as personality bias among evaluators.



This exploratory paper seeks to highlight the areas within the performance evaluation process where fairness may be compromised and help improve current evaluation procedures. This paper also attempts to challenge the conception that auditors are evaluated on a fully cognitive basis or that certain biases that factor into the evaluation process are deliberate. By demonstrating that there are scenarios and conditions that are more likely than not to produce automated responses or biases from evaluators, safeguards can be placed in the auditor evaluation process to ensure that evaluations are thorough and non-automated and keep biases in check. Further research may determine to what extent automaticity has an impact on an evaluation. For now, this study only attempts to bring awareness to the presence of automaticity within the auditor performance evaluation process to guide future improvements on auditor performance evaluation procedures.

### Automaticity

Every day, countless numbers of people get into their vehicles and drive to some destination, whether an office, a school, a restaurant, or some recreational place. If those people were asked how they got to their destination, most would probably point out some route they took or what vehicle they drove in. The actual process of driving a vehicle would be left unmentioned. How is it possible that someone can drive a vehicle without thinking about driving a vehicle? It is because of automaticity. Bargh (1994) defines four characteristics of automatic behaviors: they occur 1) without any awareness, 2) without any intention, 3) continue without any control, and 4) are efficient with little to no effort. Not all four characteristics

must be present for a process to be considered automatic. For instance, if someone were to drive a vehicle without being aware of the driving process, this would be an example of automaticity regardless of the fact that the person had the intention to drive in the first place. Unlike driving a car, completing a performance evaluation is considered a more cognitive task. What roles, if any, do automated processes play in high cognitive task processes like performance evaluations? Is automaticity present in the evaluation process of auditors?

### Research Approach

This thesis explores the research question, “Is automaticity present in the performance evaluation of auditors?” A pilot survey is conducted to determine how different scenarios impact the self-reported completion rates of performance evaluations. A popular idea in the psychology literature is that automaticity in task performance is indicative of expertise in the task (Alba and Hutchinson, 1987; Anderson, 1982; 1987; Bédard, 1989; Davis and Solomon, 1989; Mayer, 1992, p. 305, Russo, 2006). Since efficiency is indicative of expertise (Russo, 2006) and is also indicative of automaticity (Bargh, 1994), it can be inferred that faster task completion rates point to higher cases of automaticity. Higher automaticity implies that less deliberation was necessary to come to a conclusion concerning an auditor’s performance. Two areas of automaticity specifically addressed and researched in this study are conscious automaticity (expertise) and unconscious automaticity (priming effects).

### Organization of Study

The following chapter presents relevant literature of automaticity in the psychology field as well as studies done within the auditing profession concerning automaticity. Hypotheses for the study are then developed in chapter three. The experimental design and experimental results are chapters four and five, respectively. The final chapter summarizes the study and conclusions.

## CHAPTER TWO

### LITERATURE REVIEW

This chapter presents relevant research of automaticity in the area of psychology followed by automaticity research specifically in the auditing field.

In order to understand to what extent automaticity is present in the completion of auditor performance evaluations, a thorough examination of available literature on automaticity is needed. Understanding how automaticity has been researched in other fields and professions will pave the way for further studies of automaticity in the auditing profession, specifically in the performance evaluations of auditors.

#### Conscious Automaticity

At first, the term conscious automaticity seems like a contradiction because conscious generally refers to awareness and automaticity generally refers to unawareness (Wheatley and Wegner, 2001). What this term implies is that automaticity can develop through routines that were initially willed consciously and then become automatic in process. Driving a car may become an automatic process after the person willed the action into being (Vallacher and Wegner, 1987).

Another example of conscious automaticity is in the area of expert development or training (Brown and Bennett, 2002; Dunbar and MacLeod, 1988; Russo, 2006). Dunbar and MacLeod (1988) conducted three experiments that involved four phases of naming colors and shapes and training to identify variations of these colors and shapes. The researchers measured Stroop interference, which is when “a word interferes with naming the color, but the color does not interfere with reading the word,” (p. 126). In this study the researchers found that with additional training, Stroop interference decreased months later and strong indications of high levels of automaticity were determined. The study done by Dunbar and MacLeod demonstrates that with increased training or high levels of knowledge in certain tasks, automaticity can become the dominant function in a task process despite initial awareness and interference.

### Unconscious Automaticity

While many processes are initially learned cognitively and may become automatic through repetition (e.g., walking, driving), automaticity can also occur when our subconscious has been primed by either intentional or unintentional stimuli by others or our environment (Bargh, Chen, & Burrows, 1996; Bargh and Ferguson, 2000). Priming is a process in which a stimulus introduced to a subject helps “prime” a certain response when a later stimulus is introduced (Kolb and Winshaw, 2003). Priming can be perceptual, semantic, or conceptual in nature (Kolb and Winshaw, 2003). Humans are primed to some extent by their environment, and behaviors can be “induced unconsciously through automatic perceptual activity” (Bargh and Ferguson, 2000, p. 929). Perceptual activity meaning sensory

information that has been collected, stored, and organized (Schacter, 2011). Automatic perceptual activity implies that sensory information is collected without the individual's awareness. Bargh and Ferguson (2000) state "in short, social behaviors in the external environment often if not usually access their corresponding mental representations in an immediate and direct manner, without conscious and effortful processes of categorization and interpretation being necessary" (p. 929). For instance, a stranger in a new place may know exactly how to interact with others due to prior experiences, without being aware of how he interacts with others.

Researchers studying the macaque and other primates discovered that mirror neurons located in the primate's brain fire not only when the primate does an action but also when the primate observes an action being done (Gallese, Fadiga, Fogassi, and Rizzolatti, 1996; Rizzolatti and Arbib, 1998). This "monkey see, monkey do" behavior happens unconsciously and humans interact with each other in much the same way as other primates.

Further studies explore this mirroring phenomenon and its relation to human interactions. One study explored how media may prime certain behaviors in humans. The study revealed that films containing violence were more likely to cause subjects to behave in an aggressive manner (Berkowitz, 1984, 1997). Chartrand and Bargh (1999) also conducted experiments to test social mimicry through automated processes. One experiment tested how much a subject unintentionally mimicked the behavior of the person with him, whether it was face-rubbing or foot-shaking. The study revealed that a subject who was in the same room as someone who rubbed

their face was more likely to mimic that behavior and do the same when placed in a room with someone who shook their foot. The subjects were unaware of the mimicry when questioned later.

Priming can also happen semantically. An experiment with 19 male and female students testing priming of the elderly stereotype was conducted at New York University. The students were first asked (primed) to scramble sentences for language proficiency and then their walking speed leaving the experiment location was measured. Some students were given sentences containing words pertaining to the elderly while others were given neutral sentences. The researchers found the students who unscrambled words concerning the elderly were more likely to walk slower in the hallway after the test than the students who read the neutral sentences (Bargh et al. 1996). The implications of this study are that regardless of what the students cognitively thought of old people, there was an automatic, unconscious response that linked words pertaining to elderly people to walking slowly.

Overall, automatic processes do not have to be fully automatic and indeed have a blend of conscious will and awareness involved in certain tasks (Bargh 1994). Regardless of whether a process is learned repeatedly to where it becomes automatic or whether a subject is primed to produce an automatic response, automaticity has plenty of uses but may be a double-edged sword.

#### Benefits of Automaticity

Automatic processes allow the brain to focus on areas that demand more cognitive thought processes. No one would ever accomplish anything efficiently if

they constantly thought about the process of walking or if they deliberately thought about how they eat at every meal. Wheatley and Wegner (2001) report that automaticity “allows a familiar and comfortable interaction with our environments (p. 992).” A person does not go into a grocery store and wonder why people are taking items off of the shelves. Due to habit and experience, people automatically know how to respond in situations they are accustomed to.

In his book, Blink, Malcolm Gladwell coins a term called “thin-slicing,” which he defines as “the ability of our unconscious to find patterns in situations and behavior based on very narrow slices of experience” (Gladwell, 2005, p. 23). Gladwell’s idea of “thin-slicing” satisfies the criteria that Bargh (1994) identifies as belonging to all automatic processes. Gladwell writes of how the unconscious is very helpful in allowing humans to operate on a high level of efficiency. He writes, “snap judgments are, first of all, enormously quick: they rely on the thinnest slices of experience. But they are also unconscious” (Gladwell, 2005, p. 50). Thin-slicing can help experts make snap judgments because enough familiarity with the subject is available that the unconscious is able to retrieve necessary information, making it one of the benefits of automatic functions.

#### Costs of Automaticity

Stereotyping is a negative or harmful automatic process. An example is the stereotype of tall people making great leaders. Judge and Cable (2004) did a height-salary study and discovered that an inch of height is worth \$789 a year in salary (variables such as age, gender, and weight were corrected). “A person who is six feet tall but otherwise identical to someone who is five foot five will make on average



\$5,525 more per year” (Gladwell, 2005, p. 88). Regardless of how we consciously think, the study shows that there is an unconscious pull toward positioning tall people into leadership roles, all other factors being equal (Judge and Cable, 2004), because of the primed perception that tall people make better leaders.

Another cost of automaticity is that it may benefit low-level skill sets, but it may cause harm in areas where critical thinking and in-depth analysis are necessary. Errors may become more frequent and the costs may increase (Barshi, 1993). Checklists and routine task behaviors are generally beneficial because they allow the users to focus on what is necessary, get the big picture, and cut down on wasteful time. Checklists increase automated behavior because if checklists are done enough times, the process becomes routine, and routine processes easily become automated (Toft and Mascie-Taylor, 2005). However, automaticity in these areas becomes detrimental when users stop critically thinking and only focus on completing the checklist or finishing the routine. The implications are that problems that exist outside of the “standard checklist” will not be addressed until it is too late.

Consider the case of airline pilots and copilots and the routine checklist they keep to make sure the plane is functioning smoothly. Generally, the copilot recites a list of equipment and procedures that must be checked and the pilot verifies by repeating what the copilot says while examining the equipment. If the equipment is fine, the pilot will say, “check” back to the copilot. If a pilot gets into the automated habit of simply repeating the words on the checklist back to the copilot and glancing at the equipment rather than thoroughly examining it, the pilot can easily miss something because of his expectations (Green RG, Muir, James, Gradwell, Green RL,

1993). This oversight can lead to complications during take off, mid-flight, and landing.

What may be even more troubling is when those in charge of people's health may be operating unaware under automatic processes. Toft and Mascie-Taylor (2005) discuss the risks involved in placing physicians and nurses under systems that allow for the occurrence of greater automaticity due to the amount of checklists and routine tasks that take place. Toft and Mascie-Taylor (2005) question whether some of the errors produced should be held against the people who made them or against the systems in place that allowed for involuntary automaticity to occur. Checklists work great for simple routines that can become automated, but they are not as effective and can be detrimental in areas where more critical thinking and deliberation are necessary. Should a doctor, working unreasonable hours, seeing multiple patients, be responsible for health complications of a patient if he followed the routine patient checklist? Questions like this raise issues pertaining to automaticity among all professions, including auditing and the presence of possible systems that may encourage involuntary automaticity among auditors.

#### Automaticity in Auditing

Automaticity helps auditors gain expertise in their profession by increasing the ability of auditors to complete tasks efficiently (Russo 2006). However, priming studies in auditing have shown that automaticity may be detrimental if auditors are not aware of priming effects or of the automated response the priming effects produce (Chugh, Bazerman, & Banaji, 2005; Moore, Cain, Loewenstein, & Bazerman, 2005). Therefore, it may not be beneficial for auditors to complete performance

evaluations without proper safeguards because of the likelihood for biases to emerge and oversight to occur due to routine behavior. If automaticity is present in high amounts in a performance evaluation, fairness and objectivity may be compromised. For the purpose of this exploratory study, automaticity in auditing will be examined in the following aspects: expertise/familiarity (conscious automaticity) and priming effects (unconscious automaticity).

#### *Expertise—Conscious Automaticity*

Experience and expertise and their relation with automaticity are important because they help support the assumption that the more expertise or familiarity a person has with a process, the greater the likelihood that the process may become automated (Brown and Bennett, 2002; Dunbar and Macleod, 1988; Russo, 2006). A study of the effectiveness of automaticity in reducing interference between a temporal task, dependent upon time or requires time to be measured when completing the task, and a nontemporal task, independent of time, revealed that subjects had a harder time efficiently completing the temporal task when they were focused on the nontemporal one. (Brown and Bennett, 2002). The interference was due to the limited amount of attention spread between both tasks. The study further revealed that the more experience a subject had with the nontemporal task, the more automated the nontemporal task became, and the more likely the subject was to complete the temporal task efficiently due to freed attention.

Specifically within the auditing profession, Russo (2006) studied automaticity and expertise when he used task automaticity as a measure of expertise. Task automaticity is the amount of automaticity present within a singular

process or function (Russo 2006). While Russo's experiment produced varying degrees of expert development among the four subjects in the study, he noted that experience was integral to increased automaticity. He concluded from his experiment that experience is what caused task automaticity, which in turn could be used to measure different levels of expertise. Therefore, an assumption can be made from prior research that the more expertise or knowledge an auditor has with performance evaluations, the greater the presence of task automaticity in the completion of a performance evaluation. After all, an expert in any field is someone who has a considerable amount of experience in that area of study. Experience leads to higher task automaticity when performing a task repeatedly (Brown and Bennett, 2002; Russo, 2006; Wheatley and Wegner, 2001).

#### *Priming Effect—Unconscious Automaticity*

A second area of automaticity to examine in the auditing profession is how priming creates biases that generate automated responses from auditors. The prevailing theory within the accounting world is that biases can be leashed or negated if they are suspected to exist; that auditors can remain unbiased if they choose to do so (Antle, 1984; Jensen & Meckling, 1976; Simunic, 1984). However, most auditors underestimate the influence of biases. As researchers have discovered, most biased thought processes are outside the realm of consciousness and never actively considered (Chugh, Bazerman, & Banaji, 2005; Moore, Cain, Loewenstein, & Bazerman, 2005). These biased thought processes might produce automated responses despite the auditor's best efforts to remain objective.

Moore, Tanlu, and Bazerman (2010) conducted an experiment to test if auditors were more or less likely to state that a company followed Generally Accepted Accounting Principles (GAAP) if they were hired by the company or by an independent party. The study found that auditors working for the company were “significantly more likely to approve” a company’s accounting policies, despite the effort to maintain independence. There is a strong bias to report favorably for a client as an employee of the client than when working independently.

Hall, Hunton, and Pierce (2000) concluded that auditors are especially susceptible to selection biases in the area of nonstatistical sampling or haphazard selection. Selection bias occurs when an auditor is unintentionally primed by various stimuli (Hall, Hunton, Pierce, 2000; Pillsbury [1908] 1973; Tversky 1984; Wilson 1966; Birren 1969; Van der Heijden, 1992). The selection bias tested in their study was the perception of visual objects and how it affected sampling decisions made by auditors (Hall, Hunton, and Pierce, 2000). By designing experiments with inventory bins and vouchers that possessed certain physical characteristics, they expected participants to be more prone to choose the samples that were unique. Unique in this study was determined to be any distinguishable feature that unintentionally primed the auditor’s choice despite the auditor’s effort to choose at random (Hall et al., 2000). The study confirmed the following: size is a determinant in an object’s ability to attract attention (Pillsbury [1908] 1973; Tversky 1977), higher wavelength colors, like red and yellow, attract more attention than lower wavelength colors like green and blue (Wilson 1966; Birren 1969), and the physical location of an object in relation to other objects impacts an objects attractiveness

(Van der Heijden 1992). The results indicate that objects which are unique or distinguishable from similar objects, regardless of the auditor's intent to be unbiased, draw the most attention.

The selection bias in nonstatistical sampling study is important because it highlights the notion that humans are more likely to pay attention to objects or features that call attention, regardless of attempts to be impartial. The implication specifically in the area of auditor performance evaluations is that average-performing auditors may be overlooked or not as thoroughly evaluated in comparison to their higher-achieving or under-achieving peers because of the lack of distinctive performance attributes, assuming that the average employee does not have physical attributes that may call attention. Priming and biases studies demonstrate that auditors may not be entirely objective when performing "objective" duties. The consequences for auditor evaluations are that some evaluations may contain automated responses due to unconscious priming, even if an evaluator believes he or she is objective.

While automaticity has been researched within the auditing field, mainly in the areas of expert development (Russo 2006) and conflicts of interest/biases (Antle 1984; Jensen & Meckling, 1976; Simunic, 1984; Chugh, Bazerman, & Banaji, 2005; Moore, Cain, Loewenstein, & Bazerman, 2005; Hall, Hunton, Pierce, 2000), a study on the presence of automaticity in auditor performance evaluations has not been conducted. The following chapter uses the literature review in this chapter to develop the hypotheses of this study.

## CHAPTER THREE

### HYPOTHESES DEVELOPMENT

As mentioned earlier in the psychology literature of conscious automaticity, the more experience an individual has with a certain task, the more likely the task may become routine and automated even if the task was initially willed consciously (Wheatley and Wegner, 2001). Russo (2006) finds that more experience leads to greater task automaticity. Therefore, evaluators who perform more performance evaluations over a 12-month period should experience higher levels of automaticity than those who perform fewer evaluations, according to the psychology literature.

*Hypothesis 1: Automaticity increases with the number of performance evaluations completed.*

#### Expertise/Familiarity

The second hypothesis is related to the first one but deals more with person-to-person relations. Familiarity is related to expertise, and while familiarity does carry elements of expertise (experience), the two constructs cannot be considered congruent because an individual can be familiar with something without having expertise. For example, a person can be familiar with auditing without being considered an expert auditor. A major component of familiarity is the perception-behavior link, the link between stimuli picked up by social perception and the

intentional or unintentional effects of said stimuli on behavior (Bargh and Williams, 2006).

Familiarity is not in the priming effects category because an evaluator is interacting with an employee in an automated manner; interactions which occurred repeatedly in the past (chronic accessibility). This familiarity is opposed to an interaction with a new employee, which would have more of a priming effect (e.g, stereotyping). For the purpose of this study, familiarity exists between the evaluator and the employee. Familiarity may impact how an auditor is evaluated, and if an evaluator is familiar with an auditor, automaticity may be more likely to occur. If the two have been working together for years, especially if the relationship is amicable, the perception-behavior link through chronic accessibility should produce a favorable automated response from the evaluator that would be faster than the time taken to complete an average performance evaluation.

*Hypothesis 2: The more (less) familiar an auditor is to the evaluator the more automaticity increases (decreases).*

#### Priming Effect

Using findings from the study of nonstatistical sampling (Hall et al., 2000), the next hypothesis was formulated. If objects have certain “call features,” features that attract attention, then the same could be said about humans. If people are more likely to pay attention to tall people, unconsciously believing them to be better leaders (Judge and Cable, 2004), then it is very likely that auditors who are distinguishable qualitatively (physical appearance, personality) draw strong



automated responses from those around them, which may be a possible reason why there are cases of employees producing poor work but receiving decent performance evaluations.

*Hypothesis 3: Automaticity increases when evaluators complete evaluations of auditors with distinctive qualitative traits (physical appearance, personality).*

Automaticity allows us to operate with efficiency under the expectation that things will happen as expected (Bargh and Williams, 2006; Wheatley and Wegner, 2001). Bargh and Williams (2006) write, "Routine settings and situations also have particularized norms for conduct that are automatically activated when one enters those settings" (pg. 4). Concerning performance evaluations, there are certain norms that evaluators are accustomed to experiencing when completing a performance evaluation. Therefore, if a norm or assumption is challenged or expectations are exceeded or not met, automaticity in all likelihood should decrease and this would be conveyed in responses by a longer task completion rate than average.

*Hypothesis 4: Automaticity decreases when expectations are not met or assumptions are challenged.*

## CHAPTER FOUR

### EXPERIMENTAL DESIGN

#### Subjects

A pilot survey was administered to 22 auditors from a global, Big Four, public accounting firm located in Texas, ranging from senior level to partner level. The study included 7 female auditors and 15 male auditors. All subjects have had at least two years of audit experience. The performance evaluation process does not significantly differ among the Big Four accounting firms; thus, the sampled auditors come from a single Big Four firm.

#### Survey

The pilot survey was designed to help determine whether automaticity increased or decreased in different evaluation scenarios. By asking whether evaluators completed various performance evaluations faster or slower than their self-reported averages, the likelihood for the presence of automaticity was analyzed. While there is no strong proof that time has any effect on automaticity, literature in psychology does reveal a strong inverse correlation between automaticity and time. Studies of automatic processes have demonstrated that the more automaticity present in a task, the more efficiently those tasks can be performed, and thereby the less time a task takes (Bargh, 1994; Wheatley and Wegner, 2001; Russo, 2006) The assumption can be drawn that the longer it takes an auditor to complete a performance evaluation, the less likely automaticity is dominating the task.

Increased length of time allows for more cognition and deliberation (Gladwell, 2005). Therefore an inference can be made based on current automaticity literature that there is a correlation between task completion and automaticity and an inverse relationship between time to complete a task and automaticity. The first two questions on the survey set a baseline that is then used in successive questions to determine whether automaticity is present.

The first question determines how much experience the auditor has with preparing performance evaluations. The more performance evaluations an auditor completes, the more experience he/she has, and therefore the more automaticity should be present in his/her evaluations based on Russo's (2006) study of task automaticity, experience and expertise.

*Question 1: During the last 12 months, how many performance evaluations have you completed/prepared?*

Auditors have different levels of experience with performance evaluations; therefore it is necessary to ask what an individual believes he/she thinks is his/her average time of completion rather than setting an average for him/her. The self-reported average time is then used as a baseline to determine whether evaluators complete certain performance evaluations faster or slower than their average in order to gauge whether more or less automaticity is present in various circumstances.

*Question 2: When completing these performance evaluations over the last 12 months, on average, how long does it take you to complete a standard performance evaluation using your firm's guidelines?*

After the first two queries, auditors were asked a series of questions that used the auditor's self-reported average completion time as a baseline in order to determine how different scenarios increased or decreased the likelihood of automaticity. The average completion rate may point to the presence of automaticity. For instance an auditor with more automaticity may have a shorter average completion time than a person with less automaticity, but without supporting evidence, the average time is not a strong indicator of automaticity. Therefore, auditors were asked if they completed various performance evaluations, given certain conditions, with a time faster than, slower than, or equal to their self-reported average times.

The following survey questions (Appendix B) tested the four hypotheses:

Hypothesis 1: Questions 1 and 2

Hypothesis 2: Questions 3, 4, 5, and 6

Hypothesis 3: Questions 7, 8, 9, 13, 14, 15, and 16

Hypothesis 4: Questions 10, 11, and 12

A seven-point Likert scale measured the responses ranging from "Much Less" to "Much More." However, due to a small sample size, the answers were reduced to "Less," "Same," and "More," for the sake of power and clarity in analysis.

Table 4.1 Demographic Information

	n	%
<u>Classification</u>		
Senior Associate	8	36.4%
Manager	5	22.7%
Senior Manager	4	18.2%
Partner	5	22.7%
<u>Gender</u>		
Female	7	31.8%
Male	15	68.2%
<u>Audit Experience</u>		
2-5 years	10	45.5%
6-10 years	7	31.8%
11-15 years	0	0%
16-20 years	2	9.1%
21-25 years	3	13.6%

## CHAPTER FIVE

### EXPERIMENTAL RESULTS

The purpose of this chapter is to present and examine the results of the survey testing the two different areas of automaticity in expertise and priming effects. The organization of this chapter starts with the analysis of the impact of expertise and priming effects on automaticity and ends with the figures used for the analysis. The analysis is descriptive in nature due to the exploratory nature of this paper, and no statistical analysis was used in this study.

#### Analysis

##### *Hypothesis 1*

According to the psychology literature, it is expected that the respondents that complete the most performance evaluations in a year would have the faster completion rates. What this particular survey pool depicted is that managers and then senior managers on average complete the most performance evaluations, followed by senior associates, and lastly partners (Figure 5.1). According to Figure 5.2, seniors and partners have on average longer self-reported completion rates than managers and senior managers. A correlation test run in Excel showed a negative correlation of -0.238 between frequency of performance evaluations and self-reported average completion rates which supports the idea of an inverse relation between evaluation frequency and completion time. However, correlation does not mean causation. More testing and further examination must be done before

determining whether high frequency is a direct cause of faster completion rates in performance evaluations.

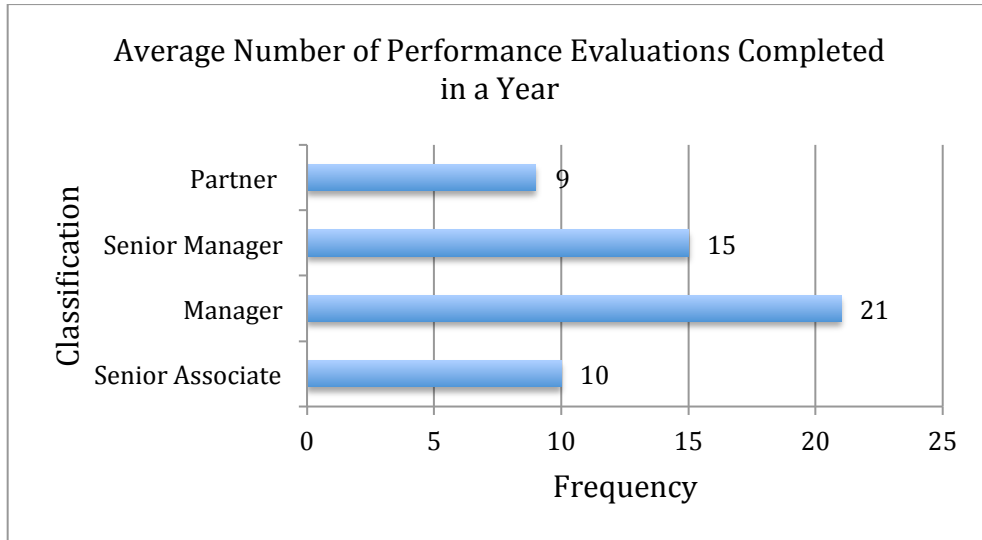


Figure 5.1

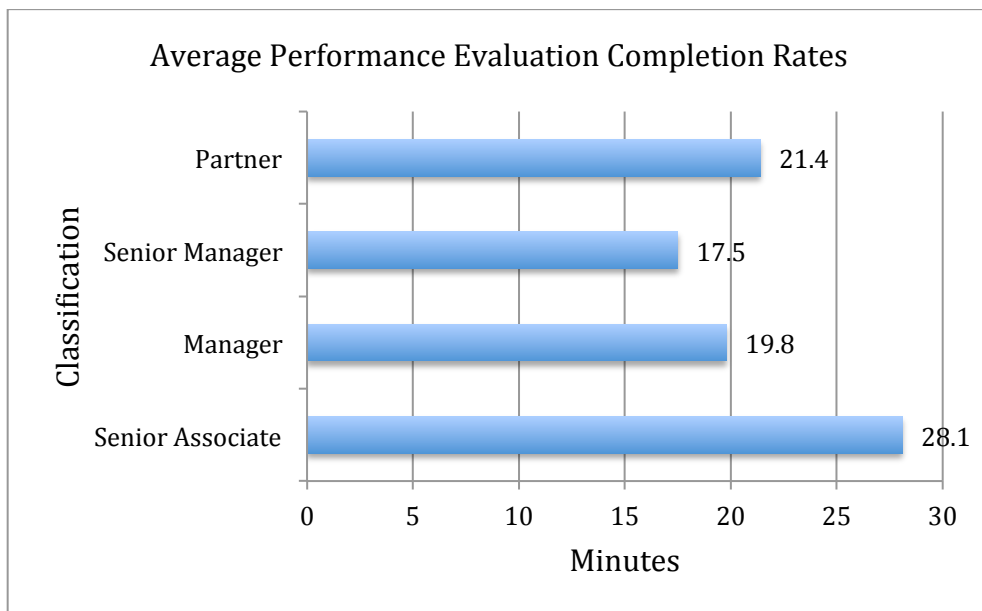


Figure 5.2

## Hypothesis 2

The results show that 45% of respondents believe that a performance evaluation of a new hire would be completed in the same amount of time as an average performance evaluation (Figure 5.3). However, 55% of respondents were split evenly between more and less time. In comparison, 50% of respondents believe that a performance evaluation of a familiar employee would be completed in the same time as an average performance evaluation (Figure 5.4). Only one person changed their answer from “Less,” in the new hire evaluation question to “Same,” in the familiar employee evaluation question. Therefore, evaluations of new hires and a familiar employees have little distinction, but a familiar employee is more likely than a new hire to have a performance evaluation completed in the same time as an average performance evaluation.

Evaluation of New Hire to Average Evaluation

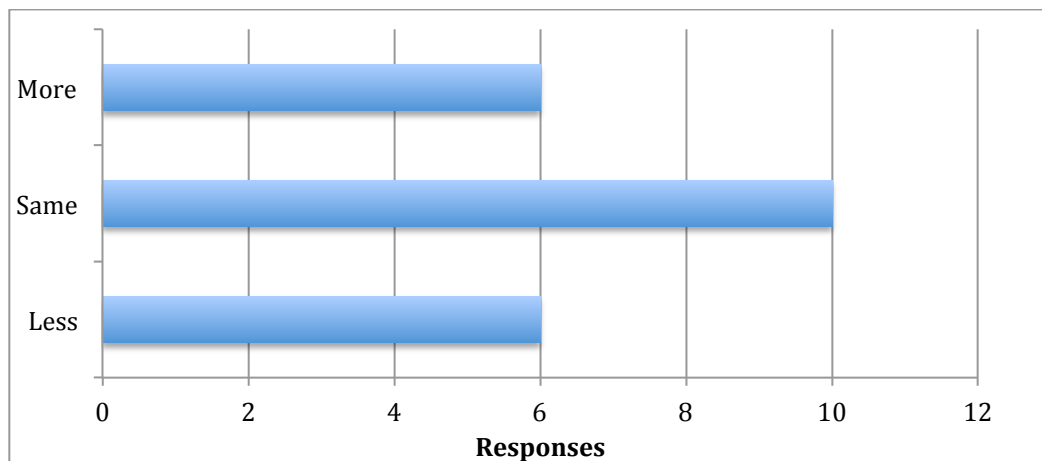


Figure 5.3



### Evaluation of Familiar Employee to Average Evaluation

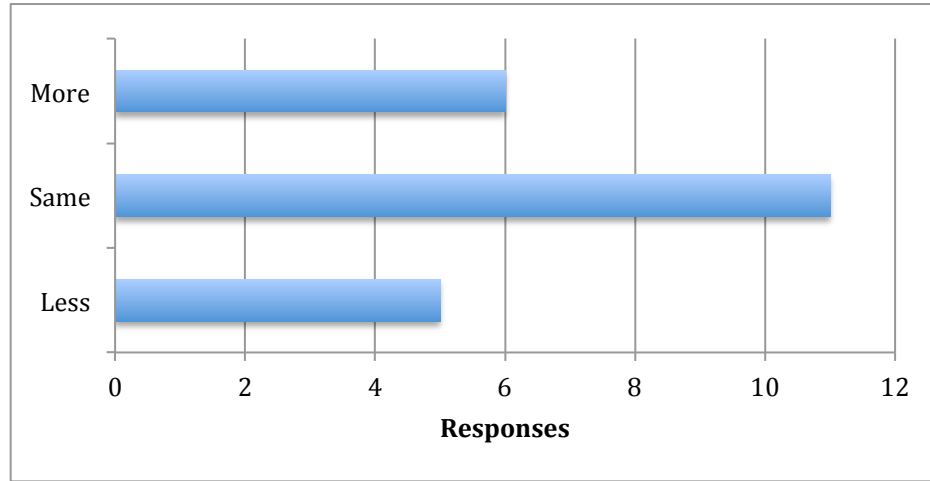


Figure 5.4

However, when an evaluation has been postponed, 45% of respondents reported that they would take less time on a new hire performance evaluation than with an average performance evaluation (Figure 5.5). On the other hand, 52% of respondents answered that they would take the same amount of time as an average performance evaluation for a postponed evaluation of a familiar employee (Figure 5.6). Nonetheless, 41% answered that they would take less time with a postponed performance evaluation of a familiar employee. The indication is that postponed evaluations do have faster completion times when compared to performance evaluations done when the employee is present. The drop in self-reported completion time may be an indicator of an increase in automaticity, especially in cases of postponed new hire evaluations. More study needs to be done to determine why postponing an evaluation of both a new hire and a familiar employee leads to a reduction in self-reported time spent on the evaluations.

### Postponed Evaluation of New Hire to Average Evaluation

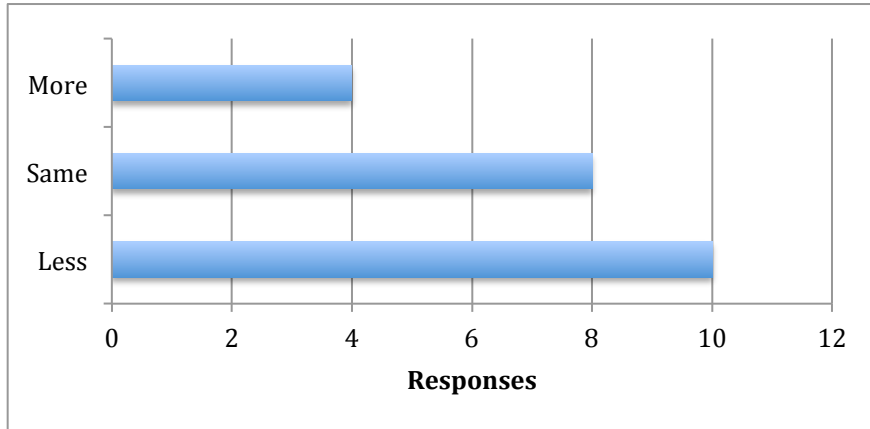


Figure 5.5

### Postponed Evaluation of Familiar Employee to Average Evaluation

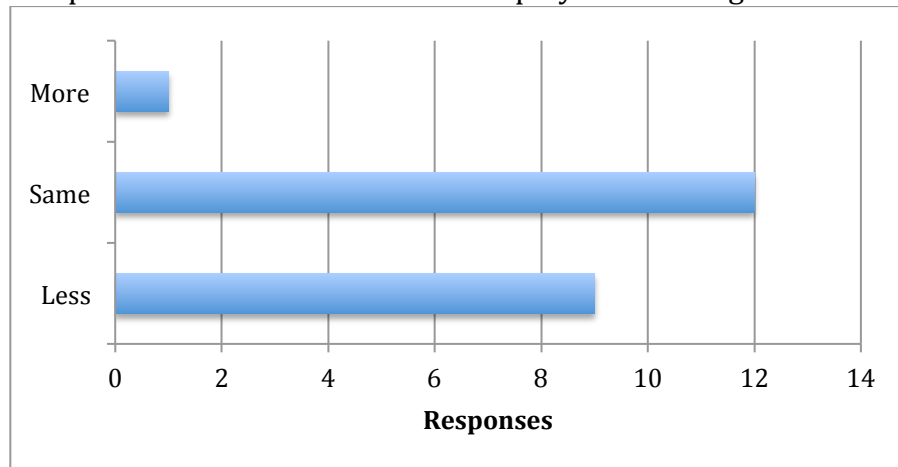


Figure 5.6

Overall the results for familiarity show that evaluators are more likely to complete a performance evaluation of a new hire faster than a familiar employee. The results seem to indicate a more inverse relationship between familiarity and automaticity rather than a direct relationship. More studies need to be conducted to determine why the relationship between automaticity and familiarity may be inversely correlated in performance evaluations.

*Hypothesis 3*

When asked whether or not distinctive physical characteristics come to mind when evaluating an employee, only two auditors answered yes, that distinctive physical traits did make an impression during an evaluation (Figure 5.7). Those two auditors were a female partner and a male manager. No analysis at this time can be drawn from those responses, but those same auditors answered that physical characteristics would not impact the performance evaluation process (Figure 5.8) to a follow-up question. The 20 other respondents answered no, which allowed them to skip the follow-up question. An experiment may be needed to test whether or not physical characteristics do indeed impact performance evaluations to determine whether response bias was present in the answers given to these particular questions.

Physical Features A Factor in Performance Evaluation


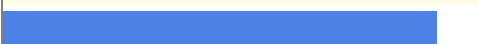
#	Answer		Response	%
1	Yes		2	9%
2	No		20	91%

Figure 5.7

Impact of Physical Features on Performance Evaluation

#	Answer		Response	%
1	Very Unlikely		2	100%

Figure 5.8

Sixteen out of twenty-two auditors responded that distinctive personalities did make an impression during the evaluation process (Figure 5.9). The majority of

those sixteen answered that distinctive personality is “somewhat likely” to “likely” to have an impact on the performance evaluation, indicating that auditors are more likely than not to be influenced by personality when completing a performance evaluation (Figure 5.10). Since 73% of the respondents answered that personality might impact the overall performance evaluation, the analysis is that a positive personality would receive a better performance evaluation than a negative personality. The assumption being that performance level is equal on both accounts. However, if most evaluators view personality as a factor of performance, then this could also explain the results. An experiment would better highlight how personality plays a role in performance evaluations by eliminating the response bias in this survey.

Personality a Factor in Evaluation

#	Answer	Response	%
1	Yes	16	73%
2	No	6	27%
	Total	22	100%

Figure 5.9

Impact of Personality on Performance Evaluation

#	Answer	Response	%
2	Unlikely	1	6%
4	Undecided	1	6%
5	Somewhat Likely	9	56%
6	Likely	3	19%
7	Very Likely	2	13%

Figure 5.10

When testing whether distinctive performance (very high/very low performance) induced automaticity in the evaluation process, 55% of respondents

were more likely to evaluate a high achieving individual the same time as an average performance evaluation (Figure 5.11). The results show that a high performance evaluation does not produce a remarkable change from an average performance evaluation for most evaluators, but a poor performance evaluation would. Results strongly indicate that poor performance does have a clear impact on the completion time of a performance evaluation (Figure 5.12). These results suggest that most auditors take longer than normal when completing evaluations of poor performance. The likelihood of automaticity decreases because longer completion time implies more deliberation.

Evaluation of High Performance of New Hire to Average Evaluation

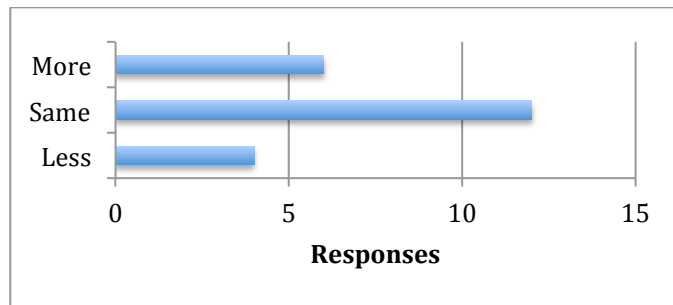


Figure 5.11

Evaluation of Low Performance of New Hire to Average Evaluation

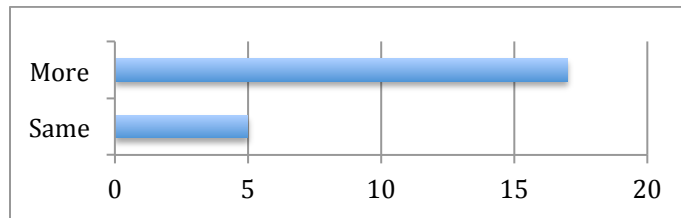


Figure 5.12

Based on the self-reported completion times, over half of the respondents claimed they would have completed the high performance evaluation in the same

time as an average evaluation, and 82% responded that an average performance evaluation would be completed in the same time as their average evaluation (Figure 5.13). The results indicate that generally high and average performances are expected within the firm. An inference from the results is that automaticity is more likely to be present when evaluations on high-achieving and average-achieving individuals are completed.

Evaluation of Average Performance of New Hire to Average Evaluation

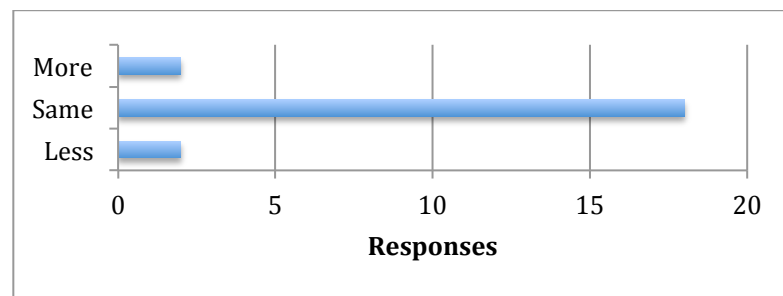


Figure 5.13

Based on the respondents' answers, the results show that personality traits do trigger automated responses, but more study must be done to determine whether physical characteristics trigger automated responses in the performance evaluation process. However, negative performance traits significantly decrease the likelihood of automaticity in a performance evaluation.

#### *Hypothesis 4*

Results show that 86% of respondents would take more time when completing the evaluation of a normally high performance employee who produces poor work (Figure 5.14). The results indicate that when expectations are not met, the presence of automaticity decreases due to the increase in deliberation time. As

stated before, longer completion time implies longer deliberation time, and the presence of automaticity is more likely to decrease as deliberation increases.

Evaluation of Troubled Employee to Average Evaluation

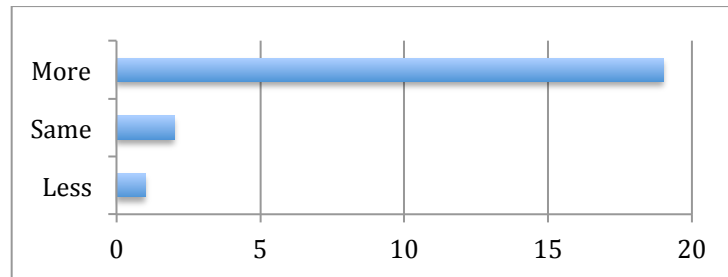


Figure 5.14

Lastly, evaluators sometimes let auditors self-evaluate themselves in order to determine how an auditor feels about his/her performance. A little more than half of respondents (55%) answered that auditors who self-evaluated higher than what the evaluator would have given would receive the same consideration as an average performance evaluation. However, 45% of respondents reported that their completion time would be greater than their self-reported average evaluation completion time (Figure 5.15). When assumptions are challenged, it is common for people to want to know why, but low-self scoring evaluations did not significantly increase or decrease the completion time for most evaluators. In fact, Figure 5.16 shows that 68% of respondents would treat a low self-scoring evaluation like an average evaluation. There may be a hidden expectation that it is better to self-evaluate lower and than to self-evaluate yourself higher. In this case, a high self-evaluation is a challenge to the situational norm and therefore would decrease automaticity. Further examination is necessary to determine why low self-scoring

evaluations do not have as great of an impact as high self-scoring performance evaluations on evaluators.

#### Evaluation of High Self-Scoring Employee to Average Evaluation

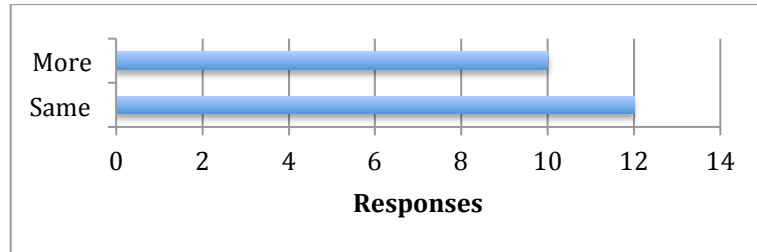


Figure 5.15

#### Evaluation of Low Self-Scoring Employee to Average Evaluation

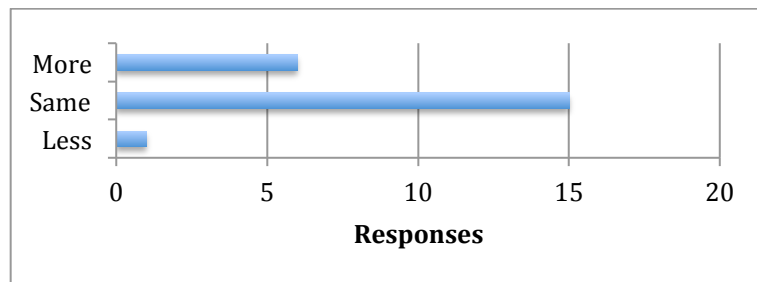


Figure 5.16



## CHAPTER SIX

### SUMMARY and CONCLUSIONS

The purpose of this exploratory study is to gain a better understanding of auditor performance evaluations by examining automaticity in the performance evaluation process. By determining whether automaticity was apparent in evaluations, auditors can be more aware of whether the decisions they make are truly deliberate or automated. While the study has proven that a slight negative correlation exists between task frequency and average completion rate, the relation between automaticity and expertise proved to be overall inconclusive. However, the study has revealed that priming and perception play important roles in evaluations and greatly increase or decrease the likelihood of automatic evaluations. This study will help pave the way for future studies and experiments in the auditor performance evaluation process.

#### Results

The results show that the presence of automaticity is more likely to increase when evaluating a new hire, completing a postponed evaluation, and evaluating someone with a distinctive personality. The presence of automaticity is more likely to decrease when evaluating a familiar employee, when evaluating high and low performance, when evaluating an unexpected decline in employee's performance, and when employees self-evaluate themselves in an unexpected manner. The results are inconclusive as to whether there is a correlation between automaticity and

familiarity in performance evaluations and whether physical appearance truly makes an impact. Therefore, more study is necessary in these areas.

### Limitations

The main limitation in this study is that the analysis relies on self-reported information that may be inaccurate or not reflective of actual occurrences. Auditors may report faster completion rates but take longer than what is reported. An experiment would produce a better indication of whether the presence of automaticity has an impact on the performance evaluation of auditors. There was also no strong independent variable in which to do statistical analysis since the average completion times were self-reported and varied from person-to-person.

Another limitation of the survey is the response bias of the respondents. If the auditors were more concerned with trying to find a “right” answer, this would skew the results. For instance, the physical appearance question, only two out of twenty-two auditors answered yes. There could be a strong negative bias toward admitting that appearance affects evaluations. The survey itself could have unintentionally primed auditors, and therefore some of the responses may be automated. Sometimes an automated response provides us with the most accurate information, “thin-slicing” (Gladwell, 2005), but only if respondents understand the question.

### Future Research

One major area of research would be in determining to what extent physical appearance plays a role in auditor performance evaluations. Another area of

research would be to look into the relationship between familiarity and automaticity; whether or not two are inversely related, or if other factors play a role. Lastly, the issue of how motivations influence performance evaluations needs to be investigated: Why does an evaluator spend more time on one evaluation but not as much time on another? Or why is an evaluator willing to spend the same amount of time on evaluations regardless of the scenario? These studies could lead to greater clarification of the evaluation process. They can also make auditors more aware of automated processes and how these processes affect decisions. Further studies can also lead to more objective performance evaluations and awareness of biases. Safeguards can be implemented to ensure that evaluations do not become automated processes. Evaluators will be able to make more informed and thorough evaluations, which will lead to more fairness and objectivity in the evaluation process.

## APPENDICES

## APPENDIX A

### DEMOGRAPHIC INFORMATION

1. What is your gender?

\_\_\_\_ Male

\_\_\_\_ Female

2. How many years of audit experience do you have?

3. What is your job title?

APPENDIX B  
SURVEY QUESTIONS

1. During the last 12 months, how many performance evaluations have you completed/prepared?
2. When completing these performance evaluations over the last 12 months, on average, how long does it take you to complete a standard performance evaluation using your firm's guidelines? This average will be referenced in the following questions.
3. When you prepare a performance evaluation for a new hire, do you spend more or less time than your average?
4. When you prepare a performance evaluation for a member of your engagement team you have worked with for several years, do you spend more or less time than your average?
5. Due to time constraints, you have postponed the evaluation of a new hire who had worked on your engagement team several weeks ago. When you prepare the evaluation, do you spend more or less time than your average?
6. Due to time constraints, you have postponed the evaluation of an employee who worked on your engagement several weeks ago. However, you have known this person for several years. When you prepare the evaluation, do you spend more or less time than your average?

7. One of the new hires on your engagement team is exceptionally talented and competent. When completing his/her performance evaluation, do you spend more or less time than your average?
8. One of the new hires is a disappointment and does not meet the expectations you set for your engagement team. When completing his/her performance evaluation, do you spend more or less time than your average?
9. One of the new hires is average according to your expectations and the firm's. When completing his/her performance evaluation, do you spend more or less time than your average?
10. A member of your engagement team who normally produces excellent work is going through a difficult time and the quality of his/her work decreases. Do you spend more or less time than your average when completing their performance evaluation?
11. When preparing a performance evaluation on a member of your engagement team, you notice that they evaluate themselves higher than you might have. Do you spend more or less time than your average when preparing their performance evaluation?
12. When preparing a performance evaluation on a member of your engagement team, you notice that they evaluate themselves lower than you might have. Do you spend more or less time than your average when preparing their performance evaluation?
13. The individual you are evaluating has a unique/distinctive physical attribute (i.e extremely tall, extremely short, physically attractive, physically

unattractive, etc). Does the distinctive physical attribute come into mind while you prepare the performance evaluation?

14. Would the physical attribute of the individual influence the way you prepare the performance evaluation?

15. The individual you are evaluating has a unique/distinctive personality (i.e. charismatic, aloof, optimistic, cynical, etc.) Does the personality of the individual come into mind while you prepare the performance evaluation?

16. Would the personality of the person you are evaluating influence the way you prepare the performance evaluation?



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