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## **Out of Office: Examining How Remote Auditing Can Affect Audit Quality**

Kristen Thompson

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OUT OF OFFICE: EXAMINING HOW REMOTE AUDITING  
CAN AFFECT AUDIT QUALITY

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Submitted in Partial Fulfillment of the Requirements

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Darla Moore School of Business

University of South Carolina

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## DEDICATION

I dedicate my dissertation to my husband, Austin, who has been a constant source of positivity and encouragement throughout the writing process, never failing to celebrate a milestone along the way, no matter how small. I am truly blessed to have you in my life. This work is also dedicated to my family Nate, Elinda, David, Mark, and Lindsey whose good examples have taught me to work hard for the things that I aspire to achieve, while not losing sight of the most important things in life.

Philippians 4:13 I can do all things through Christ who gives me strength.

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## ABSTRACT

Psychological factors bring rise to the potential for differences in audit quality between in- person and remote work. With remote auditing on the rise, I investigate whether an increase in distance between an auditor and their supervisor can increase auditors' divergent thinking and, in high time pressure, lead to a greater likelihood for auditors to exhibit reduced audit quality (RAQ) behavior. Consistent with prior literature, I find auditors facing high (vs. low) time pressure are more likely to engage in RAQ behavior, consistent with their motivation to speed up testing. More importantly, I find auditors working remotely are more likely to engage in RAQ behavior than their counterparts who are working in close proximity to their supervisor. This paper serves as an important first step to inform research and practice of a potentially negative effect on audit quality that could stem from remote work.

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# CHAPTER 1

## INTRODUCTION

While the components of a remote audit are in many ways analogous to an in-person audit, psychological factors bring rise to differences between in-person and remote work that could affect audit quality. Toward that end, I examine whether the psychological distance experienced by auditors working remotely from their supervisor can, in some circumstances, lead to decreased audit quality. Dishonesty and unethical behavior are widespread in today's society, affecting many areas of life, with audit work being no exception (e.g., Bray 2017; McKenna 2019; Iacone 2020b). However, misconduct does not always take place on a large scale or occur as a result of an evil individual's intent to harm. In fact, most people acting unethically think of themselves as moral individuals (Moore and Gino 2015). They do so through 'moral flexibility': that is, by convincing themselves ethically questionable behavior is not immoral by generating multiple and diverse rationales for why these actions are ethically appropriate or consistent with their moral compass (Gino 2016; Scigala, Schild, and Zettler 2020).

Auditors, who are subject to ethical regulation from both the AICPA and the PCAOB, are likely to consider themselves moral, due to the role they play as ethical gatekeepers in the financial reporting process (Alzola 2017). However, more than one half of practicing auditors admit to engaging in at least one intentional action which compromises the quality of the audit by decreasing the quality or extent of evidence gathering (e.g., Donnelly, Quirin, and O'Bryan 2003; Raghunathan 1991; Coram,

Glavovic, Ng, and Woodliff 2008).<sup>1</sup> Literature refers to such actions as reduced audit quality (RAQ) behaviors (Malone and Roberts 1996). Due to their inherently negative effect on audit quality, management, investors, regulators, and the firm itself bear an interest in identifying precursors to these behaviors (Smith and Emerson 2017).

When people make unethical choices, their conduct is “constrained by their ability to construct seemingly reasonable justifications for these decisions” (Kunda 1990, 480). Because it is important for most of us to think of ourselves as moral individuals (Aquino and Reed 2002), consciously engaging in unethical behavior will trigger cognitive dissonance between our actual behavior and how we think we ought to behave (Festinger 1957). This dissonance requires resolution, either through changing one’s actions to more closely align with one’s beliefs, or changing one’s beliefs to more closely align with one’s actions (see Cooper 2007, for a review). Moral flexibility has been shown to allow individuals to develop multiple and diverse rationales to justify their behavior, giving way to moral disengagement (Bandura 1990), and ultimately resolve for one’s dissonance (Gino and Ariely 2012).

Research suggests the increased spatial distance (one component of psychological distance; Trope and Liberman 2010) between a remote auditor and their remote supervisor will increase an individual’s divergent thinking, or the ability to develop multiple and diverse ideas (Cromptley 2006), which can serve to benefit the audit in various ways (Bhattacharjee, Hillison, and Malone 2021). However, psychology literature has shown this same ability to increase unethical behavior when individuals use their ideas as a way to disengage from their morals through moral flexibility (e.g., Gino and Ariely

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<sup>1</sup> These behaviors include activities such as changing or replacing audit procedures, accepting a client’s weak explanation, and not investigating a doubtful item further (Malone and Roberts 1996).

2012; Mai, Ellis, and Welsh 2015; Zheng, Qin, Liu, and Liao 2019). Therefore, divergent thinking has the capacity to be used for harm, as in moral flexibility, or good. With this in mind, I expect remote auditors will be more likely to exhibit higher levels of divergent thinking and, when motivated to do so, will demonstrate a higher level of moral flexibility, leading to an increased likelihood to engage in RAQ behavior, relative to their non-remote counterparts.

The relation between divergent thinking and unethical behavior has been attributed to individuals' increased ability to generate justifications to support their unethical behavior (hereafter, unethical justifications; Gino and Ariely 2012; Mai et al. 2015; Zheng et al. 2019) by reducing the psychological costs that can arise from acting in an immoral way (Shalvi, Gino, Barkan, and Ayal 2015). However, for individuals not facing motivation to engage in unethical behavior, heightened divergent thinking could instead manifest in justifications to support ethical behavior (hereafter, ethical justifications). Accordingly, I predict remote auditors will exhibit a higher level of divergent thinking, which will manifest in the development of more justifications both for and against exhibiting RAQ behaviors, compared to non-remote auditors.

Prior literature has shown a number of factors, including time pressure, to lead to an increase in auditor RAQ behavior (Sweeney and Pierce 2004; Smith and Emerson 2017; Persellin, Schmidt, Vandervelde, and Wilkins 2018). Specifically, as a deadline approaches, auditors are expected to experience increased motivation to complete the audit on time, which may supersede the motivation to conduct a quality audit (Persellin et al. 2018). Toward that end, auditors have been shown to engage in shortcuts and other effort-reducing tactics to speed up testing (i.e., RAQ behavior; Coram, Ng, and Woodliff

2003; Sweeney and Pierce 2004; Bennett, Hatfield, and Stefaniak 2015; Smith and Emerson 2017; Persellin et al. 2018). Provided working in a remote setting increases auditors' divergent thinking, the negative effects of time pressure are expected to be even more pronounced in a remote setting. That is, auditors working remotely and experiencing high time pressure are expected to be more likely to engage in RAQ behavior due to their increased ability to develop justifications and increased motivation to meet a deadline, relative to auditors working non-remotely or not facing the same pressure.

I test my predictions with a 2 x 2 between-subjects experiment in which I present 156 practicing auditors with a vignette containing information about a hypothetical audit senior, Riley. Between conditions, I vary Riley's work location (*Remote vs. Non-Remote*) and the level of time pressure (*High Time Pressure vs. Low Time Pressure*). Auditors are presented with a short audit scenario which, consistent with other studies examining behavioral justifications (Detert, Trevino, and Sweitzer 2008; Scigala et al. 2020), ends with a sentence suggesting Riley is considering an unethical (i.e., RAQ) behavior (Coram et al. 2008). It is important to note while the scenario presented is hypothetical, in practice RAQ behaviors inherently reduce the amount of time and effort spent on the audit procedure and allow auditors to sign off on a workpaper more quickly than if they were to conduct the proper audit procedure. This implication serves as motivation for auditors to support Riley choosing to exhibit the RAQ behavior, especially for those in the high time pressure condition whose primary focus is likely to be satisfying an approaching deadline.

After viewing the audit scenario, participants are asked to respond with Riley's likely course of action, as well as some of the reasons (i.e., justifications) Riley would have for choosing this option. Participants are then posed with the alternative behavior and asked to state some of the reasons Riley might have for choosing the alternative course of action (Benedek, Muhlmann, Jauk, and Neubauer 2013; Scigala et al. 2020). I refer to the reasons supporting and resisting the RAQ behavior as unethical and ethical justifications, respectively. This design captures the justification process auditors go through when facing an opportunity to exhibit an RAQ behavior, along with their likelihood to engage in that behavior. Finally, participants respond to process measures and manipulation check questions, along with questions intended as control variables and provide demographic information.

I find two significant main effects of time pressure and work location on auditors' likelihood to exhibit RAQ behavior. That is, consistent with prior research, I find higher levels of time pressure lead auditors to be more likely to exhibit RAQ behavior than those facing lower time pressure, regardless of work location. More importantly, I find auditors working remotely from their supervisors are more likely to exhibit RAQ behavior than those working in close proximity to their supervisor (i.e., non-remotely), regardless of the level of time pressure. These results are important in identifying an unintended consequence of remote work on audit quality.

The results of my study not only respond to numerous calls for research on the effects of remote audit work on audit quality (e.g., AAA 2020; CAQ 2021; KPMG 2021) and a call to revisit research on RAQ behavior based on the changes to the audit environment in the last decade (Alberti, Bedard, Bik, and Vanstraelen 2020), but also

contribute to multiple streams of literature. First, my study extends the work of Bhattacharjee et al. (2021) on how the ability to develop multiple and diverse ideas can affect audit quality. Specifically, I find while this benefit associated with remote auditing can lead to increased audit quality in some areas of the audit (i.e., analytical procedures; Bhattacharjee et al. 2021), it may pose a threat to audit quality in others. Second, I add to the literature on RAQ behavior (e.g., Coram et al. 2003; Smith and Emerson 2017; Persellin et al. 2018) through supplemental findings in which I identify a positive effect of divergent thinking on RAQ behavior. Third, I contribute to the literature on RAQ behavior by investigating the rationales utilized by auditors to justify unethical actions, despite their role as ethical gatekeepers in the financial reporting process (Alzola 2017).

Finally, the results of my study seek to inform practice in several important ways. First, I find divergent thinking, a quality considered to increase due to remote auditing and serve as a benefit to certain audit activities (Bhattacharjee et al. 2021), may also present itself as a detriment to others. Specifically, divergent thinking can manifest in moral flexibility through the generation of multiple and diverse justifications to support RAQ behavior. Additionally, I support prior research in finding high time pressure, a factor inherent in the audit environment (e.g., Smith and Emerson 2017; Persellin et al. 2018), presents auditors with a goal which can supersede that of audit quality, thereby leading to increased RAQ behavior. The implications of my study are especially important in a dynamic audit culture where remote work is on the rise and time pressure can be unavoidable.

## CHAPTER 2

### THEORY AND HYPOTHESES

#### **Remote Auditing as an Enduring Trend**

With increasing technological advances, the shift toward remote auditing was a natural transition that was occurring even before the COVID-19 pandemic (Teeter, Alles, and Vasarhelyi 2010; Wilson 2017; Nissen 2018; Iacone 2020; Shneyder 2020). The largest U.S. audit firms say they have been preparing for and employing an increase in remote work for years, with 61 percent of firms reporting a seamless transition to full remote work, overnight, in response to the pandemic (Iacone 2020; Moelders and Wilson 2020; Shneyder 2020). Due to the increased flexibility and efficiencies, along with the decreased travel and expenses, firms, auditors, and clients alike have identified numerous benefits to embracing remote auditing that are likely to encourage the trend to continue in some capacity in a post-COVID-19 world (Wilson 2017; Moelders and Wilson 2018; Nissen 2018; Appelbaum, Budnik, and Vasarhelyi 2020).

According to KPMG (2021), new ways of working have become commonplace, and hybrid models of work are predominating, with each of the Big Four, as well as 68 percent of nearly 300 executives interviewed as part of Deloitte's April 2021 Return to Workplaces survey indicating an intent to operate in a hybrid model, going forward (Deloitte 2021a; Deloitte 2021b; EY 2021; KPMG 2021; PwC 2021). Another survey of 223 accounting and consulting firms echoes these expectations, with 81 percent of firms anticipating an increase (49 percent) or significant increase (32 percent) in remote work



going forward (Moelders and Wilson 2020). Jim Burton, partner-in-charge of audit methodology and standards at Grant Thornton LLP, stated, “The question is not, are audits different, it’s really, have audits changed forever. And I think they have” (Iacone 2020). Given the increasing prevalence of remote auditing, it is important to examine how aspects of remote auditing can impact audit quality (Bhattacharjee et al. 2021).

### **Distance and Divergent Thinking**

The increased distance between an auditor and their supervisor is one such factor that is likely to influence audit quality in a remote auditing environment. External audit work involves a unique culture wherein auditor work location can vary from a cubicle at a firm office to a conference room at a client (Choi, Kim, Qiu, and Zang 2012). As a result, auditors are unlikely to have a sense of a ‘home base’ for where their work is to occur. This could suggest the effect of distance would be unlikely to vary with remote versus normal audit work procedures. However, regardless of work location, audits have typically been conducted in a team environment, with collaboration between team members encouraged, and even facilitated via a proximal work environment for audit teams (Choi et al. 2012). Thus, with the shift to remote work, it is expected the primary distance increase experienced by auditors working remotely is the increase in the spatial distance between themselves and their team members, including their supervisor.<sup>2</sup>

Spatial distance, as a component of the broader construct of psychological distance (along with temporal, social, and hypothetical), represents an index of “closeness” with reference to oneself, and determines the level at which an object is

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<sup>2</sup> While a remote auditor may also be aware of the increased distance between themselves and their client, I anticipate the perceived distance between the auditor and their supervisor is the more relevant distance for auditors in my study, due to the review role served by the supervisor, rather than the client.

mentally represented (i.e., more abstractly or concretely; Trope and Liberman 2010; Bhattacharjee et al. 2021). Psychological distance refers to a subjective experience about a decision maker's proximity, where individuals represent psychologically near events in more concrete terms and psychologically distant events in more abstract terms (Trope and Liberman 2010). Increasing any of the four dimensions of psychological distance leads to an increased construal level, which entails high-level mental representations and more abstract processing of information (Fujita, Henderson, Eng, Trope, and Liberman 2006; Trope and Liberman 2010; Klitmoller and Luring 2016). Such high-level cognition has been shown to lead to an increase in divergent thinking (e.g., Liberman, Trope, and Stephan 2007; Jia, Hirt, and Karpen 2009; Cocu, Pecheanu, and Susnea 2015). Hence, the physical separation between an auditor and their supervisor (e.g., together at the firm office or apart at their respective homes) constitutes a spatial distance that can directly affect how auditors construe, or interpret, information (Bhattacharjee et al. 2021). Thus, I investigate how the increase in auditors' divergent thinking associated with increased spatial distance between an auditor and their supervisor can impact audit quality.

### **Divergent Thinking**

Divergent thinking refers to the ability to develop original ideas and envision multiple solutions to a given problem. It involves thinking “without boundaries” and outside the box (Thompson 2008). The term commonly refers to the generation and elaboration of ideas or products that are both novel and useful (Amabile 1989; Osche 1990), and has long been considered an important skill for individuals, as well as for organizations and societies (Gino and Ariely 2012). Discussions of divergent thinking tend to associate it with creativity and assume it to be a socially desirable trait (McLaren

1993; James, Clark, and Cropanzano 1999), viewed as the production of positive outcomes by novel means. However, individuals and groups can and sometimes do work to develop novel means toward negative ends, such as devising new ways to evade unpleasant work duties (Clark and James 1999).

### ***Positive vs. Negative Divergent Thinking***

Psychology literature distinguishes between positive and negative divergent thinking based on the type of outcome yielded (Clark and James 1999; Kapoor and Khan 2016; Kapoor and Khan 2017; Scigala et al. 2020). Whereas the outcome in positive divergent thinking involves problems solved or processes improved, those of negative divergent thinking involve a more selfish notion wherein individuals develop original ways to bypass or shortcut moral rules (Walczyk et al. 2008; Clark and James 1999; Gino 2016; Kapoor and Khan 2016). In essence, negative divergent thinking is the creation of ideas used to meet goals which are primarily beneficial to the individual, wherein the by-product of the novelty can harm others (e.g., Walczyk, Runco, Tripp, and Smith 2008; Cropley and Cropley 2011). In an audit context, positive divergent thinking may involve creating value added efficiencies for audit procedures which ultimately lead to an improved audit, while negative divergent thinking is more likely to describe an auditor's ability to generate ideas for how to avoid or expedite unpleasant tasks in a way that does not openly disavow their professional responsibility as an auditor.

### **Moral Flexibility and (Un)ethical Justifications**

The relation between negative divergent thinking and unethical behavior has most often been attributed to individuals' increased moral flexibility (Gino and Ariely 2012; Mai et al. 2015; Zheng et al. 2019). Moral flexibility is defined as an individual's ability

to justify their immoral actions by generating multiple and diverse rationales for why unethical actions are ethically appropriate or consistent with their moral compass (Gino and Ariely 2012; Gino 2016). When people make unethical choices, their conduct is “constrained by their ability to construct seemingly reasonable justifications for these decisions” (Kunda 1990, 480). Because it is important for most of us to think of ourselves as moral individuals (Aquino and Reed 2002), consciously engaging in unethical behavior will trigger cognitive dissonance between our actual behavior and how we think we ought to behave (Festinger 1957). This dissonance requires resolution, either through changing one’s actions to better align with one’s beliefs or changing one’s beliefs to better align with one’s actions (see Cooper 2007, for a review). Moral flexibility has been shown to allow individuals to envision original ways to break rules and find multiple reasons to justify their dishonest behavior, allowing for resolution to one’s dissonance (Gino and Ariely 2012). I refer to these reasons as unethical justifications, the development of which facilitates unethical behavior because individuals can more fully retain their moral self-image while still engaging in questionable behavior (Mai et al. 2015). By diverting attention away from moral standards and instead toward justifying desired outcomes, individuals are able to behave as they want, without feelings of guilt or hypocrisy, while still maintaining a positive self-concept.

However, prior literature has primarily focused on settings in which participants are motivated toward an unethical behavior in order to study the relation between divergent thinking and unethical behavior (e.g., Walczyk et al. 2008; Gino and Ariely 2012; Mai et al. 2015). For individuals not facing a motivation to engage in unethical behavior, an increase in the level of divergent thinking could instead manifest in

justifications to support moral behavior (i.e., ethical justifications). Along those lines, Scigala et al. (2020) find divergent thinking does not discriminate as to the valence of justifications generated. That is, individuals able to think outside the box have also demonstrated an increased ability to generate ethical justifications. Accordingly, in the audit profession, which relies heavily on ethics and is subject to ethical regulation from both the AICPA and the PCAOB, it is important to investigate whether, and to what extent, auditor work location will affect the valence of one's justifications and the behaviors that follow.

### **Unethical Justifications and Moral Disengagement**

Moral disengagement theory (Bandura 1986, 1990, 1999) provides a framework through which to conceptualize the unethical justifications developed through moral flexibility. The theoretical rationale is that moral flexibility facilitates moral disengagement – the rationalization and justification for behaving immorally (Bandura 1999) – which in turn instigates unethical behavior (Shalvi, Dana, Handgraaf, and De Dreu 2011; Mai et al. 2015). Through moral disengagement, individuals deactivate their moral regulation by decoupling their internal moral standards from the action in order to facilitate engagement in unethical behavior without feeling distress (Moore 2015). Bandura (1986) suggests moral regulation can be deactivated via eight interrelated mechanisms: *distortion of consequences, diffusion of responsibility, advantageous comparison, displacement of responsibility, moral justification, euphemistic labeling, dehumanization, and attribution of blame.*<sup>3</sup> Together, these mechanisms provide a framework through which to classify the diversity of unethical justifications.

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<sup>3</sup> These mechanisms may be better understood through an example. Imagine Sam has an internal standard that prohibit theft, but has taken a newspaper without paying for it from Starbucks. Moral disengagement

## Divergent Thinking and Reduced Audit Quality Behavior

Unethical behavior in auditing refers to auditors' failures to properly or adequately execute audit steps and is referred to as reduced audit quality (RAQ) behavior (e.g., Malone and Roberts 1996; Coram et al. 2008; Anugerah, Anita, Sari, Abdillah, and Iskandar 2016). Consistent with prior literature, I define RAQ behaviors as actions taken by an auditor during an engagement which reduce evidence-gathering effectiveness inappropriately (McNair 1987; Kelley and Margheim 1990; Malone and Roberts 1996). These behaviors include activities such as replacing awkward-looking items from a sample, accepting a client's weak explanation, and failing to test all items in a sample (Malone and Roberts 1996). It is of note each of these behaviors inherently reduces the amount of time spent on the audit procedure (Bhaskar, Majors, and Vitalis 2018).

Studies that span a period of more than 40 years have documented the occurrence of RAQ behavior by auditors around the world (e.g., Rhode 1977; Alderman and Deitrick 1982; Kelley 1984; Margheim and Pany 1986; McNair 1987; Kelley and Margheim 1990; Raghunathan 1991; Malone and Roberts 1996; Herda, Cannon, and Young 2019; Alberti et al. 2020). Although the specific research questions, research methods, and sample sizes varied, all studies found that audit effectiveness is sometimes compromised because auditors *choose* not to execute audit program steps thoroughly and/or completely

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mechanisms help Sam construe taking the newspaper as no big deal (*distortion of consequences*), believe that everyone takes small things like a paper sometimes (*diffusion of responsibility*), that taking the paper is tiny compared to others' violations (*advantageous comparison*), or that he's seen Starbucks employees take copies of the paper, so why shouldn't he (*displacement of responsibility*)? He could think that in the grand scheme of things, being an informed citizen is more important than paying for the paper (*moral justification*). He could even plan on leaving the paper in the café when he was finished with it, so really he was just 'borrowing' it (*euphemistic labeling*). He could think that Starbucks is a large heartless corporation that won't notice the missing paper (*dehumanization*), or even deserves having the paper taken from it because it charges so much for coffee (*attribution of blame*). Thus, Sam can leave the store, paper under arm, confident in the belief that he's done nothing wrong (Moore 2015).

as a result of some other, competing motivation (Malone and Roberts 1996). By lowering the care and skepticism involved in an audit, these behaviors threaten the outcome of the audit engagement and the validity of the audit opinion (Herrbach 2001). Identifying and understanding the precursors to these behaviors, as well as whether factors associated with the virtual audit (e.g., psychological distance) may contribute, are thus important topics for study in the midst of this culture of change and progression toward a virtual world (e.g., Sanusi, Mohd, Yusarina, Takiah, and Lee 2014).

In order to exhibit RAQ behavior, an auditor must be able to alleviate dissonance between what one knows to be the appropriate action, and the action that will expedite audit testing (which in this case, results in reduced audit quality). That is, an auditor must be able to develop sufficient justification(s) for his or her behavior in order to satisfy the competing motivations of gaining from dishonest behavior and maintaining a positive self-concept as honest (Aronson 1969; Harris, Mussen, and Rutherford 1976; Mazar, Amir, and Ariely 2008). On the other hand, if an auditor prefers to resist an opportunity to engage in an RAQ in order to pursue higher audit quality even at a higher cost to themselves, they will need to develop rationales to support this alternative.

### **Measuring Divergent Thinking**

Divergent thinking in the form of justifications can be measured from a quantitative and a qualitative perspective – the former referring to the number of generated justifications and the latter, to the diversity of the justifications (e.g., Nusbaum, Silvia, and Beaty 2014; Silvia, Nusbaum, and Beaty 2017; Scigala et al. 2020). Therefore, I utilize both the quantity and diversity of justifications to represent an increase in divergent thinking.

Regarding the quantitative aspects for the relation between divergent thinking and justifications, Mai et al. (2015) find the relation between divergent thinking and (unethical) behavior is mediated by the number of generated (unethical) justifications, suggesting the quantity may be relevant for the relation in question. Furthermore, from a theoretical perspective, the relation between divergent thinking and justifications has been attributed to, among others, quantity, namely to “generating multiple [emphasis added] and diverse reasons these (unethical) actions can be judged as (ethically) appropriate” (Gino and Ariely 2012, 447). Indeed, one can argue the more justifications generated, the higher the likelihood some of them will turn out effective, or that a combination of several justifications will be effective overall (Scigala et al. 2020). However, one can generate multiple justifications, but if virtually all of them are related, they may not be sufficiently effective to influence one’s behavior (Scigala et al. 2020). The diversity of justifications, therefore, is represented by the number of dimensions recognized in each participant’s response as identified by two independent coders. Section III contains further information on this process.

Prior research has identified divergent thinking as a facilitator of justifications (e.g., Mai et al. 2015; Scigala et al. 2020) and psychological distance as a facilitator of divergent thinking (e.g., Liberman et al. 2007). Thus, I propose the increased psychological distance associated with remote auditing will increase auditors’ divergent thinking, thereby increasing their ability to generate multiple and diverse justifications both for and against RAQ behaviors. Formally stated,

**H1a:** Remote auditors generate more justifications to both engage and resist engaging in reduced audit quality behavior, compared to auditors working from a non-remote location.



**H1b:** Remote auditors generate more diverse justifications to both engage and resist engaging in reduced audit quality behavior, compared to auditors working from a non-remote location.

While, *ceteris paribus*, remote auditor work location is expected to increase divergent thinking, and as a result, the quantity and diversity of justifications, other factors prevalent in audit culture are likely to dictate the valence of these justifications and the actions that follow. I draw upon prior literature on RAQ behavior to identify a feature of audit culture I expect will influence whether divergent thinking will manifest in unethical justifications and actions.

### **Time Pressure and Reduced Audit Quality Behavior**

Auditors face stress from the quantity of work they must do and the limited time allotted to complete it (Public Company Accounting Oversight Board – PCAOB 2014; Smith and Emerson 2017). Audit literature refers to this conflict of interest as time pressure, which is particularly pressing at year-end when there are a finite number of days to complete the audit (Bennett et al. 2015; Lambert et al. 2017).<sup>4</sup> As a deadline approaches, auditors are expected to experience increased motivation to complete the audit on time, which may supersede the motivation to conduct a quality audit. As one auditor stated in a survey by Persellin et al. (2018, 27), “There is so much pressure to meet deadlines that quality is often the easiest thing to sacrifice and still meet the deadline”. Toward that end, time pressure has been shown to lead to decreased audit quality via compromised audit procedures which entail shortcuts and other effort-reducing tactics to speed up testing (i.e., RAQ behavior; e.g., Coram et al. 2003; Sweeney

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<sup>4</sup> Time pressure, as it relates to an audit, can be specified as time budget tightness or time deadline pressure (e.g., Sweeney and Pierce 2014), the latter of which is the focus of my study.

and Pierce 2004; Bennett et al. 2015; Smith and Emerson 2017; Persellin et al. 2018). For example, in the same survey by Persellin et al. (2018, 28-29), auditors admitted to re-sampling, skipping steps in the audit program, and shifting their overall focus in the face of time pressure.

*“When it was tough to gather appropriate documentation for the sample selected, we decided to randomly select a new sample hoping that documentation could be gathered faster and thus finish the engagement on time.”*

*“I have seen staff (and have been guilty of it myself) skip a step they deem too time-consuming even though they know they need to do it. The hope is the reviewer won’t catch it and they can move on to finish their work more timely.”*

*“During a recent busy season...the focus shifted to ‘just get it done,’ as opposed to doing a thorough and accurate job.”*

As demonstrated in the quotations above, high time pressure provides auditors with a motivation to engage in RAQ behavior. This motivation is likely to increase auditors’ moral flexibility and encourage them to develop an increased number of diverse justifications in support of the RAQ behavior (i.e., unethical justifications), compared to auditors not facing the same pressure. Equipped with the tools to disengage from their morals, auditors facing high time pressure are likely to engage in more RAQ behavior than their counterparts. Formally stated,

**H2a:** Auditors facing high time pressure generate more unethical justifications to engage in reduced audit quality behavior, relative to auditors facing low time pressure, regardless of work location.

**H2b:** Auditors facing high time pressure generate more diverse unethical justifications to engage in reduced audit quality behavior, relative to auditors facing low time pressure, regardless of work location.

**H2c:** Auditors facing high time pressure are more likely to exhibit reduced audit quality behavior, relative to auditors facing low time pressure, regardless of work location.

However, the negative effects of time pressure on RAQ behavior are expected to be even more pronounced in a remote audit setting where auditors are experiencing a higher level of divergent thinking. For example, recall that in order to exhibit unethical behavior, individuals must be able to alleviate the guilt that would otherwise prevent them from engaging in the behavior through moral disengagement (Festinger 1957; Aquino and Reed 2002; Detert et al. 2008). This process benefits from the ability to choose from a wide range of unethical justifications allowing an individual to draw upon those that allow them to fully retain their moral self-image, while still engaging in the questionable behavior (e.g., Mai et al. 2015; Gino 2016; Scigala et al. 2020). Due to the anticipated effect of a remote work location on the quantity and diversity of auditor justifications, and the motivation provided by a high time pressure audit setting, remote auditors facing high time pressure are likely to be more equipped with the means to exhibit RAQ behavior without suffering psychological costs than auditors working in a non-remote setting or not facing the same pressure. Formally stated,

**H3a:** The effect of auditor work location on the generation of multiple unethical justifications will be more pronounced in high time pressure than in low time pressure.

**H3b:** The effect of auditor work location on the generation of diverse unethical justifications will be more pronounced in high time pressure than in low time pressure.

**H3c:** When time pressure is high (low), remote auditors will be more (equally) likely to exhibit reduced audit quality behavior, compared to non-remote auditors.

## CHAPTER 3

### RESEARCH METHOD

#### **Participants**

Participants include 156 auditors of all levels from Big Four and other public accounting firms.<sup>5</sup> Participants were recruited through various methods including emails to former work contacts and previous research participants, cold calls to audit firms, visits to local audit firm offices, and messages to auditors on LinkedIn. Each participant received a \$10 Amazon gift card as a ‘thank you’ for successful participation.

#### **Experimental Task**

The task, conducted on Qualtrics, provides a brief background about a hypothetical audit senior, Riley, and assigns each participant to one of four conditions based on a 2 x 2 manipulation of auditor work location (*Remote vs. Non-Remote*) and level of time pressure (*High Time Pressure vs. Low Time Pressure*). Participants are then presented with a short audit scenario which, consistent with prior research on behavioral justifications (Detert et al. 2008; Scigala et al. 2020), ends with a sentence suggesting Riley is considering rejecting (and replacing) an awkward looking sample (i.e., the RAQ

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<sup>5</sup> Participants include partners (3.2%), senior managers (1.3%), managers (8.3%), seniors (39.1%), staff (46.2%), interns (0.6%), and two individuals who selected ‘other’ (1.3%). The majority of participants are employed as auditors at a Big Four firm (51.9%), while the remaining participants are spread between international (21.8%), national (6.4%), regional (10.3%), local (5.8%), and other (3.8%) firms. The reported results for each hypothesis are inferentially identical when controlling for participants’ experience (in months) as well as firm type. Each of these control variables itself is insignificant in each of the tests (all two-tailed p-values < 0.05). I eliminate 16 participants who failed one or more manipulation checks. Including these individuals does not change the conclusions herein.

behavior; Coram, Ng, and Woodliff 2000; Kasigwa, Munene, Ntyai, and Nkote 2013).<sup>6</sup> Recall, while the scenario presented is hypothetical, in practice, RAQ behaviors inherently reduce the amount of time and effort spent on the audit procedure and allow auditors to sign off on a workpaper more quickly than if they were to conduct the proper audit procedure (e.g., Malone and Roberts 1996). After viewing the scenario, participants are asked to respond with Riley's likely course of action (i.e., the RAQ behavior or the appropriate behavior), as well as some of the reasons (i.e., justifications) Riley would have for choosing this option. Participants are then posed with the alternative behavior and asked to state some of the reasons Riley might have for choosing the alternative course of action (Benedek, Muhlmann, Jauk, and Neubauer 2013; Scigala et al. 2020). I refer to the reasons supporting and resisting the RAQ behavior as unethical and ethical justifications, respectively. Finally, participants respond to process measures and manipulation check questions, as well as questions intended as control variables and provide demographic information.

## **Independent Variables**

### ***Work Location***

At the start of the experiment, participants are provided with a list of 16 cities around the United States and asked to select the city closest to their location. This

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<sup>6</sup> I choose 'rejecting an awkward looking sample' as the RAQ behavior in my study for a number of reasons. First, rejecting an awkward looking sample is an RAQ that has been used in numerous prior studies (Coram et al. 2000; Coram et al. 2003; Coram et al. 2008; Kasigwa et al. 2013). Second, and more importantly, Coram et al. (2008) investigate multiple dimensions of moral intensity perceived by auditors for seven RAQ behaviors. While they find auditors view all seven behaviors as 'wrong', rejecting an awkward looking sample is the behavior perceived as least likely to be found out or caught by a superior. Given an experimental setting in which I aim to find variation in responses, such that some participants will 'admit' to the expectation that another auditor would engage in the behavior, I believe this is an important feature. Further, despite having a low likelihood of being detected by a superior, rejecting an awkward looking sample was rated fourth (of seven) for 'likelihood to lead to an incorrect audit opinion'. Consequently, I believe this is an important RAQ behavior to study given the potential for severe consequences on audit quality.

location [Participant City] is utilized in the work location manipulation through piped text. Participants are told,

*Remote (Non-Remote) Condition:* Riley is working as a senior auditor at Oden Accounting Firm in [Participant City]. Riley has been put on an audit team that is conducting audit procedures in a remote (non-remote) work environment, wherein each auditor is working from his or her own home in or around (the firm office in) [Participant City]. Given this work arrangement, Riley and Riley's supervisor are roughly 30 miles (feet) apart. Refer to the map below which shows Riley's work location relative to Riley's supervisor's work location.

Consistent with prior psychology research which utilizes a map to illustrate differences in spatial distance (e.g., Rinck and Denis 2004; Wakslak and Kim 2015), participants in each condition are provided a map of the area around their selected city, depicting their current work location compared to their supervisor's work location. This manipulates spatial distance (a component of psychological distance) by clearly showing the distance between the auditor and their supervisor. Following psychology research (e.g., Rinck and Denis 2004; Landau, Oyserman, Keefer, and Smith 2014; Macrae, Christian, Golubickis, Karanasiou, Troksiarova, McNamara, and Miles 2014), to emphasize the work location manipulation, participants are asked to complete a mental imagery exercise, wherein they visualize their workspace and respond with how they feel or what it would feel like to work in that workspace.<sup>7</sup> Responses confirm participants were able to relate to their respective work conditions.

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<sup>7</sup> Accountability, as an element of the audit environment arising from the review process regardless of auditor work location, is not anticipated to vary between remote conditions. However, in order to rule it out as an alternative explanation driving my results, I ask participants how accountable they feel to their firm, manager, engagement team, client, and investors from 1 (*Not very accountable*) to 7 (*Very accountable*) as well as the probability the action will be discovered by their supervisor and the level of disciplinary action they would be likely to face if it were to be discovered (Coram et al. 2008). Responses to each of these does not vary between remote and non-remote conditions (all p values > 0.05).

### ***Manipulation of Time Pressure***

Consistent with prior literature (e.g., Bennett et al. 2015), time pressure is manipulated by telling participants in the *High (Low) Time Pressure* condition their last day of fieldwork is in three days (weeks), along with verbiage specifying this leaves them with very little time (plenty of time) to complete all testwork, as well as allow time for review.

### **Dependent Variables**

#### ***Divergent Thinking Measures***

Justifications provided by participants were coded by two Ph.D. students blind to experimental conditions who determined both the quantity and diversity of justifications.

**Quantity of Justifications** The *Quantity of Justifications* variable is based on the raw number of unethical and ethical justifications developed, respectively. To assure good quality of data, and consistent with prior literature (Reiter-Palmon, Forthmann, and Barbot 2019; Scigala et al. 2020), before summing up the responses, coders are asked to exclude all responses that are nonsensical, non-understandable, or repetitive (for a particular participant), and to divide responses from participants so that each justification is listed independently from the others. The sum of each determines the *Quantity of Unethical Justifications* and *Quantity of Ethical Justifications*. Together, these variables make up the *Quantity of Justifications* variable utilized in the test of H1a, while the distinct *Quantity of Unethical Justifications* measure is utilized in tests of H2a and H3a.

**Diversity of Justifications** The *Diversity of Justifications* variable represents the number of dimensions identified in a participant's justifications. The dimensions considered differ based on the valence of their ethicality (i.e., unethical vs. ethical justifications). For unethical justifications, the dimensions relate to those specified by the

theory of moral disengagement (Bandura 1986): *moral justification, euphemistic labeling, advantageous comparison, displacement of responsibility, diffusion of responsibility, distortion of consequences, dehumanization, and attribution of blame*. For ethical justifications, the dimensions relate to eight common themes identified from participants' justifications: *accuracy of testing, time constraint, ethics or integrity, professional responsibility, possible repercussions of getting caught, ease of getting caught, materiality or risk of material misstatement, and the exception being indicative of or related to something else*. The total number of dimensions represented in a participant's responses for both unethical and ethical justifications makes up the *Diversity of Justifications* variable and is used in the test of H1b. To test H3b, I use the variable *Diversity of Unethical Justifications*, which represents only the number of dimensions represented in a participant's response for unethical justifications.

### ***RAQ Likelihood***

Participants are asked about Riley's likely course of action and must choose whether Riley would likely engage in the behavior which reduces audit quality or the behavior that does not. Participants then indicate the strength of their preference for the chosen option on a 50-point scale (Austin, Bobek, and Jackson 2021). The left endpoint of the scale is labeled "Very weak" and the right endpoint of the scale is labeled "Very strong." I recode the responses such that the dependent variable, *RAQ Choice*, has a range of 0-100 with 0 (100) indicating a very strong preference for the non-RAQ behavior (RAQ behavior) option. The *RAQ Choice* variable serves as the primary dependent variable in the tests of H2c and H3c.



## CHAPTER 4

### RESULTS

I investigate my hypotheses by first focusing on the tests related to the effect of work location and time pressure on divergent thinking (i.e., quantity and diversity of justifications), before considering their effect on RAQ behavior. Additionally, because the percentage of time an individual worked remotely during the past year (i.e., 2021) is likely to affect a participant's ability to place themselves in the position of "Riley", the hypothetical auditor, I include *PYRemote* as a covariate in each of my analyses.

#### **Tests of Divergent Thinking**

##### ***Quantity of Justifications***

I begin by examining whether auditors working remotely (vs. non-remotely) from their supervisor generate significantly more justifications both for and against exhibiting RAQ behavior (H1a). I run an ANOVA with *Work Location* and *Time Pressure* as the independent variables and *Quantity of Justifications* as the dependent variable. Figure 1 graphs the results, while Table 1 displays cell means (graphed in corresponding figure), ANOVA results, and simple effects.

While I do not observe a significant increase in the number of justifications for participants in the remote (vs. non-remote) condition (5.19 vs. 5.30;  $F = 0.07$ ; one-tailed  $p = 0.399$ ), I do observe an unpredicted marginally significant interaction between *Work Location* and *Time Pressure* ( $F = 3.08$ ; two-tailed  $p = 0.081$ ). Simple effects suggest remote auditors are driving this result ( $F = 3.83$ ; two-tailed  $p = 0.052$ ), with those in the

low (vs. high) time pressure condition generating significantly more justifications (5.58 vs. 4.80). These findings are counter to my expectations and are discussed further below.

H2a predicts auditors facing high (vs. low) time pressure will generate an increased number of unethical justifications, regardless of their work location. H3a predicts a significant interaction between work location and time pressure on the quantity of unethical justifications, such that the effect of auditor work location will be more pronounced in high (vs. low) time pressure. To test both hypotheses, I run an ANOVA with *Work Location* and *Time Pressure* as independent variables and *Quantity of Unethical Justifications* as the dependent variable. Figure 2 graphs the results, while Table 2 displays cell means (graphed in corresponding figure), ANOVA results, and simple effects.

While I do not find an increase in unethical justifications for participants in the high (vs. low) time pressure condition (2.60 vs. 2.67;  $F = 0.19$ ; one-tailed  $p = 0.332$ ), I do find a marginally significant interaction between *Work Location* and *Time Pressure* ( $F = 2.96$ ; two-tailed  $p = 0.087$ ).<sup>8</sup> Specifically, I find auditors working remotely from their supervisor generate more unethical justifications in the low (vs. high) time pressure condition (2.80 vs. 2.45).<sup>9</sup>

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<sup>8</sup> In light of directional results differing from my prediction, I report the two-tailed p-value.

<sup>9</sup> A potential explanation for the pattern of results observed here as well as in H1a is that auditors in a high time pressure environment are able to derive sufficient justification for RAQ behavior from the nature of their circumstance (e.g., Riley doesn't have enough time to engage in the (more time consuming) ethical behavior), rather than their own moral reasoning (e.g., Riley should choose the unethical behavior so (s)he doesn't bother the client; The unethical behavior is not actually unethical). In other words, the increased level of time pressure may serve as ample justification for auditors to rationalize RAQ behavior, thereby negating the need for them to exhibit divergent thinking in the development of their own justifications. Alternatively, auditors facing low time pressure and seeking to reduce efforts likely lack justification inherent in their circumstance and may therefore, feel the need to develop their own. Untabulated results reveal when individuals are distinctly aware of a "lack of time pressure" (as referred to in their ethical justifications), they develop marginally significantly more (two-tailed  $p = 0.076$ ) and significantly more diverse (two-tailed  $p = 0.036$ ) unethical justifications, representing an increase in divergent thinking as it relates to unethical justifications. For example, when a participant specifies "Riley is not pressed for time",

### *Diversity of Justifications*

To test the second element of divergent thinking for remote auditors, I investigate whether auditors working remotely (vs. non-remotely) from their supervisor generate more diverse justifications (H1b). To test my prediction, I run an ANOVA with *Work Location* and *Time Pressure* as the independent variables and *Diversity of Justifications* as the dependent variable. Figure 3 graphs the results, while Table 3 displays cell means (graphed in corresponding figure), ANOVA results, and simple effects.

Inconsistent with my prediction, I do not observe a significant increase in the diversity of justifications for participants in the remote (vs. non-remote) condition (4.10 vs. 3.86;  $F = 1.39$ ; one-tailed  $p = 0.120$ ). This suggests auditors in a remote environment do not demonstrate an increase in divergent thinking through an increase in the diversity of their justifications.

H2b focuses on unethical justifications and predicts auditors facing high (vs. low) time pressure generate more diverse unethical justifications. Further, H3b predicts an interactive effect between work location and time pressure on the diversity of unethical justifications, such that the effect of auditor work location is more pronounced in the high (vs. low) time pressure condition. To test my predictions, I run an ANOVA analysis with *Work Location* and *Time Pressure* as the independent variables and *Diversity of Unethical Justifications* as the dependent variable. Figure 4 graphs the results, while Table 4 displays cell means (graphed in corresponding figure), ANOVA results, and simple effects.

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(s)he is recognizing the circumstance does not dictate a ‘need’ for an RAQ behavior in order to speed up testing. As a result, this individual will tend to develop more, and more diverse justifications in order to rationalize the RAQ behavior.

I do not find an increase in the diversity of unethical justifications for auditors in the high (vs. low) time pressure condition (1.61 vs. 1.72;  $F = 0.88$ ; one-tailed  $p = 0.175$ ). I also do not find the effect of work location to be more pronounced in the high (vs. low) time pressure condition (1.65 vs. 1.88;  $F = 1.19$ ; one-tailed  $p = 0.138$ ). However, simple effects suggest auditors working remotely develop marginally significantly ( $F = 2.11$ ; one-tailed  $p = 0.074$ ) more diverse unethical justifications when facing low (vs. high) time pressure (1.88 vs. 1.65).

### **Tests of RAQ Behavior**

H2c and H3c relate to the effect of work location and time pressure on auditor RAQ behavior. Specifically, H2c predicts auditors facing high (vs. low) time pressure will be more likely to exhibit RAQ behavior. Accordingly, H3c predicts an interaction between work location and time pressure on auditors RAQ likelihood, such that when time pressure is high (vs. low), remote auditors will be more likely to exhibit reduced audit quality behavior, compared to non-remote auditors. To test my predictions, I run an ANOVA with *Work Location* and *Time Pressure* as the independent variables and *RAQ Choice* as the dependent variable. Figure 5 graphs the results, while Table 5 displays cell means (graphed in corresponding figure), ANOVA results, and simple effects.

While I do not find support for the interactive effect ( $F = 0.03$ ; one-tailed  $p = 0.436$ ), I do find an unpredicted marginally significant effect of *Work Location* ( $F = 3.75$  two-tailed  $p = 0.055$ ) and a predicted significant effect of *Time Pressure* ( $F = 6.63$ ; one-tailed  $p = 0.006$ ) on *RAQ Choice*. These results suggest auditors working remotely (vs. non-remotely) are more likely to exhibit RAQ behavior, regardless of time pressure (27.08 vs. 18.54) and auditors facing high (vs. low) time pressure are more likely to

exhibit RAQ behavior, regardless of work location (28.94 vs. 17.05). Simple effects display a significant difference in *RAQ Choice* for auditors in the remote condition ( $F = 3.83$ ; one-tailed  $p = 0.026$ ). Although the interaction is not significant, cell means suggest auditors working remotely and facing high time pressure are most likely to exhibit RAQ behavior (33.63), relative to those facing low time pressure (20.53), or those operating in a non-remote setting and facing high or low time pressure (23.86 vs. 13.49).

Taken together, these results serve as a first step in identifying an unintended consequence of remote work, as well as follow prior research to confirm time pressure can have negative effects on audit quality. That is, while the quantity and diversity of justifications do not consistently align with theory's expectations, I do observe differences in RAQ behavior based on work location and time pressure. Specifically, I find auditors working remotely or facing high time pressure are more likely to exhibit RAQ behavior than auditors working in close proximity to their supervisor or operating under low time pressure. These findings have important implications as firms progress toward a hybrid work environment in a field where time pressure can be unavoidable.

### **Supplemental Analyses**

While work location and time pressure do not dictate divergent thinking in the manner which was predicted, it is possible divergent thinking could still be driving RAQ behavior. In order to better understand my results, I investigate the relation between the divergent thinking variables (i.e., diversity and quantity of unethical justifications) and the likelihood for an individual to exhibit RAQ behavior. A correlation analysis reveals a positive, significant relation between the *Diversity of Unethical Justifications* and *RAQ Choice* ( $r = 0.217$ ; one-tailed  $p = 0.002$ , untabulated) and a positive, marginally

significant relation for the *Quantity of Unethical Justifications* ( $r = 0.107$ ; one-tailed  $p = 0.092$ , untabulated). These results suggest divergent thinking does serve as an indication of the likelihood for an individual to engage in unethical or RAQ behavior. Future research may wish to investigate the predictors of divergent thinking in an audit context, along with other unintended negative consequences that may accompany the benefits of outside the box thinking.

Table 4.1 Effect of Work Location and Time Pressure on Quantity of Justifications

Panel A: Cell means (SD) [n] for *Quantity of Justifications*

	Remote	Non-Remote	Overall
High Time Pressure	4.80 (2.05) [40]	5.41 (2.06) [37]	5.10 (2.07) [77]
Low Time Pressure	5.58 (2.30) [40]	5.21 (1.98) [39]	5.39 (2.14) [79]
Overall	5.19 (2.20) [80]	5.30 (2.01) [76]	5.24 (2.10) [156]

Panel B: ANOVA results for *Quantity of Justifications*

Variable	F	p-value*
<i>PYRemote</i>	11.80	< 0.001
<i>Time Pressure</i>	0.96	0.329
<i>Work Location (H1a)</i>	0.07	0.399*
<i>Time Pressure x Work Location</i>	3.08	0.081

Panel C: Simple Effects for *Quantity of Justifications*

Effect of <i>Time Pressure</i> for	F	p-value*
Remote	3.83	0.052
Non-Remote	0.30	0.587

\*p-values are one-tailed in light of directional predictions

Variable Coding:

*Quantity of Justifications* = Participants' total number of justifications for and against the RAQ behavior (i.e., unethical and ethical justifications, respectively)

*Time Pressure* = Dummy variable with 1 (0) for high (low) time pressure

*Work Location* = Dummy variable with 1 (0) for remote (non-remote) work location

*PYRemote* = The percentage of time participants worked remotely during the past year

Table 4.2 Effect of Work Location and Time Pressure on Quantity of Unethical Justifications

Panel A: Cell means (SD) [n] for *Quantity of Unethical Justifications*

	Remote	Non-Remote	Overall
High Time Pressure	2.45 (1.24) [40]	2.76 (1.36) [37]	2.60 (1.30) [77]
Low Time Pressure	2.80 (1.30) [40]	2.54 (1.10) [39]	2.67 (1.21) [79]
Overall	2.63 (1.28) [80]	2.64 (1.23) [76]	2.63 (1.25) [156]

Panel B: ANOVA results for *Quantity of Unethical Justifications*

Variable	F	p-value*
<i>PYRemote</i>	11.71	< 0.001
<i>Time Pressure</i> (H2a)	0.19	0.332*
<i>Work Location</i>	0.00	0.989
<i>Time Pressure x Work Location</i> (H3a)	2.96	0.087**

Panel C: Simple Effects for *Quantity of Unethical Justifications*

Effect of <i>Time Pressure</i> for	F	p-value*
Remote (H3a)	2.38	0.063*
Non-Remote	0.81	0.370

\*p-values are one-tailed in light of directional predictions

\*\* p-values are two-tailed in light of directional findings differing from predictions.

Variable Coding:

*Quantity of Unethical Justifications* = Participants' total number of justifications for the RAQ behavior (i.e., unethical justifications)

*Time Pressure* = Dummy variable with 1 (0) for high (low) time pressure

*Work Location* = Dummy variable with 1 (0) for remote (non-remote) work location

*PYRemote* = The percentage of time participants worked remotely during the past year



Table 4.3 Effect of Work Location and Time Pressure on Diversity of Justifications

Panel A: Cell means (SD) [n] for *Diversity of Justifications*

	Remote	Non-Remote	Overall
High Time Pressure	3.80 (1.40) [40]	3.84 (1.40) [37]	3.82 (1.39) [77]
Low Time Pressure	4.40 (1.65) [40]	3.87 (1.34) [39]	4.14 (1.52) [79]
Overall	4.10 (1.54) [80]	3.86 (1.36) [76]	3.98 (1.46) [156]

Panel B: ANOVA results for *Diversity of Justifications*

Variable	F	p-value*
<i>PYRemote</i>	10.13	0.002
<i>Time Pressure</i>	2.20	0.138
<i>Work Location (H1b)</i>	1.39	0.120*
<i>Time Pressure x Work Location</i>	2.22	0.139

Panel C: Simple Effects for *Diversity of Justifications*

Effect of <i>Time Pressure</i> for	F	p-value*
Remote	4.55	0.036
Non-Remote	0.00	0.998

\*p-values are one-tailed in light of directional predictions

Variable Coding:

*Diversity of Justifications* = The number of dimensions referred to in participants' justifications for and against the RAQ behavior (i.e., unethical and ethical justifications, respectively)

*Time Pressure* = Dummy variable with 1 (0) for high (low) time pressure

*Work Location* = Dummy variable with 1 (0) for remote (non-remote) work location

*PYRemote* = The percentage of time participants worked remotely during the past year

Table 4.4 Effect of Work Location and Time Pressure on Diversity of Unethical Justifications

Panel A: Cell means (SD) [n] for *Diversity of Unethical Justifications*

	Remote	Non-Remote	Overall
High Time Pressure	1.65 (0.86) [40]	1.57 (0.93) [37]	1.61 (0.89) [77]
Low Time Pressure	1.88 (0.72) [40]	1.56 (0.75) [39]	1.72 (0.75) [79]
Overall	1.76 (0.80) [80]	1.57 (0.84) [76]	1.67 (0.82) [156]

Panel B: ANOVA results for *Diversity of Unethical Justifications*

Variable	F	p-value*
<i>PYRemote</i>	7.44	0.007
<i>Time Pressure</i> (H2b)	0.88	0.175*
<i>Work Location</i>	2.59	0.109
<i>Time Pressure x Work Location</i> (H3b)	1.19	0.138*

Panel C: Simple Effects for *Diversity of Unethical Justifications*

Effect of <i>Time Pressure</i> for	F	p-value*
Remote (H3b)	2.11	0.074*
Non-Remote	0.01	0.912

\*p-values are one-tailed in light of directional predictions

Variable Coding:

*Diversity of Unethical Justifications* = The number of dimensions referred to in participants' justifications for the RAQ behavior (i.e., unethical justifications)

*Time Pressure* = Dummy variable with 1 (0) for high (low) time pressure

*Work Location* = Dummy variable with 1 (0) for remote (non-remote) work location

*PYRemote* = The percentage of time participants worked remotely during the past year

Table 4.5 Effect of Time Pressure and Work Location on RAQ Choice

Panel A: Cell means (SD) [n] for *RAQ Choice*

	Remote	Non-Remote	Overall
High Time Pressure	33.63 (34.97) [40]	23.86 (27.83) [37]	28.94 (31.91) [77]
Low Time Pressure	20.53 (25.99) [40]	13.49 (21.85) [39]	17.05 (24.14) [79]
Overall	27.08 (31.31) [80]	18.54 (25.31) [76]	22.92 (28.78) [156]

Panel B: ANOVA results for *RAQ Choice*

Variable	F	p-value*
<i>PYRemote</i>	3.52	0.062
<i>Time Pressure</i> (H2c)	6.63	0.006*
<i>Work Location</i>	3.75	0.055
<i>Time Pressure x Work Location</i> (H3c)	0.03	0.436*

Panel C: Simple Effects for *RAQ Choice*

Effect of <i>Time Pressure</i> for	F	p-value*
Remote (H3c)	3.83	0.026*
Non-Remote	2.84	0.094

\*p-values are one-tailed in light of directional predictions

Variable Coding:

*RAQ Choice* = Participants' RAQ likelihood calculated on a 100-point range with 50 omitted, such that 0 (100) indicates a strong preference for the ethical (unethical) behavior. Cell entries are the mean (s.d.) [n] response to the continuous dependent variable.

*Time Pressure* = Dummy variable with 1 (0) for high (low) time pressure

*Work Location* = Dummy variable with 1 (0) for remote (non-remote) work location

*PYRemote* = The percentage of time participants worked remotely during the past year

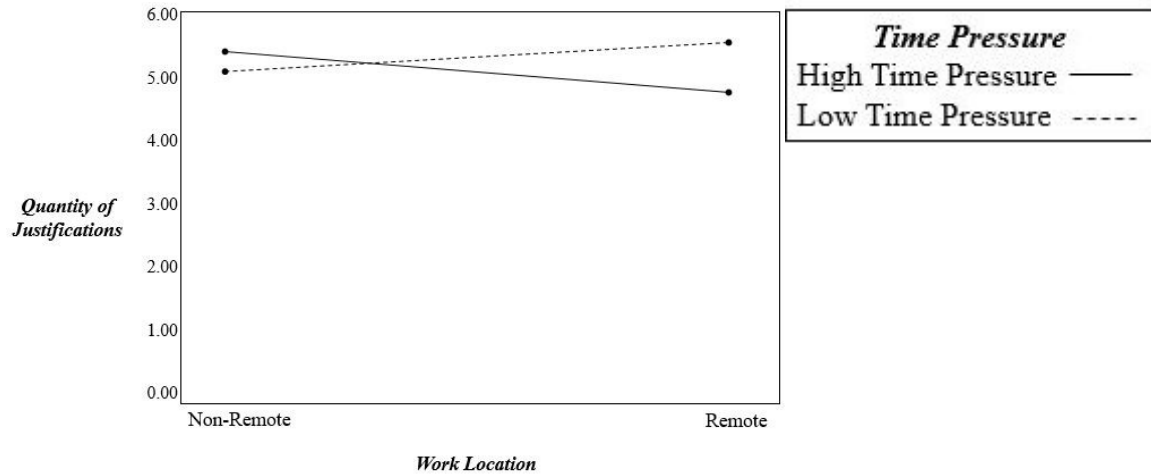


Figure 4.1 Effect of Work Location and Time Pressure on Quantity of Justifications

Variable Coding:

*Quantity of Justifications* = Participants' total number of justifications both for and against the RAQ behavior (i.e., unethical and ethical justifications, respectively)

*Time Pressure* = Dummy variable with 1 (0) for high (low) time pressure

*Work Location* = Dummy variable with 1 (0) for remote (non-remote) work location



Figure 4.2 Effect of Work Location and Time Pressure on Quantity of Unethical Justification

Variable Coding:

*Quantity of Unethical Justifications* = Participants' total number of justifications for the RAQ behavior (i.e., unethical justifications)

*Time Pressure* = Dummy variable with 1 (0) for high (low) time pressure

*Work Location* = Dummy variable with 1 (0) for remote (non-remote) work location

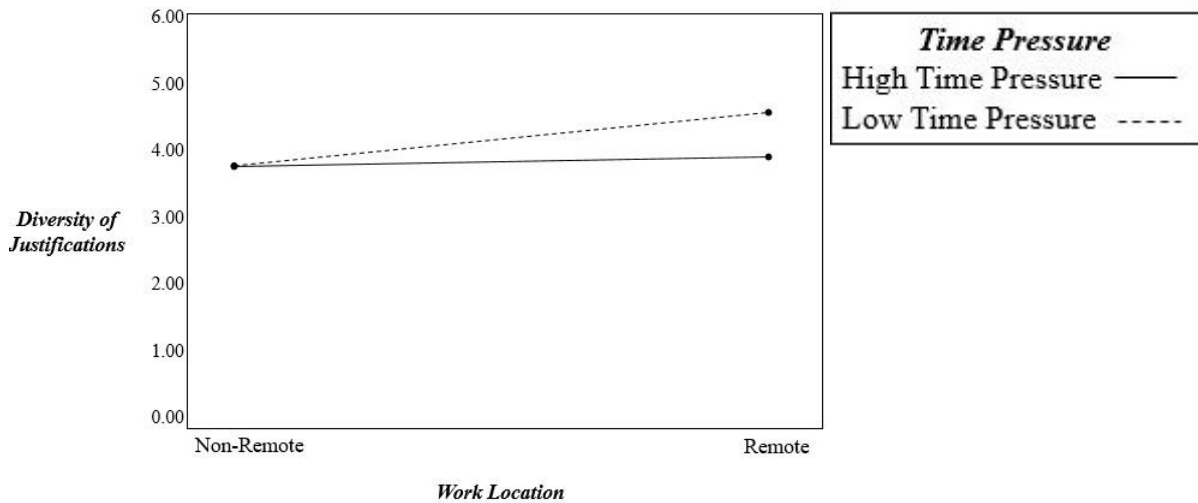


Figure 4.3 Effect of Work Location and Time Pressure on Diversity of Justifications

Variable Coding:

*Diversity of Justifications* = The number of dimensions referred to in participants' justifications for and against the RAQ behavior (i.e., unethical and ethical justifications, respectively)

*Time Pressure* = Dummy variable with 1 (0) for high (low) time pressure

*Work Location* = Dummy variable with 1 (0) for remote (non-remote) work location

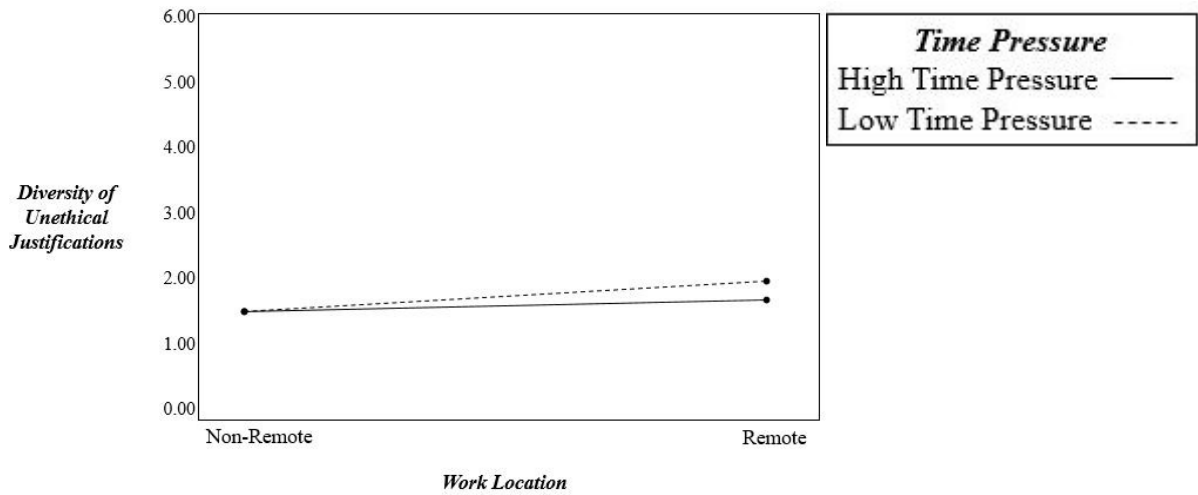


Figure 4.4 Effect of Work Location and Time Pressure on Diversity of Unethical Justifications

Variable Coding:

*Diversity of Unethical Justifications* = The number of dimensions referred to in participants' justifications for the RAQ behavior (i.e., unethical justifications)

*Time Pressure* = Dummy variable with 1 (0) for high (low) time pressure

*Work Location* = Dummy variable with 1 (0) for remote (non-remote) work location

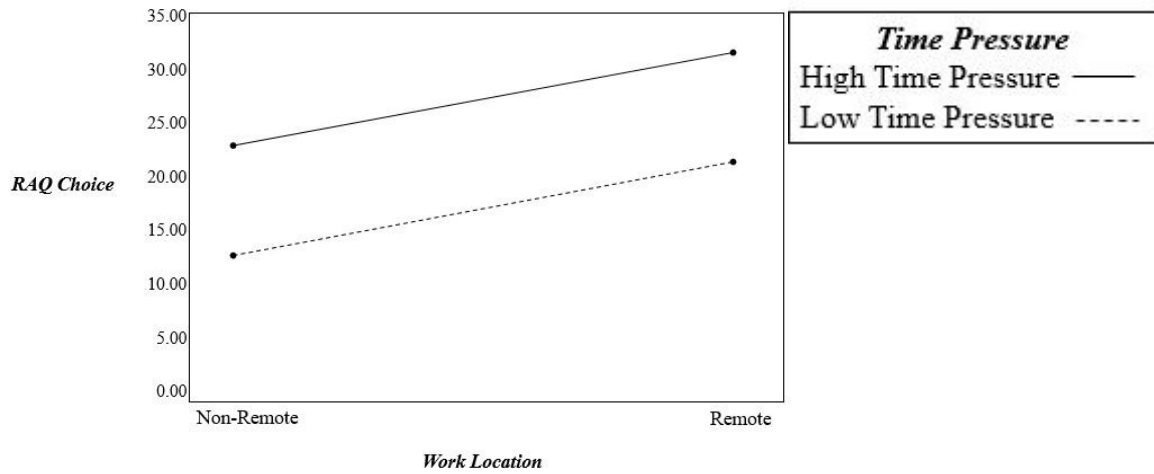


Figure 4.5 Effect of Work Location and Time Pressure on RAQ Choice

Variable Coding:

*RAQ Choice* = Participants' RAQ likelihood calculated on a 100-point range with 50 omitted, such that 0 (100) indicates a strong preference for the ethical (unethical) behavior.

*Time Pressure* = Dummy variable with 1 (0) for high (low) time pressure

*Work Location* = Dummy variable with 1 (0) for remote (non-remote) work location



## CHAPTER 5

### CONCLUSION

Unethical behavior, in its various forms, is among the greatest personal and societal challenges of our time (Gino 2016). With remote audits on the rise (e.g., Moelders and Wilson 2020), whether and how the increased distance experienced by auditors may lend itself to an increase in unethical behavior merits investigation. While the components of a remote audit are in many ways analogous to an in-person audit, psychological factors bring rise to differences between in-person and remote work that could affect audit quality. Toward that end, I examine whether, when motivated by high time pressure, the psychological distance experienced by auditors working remotely from their supervisor, may increase auditors' ability to develop justifications to support RAQ behavior and lead them to engage in more unethical behavior.

Consistent with prior literature, I find auditors working under high time pressure will be more likely to exhibit RAQ behavior than those not facing the same pressure. More importantly, my results show, relative to auditors working from a non-remote location, those working from a remote location are more likely to engage in RAQ behavior, compared to non-remote auditors. Further, while I do not find the predicted increase in divergent thinking with high time pressure and remote working, I do find a positive correlation between divergent thinking and RAQ behavior. These findings serve to suggest audit firms working toward hybrid and remote work arrangements ought to put effort toward ensuring audit quality is not compromised by the increase in flexibility that

comes with remote work. My results also contribute important insights to the developing literature on remote auditing by identifying an unintended negative consequence that can arise from remote work and provide a path forward for future research to investigate the root of these disparities.

Accordingly, my study lends itself to several opportunities for future research. Specifically, identifying the theoretical construct underlying the increase in RAQ likelihood for remote auditors provides a fruitful avenue for researchers to pursue. In addition, while I specify in the remote condition both auditors are working from their own home, it is likely my results would generalize to a setting in which an auditor is working on site at a client while their superior spends multiple days or weeks working at another client site. Similarly, while I expect distance between an auditor and their supervisor to increase divergent thinking, it is possible other variables present within an audit, such as the distance between the auditor and their client, will spur divergent thinking in other realms and thus merit investigating. Further, I identify one possible negative effect of remote work on the audit. Future work could continue to examine other unintended consequences which come about with remote work. Finally, with the goal of reducing ethical misconduct, future research could seek to identify simple interventions for reducing or eliminating unethical behavior to which we all so easily succumb.

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