

The Copycat Effect: Do social influences allow peer team members' dysfunctional audit behaviors to spread throughout the audit team?

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ABSTRACT

Staff auditors often rely on team members as a source of information to determine the behaviors that are normal and acceptable. This may be one cause of the prevalence of audit quality reducing dysfunctional audit behaviors (DAB) within the profession. Social influence theory, applied in an auditing context, posits that staff auditors are influenced not only by the preferences of their superiors (i.e., compliance pressure) but also by their peers' DAB (i.e., conformity pressure). Given the importance of the work performed by staff auditors, I conduct an experiment to identify the role that a peer team member's behavior and a superior's preference plays in influencing staff auditors' behavior. I predict, and find, that staff auditors with a peer team member who engages in a DAB are more likely to engage in a DAB. I also predict, and find, that staff auditors with a superior who has a preference toward efficiency are more likely to engage in a DAB. Finally, I predict that a superior's preference toward efficiency will amplify the influence of a peer team member's involvement in a DAB. Interestingly, I find that a superior's preference amplifies the effect of a peer team member's behavior when it is toward efficiency only, not effectiveness, for a face-to-face request from the client, but not for an email request. These results suggest that peer behavior influences the effect of a superior's preference of staff auditors in the intimidating situation of having a face-to-face interaction with the client. This could be because of the cognitive dissonance staff auditors experience when their general understanding of the standards does not align with their peer's behavior. The results of this study provide insights into a potential risk introduced to the audit engagement through audit team dynamics.

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GENERAL AUDIENCE ABSTRACT

Financial statement audits conducted by public accounting firms are frequently performed in a team setting. Most of the audit team consists of younger, inexperienced staff auditors who perform much of the testwork that informs the final audit opinion. Staff auditors' lack of knowledge requires them to seek information to complete their testwork, from both their peer team members and their superiors. Peer team members may engage in behaviors that reduce the quality of the audit, which shows staff auditors that these dysfunctional behaviors are acceptable. At the same time, superiors often display a preference toward effectiveness (i.e., improving audit quality) or efficiency (i.e., saving time). I perform an experiment to determine if staff auditors mimic the audit quality reducing behaviors of their peer team members, while also considering the preference of their superior. I find that staff auditors are more likely to engage in audit quality decreasing behaviors when their peer team members have done so previously. I also find that staff auditors are more likely to engage in audit quality decreasing behaviors when their superior has a preference toward efficiency. I find that a superior's preference toward efficiency, but not effectiveness, amplifies the effect that a peer team member's behavior has on the likelihood that a staff auditor engages in an audit quality increasing behavior of requesting information from the client in a face-to-face interaction, but not for an email request. These results suggest that peer behavior influences the effect of a superior's preference of staff auditors in the intimidating situation of having a face-to-face interaction with the client. In general, I find that peer behavior and superior preference influence staff auditors' chosen behaviors.

DEDICATION

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

This study examines how the audit quality reducing behaviors of one audit team member can influence a change in the behavior of a peer team member. Audit quality reducing behaviors are the subset of dysfunctional audit behaviors (DAB) that have a direct impact on audit quality, which include premature sign-off of audit procedures, insufficient evidence gathering, altering audit procedures, and not completing audit steps (Donnelly, Quirin, and O'Bryan 2003). One motivation of this study is to identify one cause of the high frequency of DAB within the profession. Since nearly all audits are conducted in a team setting, the possibility that one team member engaging in DAB will influence other team members' behaviors poses a real threat to audit quality. A second motivation of this study is to investigate the influence that the team setting has on the quality of audits. Because audit quality starts at the engagement team level (Public Company Accounting Oversight Board 2013a, 2015), and inexperienced staff auditors perform a large part of the testwork (Abdolmohammadi 1999; Griffith, Hammersley, and Kadous 2015; Brown, Gissel, and Gordon Neely 2016), staff auditors look to team members for information on normal and acceptable behaviors (Ouchi 1980; Lord and DeZoort 2001; Cialdini and Goldstein 2004; Jenkins, Deis, Bedard, and Curtis 2008). It then follows that staff auditors new to the job will be influenced by DAB of their team members because, given their lack of experience, the actions of other team members are likely to be viewed as normal and acceptable. In addition, newcomers seek information for two primary reasons (Morrison 1993). First, newcomers seek information to reduce uncertainty, which enables them to understand, predict, and control their environments (Berlyne 1960; Berger 1979; Morrison 1993). Second,

newcomers seek information to successfully complete their job and integrate into their new organization (Graen, Orris, and Johnson 1973; Jablin 1984; Dirsmith and Covaleski 1985; Morrison 1993). Specifically, this study seeks to answer the question: Given a superior's preference toward effectiveness or efficiency, are the behaviors of peer team members likely to influence staff auditors' behaviors?

Following research in psychology (Asch 1956; Cialdini and Goldstein 2004), this study predicts that staff auditors will choose their behavior based on the actions of other team members, even if the behavior reduces the quality of the audit. Importantly, it is not only superiors who staff auditors seek information and advice from, but peers are also often a source of informal advice within the audit team. While staff auditors will sometimes have the experience necessary to determine, and stay the course with, an appropriate planned course of action, many times, they will look to the behaviors, and the outcomes, of team members as sources of information to determine their own next course of action. The conduct of both superiors and peer team members can be a source of information, influencing an individual's behavior (Ouchi 1980; Lord and DeZoort 2001; Cialdini and Goldstein 2004; Jenkins et al. 2008). This is especially true in the audit setting, as opposed to other organizational settings, because of the mentorship model that audit firms use. A result of this mentorship model is that auditors look to their team members as role models who serve as a source of information for what behaviors are normal and acceptable within the team. As such, this study also predicts that the preferences of the staff auditor's immediate superior (i.e., senior) will also influence the staff auditor's chosen behavior. While team members may feel pressure to *comply* with superiors' preferences, they may also feel pressure to *conform* to peers' behaviors. In either case, if a staff member perceives another team member's audit quality reducing behavior as normal and

acceptable, the resultant audit work can impair the overall audit quality. Understanding the effects of compliance and conformity pressures is especially important within the audit setting since nearly all audit engagements are conducted in a team setting.

Despite this team environment, there is a paucity of research devoted to understanding auditor-auditor interactions within the audit team (Rich, Solomon, and Trotman 1997; Nelson and Tan 2005; Francis 2011; Trotman, Bauer, and Humphreys 2015). More specifically, Nelson and Proell (2018) note that further investigation is needed to determine, “how the actions of some team members affect others on the team, and whether auditors consider those effects when determining their own professional behavior” (Nelson and Proell 2018, 38). Investigating the effect that auditors’ behaviors have on each other contributes to the current audit team literature that is mostly devoted to the review process, brainstorming, and consultation (Trotman et al. 2015). Further, these three areas of concentration focus mostly on supervisor-subordinate relationships, however, auditors also communicate with their peers. This study adds to the audit team literature by investigating the influences that interactions among staff auditors have on their behaviors.

In addition to the emphasis that the accounting literature places on the complexities inherent to the audit team, regulators also stress that the level of audit quality starts with the audit engagement team. Specifically, the Public Company Accounting Oversight Board (PCAOB) notes that the quality of the audit starts at the engagement team level, despite firm-wide quality control systems (Public Company Accounting Oversight Board 2013a). Further, the PCAOB notes that “even without a broader set of data, information about an engagement team or its deployment may highlight issues that, if addressed, could increase audit quality” (Public Company Accounting Oversight Board 2015, 19). Taken together, the PCAOB suggests that the

engagement team influences audit quality and since staff auditors make up a large part of the team, completing a large portion of the audit work that the audit report is based on, their actions have a significant effect on audit quality (e.g., Abdolmohammadi 1999; Griffith et al. 2015; Brown et al. 2016). While there are hierarchical review processes in place to address issues that may arise from inexperienced staff auditors completing a large portion of the audit work, it is an imperfect system, as evidenced by PCAOB inspection reports and disciplinary orders that find issues with appropriate supervision within the audit team. For example, an inspection report stated, “The reported deficiencies raise questions regarding the sufficiency, rigor, and efficacy of the supervision and review activities of the Firm’s engagement managers, engagement partners, and SEC concurring review partners, including their exercise of due care and the thoroughness with which they review work papers” (Public Company Accounting Oversight Board 2013b). As another example, a disciplinary order stated, “Burns knew of the need to improve his supervision of staff and his review of audit work papers, but failed to do so. Indeed, Burns reviewed only a small number of work papers until late in the audit and did not take sufficient time to complete his work paper review” (Public Company Accounting Oversight Board 2017). Both of these findings indicate that the workpapers prepared by inexperienced staff auditors are not always subject to a complete review, which allows dysfunctional behaviors that they have engaged in before the review to affect audit quality. Further, if social influences allow DAB to spread throughout the engagement team, then the effect on overall audit quality would be magnified because multiple staff auditors have engaged in DAB as opposed to only one. Finally, the International Auditing and Assurance Standards Board (IAASB) notes that aspects of the audit team, such as structure, are key attributes affecting audit quality partly because a large portion of the detailed audit work is performed by less experienced staff auditors (International Auditing

and Assurance Standards Board 2014). Taken together, multiple regulating agencies have drawn attention to the importance that aspects specific to the audit team, as opposed to firm-wide or individual characteristics, play in conducting a quality audit. A culmination of these findings would indicate that audit quality starts at the engagement team level, inexperienced staff auditors perform and document much of the testwork, they look to team members for information on normal and acceptable behaviors, social influences allow DAB to spread throughout the team, and the review process is an imperfect system that may not correct for DAB. See Figure 1 for a summary of this study's theoretical basis.

Adding to the scant research on audit team dynamics, this study investigates the likelihood that staff auditors engage in DAB to conform to behaviors learned as acceptable from a peer team member. An increase in the likelihood of staff auditors mimicking a peer team member's DAB is likely when it would result in expending less cognitive effort. This approach may be a common practice for staff auditors as they complete tasks that are complex for them and additional information is not readily available (Barkhi 2005). Following the social influence theory, this study predicts that staff auditors are more likely to engage in an audit quality reducing DAB when a peer team member has done so previously; peer team members' behaviors are "contagious". I find results consistent with these predictions.

In addition to attending to a peer team member's behaviors, a staff auditor must also attend to his superior's preference. A superior's preference is a facet of the tone at the top, or the ethical culture of an organization that provides the foundation for professional skepticism (Carpenter and Reimers 2013; Skaife, Veenman, and Wangerin 2013), and it is predicted to affect the likelihood that a staff audit team member engages in a DAB. Within the context of this study, superior preference is considered to be the tone that the staff auditor is subject to from his

immediate superior (i.e., the senior on the audit team). It is considered to be the level of ethical principles portrayed by those who are higher in the firm hierarchy. When there are differing tones by superiors, Pickerd, Summers, and Wood (2015) find that staff auditors are more influenced by the tone set by their immediate supervisor, as opposed to the partner, because the senior is seen as more of an in-group member. Within the accounting literature, a superior many times has a preference for efficiency (i.e., low tone) because of a desire to come in under budget or for effectiveness (i.e., high tone) because of a desire to complete the audit procedures with the utmost attention to accuracy (Bierstaker and Wright 2005; Bamber and Iyer 2009; Pickerd et al. 2015). I predict that an immediate superior's (i.e., senior team member's) preference toward efficiency (i.e., low tone) will increase the likelihood that a staff audit team member would engage in an audit quality reducing DAB; they will comply with their superior's preference. I find results consistent with these predictions.

In the audit setting, staff auditors must attend to many pressures including those from their peers and those from their superiors, of which there are multiple levels. In this study, the tone set by the senior (i.e., the superior's preference) is not the tone at the *top* of the organization but rather it is tone at the *bottom* of the organization. When there are multiple sources of pressure, those from a superior and those from a peer, the in-group bias theory would predict that an individual will be influenced by those that the staff auditor feels to be part of the in-group (Tajfel and Turner 1979). As such, although the peer will attend to their peer team members first, because they are seen as the closest in-group, in some situations they will also attend to their superior as a source of information. Specifically, I predict that when the immediate superior has a preference toward efficiency, it will amplify the effect that the peer's behavior will have on staff auditors' behavioral choice. However, when the immediate superior has a preference toward

effectiveness, the influence that a peer's behavior has on a staff auditor's chosen behavior will be smaller. This interaction could be attributed to the fact that staff auditors are fresh out of school and firm trainings, which may lead to them having naïve expectations that their superiors are hyper-focused on audit effectiveness. As such, when the superior's preference strays away from that effectiveness preference, toward efficiency, it catches staff auditors' attention and they attend to it with greater focus and emphasized cognition.

To test the aforementioned predictions, this study uses a 2x2 between-subjects experimental design with manipulations to peer team member DAB (absent, present) and to the immediate superior's preference (efficiency, effectiveness).¹ Students enrolled in a graduate accounting course, proxying for staff auditors, receive a vignette that describes a scenario involving internal controls testwork to be completed over the cash balance. Participants receive background information on the client and on the audit team which includes the manipulation for the superior's preference (efficiency or effectiveness). Participants are then informed that Jimmy had previously selected April and October himself for testing. However, when he reviews the online client PBC portal, the evidence for the April control is present but the October evidence is missing. Participants then receive a script of an informal lunchroom conversation between two of Jimmy's peer team members (Louis and Christian), which is where the peer team member's behavior (DAB present or DAB absent) is communicated. When the team has finished lunch, participants are asked what are the likely next steps that Jimmy will take to complete his internal control sample selection. Participants are then asked the likelihood that Jimmy would engage in three behaviors (DV1) change his previously selected sample by replacing the missing month by picking another month currently available on the PBC portal (DAB), (DV2) request the missing

¹ Please see Appendices J-L for IRB approvals received from all three sites from where participants were recruited.

month from the client by email (nonDAB), and (DV3) request the missing month from the client face-to-face (nonDAB).

The results indicate that staff auditors who have a peer team that engages in a DAB are more likely to engage in DAB themselves. In addition, staff auditors who have a peer team member that does not engage in DAB are more likely to also engage in nonDAB both through electronic and through face-to-face forms. H1 is supported by all three dependent variables. At the same time, staff auditors that have a superior with a preference toward efficiency are more likely to engage in DAB than those that have a superior with a preference toward effectiveness. In addition, staff auditors that have a superior with a preference toward efficiency are less likely to engage in a nonDAB through an electronic forum. However, there is no difference in the likelihood of staff auditors engaging in a nonDAB through a face-to-face forum when their superior has a preference toward efficiency versus effectiveness. H2 is supported by two of the three dependent variables. However, when the DAB of a peer team member and a superior's preference are considered together, the effect of the superior's preference on the likelihood of staff auditors engaging in DAB is not different for staff auditors that are subject to a peer engaging in DAB versus those who are subject to a peer who engaged in a nonDAB. Similarly, the effect of the superior's preference on the likelihood of staff auditors engaging in a nonDAB through an electronic forum is not different when staff auditors are subject to a peer engaging in a DAB versus those who are subject to a peer who engaged in a nonDAB. Finally, an interesting finding of this study is the result with regards to the likelihood of a staff auditor engaging in nonDAB through a face-to-face forum when simultaneously considering the peer's behavior and the superior's preference. Specifically, I find that when the superior's preference is toward efficiency, it amplifies the effect that the peer's behavior has on staff auditors' chosen behavior.

This finding can be explained by the fact that when a peer team member engages in a DAB, staff auditors will face a cognitive dissonance because of their knowledge of the standards and firm policy, albeit limited, that dictates that they should engage in nonDAB versus the behavior that the peer is engaging in. This cognitive dissonance then forced the staff auditors to then look to their superior to determine the appropriate course of action. This is consistent with the combined findings from H1 and H2 concerning DV3. Specifically, when deciding whether to request the documentation from the client in a face-to-face interaction, only the peer's DAB was statistically significant, not the superiors' preference. This indicates that the influence of a peer is greater than the influence of a superior in the most uncomfortable situation (i.e., a face-to-face interaction with a client versus an email or avoiding them altogether), which highlights the power that peer behavior plays within the audit team.

This experimental study provides insights into audit team dynamics. My research answers the calls to investigate audit team dynamics, and the effects that it has on audit quality (e.g., Solomon 1987; Rich et al. 1997; Nelson and Tan 2005; Francis 2011; Trotman et al. 2015; Nelson, Proell, and Randel 2016). The findings of this study can inform public accounting firms of areas in which their procedures can be improved upon in several different ways. First, the prevalence of DAB within the audit field is concerning and this study provides one area that firms can focus their attention to decrease the occurrences of DAB. Second, firms can learn of an area where additional checks put into place would benefit the overall audit quality. Third, the results provide new evidence about the impact of interactions within the audit team on audit quality, which suggests that firms may want to consider how to manage interactions amongst their staff team members. That understanding could suggest training or other practical

interventions that encourage audit leaders to behave in a manner that best facilitates effective communication within the audit team among staff auditors.

Despite the significant benefits to this proposed study, this dissertation also has limitations. First, investigating audit teams without using individuals who are actually members on the same team provides a limitation. A second limitation to this study is the possibility that any findings of a peer team member's behavior having an influence on another staff audit team member's behavior will disappear at higher levels within the audit team. A third limitation is that the manner in which the message is portrayed between team members may influence the likelihood that it is incorporated into an individual's behavioral decisions, since in this study the actual behavior is not being viewed, but rather communicated informally. Despite these limitations, this study adds to the scant audit team literature by investigating within-team peer interactions among staff auditors.

CHAPTER TWO

BACKGROUND & HYPOTHESES DEVELOPMENT

2.1 Dysfunctional Audit Behaviors

Dysfunctional audit behaviors are those behaviors that have a negative impact on the accounting profession and either directly or indirectly affect audit quality (Donnelly et al. 2003). Behaviors that have a direct negative effect on audit quality include premature sign-off of audit procedures, insufficient evidence gathering, processing inaccuracy, and not completing audit steps (Donnelly et al. 2003). While it is clear that not performing all of the procedures or gathering the necessary evidence would negatively affect audit quality, there are also behaviors that have an indirect negative affect on audit quality such as underreporting of time (Donnelly et al. 2003). Underreporting of time may not affect audit quality immediately and directly but it may lead to increased time pressures and poor personnel decisions that will ultimately negatively affect audit quality (Donnelly et al. 2003).

Despite evidence in the accounting literature and observations by regulators and policy makers that DAB are prevalent in audit teams, the causes of audit team dysfunctions and their effects on audit quality are less clear. Prior studies have investigated environmental factors and individual characteristics that contribute to the likelihood that an audit team member will engage in DAB. For example, environmental factors, including time pressure and supervisory style (Alderman and Deitrick 1982; Lightner, Leisenring, and Winters 1983; Otley and Pierce 1995), and individual characteristics, such as locus of control, performance, turnover intentions, and perceived consequences (Donnelly et al. 2003; Pierce and Sweeney 2006), affect an individual's likelihood of engaging in these dysfunctional behaviors. However, significantly less research in accounting has focused on team attributes and their influence on the likelihood of an auditor

engaging in DAB. Because audits are conducted in a team setting, it is possible that the dysfunctional behavior of one team member spreads through the team; it is “contagious.”

2.2 Superior Preference

While dysfunctional behaviors do exist within audit teams, the tone at the top of an organization can act as a barrier to the damaging effects that this may have on audit quality. Tone at the top is often understood as a central message from the leaders (i.e., partners) of an organization (Warren, Peytcheva, and Gaspar 2015). Therefore, if there is a tone at the top that discourages dysfunctional behaviors, then the DAB of one team member may be less likely to spread throughout the audit team. In this study, the superior’s preference toward efficiency or effectiveness is considered a facet of the tone of the audit firm. In other words, superior preference is considered to be the tone that the staff auditor is subject to from his immediate superior (i.e., the senior on the team). Within the accounting literature, a superior many times has a preference for efficiency (i.e., low tone) because of the focus on coming in under budget or for effectiveness (i.e., high tone) because of the focus on completing the audit procedures with the utmost attention to accuracy (Bierstaker and Wright 2005; Bamber and Iyer 2009; Pickerd et al. 2015; Nelson and Proell 2018). While this study is interested in the preference of the senior on the team, prior studies find that a partner’s preference does have an effect on subordinate decisions in many different areas such as analytical reviews (e.g., Peecher 1996), client bidding (e.g., Cohen and Trompeter 1998), reliance on internal auditors (e.g., Gramling 1999), going concern judgments (e.g., Wilks 2002), audit planning decisions (e.g., Bierstaker and Wright 2001, 2005), and accounts receivable reviews (e.g., Turner 2001; Carpenter and Reimers 2013). While the partner’s preference is not always centered on his tone, many times his preference does emphasize efficiency or effectiveness. For example, a superior’s tone may cause

subordinates to utilize the client too much or too little which can result in efficiency gains or losses (Peecher 1996; Turner 2001). More directly, Gramling (1999) emphasizes that the partner either has profit motives and therefore working efficiently is important or audit quality is important due to recent litigation and therefore professional skepticism is of utmost importance. Most succinctly, Bierstaker and Wright (2001, 2005) inform participants that the partner believes that this year's audit should be conducted more efficiently than last year's audit. As such, a superior's preference often parallels his tone and is an important factor that affects a subordinate's behavior.

Viewing a superior's preference as his portrayal of his tone necessitates a review of the general conception of tone at the top. Tone at the top can be described as, "top management's attitude towards creating and maintaining an ethical culture in the workplace" (Skaife et al. 2013, 92). Tone at the top influences an audit team as it is the foundation of effective professional skepticism (Carpenter and Reimers 2013). In other words, tone at the top is "the force that drives individual professionals; it is the "unseen hand" that directs activities regardless of management's proximity to the action" (International Federation of Accountants 2007, 8). Additionally, SEC Commissioner Cynthia Glassman made it clear that tone at the top goes beyond written and verbalized codes when she said, "Employees who are told that ethical conduct is important, but who in practice face inaction – or, worse, retaliation – when they report corporate misconduct, rightfully question whether the corporate ethical code is merely a hollow promise" (Glassman 2002). Taken together, even if there are codes of conduct and standards to promote ethical behavior, they can be undermined by superiors' and peers' actions, or inactions (Pickerd et al. 2015).

2.3 The Audit Team

Audit team dynamics may contribute to the prevalence of DAB within the profession. Solomon (1987, 1) states, “multi-person judgments and decisions, while often better and sometimes inferior, almost always are different from those of individuals,” drawing attention to the fact that team dynamics will influence the audit process and consequently affect audit quality. The sentiment from Solomon (1987) is echoed by subsequent research that notes that the scarce attention in the accounting literature to the audit team is not indicative of the consideration that it deserves (Rich et al. 1997; Nelson and Tan 2005; Francis 2011; Trotman et al. 2015). Nelson and Tan (2005) state that auditor interactions are highly under-researched, despite the observation that, “auditors do not work in isolation, so it is crucial to understand how the people, tasks, and environment that auditors interact with influence auditor performance” (Nelson and Tan 2005, 59).

Even though there has been limited attention to teams within the audit literature, that is not the case for the social psychology, organizational behavior, and group decision making literatures. There are many studies dating from the 1950s (e.g., Lorge, Fox, Davitz, and Brenner 1958) to the present time (e.g., Barkhi 2002; Kerr and Tindale 2004; Barkhi 2005; Ilgen, Hollenbeck, Johnson, and Jundt 2005; Kozlowski and Bell 2013) that focuses on team research. Although much of what is reported in these literatures is likely applicable to the audit setting, a key difference that necessitates context-specific research in the audit setting is that there are standards in place that auditors must abide by, which will likely influence the dynamics of team interactions. Audit teams are similar to organizational teams in that they are working together to perform tasks for the organization; they share common goals; they are interdependent; and they interact socially (Kozlowski and Bell 2013). However, audit teams are different from other

organizational teams in that the standards that guide auditors are professionally and legally enforceable and failure to adhere to them carries significant consequences for both the individual auditors and for the firm, with the possibility of affecting the audit firm's reputation so significantly that they are forced to file for bankruptcy (e.g., Arthur Andersen).

Our knowledge about audit teams is primarily limited to three main areas: the review process, brainstorming, and consultation (Trotman et al. 2015). Much of the research focuses on the effects that the review process has on the reviewer and the audit documentation preparer, while few studies focus on pre-review interacting groups (Trotman et al. 2015). Social influence theory posits that interactions among team members prior to the review process may influence auditors' behaviors and therefore the documentation evaluated during the review process (Cialdini and Goldstein 2004; Jackson 2008). Before the review process begins, interactions among peer team members (e.g., sharing task-related information, trading tips and tricks, discussing expected behaviors, etc.) will affect what will be included in the workpapers that are ultimately reviewed by their superiors. Although the hierarchical nature of audit team results in a review by more senior team members, the effectiveness of a review is largely determined by the evidence that the staff members have actually documented. The procedures and evidence that are documented can be affected by interactions among staff members prior to the start of the review process. These interactions can impact audit quality (Cameran, Ditillo, and Pettinicchio 2017), especially since the staff members perform a great deal of the audit work to be reviewed (e.g., Abdolmohammadi 1999; Herrbach 2005; International Federation of Accountants 2007).

2.4 Communication within the Audit Team

Interactions within the audit team occur continually throughout the entire engagement allowing auditors to receive both informational and behavioral cues as a means to successfully complete engagements (Herrbach 2001; Nelson and Tan 2005; Bobek, Daugherty, and Radtke 2012). To successfully complete the audit there are many different purposes for within team interactions such as the review process (e.g., Trotman 1985; Gibbins and Newton 1994; Wilks 2002; Agoglia, Kida, and Hanno 2003; Frank and Hoffman 2015), brainstorming (e.g., Carpenter 2007; Hoffman and Zimbelman 2009; Lynch, Murthy, and Engle 2009; Brazel, Carpenter, and Jenkins 2010; Hammersley, Bamber, and Carpenter 2010; Chen, Trotman, and Zhou 2015), and consultation (e.g., Salterio 1996; Kennedy, Kleinmuntz, and Peecher 1997; Salterio and Koonce 1997; Asare and Wright 2004; Ng and Shankar 2010; Gold, Knechel, and Wallage 2012; Kadous, Leiby, and Peecher 2013; Trotman et al. 2015). While there has been research about within team interactions, a common theme is their attention to superior-subordinate interactions, with limited attention to interactions between peer team members, which occur frequently and is an important source of information for staff auditors (Gibbins and Emby 1985; Kennedy et al. 1997; Ranzilla, Chevalier, Herrmann, Glover, and Prawitt 2011).

To further emphasize the critical role that communication plays in the audit process, Lurie (1982, 82) notes that, “Communication is the nerve system of the accounting profession.” Emphasis on the importance of within team communication is seen in the fact that a majority of the four modes of communication (i.e., downward from the partners to the staff, upwards from the staff to supervisors, laterally between staff members, and outside of the audit team (Lurie 1982)), are within the audit team. While downward, upward, and outward communication will most frequently be formal in nature, lateral communication among staff members will often be

informal. Lateral communication among staff members at the same level is useful because it allows for experiences gained by one team member to be shared and used by others (Lurie 1982). Additionally, these frequent informal interactions among peer team members allows them to seek additional information and perspectives (Gibbins and Emby 1985; Kennedy et al. 1997; Ranzilla et al. 2011; Kadous et al. 2013). As a staff auditor, with limited experience, leveraging experience from others is beneficial to developing a better understanding of a new setting.

Information sought after includes several different types, including technical, referent, normative, performance feedback, and social feedback, which helps newcomers better understand their new setting (Morrison 1993). Each type of information helps newcomers in different ways. First, technical information helps newcomers understand how to complete on-the-job tasks. Second, referent information helps newcomers understand the demands and expectations of their specific role. Third, normative information helps newcomers establish the behaviors and attitudes that are expected of newcomers. Fourth, performance feedback information helps newcomers understand how others think they are performing. Finally, social feedback information helps newcomers understand the acceptability of their behaviors in the workplace that are not related to job tasks. In summary, newcomers seek information in several different content areas that all assist in their ability to integrate into a new setting.

Successful integration into a new setting requires newcomers to seek information and perspectives that are both job-related and social-related (Dirsmith and Covaleski 1985). The difference being that job-related informal communication focuses specifically on performance of organizational tasks whereas social-related communication includes a wider range of topics, from encouragement to plain gossip. While two of the types of information that new professionals seek out (i.e., Morrison 1993) can be categorized easily into the information

communication types (i.e., Dirsmith and Covaleski 1985), the remaining three prove to be less obvious. Technical information (i.e., accurate job task completion) would clearly fit into job-related information, whereas social feedback (i.e., acceptable off-task behaviors) would clearly fit into social-related information. However, referent information (i.e., role demands/expectations), normative information (i.e., expected behaviors/attitudes), and performance feedback (i.e., others' perceptions) could each apply to helping newcomers with completing job-tasks as well as with assimilating socially to the new team setting. Staff auditors new to the profession seek normative and social feedback information mostly from peers, whereas they seek technical, referent, and performance feedback information from supervisors (Morrison 1993). This would indicate that those new to the team seek more behavioral information from peers, both job-related (e.g., normative) and social-related (e.g., social feedback), whereas they seek more procedural information from superiors. As such, peers play an important role in providing behavioral information to new staff auditors on both how to do their job and how to fit in with the team socially.

Bobek et al. (2012) find that nearly 11% of self-identified challenges faced by auditors are resolved through communication within the firm, and further, nearly 22% of participants noted communication with peers on the engagement as a contributing factor to resolving their challenge. Interestingly, Bobek et al. (2012) compare the results from successfully resolved and unsuccessfully resolved challenges and find that communication is the only significant element differentiating the two. However, since 55% (74%) of the self-reported challenges were within the past 6 months (1 year) (Bobek et al. 2012), there is a possibility that “successful” resolution occurred for the immediate challenge without actually resolving the matter long-term. In other words, since the majority of the challenges occurred within the past year, there is the chance that

the staff auditor thinks that he resolved the issue successfully but the successful resolution has long-term consequences that have not yet been discovered. For example, resolving an issue of a client's lack of readiness by communicating with the client may fix the issue of not having the necessary files, but the reduced time for task completion may lead to other DAB, such as gathering insufficient evidence, inaccurate processing, and ignoring audit steps (Donnelly et al. 2003), that have long-term audit quality reducing effects. Learning job-related information from peers could improve overall audit quality if the sharing of information revolves around effective audit practices. However, the concern is that it is also possible for audit quality reducing behaviors to be shared, reducing the overall audit quality.

While effective communication between audit team members is crucial to successfully complete an audit engagement, it is also important to recognize that communication among team members may sometimes have negative consequences. For example, the information exchange process among team members, along with the team structure, can lead to process losses by negatively affecting decision-making (Bedard, Biggs, Maroney, and Johnson 1998; Rudolph and Welker 1998). Consequently, while the audit is conducted in a team setting conducive to performance gains in many tasks (e.g., memory accuracy, fraud assessment, value estimation), there are potential team dynamics (e.g., dominance, interruption) that can lead to performance losses (Bedard et al. 1998). In other words, when making decisions within the group setting, performance losses can arise due to interactions among team members. For example, differing objectives/interpretations/goals among team members may lead to their inability to reach a consensus or it may lead to inefficiencies when trying to reach that consensus so that the audit process can progress efficiently and effectively. Since it is an established fact that group decision-making can lead to performance losses (Bedard et al. 1998), it then follows that in a

group decision-making context, social cues communicated informally among peer team members may influence each team member's behavior relative to others' behaviors leading to team performance losses. For example, if one member shirks and takes free rides, other team members may be more likely to also shirk and take free rides diminishing team performance (Barkhi 2005).

2.5 Staff Auditors

Communication within the audit team plays an especially important role to newcomers to the audit profession. Because newcomers have little experience in their new role, they will be especially susceptible to social influences when they are seeking information, both from peers and superiors (Gibbins and Emby 1985), to perform their job. In other words, staff auditors' lack of knowledge makes them more vulnerable to influence from their peers because they are continually seeking out different types of information. More specifically, newcomers (i.e., staff auditors) seek information to reduce the uncertainty that comes with starting a new position. By seeking out additional information staff auditors are more likely to be able to understand, predict, and control their environments (Berlyne 1960; Berger 1979; Morrison 1993). In addition, staff auditors often lack the information necessary to master their jobs and integrate into their new organization (Graen et al. 1973; Jablin 1984; Dirsmith and Covaleski 1985; Morrison 1993). Because staff auditors are often seeking out information, many times during socialization, they are likely to be influenced by the information providers (Morrison 1993).

Information that staff auditors learn from their communication with team members is imperative to a quality audit because while staff auditors may be at the bottom of the firm hierarchy, they play an important role in the audit. First, staff auditors are the foundation of the audit team in that they carry out a majority of the tasks deemed necessary by more senior team

members (Willett and Page 1996; Abdolmohammadi 1999; Herrbach 2005; Andiola and Hall 2016; Brown et al. 2016). Second, while many tasks staff complete may seem mundane (i.e., ticking/tying, confirmation logging, gathering documentation, etc.), these tasks along with the less mundane tasks (i.e., sample selection, analytical procedures, roll-forwards, etc.) require some judgement that will ultimately be used as support for the final audit report (Bonner 2008; Kaplan, O'Donnell, and Arel 2008). Finally, as staff auditors are expected to complete more complex tasks earlier in their careers (Daugherty, Dickins, and Fennema 2012; PricewaterhouseCoopers 2015), it will necessitate a search for additional information to successfully complete tasks as they arise, making the communication among staff auditors even more important. Taken together, staff auditors are the population that seeks information to successfully complete their job with the greatest likelihood of being influenced by the actions of their team members because they are trying to learn what is appropriate and acceptable behavior in many new situations.

Another reason that staff auditors may use team members as an information source is the mentorship model that firms use. Individuals at all levels of the organization will be assigned a mentor who is higher within the firm hierarchy with the hopes that it will advance the staff auditor's career in a positive manner. As an example, KPMG has specifically noted that a benefit of the mentorship model is having the opportunity to, "observe and interact with professionals" which highlights the notion that there is much information to be learned from team members (KPMG n.d.). In other words, KPMG's policy dictates that team members should be used as a source of information. While mentoring is usually hierarchical, in that a superior is a mentor to a subordinate, within the audit setting the mentorship model relies on interactions among peers because of their ability to act as a first source of information. Even before starting at the firm,

new staff auditors are often assigned a “transitional coach” who is another staff auditor that has been with the firm for one year. This transitional coach is responsible for helping the new staff auditor acclimate to the firm, which includes providing both administrative information as well as informal information about the team to which he is assigned. As such, mentoring occurs at all levels within the audit team, both superior to subordinate and peer to peer, making interactions among audit team members even more influential on an individual’s behavioral choice because he often sees those team members as role models.

2.6 Social Influence Theory

The notion that auditors seek out information from team members when deciding on their own behavior is consistent with the social influence theory, which states that individuals’ chosen actions and behaviors are susceptible to influence by others (Cialdini and Goldstein 2004; Jackson 2008). In any setting with more than one person, an individual can be influenced by superiors through compliance pressures and by peers through conformity pressures (Ouchi 1980; Lord and DeZoort 2001; Cialdini and Goldstein 2004; Jenkins et al. 2008). Changes in behavior from compliance pressures result from an individual matching a suggested response, many times from a demand made by a superior, whereas changes in behavior from conformity pressures result from an individual matching others’ responses (i.e., abiding by social norms) in a given situation. Cialdini and Goldstein (2004) conclude that both types of pressures are effective because of individuals’ accuracy goals, affiliation goals, and positive self-concept maintenance goals.

The accuracy goal states that individuals are generally motivated to achieve their goals in an effective and efficient manner (Cialdini and Goldstein 2004). This accuracy goal is complicated in social settings where individuals face compliance pressures from superiors and

conformity pressures from peers. Accuracy in a given situation is dependent on the correct construal of that situation. In other words, an individual's interpretation of his team member's behavior is imperative to achieving his goals in the most effective and efficient manner possible since it could affect the behavior that he chooses to engage in. The auditor's construal, and eventual chosen behavior, can be affected by many things during the evaluation process such as his affective state, time pressure, disruptions, rewards from authoritative figures, and social norms (Cialdini and Goldstein 2004). Importantly, injunctive norms must be considered separately from descriptive norms in that they provide information about what behavior is typically *approved/disallowed* whereas descriptive norms provide information about what is typically *done* (Cialdini and Goldstein 2004). Relatedly, when considering conformity pressure, the construal of the situation heavily depends on one's perception of the consensus of beliefs among the group and how close the peer group is to the individual making a behavioral choice. Essentially, an individual will be most likely to conform to attitudes, beliefs, and behaviors of the "local numerical majority" and more "proximate persons" because of the increased likelihood of behaving in a way that represents having accurately interpreted the situation (i.e., informational motivations) and allowing him to gain others' social approval (i.e., normative motivations) (Cialdini and Goldstein 2004). When considering the accuracy goal, it is important to consider findings that in instances of subjective judgments, where accuracy is important, social cues have a larger impact, even when coming from a non-confident source (Baron, Vandello, and Brunzman 1996). Further, Barkhi, Amiri, and James (2006) show that social cues in proximate groups (i.e., social cues from peer team members) enhance the truthfulness of the information exchanged, which helps the parties involved to better "gauge" each other and therefore construe a situation more accurately.

The affiliation goal states that individuals are also motivated to create and maintain meaningful social relationships with others (Cialdini and Goldstein 2004). This affiliation goal can be accomplished by abiding by social norms (injunctive and/or descriptive), which is more likely to occur when an individual has a greater approval/liking of the individuals to whom he is trying to strengthen affiliation with (Cialdini and Trost 1998). Another means to strengthen relationships is to maintain equity within that relationship, which is accomplished through reciprocating favors among individuals. When trying to conform, both unconscious actions such as mimicking behaviors and body language characteristics, as well as more conscious actions take place (Chartrand and Bargh 1999; Cialdini and Goldstein 2004).

Individuals' motivation extends also to their desire to maintain a positive self-concept. This positive self-concept maintenance goal is grounded in a need for consistency and can be accomplished by behaving in a manner consistent with previous and self-proclaimed actions, statements, commitments, beliefs, and other traits (Chartrand and Bargh 1999; Cialdini and Goldstein 2004). Interestingly, while this goal can enhance compliance pressures because of an individual's desire to abide by previously agreed upon actions, it could counteract conformity pressures by placing the emphasis back on self-views, versus a comparison to the peer group. However, if an individual is not confident in his self-views, he may look to a valued group member to identify with (Pool, Wood, and Leck 1998; Brewer and Roccas 2001). Taken together, it is not clear the direction that the goal of self-concept maintenance will drive someone to act since it can combat conformity behavior by focusing on oneself to be consistent with prior promises, but it can also encourage conformity behavior by encouraging one to focus on conforming to the group to increase positive self-assessments (Cialdini and Goldstein 2004).

Accuracy goals, affiliation goals, and positive self-concept maintenance goals allow for compliance pressures and conformity pressures to have an effect on one's behaviors, especially in times of uncertainty. Each of these goals are aspects of the overall social influence theory, but they can each be considered individually under a more specific theoretical lens as presented by O'Fallon and Butterfield (2012). First, accuracy goals could fall under the social learning theory because individuals learn what is acceptable from other team members, which would then change the chosen behavior to match that of the team norms. Second, affiliation goals could fall under the social identity theory because individuals place value on being a member of a specific group and will therefore change his/her behaviors to solidify that connection. Third, positive self-concept maintenance goals could fall under social comparison theory because individuals will compare themselves to similar others, absent other cues, and will change their behaviors to be better than others' behaviors. Importantly, each of the goals/theories plays an equal role in the effect that a team member's behavior has on another team member's own chosen behavior (27% social learning, 28% social identity, and 29% social comparison) (O'Fallon and Butterfield 2012, 127).

Social influence pressures work through accuracy, affiliation, and positive self-concept goals since individuals will look to others to determine social norms to develop an understanding in a given situation filled with uncertainty (Cialdini 2001). Staff auditors will be especially susceptible to social influences because of their lack of experience in the audit team setting. Prior studies find that compliance pressures have a statistically significant effect on accountants' actions (Lightner, Adams, and Lightner 1982; Kermis and Mahapatra 1985; DeZoort and Lord 1994; Otley and Pierce 1996; Lord and DeZoort 2001; Davis, DeZoort, and Kopp 2006; Smith, Simpson, and Huang 2007; Clayton and van Staden 2015). On the other hand, conformity

pressures in the accounting setting are mixed, with some finding non-statistically significant effects of peers on an individual's chosen behavior (Lord and DeZoort 2001; McManus and Subramaniam 2009; Clayton and van Staden 2015), and others finding significant effects of peers (Ponemon 1992; Jones and Kavanagh 1996; Clayton and van Staden 2015). It should be noted that while Clayton and van Staden (2015) find no overall significant effect of conformity pressure on one's behavior, participants in lower age groups *were* significantly affected by conformity pressure from peers. Taken together, in the accounting setting there is sufficient evidence that compliance pressure from superiors does have an effect on an individual's behaviors, but it remains an open question as to whether conformity pressure from peers has an effect on an individual's behavior and how it affects audit quality.

The social influence theory has been used within the accounting literature to investigate the effects of compliance and conformity pressures within the audit setting. For example, Ponemon (1992) finds that when there is an unattainable time budget or peer pressure, an auditor's level of moral reasoning affects their underreporting. However, Ponemon (1992) investigated these effects individually without interacting them on a task not likely to immediately affect audit quality. Next, Jones and Kavanagh (1996) find that quality of work experience, peer influence (ethical vs. unethical), and managerial influence (ethical vs. unethical) have an effect on an individual's intentions to act unethically when submitting expense reports. However, while they find a main effect for peer influence and an interaction effect between peer and managerial influences using undergraduate students, they find a main effect for managerial influence and no interaction effect using MBA students with work experience. Next, Lord and DeZoort (2001) find that compliance pressure from a superior but not conformity pressure from a peer increased the likelihood that staff auditors engage in signing off on a materially misstated

account balance. However, within that study, the peer pressure manipulation was from the senior who the participants were replacing. As such, the seniors were not going to remain on the audit team and the participants were unlikely to engage with them again regarding the existence and valuation of the assets in question. In addition, the compliance pressure is from a partner instructing participants to sign-off on the account even though he knows the evidence is lacking. This instruction from a superior leaves little room for a relatively inexperienced auditor to think that an alternative option is better or an acceptable choice. Additionally, compliance and conformity pressures were not tested simultaneously for the participants. Subsequently, in the post-SOX time period, changes in the regulatory environment may change the effects of social influence within the audit team (Jenkins et al. 2008). McManus and Subramaniam (2009) find that ethical evaluations and behavioral intentions are influenced by an individual's perceptions of the ethicality of his peers' conduct, their personal ethical orientation, ethics education, and gender using a questionnaire mailed to Australian accounting firms, which included a case scenario including a research and development expenditure that was accounted for improperly. However, while participants were told that the partner did not want to take action, the behavior of their peers was not manipulated, they were simply asked to rate the ethical behavior of their peers in the workplace. Finally, Clayton and van Staden (2015) find that members of the professional accounting institutes in Australia and New Zealand view themselves as being influenced by compliance and conformity pressures after individual manipulations to influence pressures (no pressure, conformity pressure, compliance pressure). Again, compliance and conformity pressure were not tested simultaneously for the participants. Given these studies within the accounting literature, this study proposes the following hypotheses to add to this stream of research by manipulating conformity pressure and compliance pressure

simultaneously, from current team members, while still leaving room for the participants to make a decision, for a task that has the potential to affect audit quality.

H1: Staff auditors subject to audit quality decreasing conformity pressure (i.e., a peer engaging in DAB) are more likely to engage in audit quality reducing dysfunctional audit behaviors than staff auditors under no conformity pressure.

H2: Staff auditors subject to audit quality decreasing compliance pressure (i.e., a superior's preference toward efficiency) are more likely to engage in audit quality reducing dysfunctional audit behaviors than staff auditors under no compliance pressure.

In summary, the social influences that are present within the audit team are those from both peers and from superiors. H1 and H2 reflect the notion that both sources of influence can be an effective means of pressuring a staff auditor to behave in a manner that he normally would not. Specifically, H1 states that staff auditors can face pressure from peer team members to conform to behaviors not consistent with standards or firm policy because they seem normal and acceptable as a result of how others on the team are behaving. Relatedly, H2 states that staff auditors can face pressure from superiors to comply with preferences that may make abiding by standards or firm policy more difficult. Because staff auditors are new to the team and are trying to learn from others what is the appropriate course of action, they will be more likely to engage in DAB if their peer team member engages in DAB or if their superior's preference makes that behavior seem acceptable.

Staff auditors will to engage in a DAB if that conforms to what their peer team members are doing or if it complies with their superior's preference because they want to complete the job in an efficient and effective manner (accuracy goals), want to create and maintain social relationships (affiliation goals), and want to act consistently (positive self-concept maintenance goals). With their limited knowledge in the auditing profession, staff auditors are easily

influenced by others on their team who have already chosen a course of action. As such, one cause for the prevalence of DAB within the profession could be the lack of knowledge that staff auditors have and their reliance on peer team members' behaviors and superiors' preferences as a source of information to influence their chosen behavior.

2.7 In-Group Bias Theory

I relied on extant theory and literature to suggest that within the audit team setting, a team member engaging in an audit quality reducing DAB can affect the behaviors that other team members choose to engage in. One way to mitigate this dysfunctional behavior is to encourage staff auditors to simultaneously attend to a superior's preference toward effectiveness (i.e., high tone) and consciously avoid imitating audit quality reducing DAB of another peer team member. While the tone set by a superior, through his preferences, is a key determinant of the overarching culture within an audit team, it may not always align with the behaviors of peer team members. Staff auditors may face situations where consideration needs to be given to two conflicting sources of information that are present when they are choosing what behavior they will engage in. This difficult situation may arise when the tone of the superior, set through his preferences toward efficiency or effectiveness, and a peer team members' behaviors do not align (e.g., a superior with a preference toward effectiveness and a peer engaging in a DAB). While staff auditors will be influenced individually by both their superior's preferences (i.e., compliance pressure) and their peer team members' behavior (i.e., conformity pressure) when deciding which action to take, it is expected that there will be an amplification effect between the two sources of influence on a staff auditor's likelihood of engaging in DAB.

The social influence theory posits that both compliance pressure from a superior and conformity pressure from a peer are effective at influencing the behavior an individual chooses to engage in (Cialdini and Goldstein 2004). While the theory predicts that both of these pressures individually affect an individual's behavior, it does not predict how the two sources of influence will interact when they are present simultaneously. As such, I look to the in-group bias theory to determine how multiple sources of information will interact to affect staff auditors' behavioral choices.

Staff auditors often consider themselves to be a part of many different groups at different points in time. An individual's in-group can be defined as, "Any categorization rule that provides a basis for classifying an individual as belonging to one social grouping as distinct from another can be sufficient to produce differentiation of attitudes toward the two groups" (Brewer 1979). Some categorization rules include, similarity, status differentials, age, personality, hierarchical level within an organization, technical accounting knowledge, managerial skills, business experience, and alumni status (Wilson and Kayatani 1968; Billig and Tajfel 1973; Dion 1973; Brewer 1979; Finkelstein, Burke, and Raju 1995; Menon and Williams 2004; Lennox 2005; Gino, Ayal, and Ariely 2009; Pickerd et al. 2015; Austin and Carpenter 2017). As such, it is possible, and likely, that staff auditors are part of many different in-groups because of different means of classification. When considering a staff auditor, they are part of the accounting profession group, they are part of the audit team group (versus the client), they are part of the staff associates group (versus seniors/managers/partners), and they may also be part of other different social groups within the organization.

While staff auditors are considered a part of many different groups, the key is that their dominant in-group in any given situation is dependent on the quantity and quality of

categorization factors with other group members. As such, in the audit setting, they will feel closest to other staff auditors because they have the most common characteristics. However, they will also feel a part of the audit team group because they share many similar characteristics with their other team members. As such, because staff auditors are in-group with both their peer staff auditors and their superiors, they will be individually influenced by both their peer team members and their superior's preferences. However, when both influences are present, they will interact in a compounding manner. Specifically, when the superior has a preference toward efficiency, the effect of peer DAB will be amplified. In other words, if the superior has a preference toward efficiency and the peer engages in DAB the staff auditors will be significantly more likely to engage in a DAB than when the peer does not engage in a DAB. However, when the superior has a preference toward effectiveness, the effect of peer DAB will be significantly less than when the superior has a preference toward efficiency. This suggests the following hypothesis, as depicted in Figure 4:

H3: The effect of a peer team member's dysfunctional audit behavior on staff auditors' likelihood of engaging in a dysfunctional audit behavior is stronger when the superior has a preference toward efficiency, rather than effectiveness.

This compounding effect of a superior's preference toward efficiency on the effect that the influence of a peer team member's behavior has on a staff auditor's behavior might be attributed to the fact that staff auditors are fresh out of school and firm training. This may lead to staff auditors having naïve expectations that their superiors are hyper-focused on audit effectiveness. As such, when the superior's preference strays away from effectiveness, toward efficiency, it catches staff auditors' attention and they attend to it with greater focus and emphasized cognition.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Participants

The current study uses 71 students enrolled in a graduate accounting course from three large public universities in the Southeast United States, proxying for staff auditors.² Staff auditors are appropriate subjects for the current study because they have frequent interactions with their immediate superiors (i.e., the senior team member), which allows the preferences of a superior to have an impact on their chosen behaviors. In contrast, the interactions that senior auditors have with their immediate superiors (i.e., the manager) would be more limited, decreasing the effect that the tone of the superiors would have on their chosen behaviors. In addition, staff auditors match the task within this experiment since they frequently perform tests of internal controls, including the selection of the sample to be tested.

Graduate accounting students are an appropriate proxy for new staff auditors in this study for several reasons. First, my study is specifically targeting staff auditors with limited experience (e.g., Bennett and Hatfield 2013; Wainberg and Perreault 2016). To this end, my internal control sample selection task does not require task-specific knowledge, unlike more complicated accounting decisions. In other words, graduate accounting students will have the appropriate/typical level of knowledge and experience to perform an audit-sampling task (e.g., Mayhew and Murphy 2014; Pickerd et al. 2015). Second, the training that staff auditors receive in bias avoidance is concentrated in undergraduate accounting classes, which means that the training is the same between new staff auditors and students enrolled in a graduate accounting

² University was included as a covariate and was not found to be significant for any of the dependent variables.

course (Commerford, Hatfield, Houston, and Mullis 2017). Third, and relatedly, there is evidence that there is little difference between ethical attitudes and reasoning between students and professionals (e.g., Mayhew and Murphy 2014). Finally, graduate students will be new staff auditors within mere months. Specifically, there is little difference in a student with internship experience and a staff auditor within their first few months on the job (e.g., Mowchan, Lowe, and Reckers 2015; Pickerd et al. 2015).

3.2 Experimental Design & Research Task

This study uses a 2x2 between-subjects experimental design to capture the behavior of a staff audit team member after manipulations to the communication of a peer team member's engagement in an audit quality reducing DAB (absent, present) and to the preferences of his senior team member (efficiency, effectiveness). The experiment was administered online using Qualtrics.

Participants receive a vignette that describes a scenario involving internal controls testwork to be completed over the cash balance, which is a high-risk financial statement account. A deficiency in this control could have significant consequences on the accuracy of the financial statements and therefore inaccurate client implementation and audit testing of the control could have significant consequences on the quality of the audit. The vignette that participants receive states that a staff auditor on the team (Jimmy) is to gather the documentation to be used in a later assessment of the accuracy of the client's performance of the reconciliation between the general ledger and the bank account in a timely manner each month (i.e., monthly bank reconciliation). Participants are also given the applicable standards (AS 2201.44-45 and AS 2315.39) to review before starting the task. Participants are informed that Jimmy had previously selected April and October himself for testing. However, when he reviews the online client PBC portal, the

evidence for the April control is present but October is missing. October is not the only month missing from the client PBC portal so as to not draw additional attention to it. In addition, participants are informed that the client sometimes forgets to upload the documentation to the PBC site, but that does not necessarily mean that they did not complete the control for that month; the missing documentation can be requested from the client directly. In addition, both November and December are present, allowing Jimmy the option of selecting a different month in Q4 for testing. After accessing the client's PBC portal, but before beginning any work, participants are informed that it is lunchtime and the audit team has ordered lunch in, which has arrived in the breakroom. Participants then receive a script of the informal lunchroom conversation between two of Jimmy's peer team members (Louis and Christian), which is where the peer team member's behavior (DAB present or DAB absent) is communicated. When the team has finished lunch, participants are asked what are the likely next steps that Jimmy will take to complete his internal control sample selection. Because the study involves a morally sensitive decision, the dependent variable is phrased in the third person, asking the participants how Jimmy would behave, rather than how the participants themselves would behave. This approach is consistent with prior research (e.g., Stefaniak and Robertson 2010; Perreault, Wainberg, and Luippold 2017; Nelson and Proell 2018), which attempts to reduce the social desirability bias present in the decision making process (Sherwood 1981; Fisher 1993; Chung and Monroe 2003), and decrease the likelihood that individuals will overestimate the likelihood that they would behave more ethically than others in their current position (Epley and Dunning 2000). Figure 5 provides a flowchart of experimental procedures and Appendices A-I include the experimental materials. Figure 6 presents a complete framework of this study.

3.3 Manipulated Independent Variables

3.3.1 H1: Peer Behavior Communicated

The communication between peers is manipulated to include either an audit quality reducing DAB or a non-DAB. Appendix D includes the script that participants read of the informal lunchroom conversation between two of Jimmy's peer team members (Louis and Christian), which either includes, or excludes, Louis boasting about having already completed his assigned internal controls testwork. In the DAB present condition, Louis indicates that his ability to complete his control testwork more quickly is a result of him selecting his internal control samples only after reviewing the posted items on the client's PBC portal, meaning that he does not have to request, and wait on the client, for additional documentation. Specifically, when asked how he has already finished testing his assigned internal controls, Louis states, "I've been picking my samples from what's already posted on the client PBC portal. I know I should pick my sample from the full population ahead of time but it saves so much time to do it this way!" As such, it is clear that Jimmy's peer team members are altering their originally selected sample and not following policies and regulations by altering their sample because of what is easily available from the client.

This approach to selecting the internal control sample is problematic, and considered an audit quality reducing DAB, because it only considers the items that have been uploaded to the PBC portal, not the entire population. By selecting the sample to be tested from only the items uploaded to the client PBC portal, there is a possibility that the client did not perform the control for one month and so it wouldn't be uploaded to the PBC portal and therefore it wouldn't have the chance to be included in the sample resulting in an internal control deficiency being missed. This approach to selecting the sample alters the procedure from selecting the sample from the

entire population to selecting the sample from just a subsection of the population. This approach is indicative of selecting the sample for potentially less problematic items, which has been found to be a frequently occurring audit quality reducing DAB, since it is unlikely to be caught as it is not something that would be included in the audit workpapers/documentation (Willett and Page 1996; Pierce and Sweeney 2004; Perreault et al. 2017).

In contrast, in the DAB absent condition, Louis states that he is almost done testing his controls to which Christian replies, “Me too, I'm just waiting on some documentation from the client since it wasn't uploaded to the client PBC portal.” In response, Louis states, “Yea, it's so annoying waiting for them to send the selected sample but that's the only way that follows firm policy since you are picking from all twelve available months.” As such, it is clear that Jimmy's peer team members are sticking to their originally selected sample and following firm policies and regulations to not alter their sample because of what is easily available from the client.

3.3.2 H2: Superior Preference

The preference of the staff auditor's immediate superior (i.e., senior team member) is manipulated as a preference toward efficiency (i.e., low tone) or toward effectiveness (i.e., high tone). Similar to prior studies, the superior's preference, which in this paper is considered to be the tone that the staff auditor is subject to from his immediate superior, is manipulated by emphasizing either accuracy (i.e., effectiveness) or coming in under budget (i.e., efficiency) (e.g., Bierstaker and Wright 2005; Bamber and Iyer 2009; Pickerd et al. 2015). As seen in Appendix B, this manipulation occurs when participants receive the background information on the client and the audit team. Specifically, participants are told the age, experience, and the university attended for each of their audit team members. Subsequently, for the efficiency condition, participants are told, “Jimmy's team is nearing the end of their on-site testwork so

Tory, the senior, has been keeping an eye on the budget and expects that testwork should be completed faster than it has been done earlier in the engagement; she wants you to work as efficiently as possible and save time when you can.” In addition, they are asked, “Please list three things that Jimmy could do to save time to appease Tory, the senior’s, preference toward efficiency.” In contrast, for the effectiveness condition participants are told, “Jimmy’s team is nearing the end of their on-site testwork so Tory, the senior, has been keeping an eye on the audit file to ensure that audit quality remains high even toward the end of the current engagement; she wants you to perform all procedures with high accuracy and maintain an appropriate degree of professional skepticism.” In addition, they are asked, “Please list three things that Jimmy could do to increase audit quality to appease Tory, the senior’s, preference toward effectiveness.”

3.4 Dependent Variables

After attending lunch where Jimmy learns about his peer team member’s behavior participants are asked in what behavior Jimmy would likely engage. Specifically, as seen in Appendix E, using a 7-point Likert scale, participants are asked, “ Based on the information currently available on the client PBC portal, how likely is Jimmy to do each of the following as his next step in selecting the internal control sample?” The choices of next available actions to be evaluated by the participants will be as follows, (DV1) Select April & pick another month already available on the PBC portal in Q4, (DV2) Select April & request October from the client by email, or (DV3) Select April & request October from the client face to face.

Three separate dependent variables are used in this study because previous research documents that there are differences in the likelihood of communicating electronically versus face-to-face (Baltes, Dickson, Sherman, Bauer, and LaGanke 2002; Brazel, Agoglia, and Hatfield 2004; Maruping and Agarwal 2004; Ho and McLeod 2008; Bennett and Hatfield 2013).

Specifically, these studies find that electronic communication (e.g., email) allows individuals to make their thoughts known because the salience of differences in parties' status and negative social cues are reduced reducing situation pressure (Brazel et al. 2004; Ho and McLeod 2008). Relatedly, communicating electronically gives individuals time to prepare their requests and responses unlike face-to-face communication, but it does not allow for immediate responses including situational factors such as body language (Maruping and Agarwal 2004). Taken together, Bennett and Hatfield (2013) find that staff auditors are more likely to request information from an older and more experienced client electronically than in a face-to-face meeting because it reduces the social pressures of the situation, which allows staff auditors to request the necessary information from the client therefore increasing audit quality, but in a less intimidating manner.

The first dependent variable represents the DAB that the peer team member engaged in for the DAB present condition. Again, engaging in this procedure is problematic because there is a possibility that the client did not perform the control for one month and so it wouldn't be uploaded to the PBC portal and therefore it wouldn't have the chance to be included in the sample resulting in the potential for an internal control deficiency to be being missed. The second and third dependent variables represent appropriate behaviors, nonDAB, because the originally selected sample is being requested from the client, either by email or face-to-face. In addition, participants are asked to provide a short explanation for their choices of Jimmy's likely next behaviors.

Next, participants are asked if they think Jimmy would face negative consequences based on his chosen behavior in selecting the internal control sample. These questions are asked to determine if participants chose their behavior based on the likelihood of facing consequences as

opposed to assimilating to their team. Using the same choices and the same 7-point Likert scale, participants are also asked, “Based on the information currently available on the client PBC portal, how likely is Jimmy to face negative consequences if he did each of the following as his next step in selecting the internal control sample?” After participants have completed the aforementioned steps relating to the main variables of interest, they complete manipulation checks, supplemental analyses, and demographic questions.

3.5 Pilot Testing

First, the experiment was pre-tested using four accounting PhD students to evaluate confusing areas of the experiment and estimated completion times. I sat with the PhD students and recorded their thought process as they completed the experiment. Next, pilot testing was conducted to determine the average completion time, manipulation check passage rate, and to refine the variables of interest. A summary of the instrument development procedures is illustrated in Table 1.

Participants in the pilot-test study were 101 undergraduate students from a large state university in the Southeast enrolled in upper-level accounting classes who received 2% extra credit for their participation in the experiment. Demographic information for the pilot testing participants is included in Table 2, which indicates that they are well-suited participants for this study given their accounting knowledge and internship experience that resembles new staff auditors. Participants took an average of 30 minutes to complete the experiment.³ The

³ Average time to complete the experiment excludes times that were greater than 60 minutes or less than 10 minutes. 24 participants had times greater than 60 minutes with an average duration of 2,335.77 minutes. 4 participants had times less than 10 minutes with an average duration of 6.26 minutes. Because many of the times greater than 60 minutes are so large, they can be attributed to participants leaving the Qualtrics browser open, and as such, they were included in the analyses. However, participants taking less than 10 minutes to complete the experiment were excluded from the analyses because that is not ample time to read the supplied information and respond to

comprehension check to determine that participants attended to that fact that there was one of the two months selected for testing was missing from the PBC portal was successful as, 93% (94) of the participants passed that check. However, there were some problems with the manipulation checks: (1) 51%, that is 52 of 101 of the participants correctly responded to the superior's preference toward efficiency manipulation check, (2) 63%, that is 64 of 101 of the participants correctly responded to the superior's preference toward effectiveness manipulation check, (3) 52%, that is 53 of 101 of the participants correctly responded to the reduction of audit quality due to peer DAB manipulation check, and (4) 64%, that is 65 of 101 of the participants correctly responded to the enhancement of audit quality due to peer DAB manipulation check.⁴ While many participants did not respond to the manipulation checks accurately, many of their free responses for explanations of: (1) what they could do to appease their superior's preference toward efficiency or effectiveness and (2) Jimmy's likely next steps, indicated that they did understand the manipulations. As a result, the manipulation checks were adjusted in the final experiment to include one to assess understanding of the superior's preference toward efficiency or effectiveness and one to assess understanding of the implications of a peer team member's DAB.

Participant responses to free-response questions also supported my predictions that new staff auditors would be influenced by their peers indicating that the research question should continue to be pursued. Selected free responses from participants in both the pilot test and the actual experiment, displayed in Table 3, result in four main conclusions. First, staff auditors are

experimental questions without "ghost clicking". Supporting this notion is a median time to complete the experiment of 25.75 minutes.

⁴ In the pilot test, manipulation check questions were asked using a 7-point scale with end points of "Not at all" and "A lot" with a midpoint of "A moderate amount". Participants who failed to answer the manipulation check in the 3 scale points indicative of an understanding were considered to have failed the check.

influenced by their peer team members to behave in a similar manner, whether it be a dysfunctional audit behavior or an audit quality increasing audit behavior. Second, staff auditors do consider the preference of their superior but sometimes subsequent to the behaviors of their peers. Third, there are conflicting beliefs between the use of email and face-to-face interactions. Some participants believe email will be more efficient or effective whereas others believe face-to-face would be more efficient or effective. However, there is a consensus in participant responses that align with previous studies that find the mismatch between client and staff affects their likelihood of requesting additional information. Finally, present but less prominent is the notion that staff auditors feel the pressure of time in an audit, whether internally or from external sources such as peers or superiors, which results in a greater likelihood of staff auditors engaging in DAB.

CHAPTER FOUR

DATA ANALYSIS

4.1 Comprehension Check

Prior to conducting tests of my hypotheses, I analyzed participant responses to the comprehension check question. Before leaving the PBC portal page, participants were asked, “Based on the months selected for testing (April and October) and the information currently available on the client PBC portal, is Jimmy faced with a problem?” 1 (1%) of the participants incorrectly selected, “I do not see a problem.” 76 (94%) of the participants correctly selected, “One of the months selected for testing is missing.” 4 (5%) of the participants incorrectly selected, “Both of the months selected for testing are missing.” As such, it is clear that a majority of the participants attended to the PBC portal and recognized that a problem existed. I excluded the 5 participants who did not answer the comprehension check questions correctly from my analyses.

4.2 Manipulation Checks

After evaluating responses to the comprehension check I analyzed participant responses to the manipulation check questions to ensure understanding of the manipulations. To evaluate the success of my operationalization of superior preference (efficiency, effectiveness), I examine participants’ response to the following question: “In the case materials, the preference of Tory, the senior of the audit team, was primarily focused on.” Responses are based on a scale ranging from 1 (efficiency/saving time) to 7 (effectiveness/high audit quality) with a midpoint of “I cannot recall”. The mean (standard deviation) for the efficiency condition was 1.737 (1.131) and for the effectiveness condition was 5.535 (1.869). The difference in ratings are statistically significant ($t = -10.884, p < 0.001$), as such I conclude that the peer team member DAB

manipulation was effective. A total of 6 participants failed this manipulation check. I considered participants to have failed the manipulation check if they did not answer in the correct direction (e.g., if they were in the superior preference of efficiency condition they answered 5, 6, or 7) because their response was opposite to that of the condition they were assigned. On the other hand, if they answered in the correct direction (e.g., if they were in the superior preference of efficiency condition they answered 1, 2, 3, or 4) I included them in the analyzed sample because their understanding, or lack thereof for option 4, was not in direct contrast to what they should have understood from the experimental materials.

To evaluate the success of my operationalization of peer team member DAB (present, absent), I examine participants' response to the following question: "In the case materials, the behavior communicated in the lunchroom by Louis, Jimmy's peer team member, is most likely to." Responses are based on a scale ranging from 1 (reduce audit quality) to 7 (increase audit quality) with a midpoint of "I cannot recall". The mean (standard deviation) for the DAB Present condition was 1.721 (1.202) and for the DAB Absent condition was 4.000 (1.931). The difference in ratings are statistically significant ($t = 6.455$, $p < 0.001$), as such I conclude that the superior preference manipulation was effective. A total of 17 participants did not answer the manipulation check question in the correct direction, the majority (15) of which were in the DAB absent condition. Just as I excluded those who answered incorrectly for the superior preference manipulation, I excluded those who answered in the incorrect direction for the DAB manipulation, with the exception of those in the DAB absent condition, as explained below.

The population included in the below analyses excludes all participants who failed the PBC portal comprehension check, those that did not answer the superior preference manipulation check in the correct direction, and participants in the DAB present condition who did not answer

the DAB manipulation check in the correct direction.⁵ After eliminating the 10 participants who failed these manipulation checks, the final sample consists of 71 participants.^{6,7} Table 4 provides sample sizes for each cell. Refer to the sensitivity analysis where I further analyze differences between the participants in the DAB absent condition who passed and failed the DAB manipulation check.

4.3 Demographic Fit

After checking for proper understanding of the manipulations, I analyzed participant responses to the demographic questions. Participants' demographic information is provided in Table 5 . Of the participants: (1) 87% had internship experience, (2) 68% had audit specific internship experience, (3) 70% had already signed a contract for an accounting job, (4) the average work experience was 9.99 months, (5) the average number of audit classes taken was

⁵ For the DAB absent condition this question is ambiguous and ineffective because participants were not exposed to a peer team member's action that would specifically *increase* audit quality, rather it is simply following the standards and company policy, whereas in the DAB present condition the peer team member's behavior would clearly *reduce* audit quality because the sample selection procedure did not draw from the full population. As such, participants were not dropped from the analyses for failure on this manipulation check because there is great potential for misinterpretation. In addition, free responses from participants in the DAB absent condition indicate that the behavior communicated by Jimmy's peer team member was in line with company policy and standards. In other words, acting as the peer team member did simply followed policy, it did not go above and beyond to increase audit quality. Some examples of participants' free responses supporting this notion follow:

"By choosing a different sample other than October he is violating the rule that samples have to be random. he can't just pick another one out of convenience."

"Based on the accounting standards I decided it would be best for Jimmy to make sure to test the months he originally decided to select."

"Jimmy needs to pick his sample for 12 months. If he changes his sample based on what the client provides, he essentially allowing them to control what months are sampled."

⁶ While there were 13 total failures, 8 participants only failed one manipulation check while 1 participant failed all 3 manipulation checks, and another participant failed 2 manipulation checks.

⁷ Analyses included participants who chose the "I do not recall" option for the manipulation checks. Excluding these additional 15 participants who had not failed other manipulation checks from the analyses removes the statistically significant effect of superior preference on a staff auditor's likelihood of engaging in DAB or requesting information by email and the statistical significance of the effect of peer DAB on a staff auditor's likelihood of requesting information by email. In addition, including all 81 participants maintains the statistically significant findings of peer DAB on a staff auditor's chosen behavior but removes the effect of a superior's preferences for all dependent variables.

1.58, (6) the average number of times selecting an internal control sample was 1.14, (7) 54% were female, and (8) the average age was 22.70 years old. Taken together, participants had ample experience and education to complete the experimental task.

Table 6 presents descriptive statistics by experimental condition for demographics and post experimental questions. I perform a one-way ANOVA on each of the measures to test for differences by condition using the experimental treatment as a single four-level variable. All of the demographics and post experimental questions are not significantly different between conditions except for the average number of times participants selected an internal control sample. This significance is driven by three participants who had selected an internal control sample a substantial amount greater than the average of 1.1 times in that they performed this task 8, 8, and 10 times, which is substantially higher than the average.

4.4 Preliminary Analysis

A 2x2 analysis of variance (ANOVA) model is used to test the hypotheses regarding influence of peer team member DAB and superior preference toward efficiency or effectiveness. As such, I first had to test whether the data met the three basic assumptions of an ANOVA model: (1) independent observations, (2) normal distribution of the dependent variables, and (3) homogeneity of variance (Maxwell and Delaney 1999, 107).

The first assumption that observations are independent is addressed in the experimental design by randomly assigning participants to one of four experimental conditions (see Table 4 for the four experimental cells).

The second assumption that there is a normal distribution of the dependent variables is addressed by visually inspecting the boxplots and normal probability plots for each of the

dependent variables. The visual inspection raised concerns about the normal distribution of each of the dependent variables. As a result, I ran the Kolmogorov-Smirnov and Shapiro-Wilk tests of normality, which also shows that the dependent variables had a distribution significantly different from a normal distribution. While a normal distribution is preferable, prior research indicates that ANOVA is robust to violations of normality (Maxwell and Delaney 1999, 109). As such, I conduct my analyses using ANOVA.

The third assumption that there is homogeneity of variance is assessed using Levene's test. I find equal variance ($p > 0.10$) for DV1 and DV3. For the dependent variable with unequal variances (i.e., DV2: Likelihood of requesting the missing month from the client by email) I performed the nonparametric Levene's test. To perform the nonparametric Levene's test I first ranked the dependent variable responses. Second, I created group means for each experimental condition. Third, I calculated the difference between the group mean and the ranked score for each response. Finally, I performed a one-way ANOVA on the difference between the groups (Nordstokke and Zumbo 2010). The second dependent variable (i.e., likelihood of requesting information from the client by email) that was identified as having unequal variance with the initial Levene's test was found to still have unequal variance (p of 0.015) using the nonparametric Levene's test. As such, I corroborate significant ANOVA results with nonparametric Mann-Whitney U tests (Wilcoxon 1945; Mann and Whitney 1947).

Prior to testing the hypotheses, I graph the means for each cell based on the dependent variables. See Figures 7 through 9. The primary dependent variable for hypothesis testing evaluates the likelihood that a staff auditor would engage in DAB and is presented in Figure 7. DV1 asks participants, "Based on the information currently available on the client PBC portal, how likely is Jimmy to select April and pick another month already available on the PBC portal

in Q4?” Based on a visual inspection of the plots it appears that the general direction of the actual results follow those of the predicted results. While a visual inspection of Figure 7 provides insight into the pattern and direction of responses across groups, it cannot determine statistical significance of differences between cells. As such, below I test the results to determine their support, or lack thereof, of my hypotheses.

4.5 Tests of H1

Hypothesis 1 examines the influence that a peer team member’s behavior has on an individual’s chosen behavior. Specifically, I investigate whether the presence of a peer team member who has engaged in DAB increases the likelihood that an auditor will also engage in a DAB, as opposed to having a peer team member who did not engage in a DAB. To test this hypothesis, I first compare my primary dependent variable that measure the likelihood of staff auditors engaging in DAB (i.e., Select April & pick another month already available on the PBC portal in Q4) between individuals in the DAB present and DAB absent groups. The means indicate that likelihood of engaging in DAB of participants in the DAB absent group (3.714) were statistically different than participants in the DAB present group (4.556), as evidenced by the ANOVA in Table 7 ($F = 3.527$, p of 0.065). Review of Figure 7 Panel A suggests that participants who were exposed to a peer engaging in DAB were more likely to engage in a DAB. This finding is consistent with expected results.

Next, I compared my two secondary dependent variables ((DV2) Select April & request October from the client by email, and (DV3) Select April & request October from the client face to face) between individuals in the DAB present and DAB absent groups. The means indicate that likelihood of requesting information from the client by email of participants in the DAB absent group (5.371) were statistically different than participants in the DAB present group

(4.444), as evidenced by the ANOVA in Table 8 ($F = 5.465$, p of 0.022).⁸ Additionally, the means indicate that the likelihood of requesting information from the client face-to-face for the participants in the DAB absent group (5.086) were statistically different than participants in the DAB present group (3.389), as evidenced by the ANOVA in Table 9 ($F = 15.860$, $p < 0.001$). Review of Panel A in Figure 8 and Figure 9 suggests that participants who were exposed to a peer engaging in a DAB were less likely to engage in a nonDAB (i.e., requesting documentation from the client by email or in a face-to-face interaction). This finding is consistent with expected results.⁹

I asked several questions to gain confidence in the results that it is the behavior of a peer team member that influences another individual's behavior. First, on a 7-point Likert scale with endpoints of highly unimportant and highly important, participants are asked, "How much importance would Jimmy place on his peer team members' behaviors when deciding on his planned internal control sample selection procedures?" Differences between the DAB absent and DAB present conditions was not statistically significant ($t = 0.711$, p of 0.480) indicating that the behavior of a peer team member is important to staff auditors whether it is dysfunctional or not.

⁸ Because of the unequal variances for DV2, I ran the Mann-Whitney U Test and found that the null (i.e., the distribution of DV2 across the Peer DAB conditions (absent, present)) should be rejected. In other words, there is a significant difference in the likelihood of a staff auditor requesting additional information from the client by email when peer has engaged in DAB.

⁹ Because I used three separate dependent variables, I conducted additional analyses to determine the reliability of my measures. First, to test the internal consistency of my measures I calculated Cronbach's alpha using DV1 and a reverse coding of DV2 and DV3 since they measured likelihood of engaging in nonDAB, rather than likelihood of engaging in DAB. The resulting Cronbach's alpha is 0.785, which is generally considered a good level of internal consistency as it is greater than 0.7 (Kline 2015; DeVellis 2016). Second, I conducted a component factor analysis that resulted in one component being extracted. All three dependent variables are suggested to be retained as they each contribute similarly to the component. Finally, I created a composite dependent variable as a sum of all three of my dependent variables. Untabulated results provide support for H1 that there is a statistically significant higher likelihood of staff auditors engaging in DAB when their peer team member engages in DAB ($F = 10.829$, p of 0.002). Additionally, they provide support for H2 that there is a statistically significant higher likelihood of staff auditors engaging in DAB when their superior has a preference for efficiency ($F = 3.322$, p of 0.073). However, there is no support for H3 that there is not a statistically significant difference in the likelihood that a peer team member's DAB will have a greater influence than the superior's preference.

Participants are also asked, on a 7-point Likert scale with endpoints of very low quality and very high quality, “How would Jimmy rate the quality of information received from the conversation between Louis and Christian (his peers) about their behavior that he just overheard?” Differences between the DAB absent and DAB present conditions was not statistically significant ($t = 0.757$, p of 0.452) indicating that the perceived quality of information obtained from a peer’s behavior is similar whether it is dysfunctional or not. Taken together, staff auditors engaging in DAB contribute to the prevalence of DAB within the profession because other team members are influenced by these behaviors allowing them to spread throughout the team.

Additionally, using a 7-point Likert scale with endpoints of strongly disagree and strongly agree, participants are asked, “Jimmy would be more accepting of altering/replacing audit procedures (e.g., internal control sample selection procedures) if: A peer team member did it”. The mean (standard deviation) across all conditions was 5.014 (1.459) with a significant difference ($t = -3.005$, p of 0.004) between the DAB absent and DAB present conditions. Consistent with predictions, the likelihood of a staff auditor engaging in a DAB was higher when a peer team member engaged in a DAB (5.500 (1.108)) than when a peer team member did not engage in a DAB (4.514 (1.616)). As such, responses to this question provides additional confidence that it was the peer team member’s behavior that influenced the team member’s behavior.

Finally, participants are asked questions to determine which parts of the social influence theory are at play: accuracy goals, affiliation goals, and/or positive self-concept maintenance goals. Two questions are asked to assess the role of accuracy goals, using a 7-point Likert scale with endpoints of never and very frequently. First, participants responded to the statement, “I learned these behaviors from my peers.” The mean (standard deviation) across all conditions was

4.845 (1.064) and differences between DAB absent and DAB present conditions was not significant ($t = -1.021$, p of 0.311). Second, participants responded to the statement, “My peers served as role models for my behavior.” The mean (standard deviation) across all conditions was 4.549 (1.285) and differences between DAB absent and DAB present conditions was not statistically significant ($t = -0.409$, p of 0.684). These findings indicate that regardless of what type of behavior a peer engages in, peers will be used as a source of information to inform an individual’s chosen behaviors.

To assess the role of affiliation goals, using a 7-point Likert scale with endpoints of never and very frequently participants responded to two statements. First, participants responded to the statement, “These behaviors fit with staff auditor's identity.” The mean (standard deviation) across all conditions was 4.338 (1.341) and differences between DAB absent and DAB present conditions was significant ($t = 1.830$, p of 0.072). Second, participants responded to the statement, “These behaviors are considered normal within staff auditors.” The mean (standard deviation) across all conditions was 4.704 (1.458). Differences between DAB absent and DAB present conditions was not statistically significant ($t = 0.543$, p of 0.589). These findings indicate that participants felt engaging in DAB was significantly less representative of the staff auditor’s identity but both DAB and nonDAB are normal for staff auditors.

To assess the role of positive self-concept maintenance goals using a 7-point Likert scale with endpoints of never and very frequently participants responded to two statements. First, participants responded to the statement, “I think that my peers received benefits that I was entitled to from engaging in these behaviors.” The mean (standard deviation) across all conditions was 4.254 (1.519) and differences between DAB absent and DAB present conditions was not statistically significant ($t = -1.235$, p of 0.221). Second, participants responded to the

statement, “My peers received something that I value from engaging in these behaviors.” The mean (standard deviation) across all conditions was 4.507 (1.403) and differences between DAB absent and DAB present conditions was statistically significant ($t = -2.404$, p of 0.019). These findings indicate that participants felt engaging in DAB was significantly more likely to result in receiving something of value.

4.6 Tests of H2

Hypothesis 2 examines the influence that a superior’s preference has on an individual’s chosen behavior. Specifically, I investigate whether the superior’s preference toward efficiency (i.e., low tone) increases the likelihood that an auditor will also engage in a DAB, as opposed to having a superior with a preference toward effectiveness (i.e., high tone). To test this hypothesis, I first compare my primary dependent variable (Select April & pick another month already available on the PBC portal in Q4) between individuals in the superior preference toward efficiency and superior preference toward effectiveness groups. The means indicate that likelihood of engaging in DAB of participants in the superior preference for efficiency (4.583) was statistically different than participants in the Superior Preference for effectiveness (3.686), as evidenced by the ANOVA in Table 7 ($F = 4.000$, p of 0.050). Review of Figure 8 Panel B suggests that participants who were exposed to a superior with a preference toward efficiency were more likely to engage in a DAB. This finding is consistent with expected results.

Next, I compared my two secondary dependent variables ((DV2) Select April & request October from the client by email, and (DV3) Select April & request October from the client face to face) between individuals in the DAB present and DAB absent groups. The means indicate that likelihood of requesting information from the client by email of participants in the superior preference toward efficiency group (4.556) was statistically different than participants in the

superior preference toward effectiveness group (5.257), as evidenced by the ANOVA in Table 8 ($F = 3.189$, p of 0.079).¹⁰ However, the means indicate that the likelihood of requesting information from the client face-to-face of participants in the superior preference toward efficiency group (4.083) was not statistically different than participants in the superior preference toward effectiveness group (4.371), as evidenced by the ANOVA in Table 9 ($F = 0.502$, p of 0.481). Review of Panel B in Figure 8 and Figure 9 suggests that participants who had a superior with a preference toward efficiency were less likely to engage in a nonDAB. This is interesting in that a superior's preference affects staff auditors' likelihood of engaging in DAB, likelihood of requesting the documentation by email, but not the likelihood of requesting the documentation in a face-to-face interaction. In combination with the findings from H1, this finding indicates that staff auditors' can be persuaded by conformity pressure from their peers to engage in a face-to-face interaction with the client, but not by compliance pressures from their superiors. This indicates that peers have more ability to pressure another into engaging in what is many times an uncomfortable situation (i.e., interacting with a client) (Bennett and Hatfield 2013). This notion is supported by the participants' free responses included in Table 3. Taken together, this finding is partially consistent with expected results.

To better understand the results that indicate a superior's preference influences a subordinate's behavior, participants were asked, "Jimmy would be more accepting of altering/replacing audit procedures (e.g., internal control sample selection procedures) if: A senior in-charge team member's preferences encouraged it" using a 7-point Likert scale with

¹⁰ Because of the unequal variances for DV2, I ran the Mann-Whitney U Test and found that the null (i.e., the distribution of DV2 across the superior preference conditions (efficiency, effectiveness)) should not be rejected. In other words, caution should be taken when interpreting the ANOVA results as the Mann-Whitney U Test is contradictory in finding that there is not a significant difference in the likelihood of a staff auditor requesting additional information from the client by email when his superior prefers effectiveness.

endpoints of strongly disagree and strongly agree. The mean (standard deviation) across all conditions was 6.070 (0.976) with an insignificant difference ($t = 1.590$, p of 0.116) between the superior preference toward efficiency and the superior preference toward effectiveness conditions. As such, the preferences of the superior plays a role in the behavioral choice made by subordinates whether it be toward efficiency or effectiveness indicating the importance of the tone set by the senior in-charge on an audit team.

Finally, participants are asked questions to determine which parts of the social influence theory are at play: accuracy goals, affiliation goals, and/or positive self-concept maintenance goals. To assess the role of accuracy goals, using a 7-point Likert scale with endpoints of never and very frequently participants responded to two statements. First, participants responded to the statement, "I learned these behaviors from my peers." The mean (standard deviation) across all conditions was 4.845 (1.064) and differences between the superior preference toward efficiency and superior preference toward effectiveness conditions was not significant ($t = 0.796$, p of 0.429). Second, participants responded to the statement, "My peers served as role models for my behavior." The mean (standard deviation) across all conditions was 4.549 (1.285) and differences between the superior preference toward efficiency and superior preference toward effectiveness conditions was significant ($t = 2.329$, p of 0.023). This indicates that peers serve as a role model significantly more when the senior has a preference toward efficiency instead of effectiveness. This is interesting, because it indicates that when the superior is setting a low tone (i.e., pressuring subordinates to save time), staff auditors are significantly more likely to look to their peers to determine the appropriate behavior. Therefore, one conclusion that could be drawn is that staff auditors' reliance on their peers as a source of information to determine their behavior begins with the tone set by the superior on the team.

To assess the role of affiliation goals, using a 7-point Likert scale with endpoints of never and very frequently participants responded to two statements. First, participants responded to the statement, “These behaviors fit with staff auditor's identity.” The mean (standard deviation) across all conditions was 4.338 (1.341) and differences between the superior preference toward efficiency and superior preference toward effectiveness conditions was not significant ($t = 0.498$, p of 0.620). Second, participants responded to the statement, “These behaviors are considered normal within staff auditors.” The mean (standard deviation) across all conditions was 4.704 (1.458) and differences between the superior preference toward efficiency and superior preference toward effectiveness conditions was not significant ($t = -0.219$, p of 0.828). This indicates that participants felt a similar level of affiliation with their peers regardless of their superior’s preference. As such, the feeling of belonging to the staff auditor group is the same whether the superior has a preference toward efficiency or effectiveness.

To assess the role of positive self-concept maintenance goals using a 7-point Likert scale with endpoints of never and very frequently participants responded to two statements. First, participants responded to the statement, “I think that my peers received benefits that I was entitled to from engaging in these behaviors.” The mean (standard deviation) across all conditions was 4.254 (1.519) and differences between the superior preference toward efficiency and superior preference toward effectiveness conditions was not significant ($t = -0.020$, p of 0.984). Second, participants responded to the statement, “My peers received something that I value from engaging in these behaviors.” The mean (standard deviation) across all conditions was 4.507 and differences between the superior preference toward efficiency and superior preference toward effectiveness conditions was not significant ($t = -0.211$, p of 0.834). This

indicates that there was not a difference in the participants' desire to conform to their own views or conform to the actions of their team members dependent on their superior's preferences.

4.7 Tests of H3

Hypothesis 3 examines the influence that a peer team member's behavior will have on an individual's chosen behavior with the presence of a superior's preference. Specifically, I investigate whether the peer team member's DAB will be amplified by the superior's preference toward efficiency. To test this hypothesis, I first examine my primary dependent variable (Select April & pick another month already available on the PBC portal in Q4) for an interaction effect between peer team member behavior and superior preference. As evidenced by the ANOVA in Table 7, the interaction between peer team member behavior and superior preference is not significant ($F = 0.086$, p of 0.770). Review of Figure 7 Panel C suggests that the slopes of the lines are not equal suggesting that the effect of the superior's preference does have a different impact depending on the peer team member's behavior, but not significantly so. Contrast testing did not identify any significant simple main effects suggesting that the effect of DAB does not differ within differing superior preferences and the effect of superior preference does not differ within different peer DABs. The direction of the findings are consistent with expected results but the significance is inconsistent with expected results.

Next, I examine my two secondary dependent variables ((DV2) Select April & request October from the client by email, and (DV3) Select April & request October from the client face to face) for an interaction effect between peer team member behavior and superior preference. As evidenced by the ANOVA in Table 8, there is not a significant interaction between peer team member DAB and superior preference groups for requesting the sample by email ($F = 0.465$, p of 0.498). However, as evidenced by the ANOVA in Table 9, there is a significant interaction

between peer team member DAB and superior preference for requesting the sample face-to-face ($F = 3.649$, p of 0.060). Review of Panel C of Figure 8 suggests that the slopes of the lines are not equal suggesting that the effect of the superior's preference does have a different impact depending on the peer team member's behavior, but not significantly so. Review of Panel C of Figure 9 suggests that the slopes of the lines are not equal suggesting that the effect of the superior's preference does have a significantly different impact on the peer team member's behavior. Contrast testing in Panel C of Table 8 reveals that both the difference between a superior's preference for efficiency versus effectiveness within the DAB absent condition for DV2 is significant ($t = -1.732$, p of 0.088) as well as the difference between the DAB absent and DAB present within a superior's preference toward effectiveness ($t = 2.120$, p of 0.038). In addition, contrast testing in Panel C of Table 9 reveals that both the difference between a superior's preference of efficiency versus effectiveness within the DAB present condition for DV3 is significant ($t = -1.866$, p of 0.066) as well as the difference between the DAB absent and DAB present within a superior's preference toward efficiency ($t = 4.197$, $p < 0.001$). Taken together these results suggest that the effect of a peer's behavior on another staff auditor's behavior is amplified when the superior has a preference toward efficiency, but not when the superior has a preference toward effectiveness.

These findings for H3 are interesting. When a peer team member has not engaged in a DAB, staff auditors will not be pressured to stray from the tendency to engage in behaviors consistent with firm policies and regulatory standards, regardless of their superior's preference. However, when the peer team member has engaged in a DAB, staff auditors will face a cognitive dissonance because of their knowledge of the standards and firm policy, albeit limited, versus the behavior that the peer is engaging in that does not agree with those standards. As a result, the

staff auditors will then look to their superior to determine the appropriate course of action. Therefore, when a peer team member engages in a DAB, the superior's preference will play a larger role than when the peer engages in a nonDAB. Interestingly, there is only statistical significance for the likelihood that staff auditors will engage in a face-to-face interaction and not for the likelihood that staff auditors will engage in a DAB or request the information from the client by email. This is consistent with the combined findings from H1 and H2 concerning DV3. Specifically, when deciding whether to request the documentation from the client in a face-to-face interaction, only the peer's DAB was statistically significant, not the superiors' preference. This indicates that the influence of a peer is greater than the influence of a superior in the most uncomfortable situation (i.e., a face-to-face interaction with a client versus emailing the client or avoiding the client altogether). This highlights the power that peer behavior plays within the audit team. This finding extends the Bennett and Hatfield (2013) findings that email is preferred by staff auditors, especially when they have an older and more experienced client contact, by showing that a peer's behavior is one source of information that could influence this decision to request information from the client either by email or in a face-to-face interaction.

To better understand how the interaction between a peer team member's behavior and the superior's preference influences a staff auditor's behavioral choice, participants were asked several questions using a 7-point Likert scale with endpoints of peer team member (1) and senior (7). The first question was focused on the weight given to the information from the two sources (i.e., peer or superior). The mean (standard deviation) across all conditions was 5.803 (1.380) indicating that on average, more weight was given to the superior team member. Second, participants were asked which party they most identify with the attributes, qualities, and values. The mean (standard deviation) across all conditions was 3.493 (2.006) indicating that on average,

they identify most with their peer team members. Third, participants were asked from who they most want approval. The mean (standard deviation) across all conditions was 6.070 (1.291) indicating that on average, they want approval from their superior. Finally, participants were asked who they would be influenced by more. The mean (standard deviation) across all conditions was 5.394 (1.703) indicating that on average, they believe that they would be influenced by the superior team member. Taken together, while staff auditors want approval more from their superior they identify most with their peers.

4.8 Sensitivity Analysis

I performed sensitivity analyses to understand any differences between participants in the DAB absent condition who failed the DAB manipulation check and those who passed the DAB manipulation check. I tested the two groups for differences in demographics and post-experimental questions (i.e., internship, internship area, work experience, signed accounting job contract, audit classes taken, age, gender, and internal control selection experience), and find no significant differences. Next, I tested for differences in the main dependent variables (i.e., DV1: Likelihood of engaging in DAB, DV2: Likelihood of engaging in a nonDAB through email, and DV3: Likelihood of engaging in a nonDAB face-to-face), and find no significant differences between those in the DAB absent condition who passed the DAB manipulation check and those who failed it. See Table 10 for a summary of these findings. As such, the wording of the question may have proved to be confusing and therefore it does not indicate that the failing group in the DAB absent condition should be excluded from the full sample.

4.9 Likelihood of Facing Negative Consequences

In addition to the main set of dependent variables, participants responded to a secondary set of dependent variables concerned with the likelihood that they would face negative consequences for engaging in each of the three possible behaviors: (DV4) Select April and pick another month already available on the PBC portal in Q4, (DV5) Select April & request October from the client by email, and (DV6) Select April & request October from the client face to face. All findings were insignificant. As such, it is clear that participants did not expect that a typical staff auditor would face negative consequences for engaging in a dysfunctional behavior whether a peer team member had done so previously or if their superior preference was toward effectiveness.

CHAPTER FIVE

SUPPLEMENTAL ANALYSES

5.1 Prior Peer Consequences for DAB

In addition to the influences that are occurring presently, an auditor may also be influenced by factors that have occurred previously or by things that have the potential to occur in the future. When deciding which behaviors to engage in, an individual will often consider the expected future consequences of his choice, which can be influenced by the consequences that others have faced from similar behaviors in the past. Individuals can reasonably expect to face the same, or similar, consequences as another individual previously did for engaging in that same behavior. When weighing the options of engaging in an audit quality reducing behavior, either to conform to peer norms or to comply with superiors, the likelihood of a negative outcome might be considered. The likelihood of facing a negative consequence increases if a peer team member faced negative consequences for previously engaging in that same behavior.

To capture the role that prior peer consequences plays in participants' decision-making, they are given a "what-if" scenario using the same client and team background information from the main study. This "what-if" scenario states that Jimmy's peer team member engaged in the DAB in the prior year, rather than this year, and received a bonus after last year's engagement. Participants are asked to assess the likelihood that Jimmy would engage in each of the aforementioned behaviors (i.e., (DV1) Select April & pick another month already available on the PBC portal in Q4, (DV2) Select April & request October from the client by email, or (DV3) Select April & request October from the client face to face), given this new information, using the same 7-point Likert scale.

I performed preliminary analyses of the data including the additional piece of information that a peer team member received a bonus at the end of the prior year engagement using paired sample t-tests. First, there was a mean (standard deviation) shift in responses to DV1 (i.e., the likelihood of engaging in DAB) of 0.690 (2.214). The addition of the information about a peer's prior year consequences from his behavior elicited a statistically significant increase in the likelihood that a staff auditor would engage in a DAB ($t = 2.626$, p of 0.011). Second, there was a mean change in responses to DV2 (i.e., the likelihood of requesting the missing sample by email) of -0.789 (1.780), which was a statistically significant decrease in the likelihood of engaging in the nonDAB behavior of requesting the missing information by email ($t = -3.733$, $p < 0.001$). Finally, there was a mean difference in responses to DV3 (i.e., the likelihood of requesting the missing sample face-to-face) of -0.254 (1.918), which was not a statistically significant decrease in the likelihood of engaging in the nonDAB behavior of requesting the missing information in a face-to-face interaction with the client ($t = -1.114$, p of 0.269). Taken together, staff auditors are more willing to engage in DAB when their peers had done so previously and had received a reward for doing so.

5.2 Level of Involvement in Communication

Another external influence on an individual's chosen behavior is the level of involvement that the individual on the receiving end of the message has in the communication. While there is no agreed upon definition of involvement within the psychology and communication literatures, the overarching theme is that, "involvement determines whether the audience is active or passive" (Roser 1990, 571). To successfully complete a task, when involvement is high, if it is the information processing at play, rather than one's ego, then an individual would be less likely

to engage in the DAB due to the extent that he weighs the consequences and consider the long-term impacts of mimicking the DAB communicated by the peer team member.

To capture the role that the level of involvement in communication plays in participants' decisions, they are given a "what-if" scenario using the same client and team background information from the main study. This "what-if" scenario states that Jimmy was directly involved in the lunchroom conversation with Louis (his peer team member) about his involvement in the dysfunctional internal control sample selection procedure. In other words, Louis told Jimmy directly, rather than Jimmy overhearing the conversation between Louis and Christian. Participants are asked to assess the likelihood that Jimmy would engage in each of the aforementioned behaviors (i.e., (DV1) Select April & pick another month already available on the PBC portal in Q4, (DV2) Select April & request October from the client by email, or (DV3) Select April & request October from the client face to face), given this new information, using the same 7-point Likert scale.

I performed preliminary analyses of the data that indicated Jimmy was directly involved in the lunchroom conversation about picking samples (rather than overhearing two other peer team members discuss the procedure) using paired sample t-tests. First, there was a mean (standard deviation) shift in responses to DV1 (i.e., the likelihood of engaging in DAB) of 0.225 (2.192). The change in the level of Jimmy's involvement in the communication information did not elicit a statistically significant increase in the likelihood that a staff auditor would engage in a DAB ($t = 0.866$, p of 0.389). Second, there was a mean change in responses to DV2 (i.e., the likelihood of requesting the missing sample by email) of -0.465 (1.873), which was a statistically significant decrease in the likelihood of engaging in the nonDAB behavior of requesting the missing information by email ($t = -2.091$, p of 0.040). Finally, there was a mean difference in

responses to DV3 (i.e., the likelihood of requesting the missing sample face-to-face) of -0.028 (1.993), which was not a statistically significant decrease in the likelihood of engaging in the nonDAB behavior of requesting the missing information in a face-to-face interaction with the client ($t = 0.119$, p of 0.906). Taken together, staff auditors are more willing to request the missing sample by email when they were more involved in the conversation about the procedures used by peers for selecting an internal control sample.

5.3 Team Stability

An additional source of influence on an individual's chosen behavior is the stability of the members that make up the team. The psychology literature indicates that team stability is a positive team attribute because team members perceive that they have the capability to collaborate with each other, which increases goal attainment, and therefore team performance (Collins and Parker 2010; Cameran et al. 2017). Conversely, qualitative data in the accounting literature indicates that the *lack* of team stability (i.e., team changes) can have positive implications for the audit team because of the introduction of new perspectives and ideas. However, these positive aspects of team changes can be offset by behaviors of audit team members who are negatively affecting audit quality (i.e., team performance) due to a lack of trust and increased uncertainty (Annelin, Svanström, and Willekens 2016). Importantly, much of the audit team stability literature that finds positive results from team changes is within the context of audit rotation, which concerns changes in positions of the *leading team members* (Cameran et al. 2017). At the staff level of the audit team, the introduction of new team members who have engaged in audit quality reducing behaviors on a different team, may introduce new audit quality threatening behaviors, such as altering audit procedures performed or premature signoff on testwork, to peer team members as an acceptable alternative to which they may mimic. However,

it is also possible that a new staff team member introduced to the audit team will not be trusted, resulting in peer team members being less likely to mimic any DAB that a newcomer brings to the team rather than DAB engaged in by a current team member.

To capture the role that team stability plays in participants' decisions, they are given a "what-if" scenario using the same client and team background information from the main study. This "what-if" scenario states that this is Louis' first year on this engagement (i.e., there has been a team change) and therefore his dysfunctional internal control sample selection procedure was for a different client engagement. Participants are asked to assess the likelihood that Jimmy would engage in each of the aforementioned behaviors (i.e., (DV1) Select April & pick another month already available on the PBC portal in Q4, (DV2) Select April & request October from the client by email, or (DV3) Select April & request October from the client face to face), given this new information, using the same 7-point Likert scale.

I performed preliminary analyses of the data that indicated that Jimmy's peer team member Louis' procedure for selecting the internal control sample was on a different engagement last year using paired sample t-tests. First, there was a mean (standard deviation) shift in responses to DV1 (i.e., the likelihood of engaging in DAB) of -0.408 (2.388). The change in the stability of the team in the communication information did not elicit a statistically significant decrease in the likelihood that a staff auditor would engage in a DAB ($t = -1.441$, p of 0.154). Second, there was a mean change in responses to DV2 (i.e., the likelihood of requesting the missing sample by email) of -0.127 (1.949), which was not a statistically significant decrease in the likelihood of engaging in the nonDAB behavior of requesting the missing information by email ($t = -0.548$, p of 0.585). Finally, there was a mean difference in responses to DV3 (i.e., the likelihood of requesting the missing sample face-to-face) of 0.282 (2.058), which was not a

statistically significant increase in the likelihood of engaging in the nonDAB behavior of requesting the missing information in a face-to-face interaction with the client ($t = 1.154$, p of 0.253). Taken together, it does not appear that the stability of the peer team members has an effect on staff auditors' likelihood of engaging in DAB.

5.4 Individual Characteristics

Prior accounting research has investigated the effects of several individual characteristics that may have an effect on an individual's likelihood of engaging in DAB, such as locus of control, performance, turnover intentions, and perceived consequences (Donnelly et al. 2003; Pierce and Sweeney 2006). However, some additional individual characteristics that could be considered to play a role in the audit team setting are an individual's personality type and his cognitive style. The population of staff auditors is inherently different from the human/professional population as a whole due to the general preference toward concrete and analytical thinking, which may be the result of self-selection into a profession not known to emphasize creativity but more so conscientiousness (Leiby and Madsen 2017). At the same time, auditors continually face decisions, sometimes with no clear answer, requiring professional judgment that requires creativity to find the best solution while still following professional and ethical standards.

5.4.1 Personality Types

Differences in personality type could play into the peer team relationships because of their effect on the use of information from peer team members. Prior studies find that personality types affect how individuals receive and process information along with the environment that an individual prefers to work in (e.g., Barkhi and Wallace 2007). While prior studies have

investigated the effect of personality type of performance, turnover intentions, and task type (Fuller and Kaplan 2004), they have not investigated the effects of personality type on the role they play in audit team dynamics.

Participants complete an instrument validated in previous research, which is based on the Myers Briggs Type Indicator (MBTI), as an indicator of an individual's personality type (Nutt 2005; Barkhi & Wallace 2007). Of most interest to decisions made in the audit setting are the sensing/intuition and the thinking/feeling dimensions of the MBTI that have been found to determine an individual's data type preference used in making a decision (Nutt 2005).

To preliminarily analyze the personality types using the scale based on the MBTI, I first calculated the sum of the scores for the extraversion/introversion, sensing/intuition, thinking/feeling, and judging/perceiving categories. There were five questions for each category so whichever personality type within each category that a participant answered a majority of the time was considered to be the "winner" for that category. For example, if a participant chose the extraversion choice for three out of the five questions he would be labeled as an extrovert, and so on for each of the three categories. As seen in Table 11, there were no significant differences between any of the personality type groups for any of the dependent variables. As such, it does not appear that the personality types along these dimensions played a role in participants choices in developing the likelihood that Jimmy would engage in DAB or not. However, it is possible that because the dependent variables were phrased in the third person that the personality types of the participants played less of a role than they would when staff auditors are making behavioral choices for themselves.

5.4.2 Cognitive Styles

In addition to personality type, data is collected on different cognitive styles, which relate to the dominance of different hemispheres of the brain (i.e., left brain/right brain). It is well established that the left hemisphere of the brain is used for language functions and the execution of manual activities, whereas the right hemisphere of the brain is used for perception, construction, and recall of nonverbalized stimuli, and that a functional asymmetry exists in most individuals (McGlone 1980; Margret and Lavanya 2017). As such, depending on which hemisphere of an individual's brain dominates, his cognitive style will differ and therefore the tasks that he excels at will also differ. As a result, it is possible that an audit team member's brain asymmetry plays a role in his use of peer team information in his decision-making process.

Participants complete the Rational-Experiential Inventory short scale (REI-10) to measure their cognitive style (Epstein, Pacini, Denes-Raj, and Heier 1996). This scale is an abbreviated version of the full REI scale which was based on the Cognitive-Experiential Self-Theory that distinguishes between a rational decision style that emphasizes an analytical approach and an experiential style that emphasizes an affective approach (Epstein et al. 1996).

To preliminarily analyze the cognitive styles using the REI scale, I first calculated the sum of the scores for the five "need for cognition" questions where one indicated no cognition and five indicated full cognition.¹¹ Next, I calculated the sum score for the five "faith in intuition" questions where one indicated no intuition and five indicated full intuition. Finally, I compared the overall need for cognition and faith in intuition scores to determine which was

¹¹ The first two questions were reverse scored. As such, I calculated them in reverse by doing six minus the score supplied by the participants, which resulted in a score where one represented no cognition and five represented full cognition allowing for the combination with the other three questions.

greater for each individual thus giving them an overall cognitive style. As evidenced in Table 12, there do not appear to be significant differences in staff auditors' likelihood of engaging in DAB between those with tendencies toward cognition or intuition ($t = 1.424$, p of 0.159) or in staff auditors' likelihood of requesting the missing sample through email ($t = -0.448$, p of 0.655). Interestingly, there is a significant difference in the likelihood that staff auditors will request the missing sample in a face-to-face interaction ($t = -1.732$, p of 0.088) such that those with a tendency toward a "need for cognition" are more likely to request the documentation from the client (4.647 (1.857)) than those with a tendency toward "faith in intuition" (3.838 (2.062)). This may indicate that accounting firms should be especially interested in developing their staff auditors' need for cognition as a way to encourage client interactions that are necessary to successfully complete many tasks but can many times be intimidating to those new to the profession.

CHAPTER SIX

DISCUSSION, CONTRIBUTIONS, & LIMITATIONS

This research sought to explain the influence of peer team member behavior as one cause of the prevalence of DAB within the audit profession, which have been shown in prior literature to have a negative impact on the accounting profession and either directly or indirectly affect audit quality (Donnelly et al. 2003). Specifically, staff auditors' lack of knowledge creates a situation where they seek out information to complete tasks that are new to them. This lack of knowledge increases staff auditors' vulnerability to be influenced by their peers because of their desire to reduce the uncertainty of the new situation and to compensate for the fact that they do not have all of the information necessary to successfully complete the task. I posited that staff auditors would be influenced both by their peer team member's behavior and by their superior's preference but when these sources of information were considered simultaneously, only when the superior had a preference toward efficiency, not effectiveness, would the effect of the peer's behavior be amplified.

This experimental study provides insights into audit team dynamics. My research answers the calls to investigate audit team dynamics, and the effects that it has on audit quality (e.g., Solomon 1987; Rich et al. 1997; Nelson and Tan 2005; Francis 2011; Trotman et al. 2015; Nelson et al. 2016). Specifically, I use an experimental setting to investigate the effects that a peer audit team member's behavior and an immediate superior's preference toward efficiency or effectiveness (i.e., tone) has on a staff audit team member's behavioral choice. This adds to the literature on social influence theory by investigating the likelihood that a staff audit team member will engage in an audit quality reducing DAB after interacting with a peer team member who had previously engaged in a DAB. In other words, what is the extent that a peer team

member influences another audit staff team member's behavior? Further, by simultaneously investigating the extent that an immediate superior's preference has on a subordinate's behavioral choice, this study adds to the debate on the degree to which conformity and compliance pressures influence a behavioral choice. This is especially interesting in the audit setting because if contagion occurs within the audit team (i.e., behaviors spread among the team members), DAB can spread throughout the team resulting in an overall decrease to audit quality.

In an experiment involving 71 students enrolled in a graduate accounting course, proxying for inexperienced staff auditors, I examine how the likelihood that staff auditors engage in a DAB is influenced by a peer team member's behavior and their superior's preferences. Participants were introduced to the internal control sample selection issue after the superior preference manipulation, were then given the PBC portal that was missing one of the previously selected months for testing, overheard an informal lunchroom conversation between two peer team members, and then provided the likelihood that a typical staff auditor would engage in a DAB or would engage in nonDAB either through an electronic or face-to-face form.

I predict, and find support, that staff auditors subject to a peer team member engaging in DAB are more likely to engage in DAB. These results indicate that staff auditors' behaviors are influenced by the behaviors of their peer team members. I also predict, and find support, that staff auditors who have a superior with a preference toward efficiency are more likely to engage in DAB. These results indicate that staff auditors' behaviors are influenced by the preferences of their immediate superiors. Finally, I predict that the effect of a superior's preference is likely to compound the effects of a peer DAB only when it is toward efficiency, not effectiveness. Interestingly, I find that when staff auditors have a peer team member engage in a DAB, the superior's preference has a larger effect on the likelihood that the staff auditor will engage in a

nonDAB through a face-to-face form. Specifically, when deciding whether to request the documentation from the client in a face-to-face interaction, only the peer's DAB was statistically significant, not the superiors' preference. This indicates that the influence of a peer is greater than the influence of a superior in the most uncomfortable situation (i.e., a face-to-face interaction with a client versus emailing the client or avoiding the client altogether). This finding highlights the power that peer behavior plays within the audit team.

The findings of this study can inform public accounting firms of areas in which their procedures can be improved upon in several different ways. First, the prevalence of DAB within the audit field is concerning and this study provides one area that firms can focus their attention to decrease the occurrence of DAB. In other words, if firms can provide additional training and attention to staff auditors so they are better equipped to handle new situations they are likely to face early in their careers, they will not need to seek as much information from their peer team members. However, if the training is successful, seeking information from peers becomes less problematic because they too will have a better grasp on the appropriate actions to take and therefore sticking with the norms will be audit quality enhancing behavior. As such, a practical intervention could be to train staff auditors to ensure they are better equipped to handle new situations as they arise. Second, firms can learn of an area where additional checks put into place would benefit the overall audit quality. For example, for the internal control sample selection task, one staff member could pick the sample for the control while the other staff member actually tests the control, mimicking separation of duties. Third, the results provide new evidence about the impact of interactions within the audit team on audit quality, which may suggest that firms may want to consider how to manage these interactions of their staff. That understanding could suggest training or other practical interventions that encourage audit leaders to behave in a

manner that best facilitates effective communication within the audit team among staff auditors. For example, firms and researchers could examine possible ways to mitigate these effects such as providing new staff auditors with a process flowchart that includes frequently encountered problems and the appropriate actions to take in response. This would alleviate the lack of knowledge that staff auditors have without necessitating that they rely on other inexperienced staff auditors but it does not require that they seek assistance from a more experienced superior, which many times can be intimidating.

Despite the significant benefits to this proposed study, this dissertation also has limitations. First, studying audit team dynamics within an experimental setting provides some challenges. For example, investigating audit teams without using individuals who are actually members on the same team provides a limitation. Of course, there are intricacies at play within an actual audit team that cannot be reasonably replicated in an experimental setting, such as aspects associated with deeper relationships that peer team members would have with actual team members versus hypothetical team members. Interacting with actual team members may strengthen an individual's reliance on another team member's behavior as an information source guiding his decision to engage in an audit quality reducing DAB or not. Gaining access to members of an actual audit team would certainly add external validity to the study but it would come at a cost of internal validity by introducing additional confounding variables. Relatedly, because this experiment was conducted online, the manner in which the message was portrayed between team members could influence the likelihood that it is incorporated into an individual's behavioral decisions. While this study focuses on how behaviors of a peer team member affect the behaviors taken by another audit team member, the instances that peer behaviors are actually observed may be much smaller than the instances that previous behaviors an individual has

engaged in are discussed among peer team members. As such, since in this study the actual behavior is not being viewed, but rather communicated informally, this adds a limitation to the study. An avenue for future research may be to investigate if *how* a message is communicated affects an audit team member's judgements and decisions.

A second limitation to this study is the possibility that the findings of a peer team member's behavior influencing another staff audit team member's behavior could disappear at higher levels within the audit team. Specifically, staff auditors new to the profession may not have had the time necessary to gain experience to learn appropriate professional behaviors for different situations and therefore they will rely more heavily on peers' behaviors as an information source to guide their decisions to engage in an audit quality reducing DAB or not, as opposed to seniors or managers. However, staff auditors new to the profession should also be less tainted than seniors or managers as to the issues that exist within the audit profession and therefore may be less likely to accept peer team members' DAB as the status quo, and therefore acceptable. As such, future research could investigate if the influence of peer behavior is less profound at higher levels within the audit team, which would provide a boundary condition for these findings.

A third category of limitations relates to the deployment of the instrument. First, the limited sample size could have been improved upon. Finding a substantial group of students enrolled in a graduate accounting course willing to spend their free time completing the experiment proved to be difficult. By increasing the sample size, the power of the study could increase with the potential to yield stronger effects. Relatedly, the wording of the DAB manipulation check could have been improved upon. While the manipulation check questions were improved upon between the pilot test and the actual test, it was still not perfect. For those in

the DAB absent condition, the question is ambiguous and ineffective because they were not exposed to a peer team member's action that would specifically *increase* audit quality. However, in the DAB present condition, the peer team member's behavior would clearly *reduce* audit quality because the sample selection procedure did not draw from the full population. As such, the manipulation check failures were a result of improper wording not participants lack of understanding of the supplied materials. Taken together, there was room for improvement in the deployment of the instrument in this dissertation.

Despite these limitations, this study has the potential to add to the scant audit team literature by investigating within-team peer interactions among staff auditors. Adding to the audit team literature has the potential to examine one way that the complexities inherent to the audit team can affect audit quality. Specifically, this paper finds that peer influences contribute to the prevalence of DAB within the profession. Future research might extend the findings in the current study by evaluating decisions made by staff auditors at the cognitive level. Specifically, if decisions made by staff auditors are heavily based on peer team member behaviors, due to non-conscious, automatic cognition (system one processing) instead of deliberate, rational cognition (system two processing) (Kahneman 2011), it would be beneficial to test, design, and implement mechanisms in an attempt to engage system two to encourage more conscious decision making. Engaging system two when deciding what behavior to take may force staff audit team members to think before they act. As such, future research could study manipulations that might engage system two within the audit team setting to decrease the negative effect that behavioral contagion might have on audit quality.

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FIGURES

FIGURE 1 THEORETICAL SUMMARY

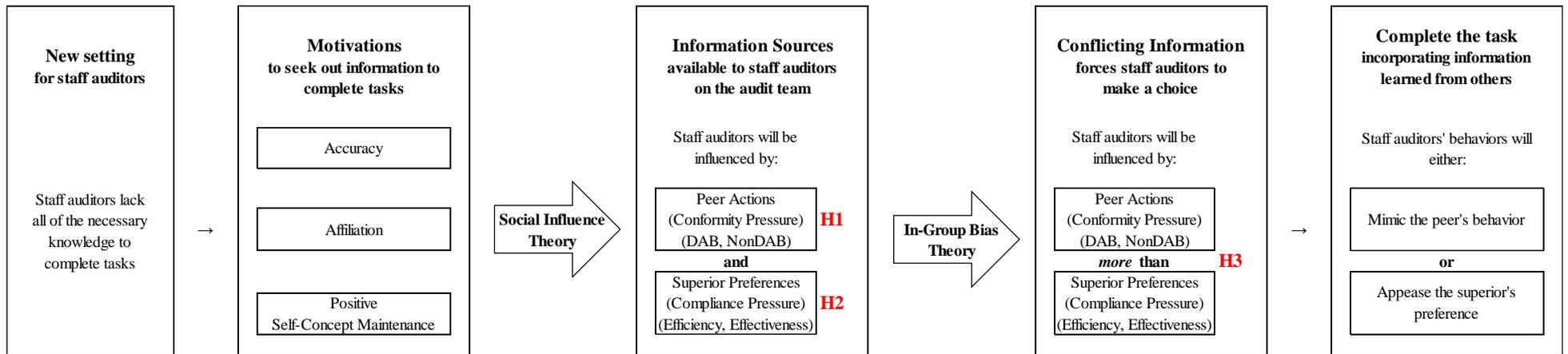


FIGURE 2
H1 PREDICTED MAIN EFFECT – PEER DAB

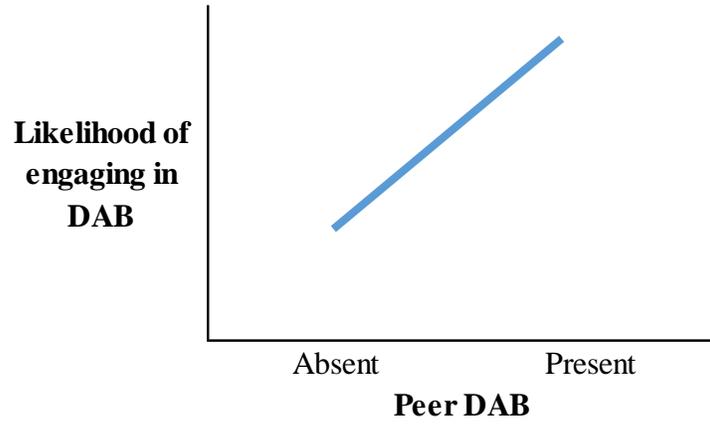


FIGURE 3
H2 PREDICTED MAIN EFFECT – SUPERIOR PREFERENCE

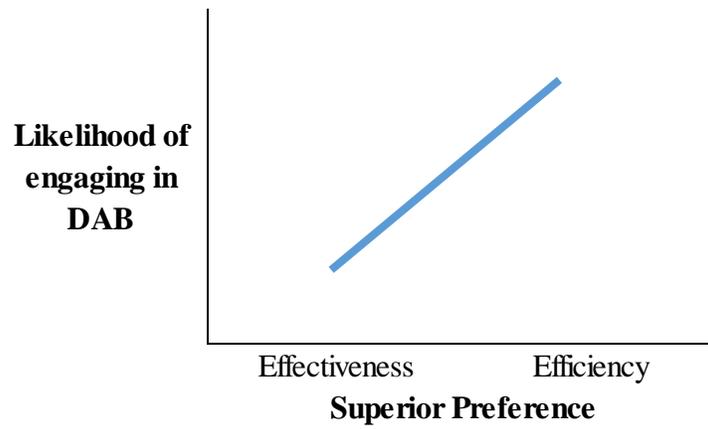


FIGURE 4
H3 PREDICTED INTERACTION EFFECT – PEER DAB & SUPERIOR PREFERENCE

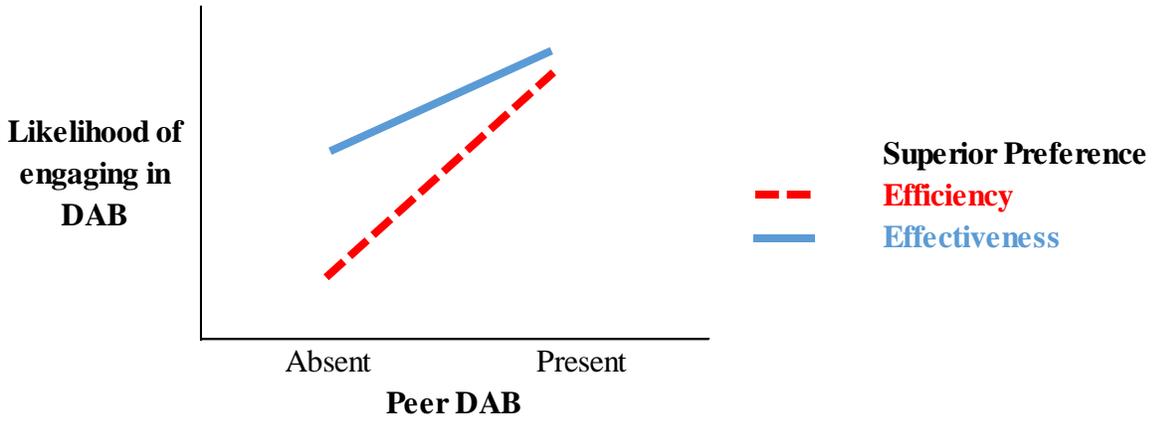
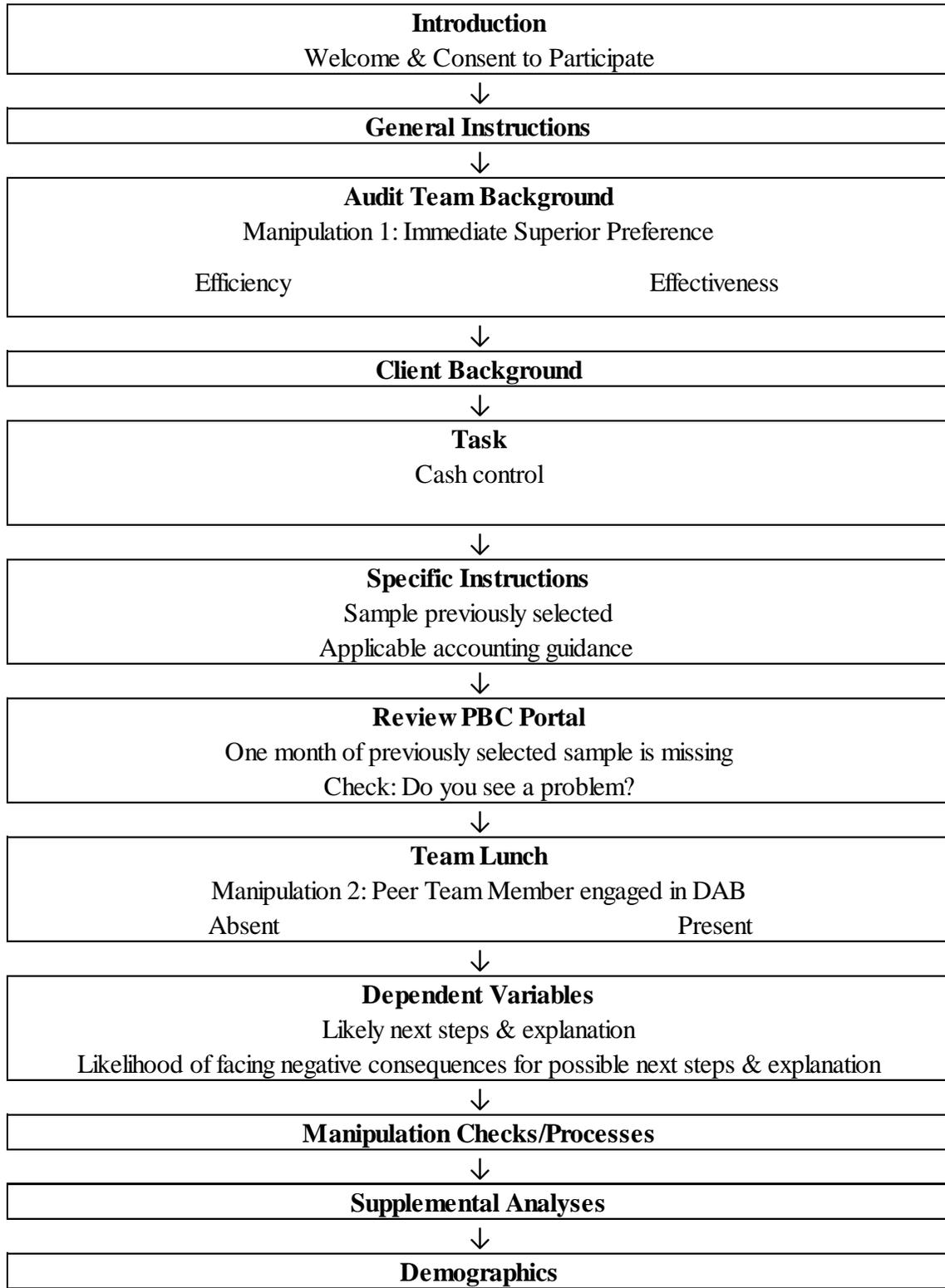


FIGURE 5
FLOWCHART OF EXPERIMENTAL PROCEDURES



**FIGURE 6
FRAMEWORK OF STUDY**

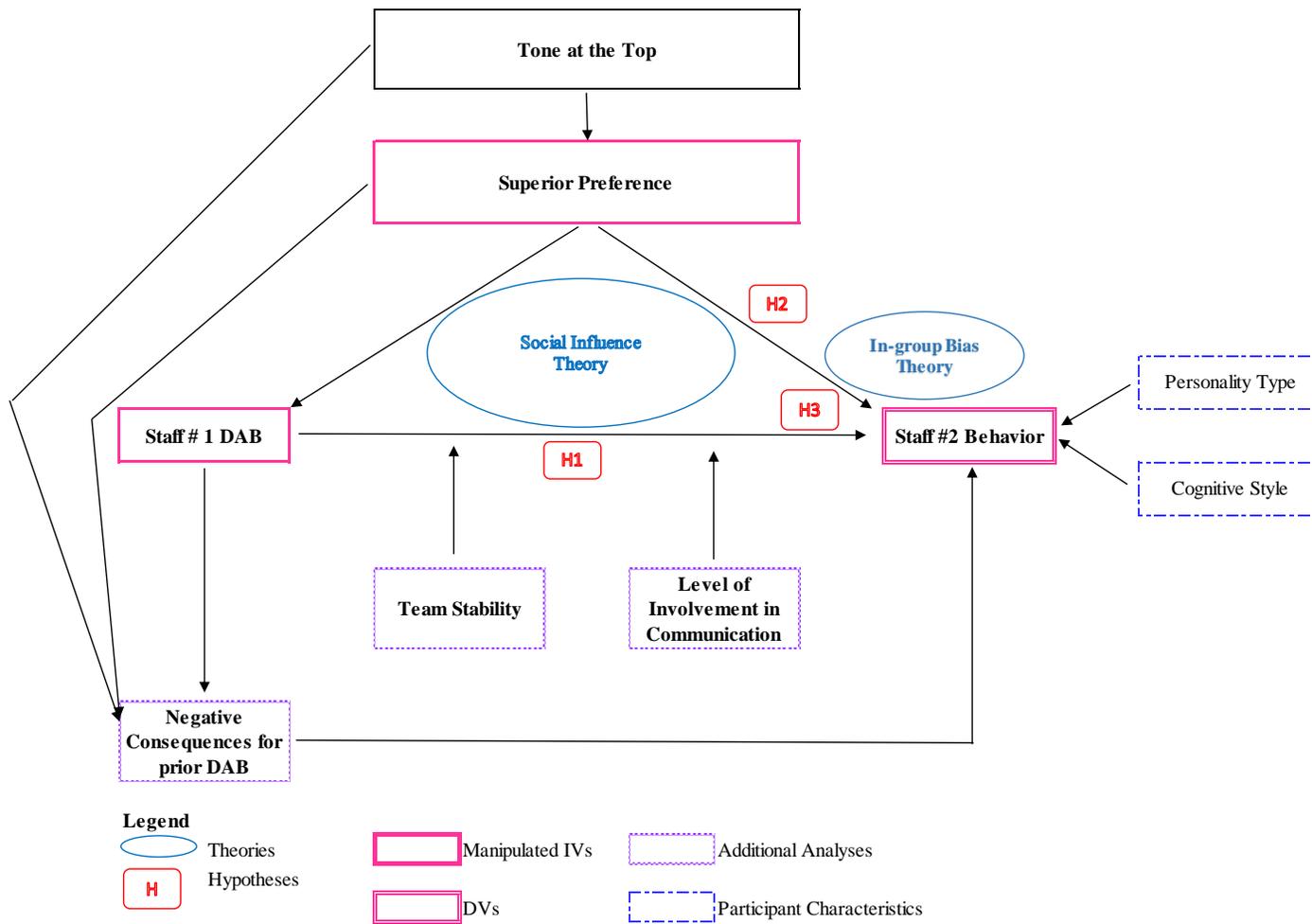
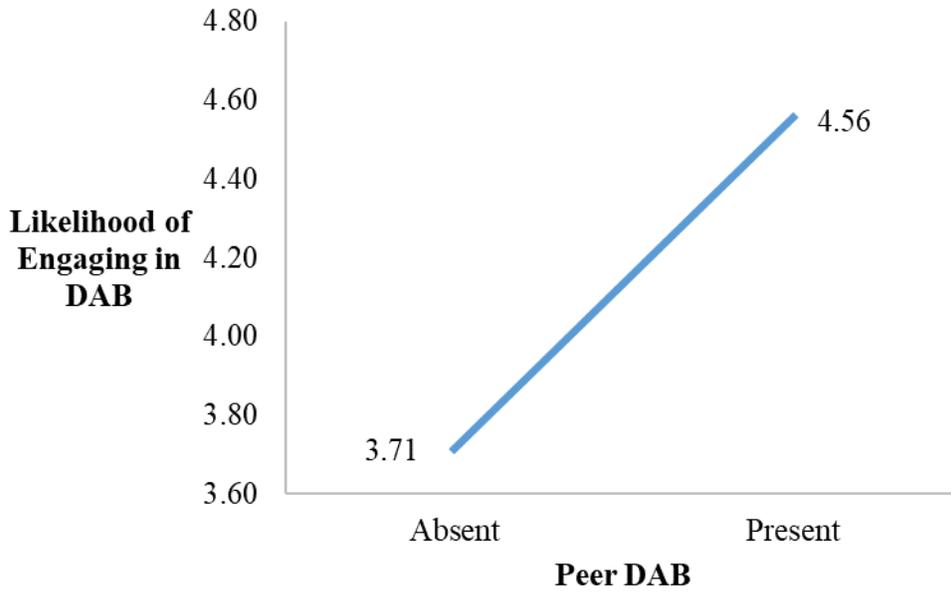
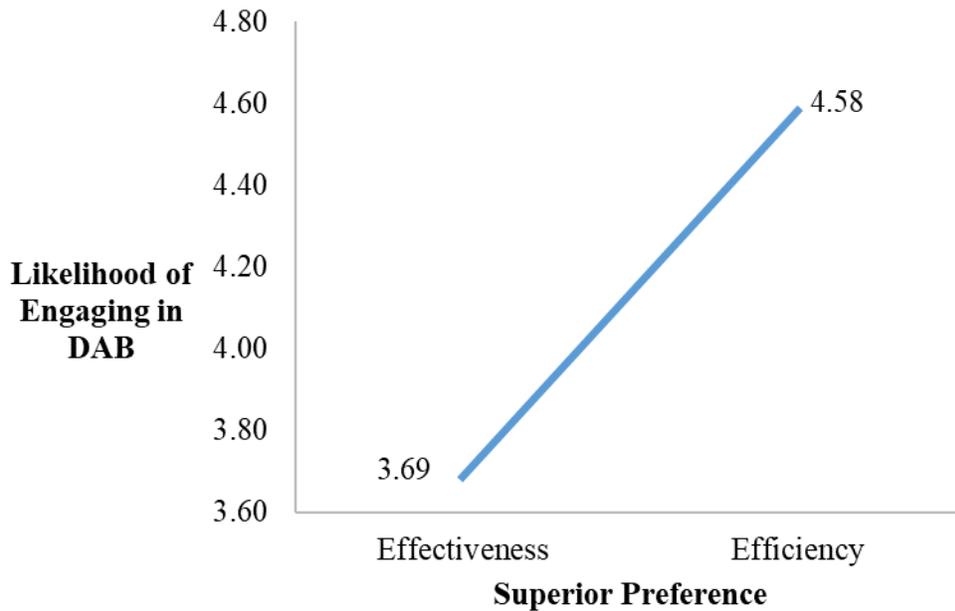


FIGURE 7
EFFECTS OF PEER DAB & SUPERIOR PREFERENCE
ON LIKELIHOOD OF ENGAGING IN DAB

Panel A: Effects of Peer DAB on Likelihood of Engaging in DAB



Panel B: Effects of Superior Preference on Likelihood of Engaging in DAB



Panel C: Effects of Peer DAB & Superior Preference on Likelihood of Engaging in DAB

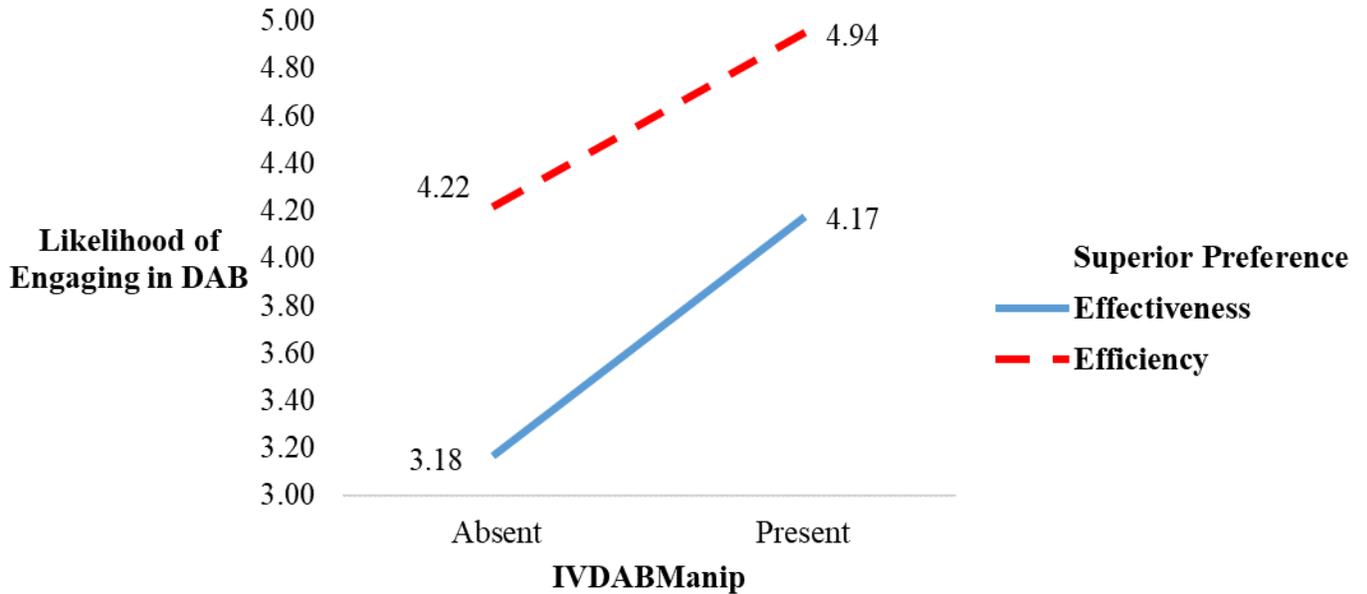
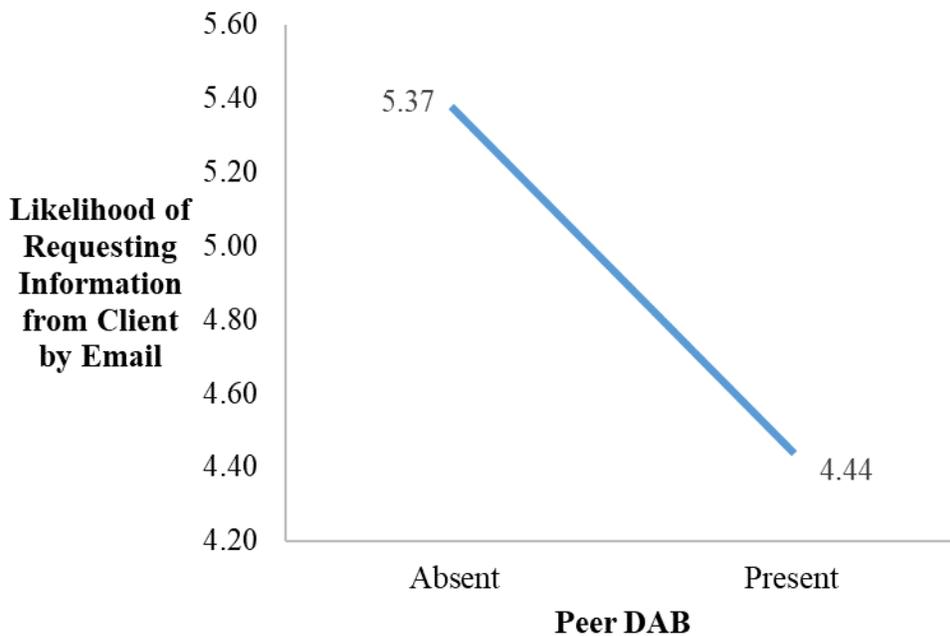
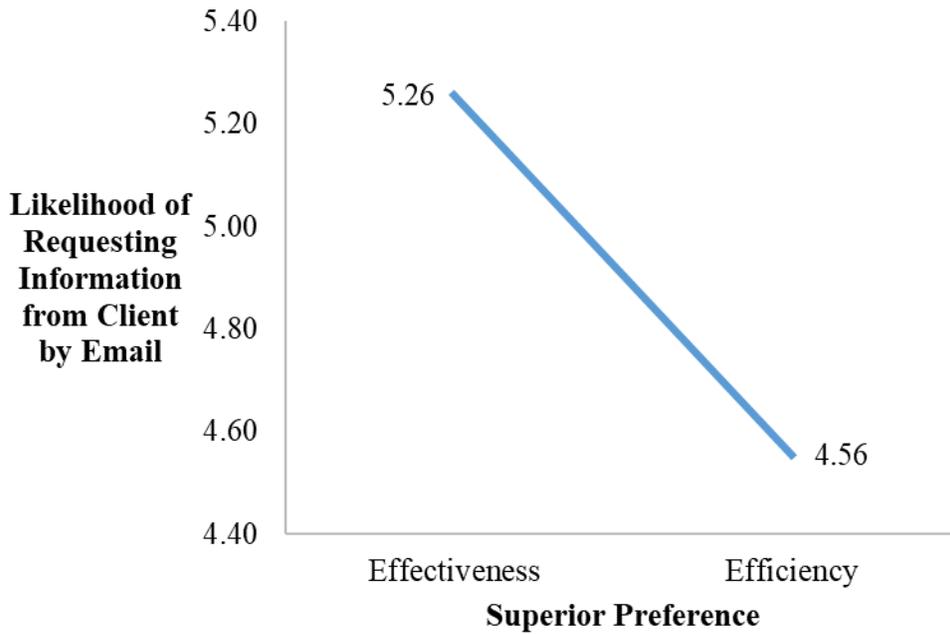


FIGURE 8
EFFECTS OF PEER DAB & SUPERIOR PREFERENCE
ON LIKELIHOOD OF REQUESTING MISSING SAMPLE BY EMAIL

Panel A: Effects of Peer DAB on Likelihood of Requesting Sample from Client by Email



Panel B: Effects of Superior Preference on Likelihood of Requesting Sample from Client by Email



Panel C: Effects of Peer DAB & Superior Preference on Likelihood of Requesting Sample from Client by Email

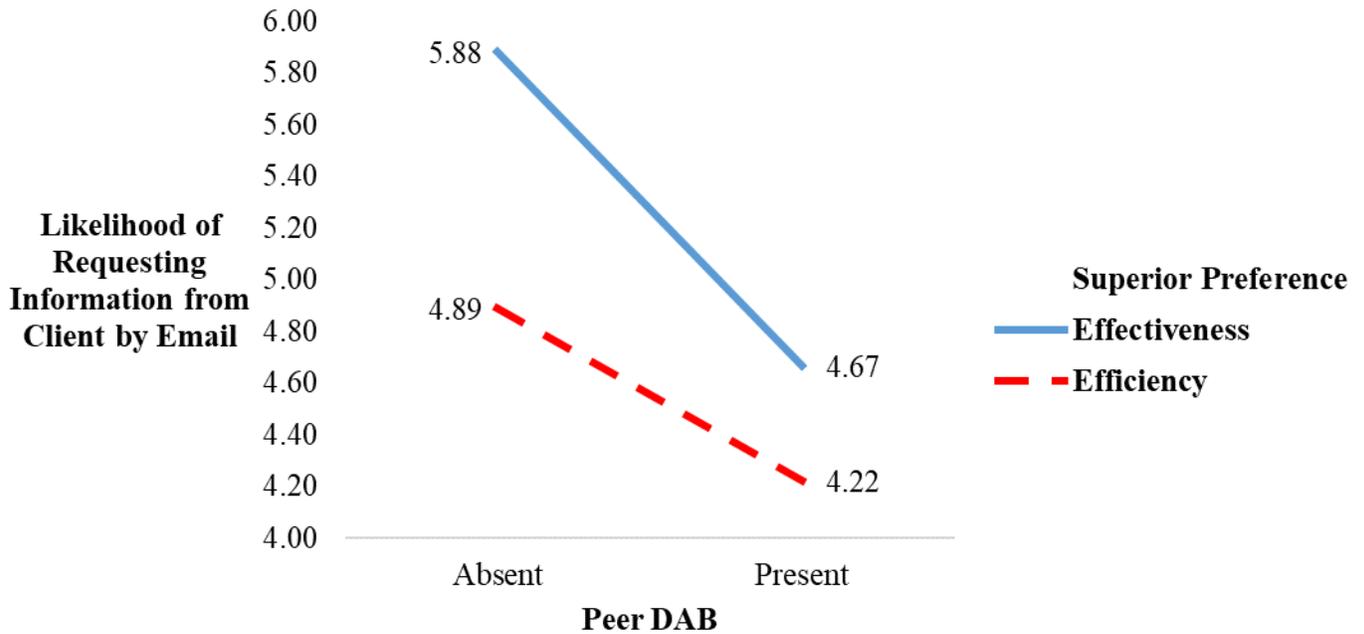
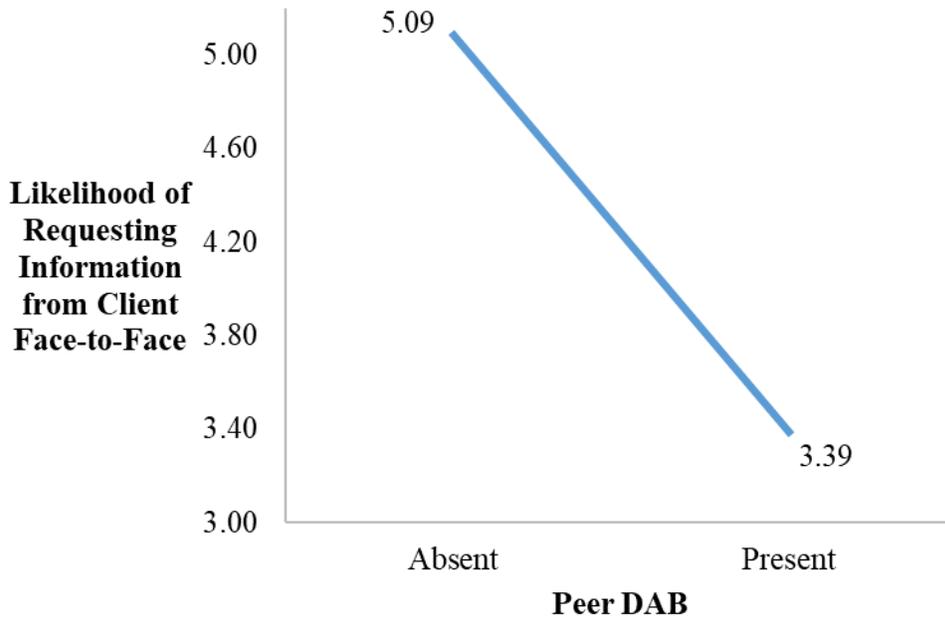
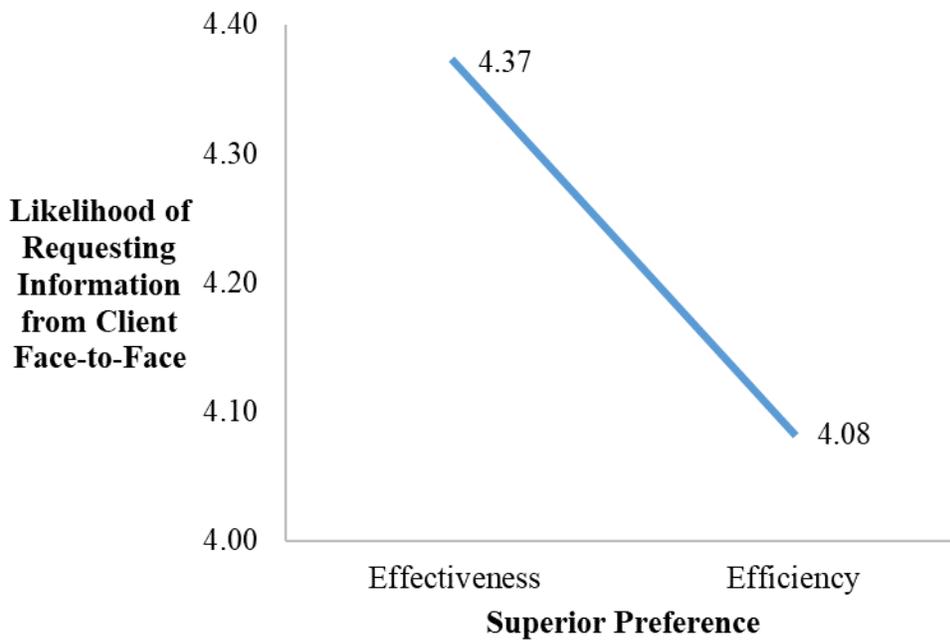


FIGURE 9
EFFECTS OF PEER DAB & SUPERIOR PREFERENCE
ON LIKELIHOOD OF REQUESTING MISSING SAMPLE FACE-TO-FACE

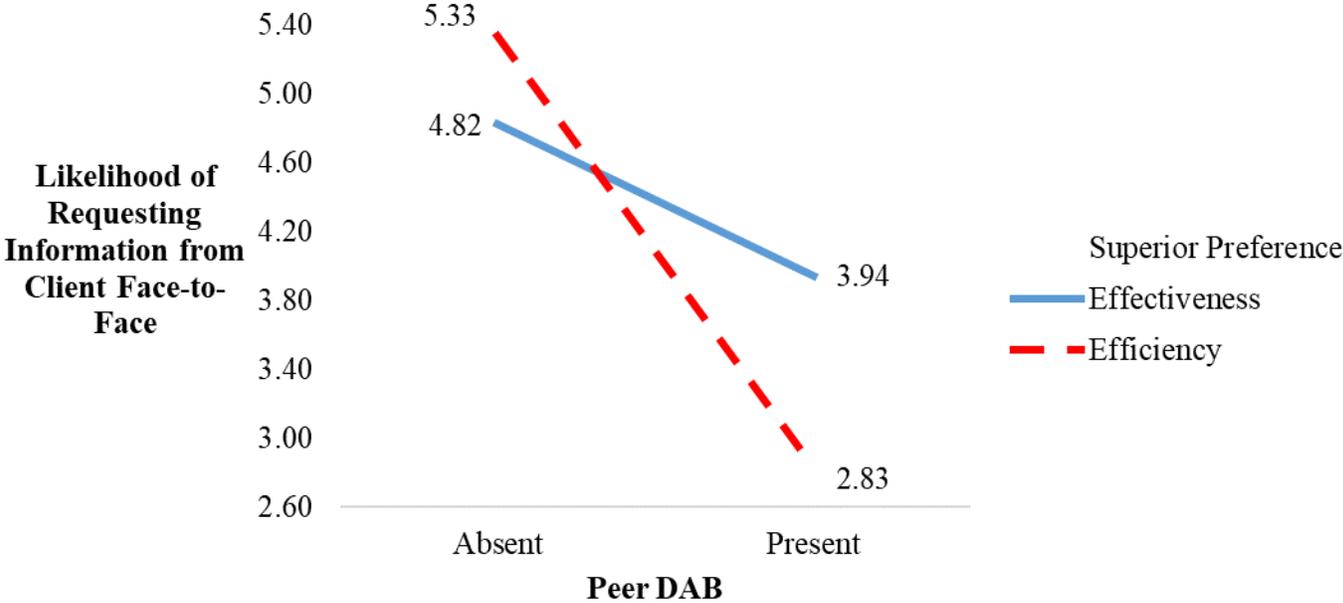
Panel A: Effects of Peer DAB on Likelihood of Requesting Sample from Client Face-to-Face



Panel B: Effects of Superior Preference on Likelihood of Requesting Sample from Client Face-to-Face



Panel C: Effects of Peer DAB & Superior Preference on Likelihood of Requesting Sample from Client Face-to-Face



TABLES

**TABLE 1
INSTRUMENT DEVELOPMENT PROCEDURES**

Step	Description	Summarized Results	Subjects
Initial Instrument Development		First draft instrument	N/A
Pre-Test	Sat with subjects while they completed the instrument to evaluate areas of confusion and document the required time.	<ul style="list-style-type: none"> - Made the PBC Portal available throughout the experiment - Added a question to check for understanding of missing information from the PBC Portal - Change phrasing to third person 	4 accounting PhD students with audit backgrounds
Pilot Test	Students completed the instrument.	<ul style="list-style-type: none"> - Wording of manipulation check questions was confusing - Changed demographic questions to free response - Added another indicator to consider the senior's preference when making decision. 	101 accounting students enrolled in an upper level accounting course at a large state university

Notes:

This table illustrates the steps taken to develop the final instrument. It shows the changes resulting from each test prior to conducting the analyzed experiment.

TABLE 2
PILOT TEST PARTICIPANT CHARACTERISTICS

	N (%)
	101
Internship Experience	50 (50%)
Audit-Specific Internship Experience	31 (31%)
Taken 1+ Audit Classes	72 (71%)
Selected 1+ IC samples	41 (41%)
Female	63 (62%)
Average Work Experience (months)	6.60
Age	21.17

Notes:

This table illustrates the characteristics of the participants in the pilot study. Review of these characteristics provides comfort that they provide a reasonable representation of expected responses from participants in the actual experiment.

TABLE 3
SELECTED PARTICIPANT FREE RESPONSES

<i>Staff auditors are influenced by their peers to behave in a similar manner, whether it be a dysfunctional audit behavior or an audit quality increasing audit behavior.</i>	
Pilot Test	
Peer Behavior	<p style="text-align: center;"><i>DAB Absent</i></p> <ul style="list-style-type: none"> - Hearing how his peers selected samples from all the available months it is unlikely that he will take the easy route and simply choose another month. If he looks to them for guidance he is likely to emulate their approach since they have more experience. - Jimmy most likely realizes that his peers follow the protocol and do the right thing so he should too - Jimmy should now feel confident to request for more information as because even his coworkers are waiting on further information - I think Jimmy would select April and request October and wait for the client to send the necessary information through email because he would be influenced by his peers and they were talking about this method during lunch. - His peer team members seem to play the waiting game, so they end up spending extra time waiting to get the materials they actually need. - Because his coworkers Louis and Christian are both awaiting other documentation from the client, I believe that Jimmy will also wait as well
	<p style="text-align: center;"><i>DAB Present</i></p> <ul style="list-style-type: none"> - I believe jimmy is more likely to pick from the available information due to the fact is peers do that. Since it seems that this is a common practice among staff at this firm he is less likely to go against what they do and report them in order to not make waves. - Based on the conversation he had with a fellow employee, it seems like he is going to follow the wrong rules in order to finish his work faster. - Jimmy may think that since other employees are picking readily available information, it would be okay for him to do the same. - If the environment surrounding him is picking their months by what is already there, because it is easier, Jimmy is probably more likely to do the same. Usually, if the environment in a work place is one way, then the other workers are likely to act in a similar way. - Since Jimmy is new within the company, he is easily influenced by the others he works with. - Jimmy is less likely to stick with October as one of his test samples because since he is new, he values the opinions of his peers and does not want to be disliked by them if they found out he was holding them up and having issues with testing - Overhearing the conversation from Louis and Christian, he is likely to select April and pick another month readily available. Although unethical and violating Accounting standards, I feel that he would pick this option due to convenience. - Since he probably wants to get it done today since he does not want to hold up his team (peer pressure) he will not ask or even email - Jimmy's coworkers decided to just test the months that showed up in the PBC portal. When someone like Jimmy hears this, they are going to think that they can get away with something like that, so he feels comfortable with just picking random months. - After listening to his team talk, he will most likely pick a readily available month on the PBC portal because he heard his team does similar things for their controls and it saves time. Jimmy most likely does not want to stand out and make the team stay late so he will probably lean towards getting his work done quicker rather than the right way.

TABLE 3 (CONTINUED)

		Actual Test
Peer Behavior	DAB Absent	<ul style="list-style-type: none"> - He overheard that his peers requested one of the months that wasn't in the portal so he knows not to choose a different month but to request the information. - Based on the conversations overheard at Lunch, Jimmy should know how important it is to wait until you get the proper PBCs you need. You shouldn't adjust your sample based on the lack of information given to you by your client. - Based of the lunch conversation, you have to wait until they give you the PBC docs that you need (AKA October) so he will not pick another month; - From his coworker's conversation, I believe he will wait for the proper data as his coworkers are.
	DAB Present	<ul style="list-style-type: none"> - He is listening to his peers/coworkers who have experience and are basing their experience on what has happened with this company in the past. He probably thinks it'd be smart to at least hear what his colleagues have to say. - Since his coworkers are cutting corners, he will now be more likely to do the same - Jimmy is highly likely to pick another month because he overhead his peer staff members doing the same thing. He doesn't want to be the reason everyone stays late because he is still testing controls. - Jimmy and the other staff all went to the same school and have the same amount of experience. Since a peer told him his tactic for testing, and Jimmy can relate to him, it gives him a reason or justification for just picking another month already available in the PBC portal. - Jimmy may be influenced by the conversation of the other auditors and wanting to go home (fatigue) to just choose two months that were on the portal. - The rest of his audit team seems to be selecting already available samples and the time urgency stated by his engagement team could be motivation to quickly select available samples and move forward. - As a first or second year auditor, you probably don't know much and are just trying to 1) fit into your team and 2) do a quick and effective job so as to not go over budget. In this case, he has heard that testwork is supposed to move quicker this busy season AND how his team members are cutting corners. Jimmy will probably lean towards what he believes the norm is for his team. - Jimmy's coworkers have already said that they are going to choose from what's available and if that is the example set, Jimmy will probably be inclined to follow suit - The work environment made it very comfortable for Jimmy to choose the easier route out. There was a sense of if everyone else is doing it then its okay. - I chose that Jimmy was more likely to choose a month already available in the PBC portal because while this isn't the most ethical thing to do, this does save a lot of time and from Jimmy's point of view, his coworkers are doing it so why shouldn't he? - He will most likely pick another month because that is what the rest of the team is doing and he won't want to be the reason everyone has to stay late

TABLE 3 (CONTINUED)

Superior Preference	<i>Staff auditors do consider the preference of their superior but sometimes subsequent to the behaviors of their peers.</i>
	<p style="text-align: center;">Actual Test</p> <ul style="list-style-type: none"> - Jimmy wants to please his senior Tory and perform effective audit work. Therefore, even though he may be tempted to take the easy way out, I believe he will do the right thing and request the October reconciliation. - I believe the stay in the budget is their first goal. - There is pressure from the senior to get things done efficiently to save money on the budget. - Some people still might take that quicker and easier route after hearing their senior's preference - The time restriction from the senior I'm sure has some effect on his decision making, but after the conversation at lunch and reassurance that other people follow the random sample and wait for the client to supply the evidence - Since Jimmy's manager has stressed finishing early this gives Jimmy the motivation to change his testing sample plus the rationalization that he is following the same steps as someone in his team. - He has his bosses expectations in the back of his mind, so even though his other associates are not following procedure, I think he is still slightly more likely to do the right thing. - I feel that Jimmy may be more likely to consider selecting a month that is already available after hearing the conversation from his peers. But I don't think that there is enough information for him to go against the wishes of Tori. - Even though it is unethical to pick another month already available, Jimmy is likely to do it because of the pressure from Tory and hearing how long it takes for clients to get the necessary documents to them. He does not want to go over budget especially being new to the firm. - Jimmy seems to be more influenced by his peers and his desire to finish the work day than he his by his boss and the standards.

Time Pressure	<i>Feeling the pressure of time in an audit, whether internally or from external sources such as peers or superiors, results in staff auditors engaging in DAB.</i>
	Pilot Test
	<ul style="list-style-type: none"> - It seemed Jimmy (and the rest of the team) want the audit to be over, so there is a slight chance he may just choose another month (instead of October) to perform the audit. - He will be heavily influenced by his peers and want to finish as early as possible. - Jimmy probably wont want to keep everyone later than they need to be in the office so he will probably select a different sample. - I don't think he wants to be the reason everyone is late. asking face to face will take too long.
	Actual Test
	<ul style="list-style-type: none"> - They want to complete the audit in a timely manner so selecting another month already available on the PBC portal will eliminate any waiting time. - He is also pressured to complete his testing as quickly as possible.

TABLE 3 (CONTINUED)

Email vs. FacetoFace	<p><i>Conflicting results: Some believe email will be more efficient or effective whereas others believe face-to-face would be more efficient or effective. Results align with previous studies that find the mismatch between client and staff affects their likelihood of requesting additional information.</i></p>
	<p>Pilot Test</p>
	<ul style="list-style-type: none"> - It is unlikely that he will need to see the client face to face, email is far more likely to quickly achieve his desired result. - he is new to the firm and since he has yet to build a personal relationship with the client it makes more sense he would request the missing month via phone or email rather than schedule a face to face meeting - Because Jimmy is a new employee, he may not have the communication skills/confidence to speak with a big client face to face about requesting more information. (Although this is probably the best and most ethical option). Email is an easy way to obtain information but this would require some work on his behalf. - meeting face to face is a large hassle and very unlikely to happen unless there is absolutely no way he can get the October via email. - The reason it would be better to request it by email is that then there's a record of the request, if it were ever to be questioned later - I think it is more likely for Jimmy to request October from the client face to face so he can clearly ask questions about why the month was missing - He is likely to request by email because that doesn't require a lot of interaction, but he is most likely to do it face to face because it will be the quickest and most accurate. - A face to face interaction will take much more time and will make it much more obvious to his coworkers that he is taking extra time to do something when they all want to leave - By doing it by email, you are still informing the client but it is not as efficient as doing it face to face. It make be a little more difficult to try to meet up face to face but it will still be the best way of relying the information. - I feel that jimmy would feel uncomfortable talking with the client face to face rather than through email. - Requesting by email might take a while for the client to respond, and while a face to face request might be "quicker" it can also be difficult to find time to meet up with the client and it can also be difficult confronting the client when you are a new associate. - Going in person will have higher chance of him getting the information - It is unlikely Jimmy will ask the client face to face because that would require the most work. - Since he is trying to save time he is more likely to request the month of October over email than through face-to-face because it would take more time. - Having fact-to-face interaction almost always guarantees that a task will be completed. - People are more inclined to respond to you when you are present, rather than sending them an email they can put off for another time.

TABLE 3 (CONTINUED)

	Actual Test
Email vs. FacetoFace	<ul style="list-style-type: none"> - He is more likely to request another month face to face because he is likely to receive it much faster. - Face to face is a quicker way of getting things done. - I feel that new employees are more likely going to choose the path that involves less face-to-face interactions if possible. - I feel the face-to-face option is the least likely because he will have to take time out of his work and he may consider that being less efficient - He would be less likely to request October from the client face to face as opposed to email, because email is easier and faster. - It would be faster to ask for the data in person - Most client documentation requests are done via email opposed to face to face - He would be most likely to request October from the client face to face if he is working at the client site and that will likely get him the documents fastest. Requesting October through email would likely make the request take a bit longer than a face to face request. - Talking face to face is intense but effective. - Requesting October by email is less intimidating but does the right thing by asking for the required month - Asking information by email gives the client to make up what is missing. Face to face is a better interaction as you can read from the client if there is a problem. - Email is ok, but face to face is better because it gives them less time to come up with an excuse to hid things - Email seems more likely because its the quickest and easiest way to ask for it; face to face may not be as quick but could be more effective, (or could be quicker if the client doesn;t check emails much); also they have a good working relationship so it's not out of the question. - Being a staff team member, i do think jimmy is more likely to email the client than go face to face because he may be a little more intimidated by the client - I think that he would rather request over email because as a new staff member it may be intimidating to talk to the client alone face to face. - As a low level staff, talking directly to the client can be very intimidating and email is less personal, and makes it easier to make requests. - Sometimes asking the client for something face to face may make them uncomfortable or mad and Jimmy probably doesn't want to be in that situation. - It is tougher to get up and walk to the client's desk and ask them a favor and interrupting their work-day. - Timeliness; sending an email would take longer to see/reply than face to face interaction. - Using e-mail seems more appropriate for office etiquette so the client isn't blindsided and has time to find the document.

TABLE 4
SUMMARY OF EXPERIMENTAL RESEARCH DESIGN
AND CELL SAMPLE SIZES

		<i>Peer DAB</i>	
		Absent	Present
<i>Superior Preference</i>	Efficiency	Cell A 18 Participants	Cell B 18 Participants
	Effectiveness	Cell C 17 Participants	Cell D 18 Participants

Notes:

This table illustrates the number of participants randomly assigned to each experimental cell.

**TABLE 5
PARTICIPANT CHARACTERISTICS**

	N (%)	Min	Max
	71		
Internship Experience	62 (87%)		
Audit-Specific Internship Experience	48 (68%)		
Female	38 (54%)		
Signed a Contract for an Accounting Job	50 (70%)		
Average Number of Audit Classes Taken	1.58	1.00	5.00
Average Number of times Selecting IC Sample	1.14	0.00	10.00
Average Work Experience (months)	9.99	0.00	180.00
Age	22.70	18.00	43.00

Notes:

This table illustrates the characteristics of the participants used in the analyses. Review of these characteristics provides comfort that they are a reasonable proxy for new staff auditors.

TABLE 6
DESCRIPTIVE STATISTICS BY CONDITION

	DAB Absent Efficiency (Cell A)	DAB Present Efficiency (Cell B)	DAB Absent Effectiveness (Cell C)	DAB Present Effectiveness (Cell D)	F- statistic	p-value
	n = 18	n = 18	n = 17	n = 18		
Internship Experience	15 (83%)	16 (89%)	15 (88%)	16 (89%)	0.075	0.973
Internship Area	12 (67%)	13 (72%)	11 (65%)	12 (67%)	0.103	0.958
Audit Classes Taken	8 (44%)	12 (67%)	11 (65%)	9 (50%)	0.804	0.496
Female	12 (67%)	10 (56%)	6 (35%)	10 (56%)	0.398	0.755
Signed a Contract for an Accounting Job	0 (0%)	1 (6%)	1 (6%)	2 (11%)	1.393	0.253
Average IC Samples Selected	2.28	0.78	0.59	0.89	2.678	0.054
Average Work Experience (months)	16.39	7.86	4.15	11.22	0.764	0.518
Average Age	23.50	22.33	22.29	22.67	0.685	0.564

Notes:

This table illustrates differences in the demographics for each cell within the experimental research design.

All p-values are two-tailed

TABLE 7
EFFECTS OF PEER DAB AND SUPERIOR PREFERENCE
ON LIKELIHOOD OF ENGAGING IN DAB

Panel A: Means (Standard Deviation)

		<i>Peer DAB</i>		Totals
		Absent	Present	
Superior Preference	Efficiency	4.222 (2.016) n = 18	4.944 (2.182) n = 18	4.583 (2.103) n = 36
	Effectiveness	3.176 (1.590) n = 17	4.167 (4.167) n = 18	3.686 (1.762) n = 35

Totals	3.714 (1.872) n = 35	4.556 (2.021) n = 36	n = 71
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Panel B: ANOVA Results

Variable	DF	Mean Square	F-Stat	p-value (two-tailed)
Peer DAB	1	13.004	3.527	0.065
Superior Preference	1	14.747	4.000	0.050
Peer DAB x Superior Preference	1	0.318	0.086	0.770

Panel C: t-Test Comparisons of Group within Condition

Comparison	t	p-value (two-tailed)
Efficiency vs. Effectiveness within DAB Absent	1.610	0.112
Efficiency vs. Effectiveness within DAB Present	1.215	0.229
DAB Absent vs. DAB Present within Efficiency	-1.128	0.263
DAB Absent vs. DAB Present within Effectiveness	-1.525	0.132

TABLE 8
EFFECTS OF PEER DAB AND SUPERIOR PREFERENCE
ON LIKELIHOOD OF REQUESTING MISSING SAMPLE BY EMAIL

Panel A: Means (Standard Deviation)

		<i>Peer DAB</i>		Totals
		Absent	Present	
Superior Preference	Efficiency	4.889 (1.967) n = 18	4.222 (1.833) n = 18	4.556 (1.904) 36
	Effectiveness	5.882 (1.317) n = 17	4.667 (1.572) n = 18	5.257 (1.559) 35

Totals	5.371 (1.734) 35	4.444 (1.698) 36	n = 71
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Panel B: ANOVA Results

Variable	DF	Mean Square	F-Stat	p-value (two-tailed)
Peer DAB	1	15.714	5.465	0.022
Superior Preference	1	9.169	3.189	0.079
Peer DAB x Superior Preference	1	1.337	0.465	0.498

Panel C: t-Test Comparisons of Group within Condition

Comparison	t	p-value (two-tailed)
Efficiency vs. Effectiveness within DAB Absent	-1.732	0.088
Efficiency vs. Effectiveness within DAB Present	-0.786	0.434
DAB Absent vs. DAB Present within Efficiency	1.179	0.242
DAB Absent vs. DAB Present within Effectiveness	2.12	0.038

TABLE 9
EFFECTS OF PEER DAB AND SUPERIOR PREFERENCE
ON LIKELIHOOD OF REQUESTING MISSING SAMPLE FACE-TO-FACE

Panel A: Means (Standard Deviation)

		<i>Peer DAB</i>		Totals
		Absent	Present	
<i>Superior Preference</i>	Efficiency	5.333 (1.715) n = 18	2.833 (2.121) n = 18	4.083 (2.285) n = 36
	Effectiveness	4.824 (1.468) n = 17	3.944 (1.765) n = 18	4.371 (1.664) n = 35

Totals	5.086 (1.597) n = 35	3.389 (2.004) n = 36	n = 71
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Panel B: ANOVA Results

Variable	DF	Mean Square	F-Stat	p-value (two-tailed)
Peer DAB	1	50.637	15.860	0.000
Superior Preference	1	1.603	0.502	0.481
Peer DAB x Superior Preference	77	11.652	3.649	0.060

Panel C: t-Test Comparisons of Group within Condition

Comparison	t	p-value (two-tailed)
Efficiency vs. Effectiveness within DAB Absent	0.844	0.402
Efficiency vs. Effectiveness within DAB Present	-1.866	0.066
DAB Absent vs. DAB Present within Efficiency	4.197	0.000
DAB Absent vs. DAB Present within Effectiveness	1.455	0.150

TABLE 10
SENSITIVITY ANALYSIS: DAB ABSENT MANIPULATION CHECK

Variables Means (Standard Deviation)	Failed n = 15 (43%)	Passed n = 20 (57%)	t	p-value (two-tailed)
Internship^a	1.133 (0.352)	1.150 (0.366)	-0.135	0.893
Internship Area^b	1.733 (1.438)	2.200 (1.642)	-0.877	0.387
Work Experience	15.533 (45.574)	6.625 (10.335)	0.849	0.402
Signed Accounting Job Contract^c	1.733 (1.580)	1.300 (0.470)	1.165	0.252
Audit Classes Taken	1.933 (1.280)	1.500 (0.607)	1.332	0.192
Internal Control Sample Selection Experience	3.333 (2.160)	5.550 (1.622)	-0.345	0.732
Age	23.733 (5.457)	22.300 (1.780)	1.104	0.278
Gender^d	1.533 (0.516)	1.600 (0.598)	-0.345	0.732
DV1: Likelihood of Engaging in DAB	5.133 (1.846)	5.550 (1.669)	-0.698	0.490
DV2: Likelihood of Requesting Missing Sample by Email	4.600 (1.765)	5.450 (1.395)	-1.593	0.121
DV3: Likelihood of Requesting Missing Sample Face-to-Face	4.583 (1.929)	5.348 (1.369)	-1.361	0.183

Notes:

This table illustrates differences in participants who were in the DAB Absent condition that passed the manipulation check and those that failed the manipulation check.

^a 1 = Yes, 2 = No

^b 1 = Audit/Assurance, 2 = Tax, 3 = Advisory, 4 = Other, 5 = N/A

^c 1 = Yes, 2 = No

^d 1 = Male, 2 = Female

TABLE 11
EFFECTS OF PERSONALITY TYPE ON BEHAVIORAL CHOICE

Means(Standard Deviation)	Extraversion vs. Introversion ^a				Sensing vs. Intuition ^b			
	Extraversion n = 27	Introversion n = 44	t	p-value (two-tailed)	Sensing n = 52	Intuition n = 19	t	p-value (two-tailed)
DV1: Likelihood of Engaging in DAB	4.185 (2.219)	4.114 (1.845)	0.1467	0.884	4.135 (1.941)	4.158 (2.141)	-0.044	0.965
DV2: Likelihood of Requesting Missing Sample by Email	4.889 (1.888)	4.909 (1.709)	-0.046	0.963	4.923 (1.813)	4.842 (1.675)	0.170	0.866
DV3: Likelihood of Requesting Missing Sample Face-to-Face	4.259 (2.105)	4.205 (1.948)	0.111	0.912	4.212 (1.954)	4.263 (2.156)	-0.096	0.924

Means(Standard Deviation)	Thinking vs. Feeling ^c				Judging vs. Perceiving ^d			
	Thinking n = 44	Feeling n = 27	t	p-value (two-tailed)	Judging n = 64	Perceiving n = 7	t	p-value (two-tailed)
DV1: Likelihood of Engaging in DAB	4.114 (1.919)	4.185 (2.113)	-0.147	0.884	4.078 (2.010)	4.714 (1.704)	-0.805	0.424
DV2: Likelihood of Requesting Missing Sample by Email	4.659 (1.725)	5.296 (1.793)	-1.489	0.141	4.922 (1.784)	4.714 (1.704)	0.293	0.770
DV3: Likelihood of Requesting Missing Sample Face-to-Face	4.341 (2.090)	4.037 (1.850)	0.621	0.537	4.188 (1.975)	4.571 (2.299)	-0.481	0.632

Notes:

This table illustrates differences in participants' responses based on their responses to the personality type questions.

^a 0 = Extraversion

10 = Introversion

^b 0 = Sensing

10 = Intuition

^c 0 = Thinking

10 = Feeling

^d 0 = Judging

10 = Perceiving

TABLE 12
EFFECTS OF COGNITIVE STYLE ON BEHAVIORAL CHOICE

Means(Standard Deviation)	Faith in Intuition vs. Need for Cognition			
	Intuition n = 37	Cognition n = 34	t	p-value (two-tailed)
DV1: Likelihood of Engaging in DAB	4.459 (2.129)	3.794 (1.771)	1.424	0.159
DV2: Likelihood of Requesting Missing Sample by Email	4.811 (1.883)	5.000 (1.651)	-0.448	0.655
DV3: Likelihood of Requesting Missing Sample Face-to-Face	3.838 (2.062)	4.647 (1.857)	-1.732	0.088

Notes:

This table illustrates differences in participants' responses based on their responses to the cognitive style questions.

APPENDICES

APPENDIX A - I EXPERIMENTAL INSTRUMENT

APPENDIX A INSTRUCTIONS

Note: Items in red and blue are included here only for reference; they are NOT shown to participants.

Welcome!

I am a PhD student at Virginia Tech and this research case is part of my program of study for my dissertation. In this research study, I plan to examine auditors' decision-making during the audit process.

Please note that your participation is voluntary and you have the option to withdraw at any point. I realize that your time is very valuable and I appreciate your willingness to participate.

This case study will ask you about decisions to be made by a hypothetical staff auditor working on an integrated audit of a hypothetical audit client. You will be given information about the hypothetical audit client, audit team, and an issue surrounding the testing of the operating effectiveness of internal controls. You will also be provided the applicable accounting guidance. Using the information given, you will be asked to provide your judgment related to the next steps the hypothetical auditor would take.

This study should take approximately 25 minutes to complete. Please do not begin until you have time to complete the study without interruption. All data are being collected in a manner that ensures your complete anonymity. There is no more than minimal risk involved in this study.

Thank you for your assistance!

If at any time you have questions or concerns about the study, please contact:

Rebecca Wetmiller, CPA
PhD Student in Residence
Virginia Tech
rebeccaw@vt.edu

Should you have any questions or concerns about the study's conduct or your rights as a research subject, or need to report a research-related injury or event, you may contact the WIRB:

Western Institutional Review Board

800-562-4789

help@wirb.com

Please click next if you agree to participate in the study.

In doing so, you are confirming that: 1) You have read the conditions of this project. You have had all your questions answered. You hereby acknowledge the above and give your voluntary consent and 2) You are over 18 years of age.

General Instructions

In the following case, Jimmy is a staff level auditor on an audit engagement team who is responsible for selecting the sample to test an internal control over the cash balance but has run into a problem.

You will read some background information and then determine what Jimmy's likely next steps will be.

Remember that cash is considered a high-risk account because of its liquidity and association with many other liability, revenue, and expense accounts. In addition, cash is highly susceptible to theft making proper implementation of internal controls even more important.

APPENDIX B

SUPERIOR PREFERENCE MANIPULATIONS

Efficiency Based Manipulation

Audit Team Background

Jimmy is a staff member at DEKP, LLC. His current engagement team is as follows:

1 Partner: Michael

Michael is 52 years old and is a partner within the audit division of DEKP, LLC. With more than 25 years of professional experience, Michael has had the opportunity to serve many industries including retail, manufacturing, and natural resources. Michael received his BS and MS from Bourke University.

2 Managers: Coco & Giorgio

Coco is 42 years old and is a senior manager within the audit division of DEKP, LLC. Coco has over 11 years of experience in financial statement auditing. Coco earned her Master of Accounting and Information Systems degree from The University of Armani.

Giorgio is 34 years old and is a manager within the audit division of DEKP, LLC. Giorgio has 8 years of experience in financial statement auditing. Giorgio earned his MS from Southern Choo University.

1 Senior: Tory

Tory is 30 years old and is a senior within the audit division of DEKP, LLC. Tory has 4 years of experience in financial statement auditing. Tory earned her BS and MS from Southern Choo University.

3 Staff members: Jimmy, Louis, Christian

Jimmy is 22 years old and is a staff auditor at DEKP, LLC and just started with the firm. Jimmy earned his Accounting degree from The University of St. Laurent.

Louis is 23 years old and is a staff auditor at DEKP, LLC. Louis has 1 year of audit experience. Louis earned his Accounting degree from The University of St. Laurent.

Christian is 23 years old and is a staff auditor at DEKP, LLC. Christian has 1 year of audit experience. Christian earned his Accounting degree from The University of St. Laurent.

The current year audit team is composed of members who were also on the audit team last year; all of the current year team members worked on the Beautiful Bags, Inc. engagement last year also.

Jimmy’s team is nearing the end of their on-site testwork so Tory, the senior, has been keeping an eye on the budget and expects that testwork should be completed faster than it has been done earlier in the engagement; she wants you to work as efficiently as possible and save time when you can.

Please list three things that Jimmy could do to save time to appease Tory, the senior’s, preference toward efficiency.

Effectiveness Based Manipulation

Audit Team Background

Jimmy is a staff member at DEKP, LLC. His current engagement team is as follows:

1 Partner: Michael

Michael is 52 years old and is a partner within the audit division of DEKP, LLC. With more than 25 years of professional experience, Michael has had the opportunity to serve many industries including retail, manufacturing, and natural resources. Michael received his BS and MS from Bourke University.

2 Managers: Coco & Giorgio

Coco is 42 years old and is a senior manager within the audit division of DEKP, LLC. Coco has over 11 years of experience in financial statement auditing. Coco earned her Master of Accounting and Information Systems degree from The University of Armani.

Giorgio is 34 years old and is a manager within the audit division of DEKP, LLC. Giorgio has 8 years of experience in financial statement auditing. Giorgio earned his MS from Southern Choo University.

1 Senior: Tory

Tory is 30 years old and is a senior within the audit division of DEKP, LLC. Tory has 4 years of experience in financial statement auditing. Tory earned her BS and MS from Southern Choo University.

3 Staff members: Jimmy, Louis, Christian

Jimmy is 22 years old and is a staff auditor at DEKP, LLC and just started with the firm. Jimmy earned his Accounting degree from The University of St. Laurent.

Louis is 23 years old and is a staff auditor at DEKP, LLC. Louis has 1 year of audit experience. Louis earned his Accounting degree from The University of St. Laurent.

Christian is 23 years old and is a staff auditor at DEKP, LLC. Christian has 1 year of audit experience. Christian earned his Accounting degree from The University of St. Laurent. The current year audit team is composed of members who were also on the audit team last year; all of the current year team members worked on the Beautiful Bags, Inc. engagement last year also.

Jimmy's team is nearing the end of their on-site testwork so Tory, the senior, has been keeping an eye on the audit file to **ensure that audit quality remains high** even toward the end of the current engagement; she wants you to perform all procedures with high accuracy and maintain an appropriate degree of professional skepticism.

Please list three things that Jimmy could do to **increase audit quality** to appease Tory, the senior's, **preference toward effectiveness**.

APPENDIX C BACKGROUND INFORMATION

Client Background

Beautiful Bags, Inc. was founded eight years ago by Kate Kors. The company specializes in providing stylish handbags to middle-aged women. While the company started as a small one-store business, it has since gone public and has expanded into multiple locations all over the United States.

Beautiful Bags, Inc. has been audited by Jimmy's firm (DEKP LLP) for the past several years. Over these years, Jimmy's firm has provided unqualified opinions and has had a good working relationship with Beautiful Bags, Inc.

Online Client PBC Portal

Documentation for internal controls testing is obtained through the online client PBC portal. Access to the portal is secure and limited to specific client personnel and audit team members.

Take note that the client sometimes forgets to upload all of the documentation to the PBC portal but that does not necessarily mean that they did not complete the control for that month. If the documentation is missing, it can be requested from the client directly.

Task

As a staff auditor at DEKP LLP, Jimmy has been assigned to perform the testwork for one of the internal controls over the cash balance as of December 31, 2017. There have been no internal control deficiencies in the cash account in the previous years. In addition, planning procedures, preliminary testwork, and interim procedures have not uncovered anything to indicate that there are any control deficiencies at this time.

Cash Control to be Tested

C-101: The general ledger will be reconciled to the monthly bank statement in a timely manner.

A description follows of how the control should operate, based on Jimmy's review of the prior year workpapers and the procedures listed in the audit program:

Bank Reconciliation

Cash control C-101 is a bank reconciliation, which adjusts the balance per the books (i.e., general ledger) to the balance per the bank (i.e., bank statement). Differences exist between the balance per the books and the balance per the bank due to deposits in transit, outstanding checks, bank errors/charges, not sufficient funds checks, and book errors. It is important that the person performing the bank reconciliation is an employee who does not have access to the cash or to creating cash journal entries.

Specific Instructions

Jimmy had previously selected April and October as the months to test this control. Jimmy now needs to obtain the documentation from the online client PBC portal for these two months so that he can test their accuracy at a later time.

When testing internal controls, it is important to make sure that they are operating effectively and to report any issues to the client and to Tory, the senior.

However, since Jimmy chose to test April and October himself, it is unlikely that the client or any of his team members would know if he decided to select different months for testing.

Please review the applicable standards that Jimmy's firm's policies and procedures adhere to when selecting samples for internal control testwork.

Applicable Accounting Guidance

AS 2201 - An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements

Testing Operating Effectiveness

.44 The auditor should test the operating effectiveness of a control by determining whether the control is operating as designed and whether the person performing the control possesses the necessary authority and competence to perform the control effectively.

.45 Procedures the auditor performs to test operating effectiveness include a mix of inquiry of appropriate personnel, observation of the company's operations, inspection of relevant documentation, and re-performance of the control.

AS 2315 - Audit Sampling

Sample Selection

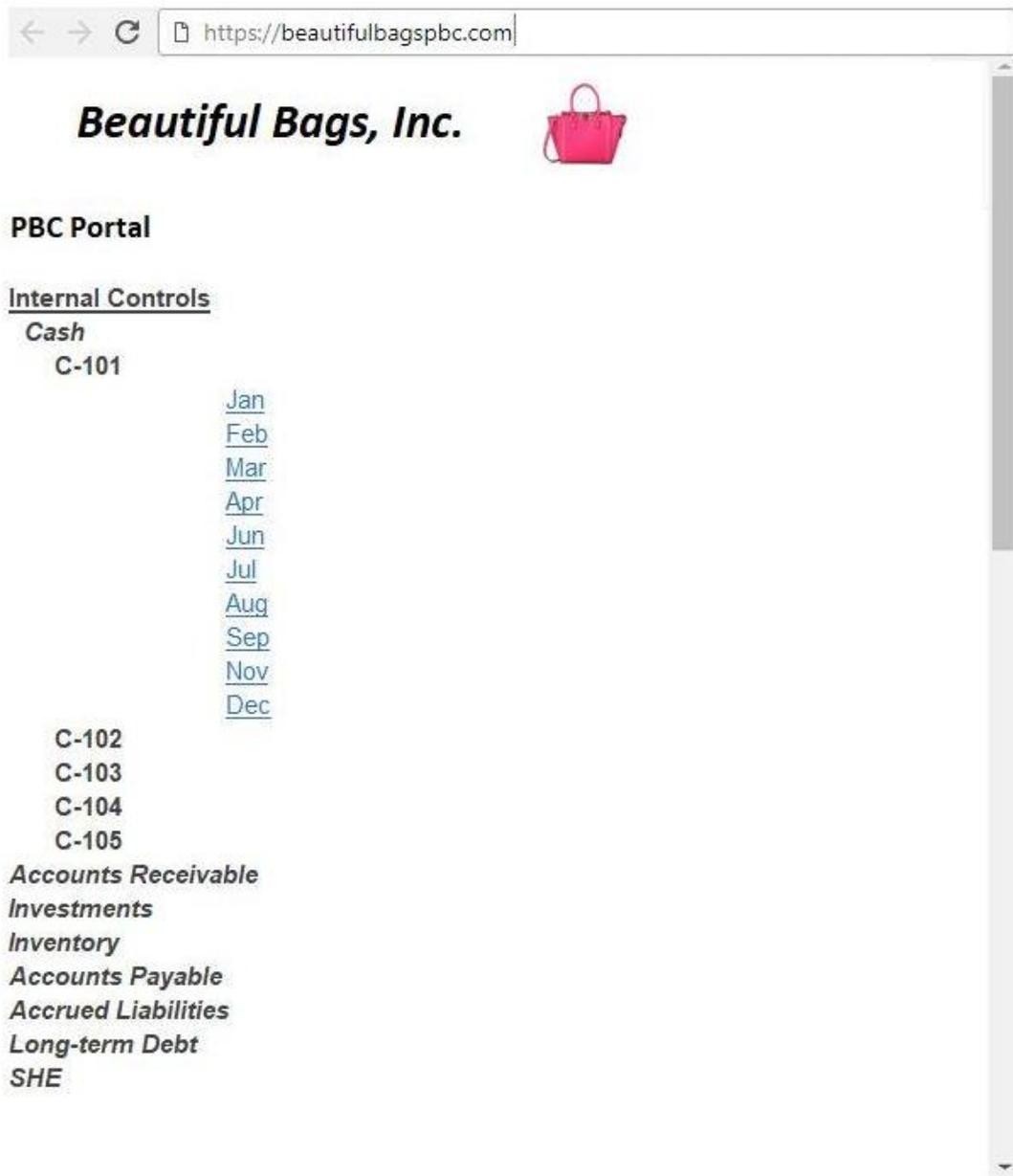
.39 Sample items should be selected in such a way that the sample can be expected to be representative of the population. Therefore, all items in the population should have an opportunity to be selected. Random-based selection of items represents one means of obtaining such samples. Ideally, the auditor should use a selection method that has the potential for selecting items from the entire period under audit.

Beautiful Bag Inc. Online PBC Portal

Below is an excerpt of the client's online PBC portal. The PBC portal site has been navigated to the section showing the documents that have been uploaded by the client for the cash control (C-101) that Jimmy is responsible for selecting the sample.

Remember your task:

Jimmy had previously selected **April and October** as the months to test this control. Jimmy now needs to obtain the documentation from the online client PBC portal for the two months selected (April & October) so that he can test their accuracy at a later time.



Based on the months selected for testing (April and October) and the information currently available on the client PBC portal, is Jimmy faced with a problem?

- There is no problem.
- One of the months selected for testing is missing.
- Both months selected for testing are missing.

Once you have finished reviewing the available documentation, please click next to continue.

APPENDIX D
DYSFUNCTIONAL AUDIT BEHAVIOR MANIPULATION

Dysfunctional Audit Behavior Present Manipulation

Lunchtime!

Before Jimmy has the chance to actually pull the sample for internal control testing, Tory announces that the lunch they ordered has arrived!

This is great news; Jimmy always learns lots of things at lunch! Jimmy's team members have lots of tips and tricks about how they select their sample for internal control testing!

Jimmy heads to the break room and overhears the following conversation between two of his peer staff audit team members about their internal control sample selection procedures:

Louis: Hey, I can't wait for busy season to be over.

Christian: Me too! I want to see the light of day!

Louis: We're getting close, I just finished testing my controls.

Christian: Really?! Already?! How?!

Louis: I've been picking my samples from what's already posted on the client PBC portal. I know I should pick my sample from the full population ahead of time but it saves so much time to do it this way!

Christian: Doesn't firm policy state that we have to pick our samples from all twelve available months before looking at what's easily available?

Louis: I guess, but no one will ever know that I didn't do that, and it won't make a difference since I'm still testing the same number of months.

Christian: Maybe I should do that for my cash control I'm testing right now. Is that allowed though?

Louis: I'm not sure but no one will ever know, and I just want to go home! Plus, you don't want to be the reason that everyone has to stay late because you're still testing controls.

Christian: Me too! This food looks good! Let's eat!

The accounting standards and PBC portal are available below for your review.

Accounting Standards

PBC Portal

Once you have finished reading the conversation among your peer team members concerning their internal control sample selection procedures, please click next to continue.

Dysfunctional Audit Behavior Absent Manipulation

Lunchtime!

Before Jimmy has the chance to actually pull his sample for internal control testing, Tory announces that the lunch they ordered has arrived!

This is great news; Jimmy always learns lots of things at lunch! Jimmy's team members have lots of tips and tricks about how they select their sample for internal control testing!

Jimmy heads to the break room and overhears the following conversation between two of his peer staff audit team members about their internal control sample selection procedures:

Louis: Hey, I can't wait for busy season to be over.

Christian: Me too! I want to see the light of day!

Louis: We're getting close. I'm almost done testing my controls.

Christian: Me too, I'm just waiting on some documentation from the client since it wasn't uploaded to the client PBC portal.

Louis: Yea, it's so annoying waiting for them to send the selected sample but that's the only way that follows firm policy since you are picking from all twelve available months.

Christian: I know, but it's so annoying having to wait!

Louis: Oh well, I'll just have to wait until they send over the months that I selected.

Christian: Yep!

Louis: This food looks good! Let's eat!

The accounting standards and PBC portal are available below for your review.

[Accounting Standards](#)

[PBC Portal](#)

Once you have finished reading the conversation among your peer team members concerning their internal control sample selection procedures, please click next to continue.

**APPENDIX E
DEPENDENT VARIABLES**

Chosen Behavior - Third Person Phrasing

Back to work!

Now that Jimmy has finished lunch and has learned new information about how his team members select their sample for testing internal controls, while keeping in mind the preferences of Tory, his senior, he has to decide how he will choose his sample for his cash control.

Based on the information currently available on the client PBC portal, how likely is **Jimmy** to do each of the following as his next step in selecting the internal control sample?

1. Select April & pick another month already available on the PBC portal in Q4.

Highly unlikely		Neither likely nor unlikely		Highly likely		
1 -----	2 -----	3 -----	4 -----	5 -----	6 -----	7

2. Select April & request October from the client by email.

Highly unlikely		Neither likely nor unlikely		Highly likely		
1 -----	2 -----	3 -----	4 -----	5 -----	6 -----	7

3. Select April & request October from the client face to face.

Highly unlikely		Neither likely nor unlikely		Highly likely		
1 -----	2 -----	3 -----	4 -----	5 -----	6 -----	7

The accounting standards and PBC portal are available below for your review.

Accounting Standards

PBC Portal

In a couple of short phrases, please explain how you arrived at your choices above (i.e., indicate the primary factors that influenced your decision):

Negative Consequences – Third Person Phrasing

Based on the information currently available on the client PBC portal, how likely is **Jimmy** to face negative consequences if he did each of the following as his next step in selecting the internal control sample?

1. Select April & pick another month already available on the PBC portal in Q4.

Highly unlikely		Neither likely nor unlikely		Highly likely								
1	-----	2	-----	3	-----	4	-----	5	-----	6	-----	7

2. Select April & request October from the client by email.

Highly unlikely		Neither likely nor unlikely		Highly likely								
1	-----	2	-----	3	-----	4	-----	5	-----	6	-----	7

3. Select April & request October from the client face to face.

Highly
unlikely

Neither likely
nor unlikely

Highly
likely

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

The accounting standards and PBC portal are available below for your review.

Accounting Standards

PBC Portal

In a couple of short phrases, please explain how you arrived at your choices above (i.e., indicate the primary factors that influenced your decision):

**APPENDIX F
PROCESS VARIABLES**

Importance of Peer Team Member Behavior

(Included to determine if participants think that Jimmy was influenced by the peer team member's behavior and/or superior's preference when making his decision on what behavior to engage in.)

Jimmy overheard a conversation among his peer staff team members about their internal control sample selection procedures at lunch.

How much importance would Jimmy place on his peer team members' behaviors when deciding on his planned internal control sample selection procedures?

Highly
unimportant

Neither important
nor unimportant

Highly
important

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

How would Jimmy rate the quality of information received from the conversation between Louis and Christian (his peers) about their behavior that he just overheard?

Very low
quality

Moderate
quality

Very high
quality

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

The accounting standards and PBC portal are available below for your review.

[Accounting Standards](#)

[PBC Portal](#)

Reasons for engaging in DAB
(Modified from Donnelly et al. 2003)

(Included to determine if participants think that Jimmy was influenced by the peer team member's behavior and/or superior's preference when making his decision on what behavior to engage in.)

Jimmy would be more accepting of altering/replacing audit procedures (e.g., internal control sample selection procedures) if:

1. A peer team member did it.

Strongly disagree		Neither agree nor disagree		Strongly agree								
1	-----	2	-----	3	-----	4	-----	5	-----	6	-----	7

2. A senior team member's preferences encouraged it.

Strongly disagree		Neither agree nor disagree		Strongly agree								
1	-----	2	-----	3	-----	4	-----	5	-----	6	-----	7

3. He believes the original audit procedure was unnecessary.

Strongly disagree		Neither agree nor disagree		Strongly agree								
1	-----	2	-----	3	-----	4	-----	5	-----	6	-----	7

4. On previous audits, there were no problems with this part of the client's system.

Strongly disagree		Neither agree nor disagree		Strongly agree								
1	-----	2	-----	3	-----	4	-----	5	-----	6	-----	7

5. He does not believe the original procedure would find anything wrong.

Strongly disagree Neither agree nor disagree Strongly agree
1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

6. He is under a lot of time pressure to complete the audit.

Strongly disagree Neither agree nor disagree Strongly agree
1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

In-Group Feelings

(Included to determine if the in-group bias theory is at play. In other words, do participants think that Jimmy would make his selections because he identifies more with peer team members (i.e., an in-group member) than his senior (i.e., an out-group member). These are going to be most important when the peer and the senior have differing perspectives (i.e., effectiveness with peer DAB present and efficiency with peer DAB absent)).

Jimmy received information from both a peer team member's prior behavior relating to his internal control sample selection procedure and from the senior team member's emphasis on efficiency or effectiveness.

Jimmy would:

1. Place more weight on information from the:

Peer Team Member Senior Team Member
1-----2-----3-----4-----5-----6-----7

2. Identify most with the attributes, qualities, and values of the:

Peer Team
Member

Senior
Team Member

1-----2-----3-----4-----5-----6-----7

3. Want approval most from the:

Peer Team
Member

Senior
Team Member

1-----2-----3-----4-----5-----6-----7

4. Be influenced more by the:

Peer Team
Member

Senior
Team Member

1-----2-----3-----4-----5-----6-----7

*Accuracy Goals (Social Learning Theory)
(Based on O'Fallon & Butterfield 2012)*

(Included to determine what part of the social influence theory is at play. In other words, do participants think that Jimmy made his decisions in an attempt to reach his goals accurately by conducting his assigned audit procedures in an efficient and effective manner? In addition, these questions aim to capture how participants construed the situation, are peer behaviors considered normal and acceptable (i.e., accurate)).

How would Jimmy respond to each of the following statements when describing his own chosen behavior after the lunchroom conversation between Louis and Christian concerning their internal control sample selection procedure?

1. I learned these behaviors from my peers.

Never

Occasionally

Very
Frequently

1-----2-----3-----4-----5-----6-----7

**APPENDIX G
MANIPULATION CHECKS**

Superior Preference Manipulation

(Included to determine if participants responded to/internalized the superior preference manipulation.)

In the case materials, the preference of Tory, *the senior* of the audit team, was primarily focused on:

Efficiency
(saving time)

I cannot
Recall

Effectiveness
(high audit quality)

1-----2-----3-----4-----5-----6-----7

Dysfunctional Audit Behavior Manipulation

(Included to determine if participants responded to/internalized the peer DAB manipulation. In other words, did participants realize that the behaviors communicated in the lunchroom were dysfunctional (or not) and would affect audit quality.)

In the case materials, the behavior communicated in the lunchroom by Louis, Jimmy's *peer team member*, is most likely to:

Reduce
audit quality

I cannot
Recall

Increase
audit quality

1-----2-----3-----4-----5-----6-----7

**APPENDIX H
SUPPLEMENTAL ANALYSES**

You will now receive several "what if" scenarios to consider. Each scenario is to be considered independently of the other "what if" scenarios.

All of the background information about Jimmy’s team and Beautiful Bags, Inc. still applies.

Prior Peer Consequences for DAB

(Included to investigate if an individual can be influenced by the consequences that others have faced from similar behaviors in the past when deciding on his own behavior.)

Suppose Louis’ approach to selecting the internal control sample was for last year's Beautiful Bag Inc.'s engagement, rather than this year's engagement, and Louis received a \$5,000 bonus at the end of last year's engagement.

Based on the new information above, how likely is Jimmy to do each of the following as his next step in selecting the internal control sample?

1. Select April & pick another month already available on the PBC portal in Q4.

Highly unlikely	Neither likely nor unlikely	Highly likely
1 -----	2 -----	3 -----
4 -----	5 -----	6 -----
7		

2. Select April & request October from the client by email.

Highly unlikely	Neither likely nor unlikely	Highly likely
1 -----	2 -----	3 -----
4 -----	5 -----	6 -----
7		

3. Select April & request October from the client face to face.

Highly unlikely Neither likely nor unlikely Highly likely

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

The accounting standards and PBC portal are available below for your review.



Level of Involvement in Communication

(Included to investigate if an individual can be influenced by how actively involved in the communication he is when deciding on his own behavior.)

Suppose Jimmy was talking to Louis about his approach to selecting the internal control sample rather than Jimmy having overheard Louis' conversation with Christian about his approach.

Based on the new information above, how likely is Jimmy to do each of the following as his next step in selecting the internal control sample?

1. Select April & pick another month already available on the PBC portal in Q4.

Highly unlikely Neither likely nor unlikely Highly likely

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

2. Select April & request October from the client by email.

Highly unlikely Neither likely nor unlikely Highly likely

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

3. Select April & request October from the client face to face.

Highly
unlikely

Neither likely
nor unlikely

Highly
likely

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

The accounting standards and PBC portal are available below for your review.

Accounting Standards

PBC Portal

Team Stability

(Included to investigate if an individual can be influenced by his tenure with his peer team members when deciding on his own behavior. In other words, does it matter whether Jimmy worked with the peer team member engaging in the DAB (or not) on this engagement previously.)

Suppose this is Louis' first year on the Beautiful Bag Inc. engagement. Therefore, his approach to selecting the internal control sample was for a different client engagement (i.e., not Beautiful Bags, Inc.).

Based on the new information above, how likely is Jimmy to do each of the following as his next step in selecting the internal control sample?

1. Select April & pick another month already available on the PBC portal in Q4.

Highly
unlikely

Neither likely
nor unlikely

Highly
likely

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

2. Select April & request October from the client by email.

Highly unlikely Neither likely nor unlikely Highly likely

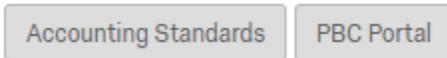
1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

3. Select April & request October from the client face to face.

Highly unlikely Neither likely nor unlikely Highly likely

1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7

The accounting standards and PBC portal are available below for your review.



Cognitive Styles
Rational-Experiential Inventory
(Epstein et al. 1996)

(Included to investigate if an individual's cognitive style influences the behavior he decides to engage in. Specifically, do differences in dominance of different spheres of the brain affect an individual's decision-making within the audit context when considering a peer team member's behavior?)

Below are a number of thinking styles that may or may not apply to you. Please indicate the extent to which you agree or disagree with each statement.

1. I don't like to have to do a lot of thinking.

Completely False Completely True

1 ----- 2 ----- 3 ----- 4 ----- 5

2. I try to avoid situations that require thinking in depth about something.

Completely
False

Completely
True

1 ----- 2 ----- 3 ----- 4 ----- 5

3. I prefer to do something that challenges my thinking abilities rather than something that requires little thought.

Completely
False

Completely
True

1 ----- 2 ----- 3 ----- 4 ----- 5

4. I refer complex to simple problems.

Completely
False

Completely
True

1 ----- 2 ----- 3 ----- 4 ----- 5

5. Thinking hard and for a long time about something gives me little satisfaction.

Completely
False

Completely
True

1 ----- 2 ----- 3 ----- 4 ----- 5

6. I trust my initial feelings about people.

Completely
False

Completely
True

1 ----- 2 ----- 3 ----- 4 ----- 5

7. I believe in trusting my hunches.

Completely
False

Completely
True

1 ----- 2 ----- 3 ----- 4 ----- 5

8. My initial impressions of people are almost always right.

Completely
False

Completely
True

1 ----- 2 ----- 3 ----- 4 ----- 5

9. When it comes to trusting people, I can usually rely on my “gut feelings.”

Completely
False

Completely
True

1 ----- 2 ----- 3 ----- 4 ----- 5

10. I can usually feel when a person is right or wrong even if I can't explain how I know.

Completely
False

Completely
True

1 ----- 2 ----- 3 ----- 4 ----- 5

Personality Type Indicators
Scale based on MBTI
(Nutt 2005; Barkhi & Wallace 2007)

(Included to investigate if an individual's personality type influences the behavior he decides to engage in. Specifically, do differences in one's level of sensing/intuition and thinking/feeling, which affect how one receives and processes information, play a role in his likelihood of following a peer team member's behavior and/or a superior's preferences.)

Below are a number of personality type indicators that may or may not apply to you. Please select which statement applies most to you.

1. When you are with a group of people, would you usually rather,
A. join in the talk of the group, or
B. talk individually with people you know well? A___ or B___

2. Do you usually get along better with,
A. realistic people, or
B. imaginative people? A___ or B___

3. Which word in the pair appeal to you more,
A. analyze, or
B. sympathize? A___ or B___

4. Does following a schedule,
A. appeal to you, or
B. cramp you? A___ or B___

5. When you have to meet strangers, do you find it,
A. pleasant, or at least easy, or
B. something that takes a good deal of effort? A___ or B___

6. If you were a teacher, would you rather teach,
A. fact courses, or
B. courses involving theory? A___ or B___

7. Which word in the pair appeals to you more,
A. foresight, or
B. compassion? A___ or B___

8. Do you prefer to,
A. arrange dates, parties, etc., well in advance, or
B. be free to do whatever looks like fun when the time comes? A___ or B___
9. Are you,
A. easy to get to know, or
B. hard to get to know? A___ or B___
10. Is it higher praise to say someone has,
A. common sense, or
B. vision? A___ or B___
11. Which word in the pair appeals to you more,
A. firm, or
B. gentle? A___ or B___
12. Does the idea of making a list of what you should get
done over a weekend,
A. appeal to you, or
B. leave you cold? A___ or B___
13. Do you tend to have,
A. broad friendships with many different people, or
B. deep friendships with a very few people? A___ or B___
14. Would you rather have as a friend someone who,
A. has both feet on the ground, or
B. is always coming up with new ideas? A___ or B___
15. Which word in the pair appeals to you more,
A. thinking, or
B. feeling? A___ or B___
16. When it is settled well in advance that you will do a
certain thing at a certain time, do you find it
A. nice to be able to plan accordingly, or
B. a little unpleasant to be tied down? A___ or B___

17. At parties, do you
A. always have fun, or
B. sometimes get bored? A___ or B___
18. Would you rather be considered,
A. a practical person, or
B. an ingenious person? A___ or B___
19. Is it a higher compliment to be called,
A. a consistently reasonable person, or
B. a person of real feeling? A___ or B___
20. Is it harder for you to adapt to,
A. constant change, or
B. routine? A___ or B___

APPENDIX I DEMOGRAPHICS

For Students Experience

Have you had internship experience with an accounting firm?

- Yes
- No

If you have had internship experience, what area did you intern in?

- Audit/Assurance
- Tax
- Advisory
- Other _____
- N/A – I have not had any internship experience

How many months of work (including internship) experience do you have?

- _____

Have you signed a contract for an accounting job?

- Yes
- No

Audit classes

How many audit classes have you taken?

- _____

Age

What is your age?

- _____

Gender

What is your gender?

- Male
- Female
- Other

**APPENDIX J - L
IRB APPROVALS**

**APPENDIX J
VT IRB APPROVALS**

VT IRB Authorization to Transfer to WIRB



Office of Research Compliance
Institutional Review Board
North End Center, Suite 4120
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-3732 Fax 540/231-0959
email irb@vt.edu
website <http://www.irb.vt.edu>

MEMORANDUM

DATE: August 6, 2018
TO: Reza Barkhi, Rebecca J Wetmiller
FROM: Virginia Tech Institutional Review Board (FWA00000572, expires January 29, 2021)
PROTOCOL TITLE: The Copycat Effect: Do social influences allow peer team members' dysfunctional audit behaviors to spread throughout the audit team?
IRB NUMBER: 18-380

Dear Investigator(s):

RE: Protocol Submission for WIRB Review

The Virginia Tech Institutional Review Board (IRB) office screened this study and determined that it is ready for WIRB review.

Please download the "Instructions for the PI to Transfer the VT IRB Protocol to WIRB":

http://www.irb.vt.edu/documents/wirb_submission_instructions.pdf

Please go to <https://connexus.wcgclinical.com> to complete the protocol submission process to the WIRB.

ATTENTION:

* Reza Barkhi MUST BE LISTED AS THE PI ON THE WIRB SUBMISSION.

* All references to the VT IRB (including phone number and email address) MUST be removed from all study documents and replaced with Western IRB - (800) 562-4789, help@wirb.com.

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Date*	OSP Number	Sponsor	Grant Comparison Conducted?

* Date this proposal number was compared, assessed as not requiring comparison, or comparison information was revised.

If this IRB protocol is to cover any other grant proposals, please contact the IRB office (irbadmin@vt.edu) immediately.

WIRB Exempt Determination



August 7, 2018

Reza Barkhi, PhD, MA, MBA, BS
Virginia Tech
Pamplin College of Business/ Pamplin Hall, Suite 3090
880 West Campus Drive
Blacksburg, Virginia 24061

Dear Dr. Barkhi:

SUBJECT: REGULATORY OPINION—IRB EXEMPTION - CORRECTED
Protocol Title: The Copycat Effect: Do social influences allow peer team members' dysfunctional audit behaviors to spread throughout the audit team?
Investigator: Dr. Reza Barkhi
IRB No.: 18-380

This letter is in response to your request to Western Institutional Review Board (WIRB) for an exemption determination for the above-referenced research project. WIRB's IRB Affairs Department reviewed the exemption criteria under 45 CFR §46.101(b)(2):

- (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:
 - (i) Information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

We believe that the research fits the above exemption criteria. The data will be collected in a way so that the subjects cannot be identified, directly or through identifiers linked to the participants. You have also confirmed that the results of this study will not be submitted to the Food and Drug Administration (FDA) for marketing approval.

Western Institutional Review Board

1019 39th Avenue SE Suite 120 | Puyallup, WA 98374-2115
Office: (360) 252-2500 | **Fax:** (360) 252-2498 | **www.wirb.com**

This exemption determination can apply to multiple sites, but it does not apply to any institution that has an institutional policy of requiring an entity other than WIRB (such as an internal IRB) to make exemption determinations. WIRB cannot provide an exemption that overrides the jurisdiction of a local IRB or other institutional mechanism for determining exemptions. You are responsible for ensuring that each site to which this exemption applies can and will accept WIRB's exemption decision.

Please note that any future changes to the project may affect its exempt status, and you may want to contact WIRB about the effect these changes may have on the exemption status before implementing them. WIRB does not impose an expiration date on its IRB exemption determinations.

If you have any questions, or if we can be of further assistance, please contact Sean W. Horkheimer, JD, CIP, at 360-252-2465, or e-mail RegulatoryAffairs@wirb.com.

SWH:dj
B2-Exemption-Barkhi (08-07-2018)
cc: Rebecca J. Wetmiller, Virginia Tech
Virginia Polytechnic Institute and State University (Virginia Tech)
WIRB Accounting
WIRB Work Order #1-1103712-1

VT IRB Authorization of WIRB Determination



Office of Research Compliance
Institutional Review Board
North End Center, Suite 4120
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-3732 Fax 540/231-0959
email irb@vt.edu
website <http://www.irb.vt.edu>

MEMORANDUM

DATE: August 8, 2018
TO: Reza Barkhi, Rebecca J Wetmiller
FROM: Virginia Tech Institutional Review Board (FWA00000572, expires January 29, 2021)
PROTOCOL TITLE: The Copycat Effect: Do social influences allow peer team members' dysfunctional audit behaviors to spread throughout the audit team?
IRB NUMBER: 18-380

The Virginia Tech Institution Review Board (IRB), acknowledges the Amendment request for the above-mentioned research protocol.

This acknowledgement recognizes the item(s) identified in the Special Instructions section.

NOTE: Please ensure that required Amendments are submitted to WIRB for review and approval. WIRB guidance is provided on page 49 of the Guide for Researchers. The section is titled Changes to Research / Additional Document Submissions. The document is located at: <http://wirb.com/Documents/Guide%20for%20Researchers.pdf#page=2>

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IRB SPECIAL INSTRUCTIONS:

This Amendment Acknowledgement includes the WIRB determination letter and WIRB smart form.

Date*	OSP Number	Sponsor	Grant Comparison Conducted?

* Date this proposal number was compared, assessed as not requiring comparison, or comparison information was revised.

If this IRB protocol is to cover any other grant proposals, please contact the IRB office (irbadmin@vt.edu) immediately.

VT IRB Approval of Additional Sites & Changes



Office of Research Compliance
Institutional Review Board
North End Center, Suite 4120
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-3732 Fax 540/231-0959
email irb@vt.edu
website <http://www.irb.vt.edu>

MEMORANDUM

DATE: October 3, 2018
TO: Reza Barkhi, Rebecca J Wetmiller
FROM: Virginia Tech Institutional Review Board (FWA00000572, expires January 29, 2021)
PROTOCOL TITLE: The Copycat Effect: Do social influences allow peer team members' dysfunctional audit behaviors to spread throughout the audit team?
IRB NUMBER: 18-380

The Virginia Tech Institution Review Board (IRB), acknowledges the Amendment request for the above-mentioned research protocol.

This acknowledgement recognizes the item(s) identified in the Special Instructions section.

NOTE: Please ensure that required Amendments are submitted to WIRB for review and approval. WIRB guidance is provided on page 49 of the Guide for Researchers. The section is titled Changes to Research / Additional Document Submissions. The document is located at: <http://wirb.com/Documents/Guide%20for%20Researchers.pdf#page=2>

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IRB SPECIAL INSTRUCTIONS:

This Amendment Acknowledgement includes the addition of two new sites for data collection, and WIRB approval of the changes (including an affirmation of the Exempt determination).

Date*	OSP Number	Sponsor	Grant Comparison Conducted?

* Date this proposal number was compared, assessed as not requiring comparison, or comparison information was revised.

If this IRB protocol is to cover any other grant proposals, please contact the IRB office (irbadmin@vt.edu) immediately.

APPENDIX K
JMU IRB APPROVAL



OFFICE OF RESEARCH INTEGRITY

REPORT OF COMMITTEE ACTION

TO: Dr. Reza Barkhi, Principal Investigator (Virginia Tech)
Ms. Rebecca Wetmiller, Principal Investigator (Virginia Tech)

FROM: Carolyn Strong, Director 

DATE: October 2, 2018

RE: Exemption Notice

The Human Subject Research protocol entitled, "*the Copycat Effect: Do Social Influences Allow Peer Team Members Dysfunctional Audit Behaviors to Spread throughout the Audit Team?*" has been determined to be exempt from continuing review by James Madison University's Institutional Review Board (IRB) under regulation 45 CFR 46.101(b)(1). Your research protocol has been assigned the ID Number 19-0128 for tracking purposes.

Per federal regulations, research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior may be determined by an IRB to be exempt from continuing review unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Exempting an activity from review does not absolve you from ensuring that the welfare of the subjects participating in the research is protected and that methods used and information provided to gain subject consent are appropriate to the activity.

You are reminded that any changes in your protocol that affects human subjects must be submitted to the IRB to determine if review and approval will be required *before* implementing new procedures.

From the desk of...
Carolyn Strong, MRA, CIM, CRA
Office of Research Integrity
James Madison University
Engineering/Geosciences, Room 3150
MSC 5738
Harrisonburg, VA 22807
Phone: 540-568-2318
strongcd@jmu.edu

