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THE EFFECT OF AUDITORS' INFORMAL COMMUNICATION IN THE AUDIT
ENVIRONMENT ON FINANCIAL REPORTING OUTCOMES

A Dissertation
presented in partial fulfillment of requirements
for the degree of Doctor of Philosophy
in the Patterson School of Accountancy
The University of Mississippi

by

EMILY KATHRYN HORNOK

May 2019

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ABSTRACT

I examine the effect of auditors' recurring, informal communication with managers and other auditors on financial reporting outcomes in a laboratory experiment in which participants in the roles of auditors and managers interact in a stylized audit setting. My 2×2 between-subjects design manipulates whether the auditors are able to informally communicate with either, neither, or both the manager and other auditors. I find that when the auditor and manager informally communicate, they each develop a social bond, which increases the manager's feeling of accountability towards the auditor, causes the manager to make more honest representations to the auditor, and leads the auditor to assess the manager's representations as more honest. Additionally, while the auditor's informal communication with other auditors creates a social bond among auditors, this bond neither reduces the strength of the auditor's bond with the manager nor reduces the effect of that bond on the auditor's assessments of the honesty of the manager's representations. My study highlights the importance of the social nature of auditing and its impact on financial reporting outcomes and has implications for practitioners and regulators.

DEDICATION

To my favorite people, my family.

LIST OF ABBREVIATIONS AND SYMBOLS

ANCOVA	Analysis of Covariance
ANOVA	Analysis of Variance
AS	Auditing Standard
CI	Confidence Interval
DF	Degrees of Freedom
LLCI	Lower Level Confidence Interval
PCAOB	Public Company Accounting Oversight Board
PEQ	Post-experimental Questionnaire
SE	Standard Error
ULCI	Upper Level Confidence Interval
US	United States

ACKNOWLEDGMENTS

Although there is only one name on the front of this project, it would be inappropriate for me to ever claim that I completed this project on my own. This project has benefitted from the guidance, suggestions, and encouragement of many, and so I pause to express gratitude to those who have helped me along the way and allowed me to stand on their shoulders. First, I thank my dissertation committee: Kendall Bowlin, my chair, Jeremy Griffin, Rachna Prakash, and John Bentley. You gave me countless hours of your time and shared your expertise with me so that I could gain the skills necessary to complete my project. You challenge me to push myself further and to think deeply about my questions. I am grateful for your example of working with excellence, and I count myself blessed to have had the chance to learn from you. Second, I thank my fellow doctoral students for the valuable time you gave me to help collect my data, listen to me hash out my ideas, and provide feedback on the initial drafts of this paper. Third, I thank my family and friends. I would not have been able to maintain my sanity if it was not for you. You continually encouraged me to not take life too seriously and step back when I was stressed. You all are my biggest cheerleaders. Fourth, I am grateful for the investment Mark Wilder and the Patterson School of Accountancy made in this project and my career. Finally, I would like to thank my Heavenly Father, who is the whole reason I am here in the first place. To Him be the glory.

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I. INTRODUCTION

My study explores the effect of auditors' recurring, informal communication in the audit environment on certain financial reporting outcomes. The financial reporting outcomes I specifically consider are the honesty of client management representations, auditor beliefs about client manager honesty, and audit quality (Gaynor et al. 2016). I study why the auditor's informal communication with the client manager affects both auditor and manager choices. Furthermore, I examine how and why the auditor's recurring, informal communication with other auditors impacts both auditor and client manager (hereafter, manager) decisions.

Due to the service-nature of the audit industry, auditors likely have informal and personal conversations with both client managers and other auditors. Audit partners suggest that building good relationships between the auditor and client management through communication is necessary for providing quality service to the client (Bennett and Hatfield 2018). Additionally, with the rise of telecommuting, understanding how informal auditor communication, or the lack thereof, affects audit outcomes is important. This study focuses on the effects of auditors' *informal* conversations on auditor and manager decisions.

Prior research demonstrates that interactions between auditors and client managers affect audit quality (Bennett and Hatfield 2013; Bennett and Hatfield 2018; Bowlin et al. 2015; Bhattacharjee and Brown 2018; Hobson, Stern, and Zimbelman 2018; King 2002). King (2002) finds that when a client manager communicates that he or she will choose a conservative reporting strategy, the auditor is more trusting of the manager and in turn selects a lower level of

audit effort. Similarly, Bowlin et al. (2015) find when auditors are able to informally communicate with client managers, auditors are more likely to choose lower levels of audit effort. These studies suggest that auditors' interactions with client managers can lead to increased levels of trust in management that potentially impair audit quality. However, prior research does not examine the process by which informal communication between the auditor and manager affect auditor decisions. Furthermore, prior research does not consider that auditors in practice also have *recurring, informal* communication with other auditors throughout the audit.

Financial reporting outcomes include more than just the audit process (Gaynor et al. 2016). Management's initial financial reporting decisions impact decisions auditors make later in the audit process. Although management decisions are impacted by the nature of auditor-manager interactions (Saiewitz and Kida 2018), prior research employs high risk, fraud settings, in which researchers intentionally prompt managers' aggressive financial reporting, to focus on auditor behavior rather than management behavior (King 2002; Bowlin et al. 2015). King (2002) and Bowlin et al. (2015) not only encourage managers to choose the aggressive financial reporting option, but also prompt the managers to make dishonest representations about their choices. Thus, the effect of auditor-manager interactions on management choices, specifically manager honesty, and whether that relationship depends on the auditor's informal communication with other auditors is poorly understood.

I contribute to the auditing literature by demonstrating that informal communication between the auditor and manager results in a social bond between the two individuals that operates as a two-way street. Importantly, the social bond, which I define as an individual's shared identity with another individual, leads the manager to be more honest with the auditor.

Then, consistent with prior literature, the auditor in turn trusts the manager. While prior literature characterized this trust as a negative consequence of auditor-manager interactions, my results demonstrate the negative characterization is unwarranted if indeed the manager is more honest. Thus, my study provides evidence about the process by which informal communication between the auditor and manager in the audit process affect financial reporting outcomes.

I use the effects of communication and social identity theory to develop my predictions. First, communication research suggests communication allows individuals to become acquainted with one another (Dawes et al. 1977) and develop a group identity (Bicchieri 2002). Social identity theory suggests that an individual draws his or her self-identity from group membership, and an individual's identity can impact his or her behavior (Tajfel 1974). Linking these theories together, communication can have psychological effects that can impact behavior. Second, communication allows coordination through discussion and promises (Bicchieri 2002; Charness and Dufwenberg 2006; Crawford 1998; Dawes et al. 1977), which create expectations about other individuals' choices (Bicchieri 2002). Thus, in the instance of repeated interactions communication may be an accountability mechanism.

To address my research questions, I conduct an interactive experiment according to the traditions of experimental economics. My setting models important elements of the audit process in a stylized audit game, in which the auditor- and manager-participants are paired together and make incentivized choices that characterize the natural audit setting. My experiment incorporates a 2×2 between-subjects design that manipulates the auditors' ability to chat in two ways. First, I manipulate whether auditors are able to informally chat with their manager-counterpart. Second, I manipulate whether the auditors are able to informally chat among themselves. To control the information environment when the auditors informally chat, I tell the managers that the auditors

are chatting. I measure financial reporting outcomes in three ways: the honesty of the manager's representation, the auditor's assessment of the honesty of the manager's representation, and joint outcome of the manager's reporting choice and the auditor's selected audit effort. I also measure the social bond between the auditor and manager, the social bond among the auditors, the auditor's perceived risk about the choice of audit effort, and the manager's feelings of accountability to the auditor. These additional measures allow me to test the process by which informal communication impacts auditor and manager decisions.

I find that when auditors and managers informally communicate the manager develops a social bond with the auditor, which then increases the manager's feelings of accountability to the auditor and results in more honest representations from the manager. Interestingly, the direct effect of informal communication between the auditor and manager on manager honesty is negative. This suggests that absent the social bond, the manager uses the communication as form of cheap talk to take advantage of the auditor. But, my results show that the social bond mitigates the effect of the cheap talk. Thus, managers are more honest when they informally communicate with auditors because of the social bond. Finally, while the manager's feelings of accountability to the auditor do not directly impact the honesty of the manager's representations, I find the manager's knowledge that the auditors informally communicate marginally enhances the effect of the manager's feelings of accountability on the honesty of the manager.

I find the auditor also develops a social bond with the manager when the auditor and manager informally communicate, and this social bond causes the auditor to assess the manager's representations as more honest. I also find that when the auditor informally communicates with other auditors, the auditor forms a bond with the other auditors. While the auditor's informal communication with other auditors has no impact on auditor assessments of

manager honesty, I observe fewer instances of audit failure, which occurs in my setting when the manager chooses aggressive financial reporting and the auditor chooses a low-effort audit, when auditors informally communicate with each other.

The experiment gives my study three comparative advantages. First, because I am able to observe elements of the audit process that are unobservable in the natural audit setting (e.g. manager representations, etc.), this methodology allows me to test a question that archival research cannot. Second, consistent with Friedman and Sunder (1994), I construct an abstract setting in which participants behave in response to incentives and information rather than according to the expectations associated with their role assignments, which allows me to test the participants' underlying behavior. Finally, the interactive setting gives me the ability to simultaneously examine auditors' and managers' endogenous behavior (Kachelmeier 2018).

My research contributes to the current auditing literature in several important ways. First, my study demonstrates how the auditor's recurring, informal communication has an effect on financial reporting outcomes. I show that informal communication between the auditor and manager creates a social bond between the individuals and how this bond in turn alters auditor and manager decisions. Importantly, I show that the auditor and manager bond despite their opposing incentives and despite *only* communicating electronically. Bennett and Hatfield (2018) note that partners are concerned the computer-mediated communication does not allow staff auditors to develop client relationships. However, my results demonstrate that such relationships form even when informal communication occurs electronically. Second, prior research largely concentrates on one element of the auditor's informal communication—communication with the manager. I examine informal auditor-auditor communication to determine how it affects auditor and manager behavior. I find that informal auditor-auditor communication does not impact the

auditor's assessments of the manager's honesty. Thus, auditors appear to behave similarly regardless of whether they informally communicate with other auditors. This finding is meaningful for practitioners as it expands the understanding of how the structure of the audit team (traditional on-site team structure v. off-shoring or telecommuting) impacts financial reporting outcomes. Third, I find that the social bond between the auditor and the manager leads the manager to make more honest representations despite the manager's option to make dishonest choices without penalty. My study provides new insights about the auditor-manager relationship. These insights are important for practitioners as they plan and conduct audits, regulators as they set standards for practice, and academia as it continues to build its understanding about auditor-manager interactions.

The remainder of this paper is as follows: Section II outlines the background literature and hypotheses development; Section III describes the research design; Section IV discusses the results; and Section V concludes.

II. BACKGROUND AND HYPOTHESES DEVELOPMENT

Background

Throughout the audit process, auditors carry on multiple, recurring conversations. The audit standards mandate some of these conversations making them task-oriented and formal in nature. For example, AS 2110 and AS 1201 require auditors to have and document certain conversations with client management (e.g. fraud inquiries) and the audit team (e.g. fraud brainstorming) during the audit (PCAOB 2010a; PCAOB 2010b). Yet, because auditing is a service-oriented industry, informal conversations likely occur between an auditor and client manager as well as among the audit team. Part of an auditor's job is to get to know the client manager and develop rapport to maintain a smooth business relationship. Bennett and Hatfield (2018) provide evidence that audit partners are concerned that audit staff who only communicate with client management via email are not developing necessary and appropriate client relationships to aid in conducting the audit. Additionally, the rise of telecommuting impacts auditors' opportunity to have informal conversations with both the client and the audit team.

Auditor's informal conversations likely occur throughout the audit process. The informal nature implies that these conversations are not comprised of any specific content (task-oriented or otherwise). The effect of the auditors' recurring, informal conversations on auditor and manager choices are of interest in this study.

Social Identity Theory

Social identity theory posits that an individual's identity is drawn from his or her group membership (Tajfel 1974). Group membership can be from either a physical or cognitive group, and belonging in a group can occur because there is an outgroup (Tajfel 1974). An individual's identity can impact his or her behavior; specifically, when group membership is salient, an individual will make decisions that are preferential to the other members of his or her group (Tajfel 1974).

A number of accounting researchers examine the relationship between the auditor and the client manager through the lens of social identity (e.g. Bamber and Iyer 2007; Bauer 2015; Bhattacharjee and Brown 2018; Bowlin et al. 2017; Kachelmeier and VanLanduyt 2017). Bamber and Iyer (2007) demonstrate that the greater an auditor's client identity is, the more likely the auditor will acquiesce to the client's preferences. An auditor's identity with the client can be developed through shared values (Bauer 2015), trivial tasks (Kachelmeier and VanLanduyt 2017), longer auditor tenure (Bowlin et al. 2017), and affiliation with the same audit firm office (Bhattacharjee and Brown 2018). In my study, social bond refers to an individual's shared identity with another individual, and I allow the social bond to develop through informal communication.

Bamber and Iyer (2002) use the social identity framework to examine an auditor's professional and organizational identity. Bamber and Iyer (2007) and Bauer (2015) show that an increase in an auditor's professional identity can constrain the auditor's tendency to acquiesce to the client. An auditor's professional identity is developed from a variety of sources including accounting firms, accounting associations, and interactions with society (i.e. clients, governing bodies, and other professions among several other stakeholders) (Brouard et al. 2017). However,

in my study, I isolate the social bond between auditors from the auditor's professional identity to determine whether the social bond itself impacts auditor choices. I can make this distinction because of the abstract nature of my experimental setting, which does not include context cues from the audit profession. Consequently, my auditor-participants are not subject to the behavioral expectations associated with the auditor role.

Communication

Outside of the accounting literature, both economics and psychology researchers have investigated the effects of communication on individuals' decisions. Economics researchers suggest communication increases coordination and allows individuals to signal their intended actions (Crawford 1998). However, as the difference in incentives increases, communication between individuals becomes less informative (Cai and Wang 2006). This suggests that in strategic settings, incentives impact the effectiveness of communication since individuals may become less trusting of one another (Cai and Wang 2006).

In psychology, researchers argue that communication has three effects: 1) communication provides the opportunity for individuals to get to know each other; 2) it allows individuals to coordinate; and 3) it provides a medium for individuals to reassure one another about their intentions (Dawes et al. 1977). Additionally, Bicchieri (2002) suggests that communication has many effects including increasing social identity, increasing the salience of social norms, and creating shared information about a situation, which allows cooperation and creates understanding and expectations about the choices other individuals will make. Importantly, both indicate that communication appears to operate as a means for developing group-identity, but neither study attempts to measure the identity that is formed by communication.

In the behavioral-economics literature, Cason et al. (2012) find that communication leads to behavior that is consistent with social identity theory (Tajfel 1974).¹ In their study, they find when groups communicated with another group, but not with their own group privately, the outcomes suggested that the two groups came together and acted as one group (Cason et al. 2012). Thus, communication appears to have psychological effects, specifically through group identity that can impact behavior above and beyond individual incentives. However, Cason et al (2012) do not directly measure the individuals' feelings of group membership. Consequently, it is still an open question whether communication will form a measurable social bond between individuals.

As noted above, communication also provides a medium for individuals to signal their intended choices (Bicchieri 2002; Crawford 1998; Dawes et al. 1977). These signals may occur through promises (Charness and Dufwenberg 2006) and create expectations about what choice the other individual will make (Bicchieri 2002). Waymire et al. (2014) demonstrate that communication can be used as a tool to conceal self-dealing because of an individual's promises. This supports the notion that cheap talk increases coordination. However, in situations with repeated interactions and feedback, the message recipient would know if the sender kept the promise he or she made, which makes dishonest behavior less feasible. Thus, communication may operate as an accountability mechanism in the presence of repeated interactions.

Setting

Prior accounting research examines interactions between auditors and managers as well as among auditors and finds that these interactions impact auditor and manager decisions (e.g.

¹ While the manipulations in this study are similar to those I employ in my study, the group set-up and the nature of the strategic game and incentives are different than my setting.

Bennett and Hatfield 2013; Bennett and Hatfield 2018; Bhattacharjee and Brown 2018; Bowlin et al. 2015; Brazel et al. 2004; Hobson et al. 2018; Kachelmeier and VanLanduyt 2017; Kadous, Leiby, and Peecher 2013; King 2002; Wilks 2002). Bennett and Hatfield (2013) find that when a staff-auditor interacts with a more experienced client manager, the staff-auditor collects inadequate audit evidence suggesting a lack of social bond leads to suboptimal audit outcomes. Expanding on this, Bennett and Hatfield (2018) demonstrate that staff auditors ask fewer questions and exhibit less professional skepticism when they communicate with client management by email rather than face-to-face, which suggests the mode of communication can have a real impact for certain, complex audit tasks. Kachelmeier and VanLanduyt (2017) show that when an auditor and manager bond through a trivial task, the auditor gives the manager the benefit of the doubt when there is uncertainty about an accounting estimate.

The previous studies have results that suggest auditor-manager interactions can lead to poor audit outcomes. Yet, two studies find that instances where auditors are less sensitive to auditor-manager interactions. Bhattacharjee and Brown (2018) find that auditors who are affiliated with the manager are less susceptible to persuasion attempts by the manager. In fact, the manager's persuasion attempt backfires in this situation. Hobson et al (2018) show that auditors who exhibit higher levels of The Dark Triad personality traits trust the managers less than auditors who have lower levels of those same personality traits. Together these studies on auditor-manager interactions demonstrate auditors are sensitive to these interactions.

Prior research also demonstrates that auditor-to-auditor interactions impact financial reporting outcomes. For example, Brazel et al. (2004) find the nature of the review process (face-to-face or electronic) impacts the preparers' expectations of the reviewer, and, in turn, the overall effectiveness of audit documentation. Similarly, audit workpapers may suffer from predecisional

distortion effects when the preparer has been made aware of the audit partner's particular area of concern in a real-time review situation (Wilks 2002). Kadous et al. (2013) find that non-specialist auditors do not objectively consider advice they receive from peer auditors with whom they share a social bond. Thus, because these interactions within the audit process impact audit outcomes, they are important to examine and understand.

While some studies address these general, task-related interactions, two prior studies address communication between the auditor and manager. King (2002) examines the impact of standardized, non-verifiable communication (cheap talk) from the manager to the auditor and finds the auditor trusts the manager more when the manager communicates with the auditor than when the manager does not. Because only the managers are able to send messages in his study, King's setting is not fully interactive between the auditor and manager. Building on this, Bowlin et al. (2015) employ a fully interactive setting between the auditor and manager and find the auditor's ability to engage in informal, electronic communication with the manager leads the auditor to trust the manager more than when they do not informally communicate. In both studies the auditor's increased trust in the manager results in negative effects on audit quality. However, it is unclear from these two prior studies why communication leads the auditor to trust the manager. Furthermore, the auditor's increased trust in the manager is only a problem to the extent that the manager takes advantage of the auditor's trust. These studies employ a high-risk, fraud setting that does not allow the results to speak to a situation where the auditor's increased trust in management is not problematic. My study isolates the auditor's informal communication with the manager and tests whether this informal communication forms a social bond between the auditor and manager, and whether this bond might alter auditor behavior.

There is limited evidence from prior literature about the effect of informal communication *among* auditors on audit decisions. Bowlin et al. (2015) do not consider that auditors also informally communicate with other auditors. King (2002) employs a two-part manipulation to create a “strong group” identity for his auditor-participants that curbs the auditor’s trust in the manager. First, King’s auditors interact informally at the beginning of his setting, but the interaction is not recurring. Second, the name of the auditor with the highest penalty at the end of each experimental session was posted publicly for all participants to see. Because King’s manipulation includes both features, it is not clear whether the auditors’ pre-experimental, informal interaction or the potential for public shaming reduced the auditors’ trust in the managers. Additionally, neither of these studies address how such informal communication *among* auditors may interact with the effects of informal communication between the auditor and manager.

Gochnauer (2018) studies informal communication between auditors and specialists and finds it results in a stronger social bond than when there is no informal communication. An important point to make about Gochnauer’s finding is that her subjects participate in a cooperative game in which their compensation is co-dependent. Her setting is different from mine in which the auditor-participants have a common objective, but their compensation is not tied together. Consequently, it is an open question whether informal communication among auditors forms a bond between auditors when their compensation is not co-dependent.

Finally, although the preceding discussion has primarily focused on auditor decisions, the audit is not the only input to financial reporting outcomes (Gaynor et al. 2016). Importantly, the manager makes decisions that affect financial reporting outcomes. Prior research provides mixed results on whether interactions within the audit process impact management’s decisions (e.g.

Bowlin et al. 2015; Kachelmeier and VanLanduyt 2017; King 2002; Saiewitz and Kida 2018). Although Kachelmeier and VanLanduyt (2017) focus on just the auditor's choices, their results do include some observations about the manager's choices. They find managers, who have a social bond with the auditor, make less aggressive reporting choices than when there is no social bond. Specifically related to communication, Saiewitz and Kida (2018) examine client management responses to auditor-manager interactions and find that the client provides more biased information when an auditor makes a request by email rather than in a face-to-face interaction.

In contrast, while King (2002) focuses on the joint decisions of the auditor and manager, he does not detect any differences in management's reporting choices when standardized communication is available. Bowlin et al. (2015) do not make any direct observations on the effect of informal communication on the manager's choices and do not detect a significant effect of the informal communication on the joint outcome of a low-effort audit by the auditor and aggressive reporting by management. However, these two studies either trained or prompted the managers to make aggressive choices and deceptive representations, and consequently any observed effects on manager behavior are unreliable. Unlike King (2002) and Bowlin et al. (2015), I employ a neutral setting where I incentivize, but do not prompt, my manager-participants to make dishonest or aggressive reporting choices, which allows me to explore whether the manager's informal communication with the auditor affects the manager's decisions and whether this relationship depends on the auditor's informal communication with other auditors.

Hypotheses

The Effect of Informal Communication on Manager Decisions

I rely on social identity theory and the effects of communication to explore the effect of auditors' informal communication on financial reporting outcomes. I first discuss my predictions for how the auditor's recurring, informal communication impacts manager decisions because these decisions are the initial inputs into the audit and have a downstream effect on the audit process. Prior literature provides mixed results on the effect of interactions between the auditor and manager on the manager decisions (Bowlin et al. 2015; Kachelmeier and VanLanduyt 2017; King 2002). Specifically, King (2002) finds no effect, and Bowlin et al. (2015) do not specifically test the effects of communication on manager choices. However, in each of these studies, the focus was primarily on how the auditor behaved in a high-risk fraud setting.²

Despite these mixed results, I expect informal communication to develop a social bond between the auditor and manager. Communication allows individuals to get to know one another (Dawes et al. 1977) and develop a shared identity (Bicchieri 2002). Joining this with social identity theory, I expect that when the auditor and manager informally communicate, they will develop a social bond with one another (Cason et al. 2012).

Social identity theory suggests members of a group make decisions that are favorable towards one another (Tajfel 1974). Kachelmeier and VanLanduyt (2017) find that a social bond between the auditor and manager leads the manager to make less aggressive reporting choices, indicating that managers are sensitive to the social bond. I expect the social bond between the manager and the auditor to result in more honest, that is truthful, representations by the manager.

² The manager participants in these studies were trained or prompted to make false representations to the auditor making tests of their behavior less meaningful.

Furthermore, individuals likely feel more accountable to others with whom they have developed a social bond. Results from studies in both psychology and economics support this notion. Specifically, DePaulo and Kashy (1998) find that individuals lie less to friends than strangers, and Chakravarty et al. (2011) observe in a sender-receiver game that individuals lied more to strangers than friends. Furthermore, Chakravarty et al. (2011) suggest that building a relationship between individuals can deter dishonesty. Thus, I expect the feelings of accountability to result in more honest representations from the manager. I predict the following:

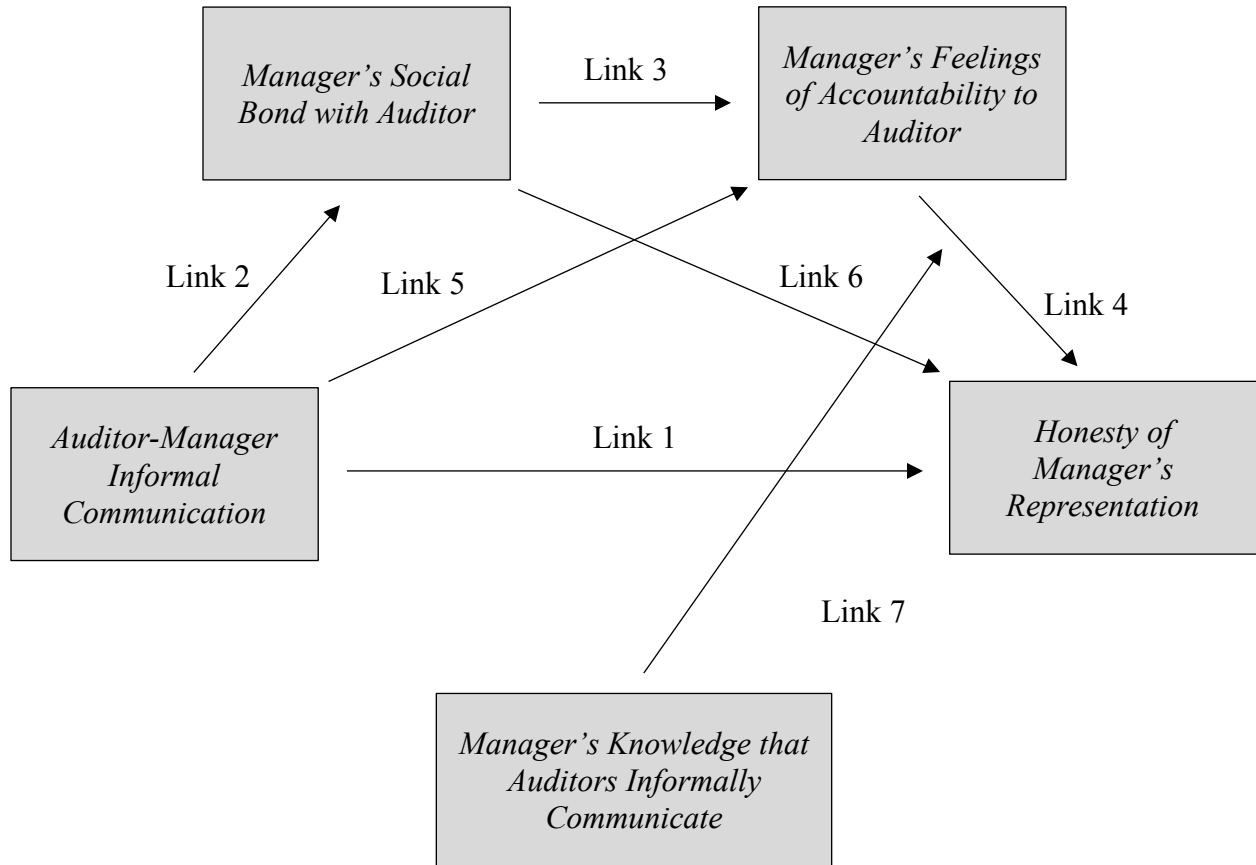
H1a: The manager will make more honest representations to the auditor when the manager and auditor informally communicate than when the manager and auditor do not informally communicate.

During the audit, auditors have informal conversations among themselves. The extent to which the manager is aware of this and believes the auditors are discussing audit evidence provided by the manager could impact whether the manager reports honestly. Specifically, it could incite feelings of self-consciousness within the manager. Self-consciousness is both one's sense of self and the "awareness of oneself as an object of someone else's observation" (Laing 1969). If the manager believes that he is the object of the auditors' conversations, then the manager will likely become more conscious of his or her actions. I expect this to enhance the effect of the manager's feelings of accountability to the auditor on the honesty of the manager's representations.

H1b: The manager's knowledge that the auditors informally communicate will have a positive moderating effect on the relationship between the manager's feelings of accountability to the auditor and the honesty of the manager's representation.

FIGURE 1

Process Model for the Effect of the Auditor's Informal Communication with the Manager on the Honesty of the Manager's Representation (H1)



The Effect of Informal Communication on Auditor Decisions

Prior literature finds communication between the auditor and manager leads the auditor to trust the manager more when perhaps the auditor should not (Bowlin et al. 2015; King 2002). However, the prior accounting literature has not examined the process by which communication between auditors and managers alters auditor behavior. Communication allows individuals to get to know one another (Dawes et al. 1977) and develop a shared identity (Bicchieri 2002). Using the social identity framework, I expect that when the auditor and manager informally communicate, the auditor will develop a social bond with the manager (Cason et al. 2012).

According to social identity theory, members of a group make decisions that are favorable towards one another (Tajfel 1974). Kachelmeier and VanLanduyt (2017) find socially bonded auditors gave managers the benefit of the doubt when there was uncertainty about an accounting estimate. Similarly, the stronger an auditor's client identity is, the more likely the auditor will acquiesce to the client (Bamber and Iyer 2007; Bauer 2015). Thus, I expect the auditor's social bond with the manager, which is accrued through informal communication, to result in the auditor rating the manager's representations as more honest.

An alternative mechanism for the auditor's heightened beliefs about the manager's honesty is a potential illusory feeling of control. Bowlin et al. (2015) suggest that the auditor's ability to informally communicate with the manager contributes to an illusory feeling of control on behalf of the auditor that results in less diligent auditing, yet they do not formally test this theory. The illusion of control suggests the individuals believe that they have control over chance-dependent situations when, in fact, they do not (Langer 1975). The informal communication with the manager may incline the auditor to feel more control over the circumstance because of a perceived reduction in uncertainty about what choice the manager will

make. The perceived reduction in uncertainty likely occurs because communication allows individuals to make non-verifiable statements, and even promises, about their intended play (Bicchieri 2002; Charness and Dufwenberg 2006; Dawes et al. 1977). As such, the feeling of illusory control could also result in the auditor assessing the manager's representations as more honest. Thus, I predict the following:

H2a: The auditor will assess the manager's representation as more honest when the auditor and manager informally communicate than when the auditor and manager do not informally communicate.

Communication creates awareness of multiple group identities as individuals get to know each other and allows shared identities to form (Bicchieri 2002; Dawes et al. 1977). Thus, when the auditor informally communicates with the other auditors, I expect the auditor to form a social bond with these auditors (Cason et al. 2012).

The auditor and manager have competing incentives whereas the auditors each have similar incentives. This difference creates a distinction between the auditor's potential social bond with the manager and that with the other auditors (Roccas and Brewer 2002). Because of similarities in the auditors' incentives, the social bond among auditors could dominate over the auditor's social bond with the manager (Roccas and Brewer 2002). For this reason, I expect the auditor's social bond with the manager to be weaker when the auditors informally communicate with the other auditors than when they do not. I predict the following:

H2b: The auditor's informal communication with other auditors will have a negative moderating effect on the relationship between the auditor's informal communication with the manager and the auditor's formation of a social bond with the manager.

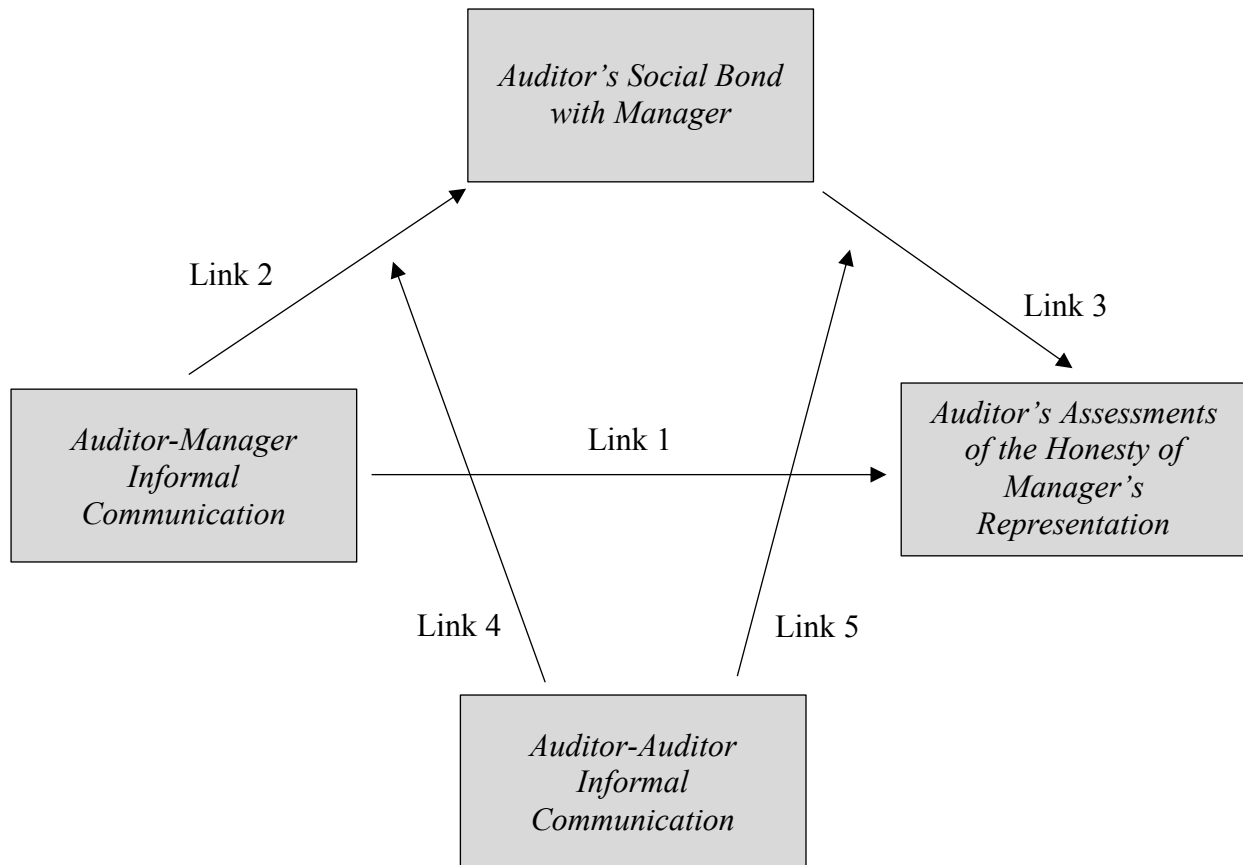
Furthermore, to the extent that the auditor's social bond with other auditors is more dominant than the auditor's social bond with the manager, the effect of the auditor's social bond

with the manager on the auditor's decisions will be altered. Similar to the findings in Bamber and Iyer (2007), as an auditor's social bond with other auditors develops, the auditor's tendency to choose client-preferred outcomes may diminish. I expect the auditor's informal communication with other auditors to moderate any remaining effect of the auditor's social bond with the manager on the auditor's assessments of the manager's honesty. Therefore, I predict:

H2c: The auditor's informal communication with other auditors will have a negative moderating effect on the relationship between the auditor's social bond with the manager and the auditor's assessment of the honesty of the manager's representation.

FIGURE 2

Process Model for the Effect of the Auditor's Informal Communication with the Manager on the Auditor's Assessments of the Honesty of the Manager's Representation (H2)



III. METHODOLOGY AND DESIGN

Experimental Setting

To address my research questions, I conduct an experiment according to the traditions of experimental economics. I construct a stylized audit setting and model the auditor-manager relationship as an interactive, strategic game consistent with prior experimental accounting research (Bowlin 2011; Bowlin et al. 2015; Bowlin et al. 2017; Kachelmeier and VanLanduyt 2017; King 2002). Specifically, I adapt the game and payoff structure from Bowlin et al. (2015).

In the game I adapt from Bowlin et al. (2015), there are two players—the auditor and the manager—and each auditor is randomly and anonymously paired with a manager. Each player can make one of two choices: the manager chooses an aggressive or conservative reporting option, and the auditor chooses to conduct either a high-effort audit or a low-effort audit. The joint decisions of each player determine one of four possible outcomes. However, each player's final outcome is determined by not only the joint decisions but also external probabilities. As I discuss below, the incentives for each player's choice are patterned after the real-world incentives present in the audit context. The potential payoffs and external probabilities are structured in such a way that each player's preferred choice is dependent on the other player's choice resulting in a mixed-strategy game.

As shown in Table 1, the auditor has a higher potential payoff when he or she conducts a low-effort audit than when he or she chooses a high-effort audit. This is analogous to the lower (higher) costs associated with conducting a lax (diligent) audit. However, the likelihood of the

auditor receiving the higher payoff is determined by the manager's reporting choice. The external probability represents the likelihood that a misstatement existed and was not identified by the audit. Specifically, when the auditor chooses a low-effort audit and the manager chooses to report conservatively, the auditor has a 70% chance of earning 10 points and a 30% chance of earning 1 point, which results in an expected value of 7.3 points on average. However, when the auditor chooses a low-effort audit and the manager reports aggressively, the auditor has a 30% chance of earning 10 points and a 70% chance of earning 1 point, which results in an expected value of 3.7 on average. Thus, the auditor prefers the low-effort audit only when the manager chooses to report conservatively. When the auditor conducts a high-effort audit and the manager chooses to report conservatively, the auditor has a 70% chance of earning 6 points and a 30% chance of earning 4 points in this situation, which results in an expected outcome of 5.4 points on average. In contrast, when the auditor conducts a high-effort audit and the manager reports aggressively, the auditor has a 70% chance of earning 4 points and a 30% chance of earning 6 points, which results in an expected outcome of 4.6 points on average. Thus, the auditor prefers the high-effort audit only when the manager chooses to report aggressively.

TABLE 1

Payoff Parameters for the Auditor and Manager Relationship Based on Player Choices and Exogenous Probabilities

Auditors' Audit Quality Choices	Managers' Reporting Choices	
	<i>Conservative Reporting</i>	<i>Aggressive Reporting</i>
<i>Low Effort</i>		
Managers' payoffs:		
Misstatement detected [payoff (probability)]	4 (10%)	1 (10%)
Misstatement not detected [payoff (probability)]	6 (90%)	10 (90%)
Expected value	5.8	9.1
Auditors' payoffs:		
Smaller misstatement [payoff (probability)]	10 (70%)	10 (30%)
Larger misstatement [payoff (probability)]	1 (30%)	1 (70%)
Expected value	7.3	3.7
<i>High Effort</i>		
Managers' payoffs:		
Misstatement detected [payoff (probability)]	4 (90%)	1 (90%)
Misstatement not detected [payoff (probability)]	6 (10%)	10 (10%)
Expected value	4.2	1.9
Auditors' payoffs:		
Smaller misstatement [payoff (probability)]	4 (70%)	4 (30%)
Larger misstatement [payoff (probability)]	6 (30%)	6 (70%)
Expected value	4.6	5.4

This table is based on table 1 from Bowlin et al. (2015). The auditor and manager players make choices during the experimental game to earn points. I accumulate the points each player earns during the game and exchange the points for U.S. dollars.

The manager has a higher potential payoff when he or she chooses to report aggressively rather than conservatively. This is analogous to the benefits received when an earnings target is met because of aggressive accounting decisions. Yet, the manager's final payoff is determined by the auditor's effort choice. For the manager, the external probabilities represent the likelihood that a misstatement existed and was uncovered. As shown in Table 1, when the manager chooses to report aggressively, and the auditor chooses a low-effort audit, the manager has a 90% chance of earning 10 points and a 10% chance of earning 1, which leads to an expected outcome of 9.1 points on average. If the manager chooses to report conservatively when the auditor conducts a low-effort audit, the manager will have a 90% chance of earning 6 points and a 10% chance of earning 4 points, which results in an expected outcome of 5.8 points on average. Thus, the manager prefers to report aggressively when the manager believes that the auditor will perform a low-effort audit. However, if the manager chooses to report aggressively and the auditor chooses a high-effort audit, the manager has a 10% chance of earning 10 points and a 90% chance of earning 1 point, which results in an expected outcome of 1.9 points on average. Thus, the manager will prefer to report conservatively when the auditor conducts a high-effort audit since the manager will have a 90% chance of earning 4 points and a 10% chance of earnings 6 points, or an expected outcome of 4.2 points on average.

This setting gives my study three comparative advantages. First, this methodology allows me to test a question that archival research cannot because I am able to observe elements of the audit process that are unobservable in the real world. Second, the abstract setting allows participants to behave in response to incentives and information rather than according to the expectations associated with their role assignments (Friedman and Sunder 1994). This enables me to test the theory and motivation underlying the participants' behavior. Third, the interactive

nature of the game allows me to simultaneously examine the auditors' and managers' exogenous behavior (Kachelmeier 2018).

Participants

Participants in my study consist of 126 students enrolled in upper-level, accounting courses at a large, public university.³ Because the setting of my study is abstract and does not require background knowledge in accounting, students are appropriate participants (Peecher and Solomon 2001; Libby et al. 2002). The participants are 21.7 years old on average and have an average of 0.44 years of accounting-related work experience. Fifty-two of the participants are female. The majority (97%) of the participants are accounting majors. Forty-seven percent of the participants are juniors, 40% are seniors, 10% are graduate students, and the remaining 3% are sophomores or did not report a classification. In exchange for approximately 51 minutes of their time, participants earned between \$15 and \$29 with an average of \$21.14.

Experimental Procedures

I conduct eight research sessions in a controlled computer lab. Each session lasts approximately 51 minutes of which the first 10 minutes is dedicated to instructions.⁴ As participants enter the computer lab, I randomly assign them to a computer where they play the experimental game I describe below. I implement the game, which lasts for fifteen rounds, with z-Tree (Fischbacher 2007).⁵

I begin each session by reading the instructions aloud while the participants follow along with a written copy. The instructions describe the game procedures and incentives. To maintain the abstract setting, I use neutral terminology to describe the participant roles. This eliminates

³ The university's Institutional Review Board approved the study prior to recruiting participants.

⁴ See Appendix A for a copy of the participant instructions.

⁵ See Appendix B for a screenshots of the experimental game in z-Tree.

demand effects from expectations about how auditors and managers should behave and allows participants to respond to the information and incentives of the game (Haynes and Kachelmeier 1998). Specifically, the instructions and computer software label each auditor-participant as a “BLUE” player and each manager-participant as a “GREEN” player. However, in the remainder of this manuscript, I refer to the players as auditors and managers for expository convenience.

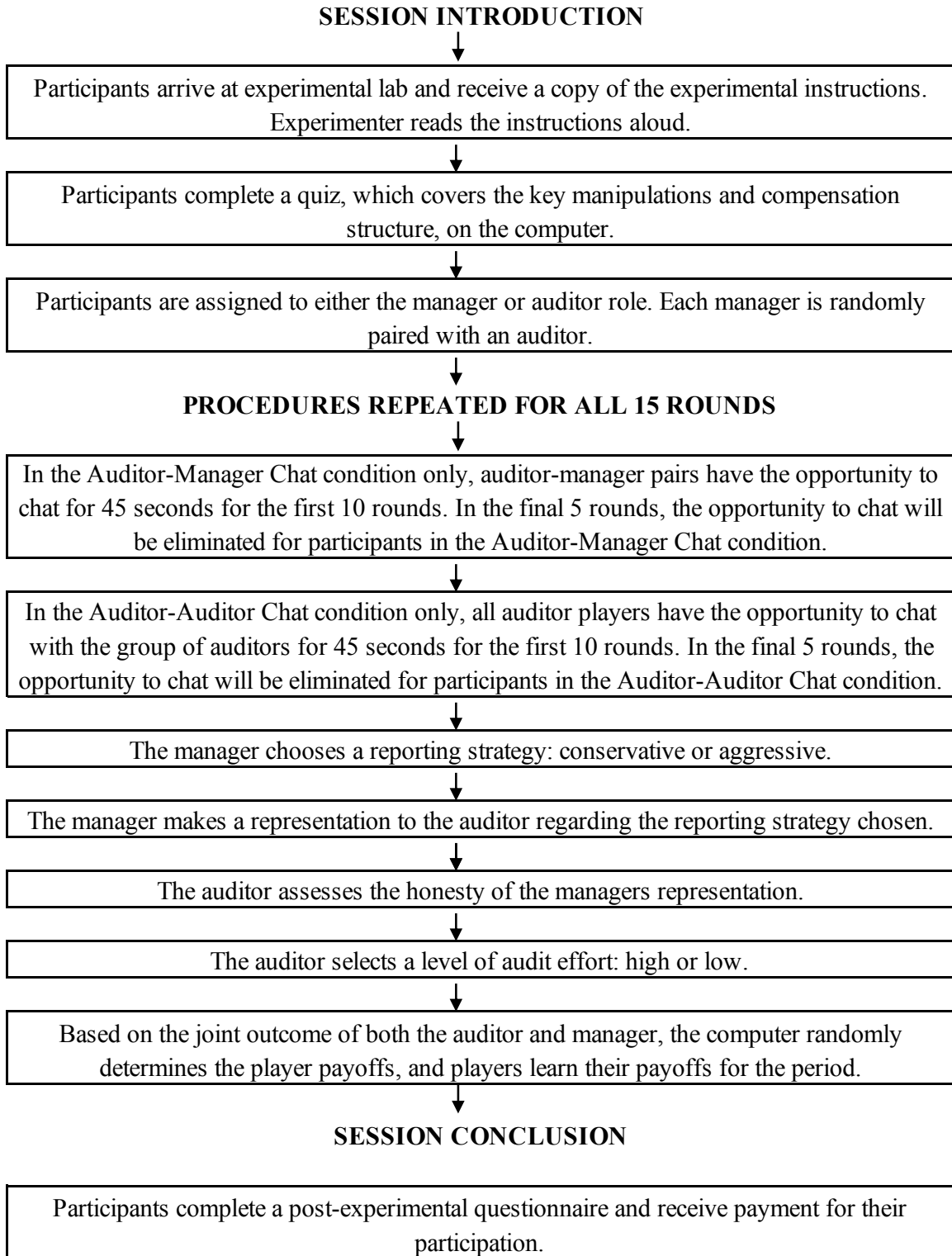
After reading the instructions, but prior to the start of the first round, participants complete a true-false quiz over the instructions. The quiz covers important elements of the game including decisions players can make and the incentive structure. I do not require participants to correctly answer all questions to begin the game. However, for any questions that they do not answer correctly, I give the correct answer along with an explanation for that correct answer.

The first round begins with the computer assigning each player to either the role of auditor or manager. Then, one auditor is paired with one manager. These players remain paired together for the entire session. As shown in Figure 3, for rounds 1-10 participants have the opportunity to chat electronically for forty-five seconds depending on which condition they are in. Specifically, when the auditors and managers are able to chat, rounds 1-10 begin with this chat session. In conditions when each auditor player is able to chat with the other auditors, this forty-five-second chat session will follow the auditor-manager chat session, when present. I order the chat session in this way to model the typical order of events in the audit process. That is, auditors obtain evidence from the manager and then return to the audit room or firm office with other auditors. In the final five rounds of all conditions, no players have the opportunity to chat. I eliminate the chatting in these rounds to analyze the nature of any lingering effects of communication. In conditions with no chatting, each round begins with the manager’s reporting choice, which I describe next.

Following the chat sessions (when present), each manager chooses from two possible strategy choices, “LEFT” or “RIGHT”, which are analogous to conservative or aggressive reporting, respectively. Next, the manager sends one of two standardized messages to the auditor: “I selected LEFT this round.” or “I selected RIGHT this round.” Importantly, I inform both the managers and auditors that this message is not required to match the manager’s actual choice, which allows the manager to report dishonestly without a direct penalty. After receiving this message from the manager, each auditor assesses the honesty of the manager’s message. Next, the auditor selects a level of audit effort: low effort or high effort, which is characterized as “UP” and “DOWN”, respectively. Finally, each round concludes with each player learning his or her own payoff for the round. Importantly, players are never told what choices the other players make or the payoffs of the other players, and the probabilistic nature of the payoff structure makes it impossible for a player to know his/her partner’s choice with any certainty. This is consistent with prior accounting research (King 2002; Bowlin et al. 2017; Bowlin et al. 2015) and models real-world auditing.

FIGURE 3

Progression of Experimental Game



At the end of each session, I ask each participant to complete a short post-experimental questionnaire.⁶ The questionnaire measures the social bond between participants with questions I adapt from Bamber and Iyer (2007) and Kachelmeier and VanLanduyt (2017). On the questionnaire, I also measure each participant's perception about the riskiness of the choices made in the game, each participant's feelings of accountability to the other players, and whether each participant trusted the player with whom he or she was paired. Finally, I collect demographic information about the participants.

Prior to participants leaving the computer lab, I accumulate each participant's earned points and translate the total into US Dollars. I pay each participant a show-up fee of \$5 plus \$0.19 for each point earned during the game.

Experimental Design

My study is a 2×2 full-factorial design. My two independent variables are *Auditor-Manager Informal Communication* (auditor-manager chat v. no auditor-manager chat) and *Auditor-Auditor Informal Communication* (auditor-auditor chat v. no auditor-auditor chat). I manipulate both independent variables between participants. In the *auditor-manager chat* condition, the auditor and manager pairs have the ability to chat electronically for forty-five seconds at the beginning of each round for rounds 1-10. In the final five rounds of the *auditor-manager chat* condition, the auditor and manager do not have the ability to chat. In the *no auditor-manager chat* condition, the auditor and manager do not have the ability to chat electronically during any of the fifteen rounds of the game.

In the *auditor-auditor chat* condition, each auditor has the ability to chat electronically for forty-five seconds with the other auditors in rounds 1-10. When the auditors chat, I tell the

⁶ See Appendix C for a copy of the post-experimental questionnaire.

managers that the auditors are chatting. In the final five rounds of the *auditor-auditor chat* condition, the auditors do not have the ability to chat among themselves. In the *no auditor-auditor chat* condition, the auditors never have the ability to chat among themselves.

Dependent Variables

Because financial reporting outcomes include both the auditor and manager's decisions, my dependent variables are honesty of management representations, auditor beliefs about manager honesty, and audit quality (Gaynor et al. 2016). I measure the honesty of the manager's representation as the absolute difference between the reporting choice the manager makes and the representation the manager provides to the auditor. I measure the auditor's beliefs about manager honesty as the average of each auditor's assessments of the honesty of his/her manager's representation. Finally, I measure audit quality as the joint outcome of the manager's reporting choice and the auditor's selected audit effort.

IV. ANALYSIS OF RESULTS

Tests of H1: Analysis of Manager Behavior

I analyze the managers' behavior first. Table 2 includes the means and standard errors of my key variables. Panel A reports means by my independent variables and shows managers developed a stronger social bond with the auditors when the managers were able to informally communicate with the auditors than when they were not (37.00 v. 27.72; $p = 0.001$, one-tailed).⁷ Importantly, the manager bonds with the auditor even though the manager and auditor have competing incentives. Furthermore, the managers made slightly more honest representations to the auditor on average when the auditors and managers informally communicated than when they did not (0.69 v. 0.63; $p = 0.174$, one-tailed), but this difference is not statistically significant. Managers are more honest when the auditors were able to informally communicate with each other versus when the auditors did not informally communicate with each other (0.70 v. 0.61; $p = 0.051$, one-tailed). Managers report higher feelings of accountability toward their auditor counterparts when the managers informally communicated with the auditors than when they did not (6.16 v. 4.58; $p < 0.01$; one-tailed).⁸

⁷ The manager's social bond with the auditor equals the summation of questions 1 through 7 on the post-experimental questionnaire included in Appendix C. A higher score indicates a stronger social bond.

⁸ The manager's feeling of accountability toward the auditor is obtained from question 17 on the post-experimental questionnaire in Appendix C. A higher score indicates a greater feeling of accountability.

TABLE 2

Descriptive Statistics of Key Variables

Panel A: Means (Std Error) by Independent Variables

	<u>Auditor-Manager Chat</u>		<u>Auditor-Auditor Chat</u>	
	Chat	No Chat	Chat	No Chat
Manager's Social Bond with Auditor	37.00 (2.35) n=31	27.72 (1.67) n=32	32.78 (2.32) n=32	31.77 (2.06) n=31
Manager's Bond with Other Managers	33.10 (2.27) n=30 ¹	33.58 (1.81) n=31	32.00 (2.10) n=31	34.73 (1.95) n=30 ¹
Manager's Feeling of Accountability to Auditor	6.16 (0.38) n=31	4.58 (0.40) n=31 ¹	4.94 (0.44) n=31 ¹	5.81 (0.37) n=31
Manager's Reporting Choice (1=Conservative; 0=Aggressive)	0.51 (0.04) n=31	0.52 (0.04) n=32	0.54 (0.04) n=32	0.49 (0.03) n=31
Manager's Representation (1=Conservative; 0 = Aggressive)	0.73 (0.03) n=31	0.66 (0.04) n=32	0.72 (0.03) n=32	0.67 (0.04) n=31
Manager's Honesty (1=Honest; 0=Dishonest)	0.69 (0.04) n=31	0.63 (0.03) n=32	0.70 (0.04) n=32	0.61 (0.04) n=31
Auditor's Social Bond with Manager	40.74 (2.47) n=31	29.13 (2.07) n=32	36.72 (2.51) n=32	32.90 (2.44) n=31
Auditor's Bond with Other Auditors	34.23 (2.31) n=31	39.87 (2.39) n=31 ¹	44.41 (2.14) n=32	29.20 (1.73) n=30 ¹

TABLE 2 (CONTINUED)

	<u>Auditor-Manager Chat</u>		<u>Auditor-Auditor Chat</u>	
	Chat	No Chat	Chat	No Chat
Auditor's Assessment of Manager's Honesty	74.97 (3.94) n=31	54.95 (3.08) n=32	66.30 (4.08) n=32	63.26 (3.80) n=31
Auditor's Audit Effort Choice (1=Low Effort; 0=High Effort)	0.74 (0.03) n=31	0.47 (0.03) n=32	0.65 (0.04) n=32	0.55 (0.04) n=31
Audit Success (1=Success; 0=Failure)	0.57 (0.03) n=31	0.54 (0.02) n=32	0.59 (0.03) n=32	0.52 (0.03) n=31

Panel B: Means (Std Error) by Experimental Condition

	<u>Auditor-Auditor Chat</u>		<u>No Auditor-Auditor Chat</u>	
	<i>Auditor- Manager Chat</i>	<i>No Auditor- Manager Chat</i>	<i>Auditor- Manager Chat</i>	<i>No Auditor- Manager Chat</i>
Manager's Social Bond with Auditor	36.75 (3.59) n=16	28.81 (2.68) n=16	37.27 (3.11) n=15	26.63 (2.06) n=16
Manager's Bond with Other Managers	29.33 (3.40) n=15 ¹	34.50 (2.47) n=16	36.87 (2.78) n=15	32.60 (2.72) n=15 ¹
Manager's Feeling of Accountability to Auditor	6.19 (0.54) n=16	3.60 (0.51) n=15 ¹	6.13 (0.54) n=15	5.50 (0.52) n=16
Manager's Reporting Choice (1=Conservative; 0=Aggressive)	0.52 (0.07) n=16	0.55 (0.05) n=16	0.51 (0.05) n=15	0.48 (0.05) n=16

TABLE 2 (CONTINUED)

	Auditor-Auditor Chat		No Auditor-Auditor Chat	
	<i>Auditor- Manager Chat</i>	<i>No Auditor- Manager Chat</i>	<i>Auditor- Manager Chat</i>	<i>No Auditor- Manager Chat</i>
Manager Representation (1=Conservative; 0 = Aggressive)	0.73 (0.05) n=16	0.71 (0.05) n=16	0.72 (0.05) n=15	0.61 (0.05) n=16
Manager's Honesty (1=Honest; 0=Dishonest)	0.73 (0.07) n=16	0.68 (0.04) n=16	0.64 (0.06) n=15	0.59 (0.05) n=16
Auditor's Social Bond with Manager	43.00 (3.38) n=16	30.44 (3.06) n=16	38.33 (3.63) n=15	27.81 (2.83) n=16
Auditor's Bond with Other Auditors	39.31 (3.27) n=16	49.50 (2.19) n=16	28.80 (2.70) n=15	29.60 (2.27) n=15 ¹
Auditor's Assessment of Manager's Honesty	76.85 (5.32) n=16	55.76 (5.08) n=16	72.97 (5.97) n=15	54.15 (3.64) n=16
Auditor's Audit Effort Choice (1=Low Effort; 0=High Effort)	0.79 (0.04) n=16	0.52 (0.05) n=16	0.68 (0.06) n=15	0.43 (0.04) n=16
Audit Success (1=Success; 0=Failure)	0.62 (0.04) n=16	0.55 (0.03) n=16	0.51 (0.05) n=15	0.52 (0.03) n=16

Notes:

¹One participant in this condition failed to provide a response to one or more questions on the post-experimental questionnaire.

TABLE 2 (CONCLUDED)

Variable Definitions:

Auditor-Manager Chat = Auditor and manager participants in the chat (no chat) conditions could (not) informally communicate online during the experiment.

Auditor-Auditor Chat = Auditor participants in the chat (no chat) condition could (not) informally communicate online with other auditor participants during the experiment.

Manager's Social Bond with Auditor = the summation of questions 1 through 7 on the post-experimental questionnaire in Appendix C. A higher score indicates a stronger social bond.

Manager's Bond with Other Managers = the summation of questions 8 through 14 on the post-experimental questionnaire in Appendix C. A higher score indicates a stronger bond.

Manager's Feeling of Accountability to Auditor = obtained from question 17 on the post-experimental questionnaire in Appendix C. A higher score indicates a greater feeling of accountability.

Manager's Reporting Choice = an average of the manager's choice to report conservatively or aggressively. A value of 1 indicates the manager reported conservatively 100% of the time, and a value of 0 indicates the manager reported aggressively 100% of the time.

Manager's Representation = an average of the manager's representation to the auditor about his/her reporting choice. A value of 1 indicates the manager disclosed he/she reported conservatively 100% of the time, and a value of 0 indicates the manager disclosed he/she reported aggressively 100% of the time.

Honesty of Manager's Representation = an average of the manager's choice to make an honest representation to the auditor. A value of 1 indicates the manager was honest 100% of the time, and a value of 0 indicates the manager was dishonest 100% of the time.

Auditor's Social Bond with Manager = the summation of questions 1 through 7 on the post-experimental questionnaire in Appendix C. A higher score indicates a stronger social bond.

Auditor's Bond with Other Auditors = the summation of questions 8 through 14 on the post-experimental questionnaire in Appendix C. A higher score indicates a stronger bond.

Auditor's Assessment of Manager's Honesty = the average of the auditor's assessments of the honesty of his/her manager's representation. A value of 100 indicates the auditors assessed the manager's representation as honest 100% of the time, and a value of 0 indicates the auditors assessed the manager's representation as dishonest 100% of the time.

Auditor's Audit Effort Choice = an average of the auditor's choice of audit effort. A value of 1 indicates the auditor chose a low-effort audit 100% of the time, and a value of 0 indicates the auditor chose a high-effort audit 100% of the time.

Audit Success = an average of the joint decisions made by the auditor and the manager. A value of 1 (audit success) indicates an appropriate match of the manager's reporting choice and the auditor's corresponding audit effort choice for all 15 rounds. A value of 0 (audit failure) indicates an inappropriate match of the manager's reporting choice and the auditor's corresponding audit effort choice for all 15 rounds.

My first hypothesis set makes predictions about how informal communication between the auditor and manager affects the honesty of the manager's representations to the auditor and whether informal communication among auditors moderates that effect. I first perform an analysis of variance (ANOVA) for both hypotheses.⁹ Table 3 contains the results of the ANOVAs. Next, I use a regression-based analysis method which allows me to simultaneously test my hypotheses and the underlying theory. Specifically, I use model 87 from the PROCESS macro (Hayes 2017), which models my theory. Table 4 and Figure 4 contain the statistical results for my process model.¹⁰

H1a predicts managers will make more honest representations to the auditors when the manager and auditor informally communicate than when they do not. The result of the ANOVA in Panel A of Table 3 is the total effect of auditor-manager informal communication on the honesty of the manager's disclosure and shows that managers are not more honest when they informally communicate with the auditor than when they do not ($F = 0.90$; $p = 0.174$, one-tailed). However, the results of the regression-based analysis in Table 4 and Figure 4 provide more detail about the effect of the manager's informal communication with the auditor on the honesty of the manager's disclosure. First, there is a negative direct effect of the manager's informal communication with the auditor on the manager's honesty (link 1; $\text{coeff} = -0.088$; $p = 0.06$, two-tailed), which is the opposite direction from what I predict. Thus, the direct effect suggests that

⁹ I perform an analysis of covariance (ANCOVA) for each of my hypotheses and include participant demographics (age, gender, classification in school, major, and work experience) in the model as covariates. While some demographic variables are significant covariates, the results are qualitatively the same as when I exclude the demographic variables. For example, in my test for H1a, I find that gender is a significant covariate of manager honesty; specifically, I find that females are more honest than males. This is the only analysis in which gender is a significant covariate.

¹⁰ The regression-based analysis for H1 is based only on 62 of the 63 manager-participants because one participant failed to provide a response to question 17 on the post-experimental questionnaire, which is my measure of how accountable the manager felt to the auditor.

holding all other factors in the model constant, the manager is more dishonest when the manager and auditor informally communicate, because the manager is better off lying about his/her reporting choice. That is, absent the social bond, the manager's disclosures to the auditor appear to be cheap talk. However, there is a significant, positive indirect effect of the manager's informal communication with the auditor on the honesty of the manager's representation through the manager's social bond with the auditor (links 2 and 6). The indirect effect suggests that when the auditor and manager informally communicate the manager makes more honest representations to the auditor *because* of the social bond the manager has with the auditor (coeff = 0.099; LLCI = 0.035, ULCI = 0.178; Table 4 Panel D).¹¹ The indirect effect is consistent with my prediction. Auditor-manager interactions have a positive impact on manager behavior. Specifically, the indirect effect suggests that the effect of the social bond cancels out the negative effect of cheap talk. H1a is supported because of the significant indirect effect I observe.

H1b predicts that the manager's knowledge that auditors informally communicate with one another will have a positive moderating effect on the relationship between the manager's feelings of accountability toward the auditor and the honesty of the manager's representations. The interaction reported in Panel B of Table 3 support H1b ($F = 3.450$; $p = 0.034$, one-tailed). Furthermore, in the regression-based analysis reported in Table 4 and Figure 4, the interaction between the manager's knowledge that auditors informally communicate and the managers feeling of accountability to the auditor is marginally significant (link 7; coeff = 0.031; $p = 0.056$, one-tailed). Thus, H1b is supported, and the auditor's informal communication with other auditors has a positive effect on the relationship between the manager's feeling of accountability to the auditor and the manager's honesty. The conditional indirect effect of the manager's

¹¹ The 95% confidence interval does not contain zero indicating statistical significance.

informal communication with the auditor on manager honesty mediated by the manager's feeling of accountability is a positive (negative) when the auditors (do not) informally communicate (auditor-auditor chat: coeff = 0.015; LLCI = -0.020; ULCI = 0.050; no auditor-auditor chat: coeff = -0.00; LLCI = -0.032; ULCI = 0.027; Table 4 Panel E). This is the relationship I predict in H1b, but these effects are not statistically significant. This is also the case for the conditional indirect effect of the manager's informal communication with the auditor on manager honesty mediated by the manager's social bond with the auditor and the manager's feeling of accountability toward the auditor (auditor-auditor chat: coeff = 0.033; LLCI = -0.007; ULCI = 0.088; no auditor-auditor chat: coeff = -0.001; LLCI = -0.048; ULCI = 0.043; Table 4 Panel F).

In addition to the findings above, I make one additional observation that expands our knowledge of auditor-manager interactions. The manager's social bond with the auditor increases the manager's feelings of accountability toward the auditor (link 3; coeff = 0.114; $p < 0.01$, one-tailed). Thus, the stronger the manager's social bond with the auditor, the more accountable the manager feels towards the auditor.

TABLE 3

Analysis of Honesty of Managers' Representation

Panel A: Analysis of Variance of Auditor-Manager Informal Communication on Honesty of Manager's Representation (H1a)

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>F</u>	<u>p-value¹</u>
<i>Auditor-Manager Informal Communication</i>	1	0.044	0.900	0.174
Error n=63	61	2.971		

Panel B: Analysis of Variance of Auditor-Auditor Communication and Manager Accountability on Honesty of Manager's Representation (H1b)

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>F</u>	<u>p-value¹</u>
<i>Manager's Knowledge that Auditors Informally Communicate (Auditor-Auditor Informal Communication)</i>	1	0.015	0.420	0.518 †
<i>Manager's Feeling of Accountability to Auditor</i>	1	0.632	18.160	<.0001 †,***
<i>Manager's Knowledge that Auditors Informally Communicate × Manager's Feelings of Accountability to Auditor</i>	1	0.120	3.450	0.034 **
Error n=62 ²	58	2.020		

Notes:

The table presents the results of the analysis of variance for H1a and H1b for all 15 rounds of the experimental game. See Table 4 and Figure 4 for the results of the regression-based analysis for the H1 hypothesis set.

¹*, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All p-values are one-tailed for directional predictions; p-values for nondirectional predictions are two-tailed and are denoted with †.

²One manager-participant failed to provide a response to question number 17 on the post-experimental questionnaire, which is my measure for the manager's feeling of accountability to the auditor.

Variable Definitions:

The dependent variable is honesty of manager's representation.

Auditor-Manager Informal Communication = dichotomous variable that equals 1 when managers and auditors can informally communicate and 0 when they cannot.

TABLE 3 (CONCLUDED)

Manager's Social Bond with Auditor = the summation of questions 1 through 7 on the post-experimental questionnaire in Appendix C. A higher score indicates a stronger social bond.

Manager's Feeling of Accountability to Auditor = question number 17 on the post-experimental questionnaire in Appendix C. A higher score indicates a greater feeling of accountability.

Manager's Knowledge that Auditors Informally Communicate (Auditor-Auditor Informal Communication) = Auditor participants in the chat (no chat) condition could (not) informally chat online with other auditor participants during the experiment. A dichotomous variable that equals 1 when auditors can informally communicate among themselves and 0 when they cannot. The manager is told when auditors can communicate. In conditions when auditors cannot communicate, no mention of such communication is made to any participant.

Honesty of Manager's Representation = an average of the manager's choice to make an honest representation to the auditor. A value of 1 indicates the manager was honest 100% of the time, and a value of 0 indicates the manager was dishonest 100% of the time.

FIGURE 4

Statistical Diagram for the Effect of the Auditor's Informal Communication with the Manager on the Honesty of the Manager's Representation (H1)^{1,2}

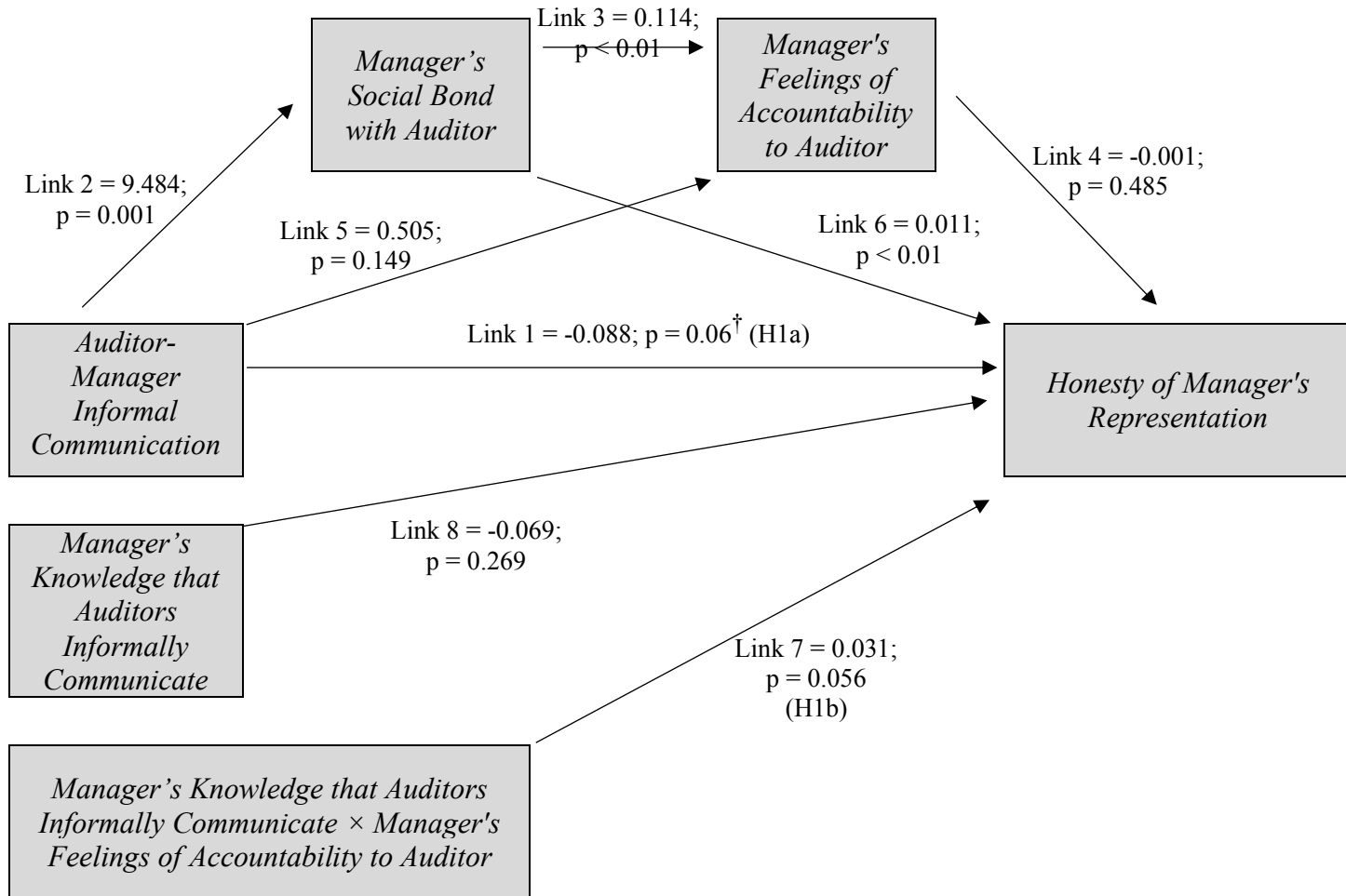


FIGURE 4 (CONCLUDED)

Notes:

This is the statistical diagram for the regression-based analysis of my H1 hypothesis set for all 15 rounds of the experimental game. I used the PROCESS macro (Hayes 2017) model 87. See Figure 1 for the theoretical diagram of this model. The statistical results for this model are also tabulated in Table 4.

¹n = 62; participant 11 from session 8 did not give a response to PEQ 17. Thus, there were only 62 usable responses for this test.

²All p-values are one-tailed unless denoted with †.

Variable Definitions:

Auditor-Manager Informal Communication = dichotomous variable that equals 1 when managers and auditors can informally communicate and 0 when they cannot.

Manager's Social Bond with Auditor = the summation of questions 1 through 7 on the post-experimental questionnaire in Appendix C. A higher score indicates a stronger social bond.

Manager's Feeling of Accountability to Auditor = question number 17 on the post-experimental questionnaire in Appendix C. A higher score indicates a greater feeling of accountability.

43 *Manager's Knowledge that Auditors Informally Communicate (Auditor-Auditor Informal Communication)* = Auditor participants in the chat (no chat) condition could (not) informally chat online with other auditor participants during the experiment. A dichotomous variable that equals 1 when auditors can informally communicate among themselves and 0 when they cannot. The manager is told when auditors can communicate. In conditions when auditors cannot communicate, no mention of such communication is made to any participant.

Honesty of Manager's Representation = an average of the manager's choice to make an honest representation to the auditor. A value of 1 indicates the manager was honest 100% of the time, and a value of 0 indicates the manager was dishonest 100% of the time.

TABLE 4

Moderated Serial Mediation Analysis of the Auditor’s Informal Communication with the Manager on the Honesty of Manager's Representation Mediated by the Manager's Social Bond with Auditor and the Manager's Feeling of Accountability to the Auditor, Moderated by the Manager's Knowledge that Auditors Informally Communicate (H1)

Panel A: Regression Model of *Manager's Social Bond with Auditor*

	Path Coefficient	SE	t-stat	p-value¹	
<i>Auditor-Manager Informal Communication (link 2)</i>	9.484	2.909	3.261	0.001	***

Panel B: Regression Model of *Manager's Feeling of Accountability to Auditor*

	Path Coefficient	SE	t-stat	p-value¹	
<i>Auditor-Manager Informal Communication (link 5)</i>	0.505	0.479	1.053	0.149	
<i>Manager's Social Bond with Auditor (link 3)</i>	0.114	0.020	5.787	< 0.01	***

Panel C: Regression of *Honesty of Manager's Representation*

	Path Coefficient	SE	t-stat	p-value¹	
<i>Auditor-Manager Informal Communication (link 1)</i>	-0.088	0.046	-1.920	0.060	†
<i>Manager's Social Bond with Auditor (link 6)</i>	0.011	0.002	4.434	< 0.01	***
<i>Manager's Feeling of Accountability to Auditor (link 4)</i>	-0.001	0.016	-0.039	0.485	
<i>Manager's Knowledge that Auditors Informally Communicate (Auditor-Auditor Informal Communication; link 8)</i>	-0.069	0.111	-0.619	0.269	
<i>Manager's Knowledge that Auditors Informally Communicate × Manager's Feelings of Accountability to Auditor (link 7)</i>	0.031	0.019	1.616	0.056	*

TABLE 4 (CONTINUED)

Panel D: Indirect Effects

<u>Mediator</u>	<u>Path Coefficient</u>	<u>SE</u>	<u>LLCI²</u>	<u>ULCI²</u>
<i>Manager's Social Bond with Auditor</i>	0.099	0.037	0.035	0.178 **

Panel E: Conditional Indirect Effect (Mediated by Manager's Feeling of Accountability to Auditor)

<u>Manager's Knowledge that Auditors Informally Communicate</u>	<u>Path Coefficient</u>	<u>SE</u>	<u>LLCI²</u>	<u>ULCI²</u>
<i>Knowledge (Auditor-Auditor chat)</i>	0.015	0.017	-0.020	0.050
<i>No Knowledge (No Auditor-Auditor chat)</i>	-0.000	0.013	-0.032	0.027

Panel F: Conditional Indirect Effect (Mediated by Manager's Social Bond with Auditor and the Manager's Feeling of Accountability to Auditor)

<u>Manager's Knowledge that Auditors Informally Communicate</u>	<u>Path Coefficient</u>	<u>SE</u>	<u>LLCI²</u>	<u>ULCI²</u>
<i>Knowledge (Auditor-Auditor chat)</i>	0.033	0.024	-0.007	0.088
<i>No Knowledge (No Auditor-Auditor chat)</i>	-0.001	0.022	-0.048	0.043

n = 62³

TABLE 4 (CONCLUDED)

Notes:

This table reports the results of the regression-based analysis of my H1 hypothesis set for all 15 rounds of the experimental game. I used the PROCESS macro (Hayes 2017) model 87 and specified the confidence level for all confidence intervals to be 95%. See Figure 1 for the theoretical diagram and Figure 4 for the statistical diagram of this model.

¹*, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All reported p-values are one-tailed unless denoted with †.

²95% confidence intervals (CI) for path coefficients are obtained through bootstrapping techniques. Bootstrap confidence intervals are based on 10,000 bootstrap samples. A coefficient is considered statistically significant if the 95% CI does not contain 0.

³Participant 11 from session 8 did not give a response to PEQ 17. Thus, there were only 62 usable responses for this test.

Variable Definitions:

Auditor-Manager Informal Communication = dichotomous variable that equals 1 when managers and auditors can informally communicate and 0 when they cannot.

Manager's Social Bond with Auditor = the summation of questions 1 through 7 on the post-experimental questionnaire in Appendix C. A higher score indicates a stronger social bond.

Manager's Feeling of Accountability to Auditor = question number 17 on the post-experimental questionnaire in Appendix C. A higher score indicates a greater feeling of accountability.

Manager's Knowledge that Auditors Informally Communicate (Auditor-Auditor Informal Communication) = Auditor participants in the chat (no chat) condition could (not) informally chat online with other auditor participants during the experiment. A dichotomous variable that equals 1 when auditors can informally communicate among themselves and 0 when they cannot. The manager is told when auditors can communicate. In conditions when auditors cannot communicate, no mention of such communication is made to any participant.

Honesty of Manager's Representation = an average of the manager's choice to make an honest representation to the auditor. A value of 1 indicates the manager was honest 100% of the time, and a value of 0 indicates the manager was dishonest 100% of the time.

Supplemental Analysis of Manager Behavior

Recall that in my experiment, when the managers and auditors informally communicate they are only able to informally communicate for rounds 1-10, and I take away the ability to informally communicate in rounds 11-15. I split the data into “chat” and “no chat” rounds, which are rounds 1-10 and 11-15, respectively. I perform the same analysis from above on both the chat and no chat rounds. The outcome for the chat rounds is qualitatively the same as the analysis above on all the rounds combined. However, I find two differences between the analysis on the no chat rounds and the analysis on all the rounds combined. First, I find that there is no significant direct effect of the manager’s informal communication with the auditor on the honesty of the manager’s representation (coeff = -0.029; $p = 0.344$, one-tailed; untabulated). Thus, a manager’s past informal communication with the auditor did not have a lingering effect on the manager’s behavior when the manager was not actively engaged in informal communication with the auditor. Second, there is marginally significant direct effect of the manager’s social bond with the auditor on the honesty of the manager’s representation (coeff = 0.005; $p = 0.097$, one-tailed; untabulated). Yet, there is no significant indirect effect of the manager’s informal communication with the auditor on the honesty of the manager’s representation mediated by the manager’s social bond with the auditor (coeff = 0.047; LLCI = -0.025, ULCI = 0.146; untabulated). The second difference suggests that although the manager develops a social bond with the auditor when they informally communicate, the bond only marginally impacts manager behavior when there is no repeated interaction with the auditor. Thus, it appears that the social bond itself cannot alter manager behavior, but repeated interactions are also important for maintaining manager honesty.

Tests of H2: Analysis of Auditor Behavior

My second hypothesis set analyzes the auditor's behavior in response to the auditor's informal communication with both the manager and other auditors. Table 2 Panel A shows that when auditors informally communicate with managers the auditor develops a stronger social bond with the manager versus when they do not informally communicate (40.74 v. 29.13; $p < 0.01$, one-tailed).¹² This is interesting since the auditors and managers have opposing incentives and are only interacting through online chatting rather than face-to-face. Furthermore, when auditors informally communicate with other auditors the auditors feel more bonded with the other auditors than when they do not (44.41 v. 29.20; $p < 0.01$, one-tailed).¹³ Importantly, informal communication with other auditors creates a bond between the auditors despite the fact that their compensation is not dependent on one another.¹⁴ However, the auditor's social bond with other auditors is weaker when the auditor also informally communicates with the manager than when the auditors does not (39.31 v. 49.50; $p = 0.015$, two-tailed).

The auditors exhibit several behavioral differences between conditions. The auditors' average assessment of the managers' honesty is higher when the auditor and manager informally communicate than when they do not (74.97 v. 54.95; $p < 0.01$, one-tailed). However, there is no difference in the auditors' average assessment of manager honesty when the auditors informally communicate with other auditors and when they do not (66.30 v. 63.26; $p = 0.587$, two-tailed). Finally, the auditors choose a low-effort audit more often on average when the auditors informally communicate with managers than when they do not (0.74 v. 0.47; $p < 0.01$, one-

¹² The auditor's social bond with the manager equals the summation of questions 1 through 7 on the post-experimental questionnaire in Appendix C. A higher score indicates a stronger social bond.

¹³ The auditor's bond with other auditors is the summation of questions 8 through 14 on the post-experimental questionnaire in Appendix C. A higher score indicates a stronger bond.

¹⁴ This finding is not inconsistent with Gochnauer (2018) because her compensation structure and game are cooperative rather than competitive like mine.

tailed).¹⁵ This finding is consistent with Bowlin et al. (2015). This is also true when auditors informally communicate with other auditors (0.65 v. 0.55; $p = 0.041$, one-tailed). This finding stands in contrast to King (2002), who finds that when auditors are a part of his “strong group” setting, the auditors choose to perform higher effort audits. However, King’s two-part manipulation confounds the effect he observes. Thus, perhaps it was the threat of public shaming that altered the auditors’ behavior rather than the social aspect of his manipulation. Finally, I observe more instances of audit success¹⁶ when auditors informally communicate than when they do not (0.59 v. 0.52; $p = .039$, one-tailed).

My second hypothesis set makes predictions about how informal communication between the auditor and manager affects the auditor’s assessments of the manager’s honesty and whether informal communication among auditors moderates the effect. To test my hypotheses, I use both ANOVAs and a regression-based analysis method which allows me to test all three hypotheses along with the underlying theory. Specifically, I use model 58 from the PROCESS macro (Hayes 2017). Table 5 reports the results of the ANOVA, and Table 6 and Figure 5 contain the statistical results for my process model.

H2a predicts that when auditors informally communicate with managers, the auditor will assess the manager’s representation as more honest than when they do not informally communicate. As predicted, auditors assess manager representations as more honest on average when they informally communicate than when they do not ($F = 16.170$; $p = 0.0001$, one-tailed; Table 5 Panel A). This effect also holds in the regression-based analysis, which controls for the

¹⁵ A value of 1 indicates the auditor chose a low-effort audit for all 15 rounds of the game, and a value of 0 indicates the auditor chose a high-effort audit for all 15 rounds of the game.

¹⁶ I define audit success as a match of the manager’s reporting choice and the auditor’s corresponding audit effort choice (e.g. the manager chooses the aggressive reporting strategy and the auditor performs a high-effort audit). Audit failure is a mismatch of the manager’s reporting choice and the auditor’s corresponding audit effort choice (e.g. the manager chooses the aggressive reporting strategy and the auditor performs a low-effort audit).

auditors' social bond with the manager and the informal communication among auditors (link 1; coeff = 10.533; p = 0.016, one-tailed). Consistent with my prediction, there is also an indirect effect of the auditor's informal communication with the manager on the auditor's assessment of manager honesty through the auditor's social bond with the manager. The indirect effect is positive and statistically significant regardless of whether the auditors informally communicate among themselves or not (auditor-auditor chat: coeff = 9.886; LLCI = 1.903; ULCI = 19.475; no auditor-auditor chat: coeff = 8.976; LLCI = 0.687; ULCI = 21.446; Table 6 Panel C). Thus, as discussed in more detail below, the auditor's informal communication with other auditors has no impact on this relationship. Thus, H2a is supported.

H2b predicts that an auditor's informal communication with other auditors will have a negative moderating effect on the relationship between the auditor's informal communication with the manager and the auditor's social bond with the manager. Based on the results of the ANOVA reported in Table 5 Panel B, I find an auditor's informal communication with other auditors does not have a significant effect on the auditor's social bond with the manager ($F = 0.100$; $p = 0.377$, one-tailed). This is also the case in the regression-based analysis (link 4; coeff = 2.042; $p = 0.377$, one-tailed). Thus, H2b is not supported.

Finally, H2c predicts that the auditor's informal communication with other auditors will have a negative moderating effect on the relationship between the auditor's social bond with the manager and the auditor's assessment of the manager's honesty. However, H2c is not supported as the interaction reported in Table 5 Panel C is not significant ($F = 0.020$; $p = 0.438$, one-tailed). This is also the case for the regression-based analysis (link 5; coeff = -0.066; $p = 0.418$, one-tailed). Thus, the auditor's informal communication with other auditors does not have any effect on the auditor's behavior.

TABLE 5

Analysis of Auditor’s Assessment of the Honesty of the Manager’s Representation and the Auditor’s Social Bond with the Manager

Panel A: Analysis of Variance of Auditor-Manager Informal Communication on Auditor’s Assessment of the Honesty of the Manager’s Representation (H2a)

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>F</u>	<u>p-value¹</u>
<i>Auditor-Manager Informal Communication</i>	1	6,308	16.170	0.0001 ***
Error	61	23,793		
n = 63				

Panel B: Analysis of Variance of Auditor-Manager Informal Communication and Auditor-Auditor Informal Communication on the Auditor’s Social Bond with the Manager (H2b)

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>F</u>	<u>p-value¹</u>
<i>Auditor-Auditor Informal Communication</i>	1	209	1.270	0.264 †
<i>Auditor-Manager Informal Communication</i>	1	2,096	12.760	0.001 †,***
<i>Auditor-Manager Informal Communication × Auditor-Auditor Informal Communication</i>	1	16	0.100	0.377
Error	59	9,692		
n = 63				

Panel C: Analysis of Variance of Auditor-Auditor Communication and the Auditor’s Social Bond with the Manager on the Auditor’s Assessment of the Honesty of the Manager’s Representation (H2c)

<u>Source</u>	<u>df</u>	<u>SS</u>	<u>F</u>	<u>p-value¹</u>
<i>Auditor-Auditor Informal Communication</i>	1	3	0.010	0.929 †
<i>Auditor’s Social Bond with Manager</i>	1	11,347	36.000	<0.0001 †,***
<i>Auditor’s Social Bond with Manager × Auditor-Auditor Informal Communication</i>	1	8	0.020	0.438
Error	59	18,596		
n = 63				

TABLE 5 (CONCLUDED)

Notes:

The table presents the results of the analysis of variance for H2a, H2b, and H2c for all 15 rounds of the experimental game. The dependent variable in panels A and C is the auditor's assessment of the honesty of the manager's representation. In panel B, the dependent variable is the auditor's social bond with the manager. See Table 6 and Figure 5 for the results of the regression-based analysis for the H2 hypothesis set.

¹*, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All p-values are one-tailed for directional predictions; p-values for nondirectional predictions are two-tailed and are denoted with †.

Variable Definitions:

Auditor-Manager Informal Communication = dichotomous variable that equals 1 when managers and auditors can informally communicate and 0 when they cannot.

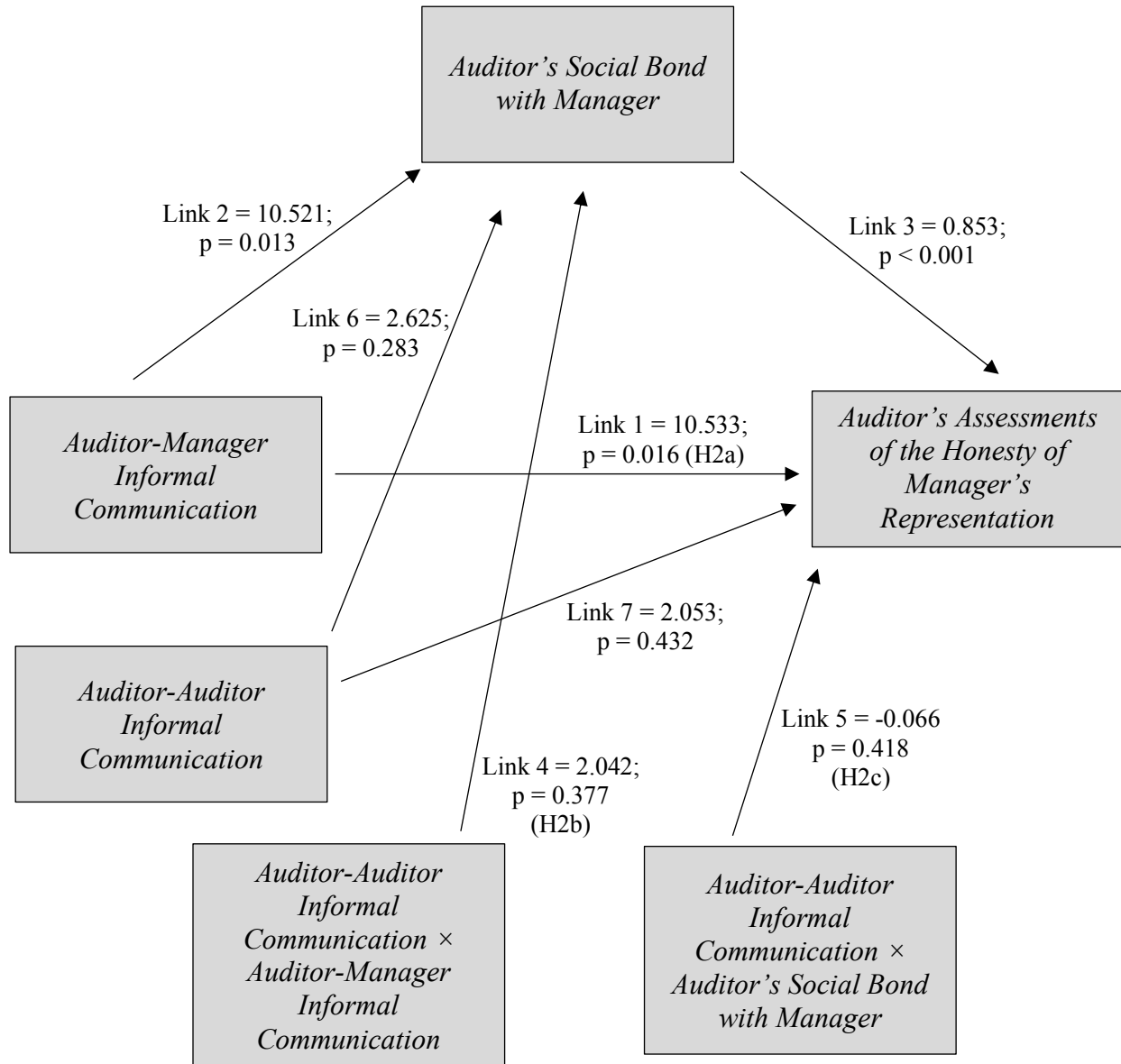
Auditor-Auditor Informal Communication = dichotomous variable that equals 1 when auditors can informally communicate among themselves and 0 when they cannot.

Auditor's Social Bond with Manager = the summation of questions 1 through 7 on the post-experimental questionnaire in Appendix C. A higher score indicates a stronger social bond.

Auditor's Assessment of the Honesty of the Manager's Representation = the average of the auditor's assessments of the honesty of his/her manager's representation. A value of 100 indicates the auditors assessed the manager's representation as honest 100% of the time, and a value of 0 indicates the auditors assessed the manager's representation as dishonest 100% of the time.

FIGURE 5

Statistical Diagram for the Effect of the Auditor’s Informal Communication with the Manager on the Auditor’s Assessments of the Honesty of the Manager’s Representation (H2)¹



Notes:

This is the statistical diagram for the regression-based analysis of my H2 hypothesis set for all 15 rounds of the experimental game. I used the PROCESS macro (Hayes 2017) model 58. See Figure 2 for the theoretical diagram of this model. The statistical results for this model are also tabulated in Table 6.

FIGURE 5 (CONCLUDED)

¹All p-values are one-tailed.

Variable Definitions:

Auditor-Manager Informal Communication = dichotomous variable that equals 1 when managers and auditors can informally communicate and 0 when they cannot.

Auditor-Auditor Informal Communication = dichotomous variable that equals 1 when auditors can informally communicate among themselves and 0 when they cannot.

Auditor's Social Bond with Manager = the summation of questions 1 through 7 on the post-experimental questionnaire in Appendix C. A higher score indicates a stronger social bond.

Auditor's Assessment of the Honesty of the Manager's Representation = the average of the auditor's assessments of the honesty of his/her manager's representation. A value of 100 indicates the auditors assessed the manager's representation as honest 100% of the time, and a value of 0 indicates the auditors assessed the manager's representation as dishonest 100% of the time.

TABLE 6

Moderated Mediation Analysis of the Auditor's Informal Communication with Manager on Auditor's Assessment of the Honesty of The Manager's Representation Mediated by the Auditor's Social Bond with the Manager, Moderated by the Auditor's Informal Communication with Other Auditors (H2)

Panel A: Regression Model of Auditor's Social Bond with Manager

	Path Coefficient	SE	t-stat	p-value ¹	
<i>Auditor-Manager Informal Communication (link 2)</i>	10.521	4.606	2.284	0.013	**
<i>Auditor-Auditor Informal Communication (link 6)</i>	2.625	4.531	0.579	0.283	
<i>Auditor-Manager Informal Communication × Auditor-Auditor Informal Communication (link 4)</i>	2.042	6.462	0.316	0.377	

Panel B: Regression Model of Auditor's Assessment of the Honesty of the Manager's Representation

	Path Coefficient	SE	t-stat	p-value ¹	
<i>Auditor-Manager Informal Communication (link 1)</i>	10.533	4.783	2.202	0.016	**
<i>Auditor's Social Bond with Manager (link 3)</i>	0.853	0.241	3.536	<0.001	***
<i>Auditor-Auditor Informal Communication (link 7)</i>	2.053	11.850	0.173	0.432	
<i>Auditor's Social Bond with Manager × Auditor-Auditor Informal Communication (link 5)</i>	-0.066	0.317	-0.209	0.418	

Panel C: Conditional Indirect Effect (Mediated by Auditor's Social Bond with Manager)

	Path Coefficient	SE	LLCI ²	ULCI ²	
<u>Auditor-Auditor Informal Communication</u>					
<i>Auditor-Auditor Chat</i>	9.886	4.464	1.903	19.475	**
<i>No Auditor-Auditor Chat</i>	8.976	5.358	0.687	21.446	**

n = 63

TABLE 6 (CONCLUDED)

Notes:

This table reports the results of the regression-based analysis of my H2 hypothesis set for all 15 rounds of the experimental game. I used the PROCESS macro (Hayes 2017) model 58 and specified the confidence level for all confidence intervals to be 95%. See Figure 2 for the theoretical diagram and Figure 5 for the statistical diagram of this model.

¹*, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All reported p-values are one-tailed.

²95% confidence intervals (CI) for path coefficients are obtained through bootstrapping techniques. Bootstrap confidence intervals are based on 10,000 bootstrap samples. A coefficient is considered statistically significant if the 95% CI does not contain 0.

Variable Definitions:

Auditor-Manager Informal Communication = dichotomous variable that equals 1 when managers and auditors can informally communicate and 0 when they cannot.

Auditor-Auditor Informal Communication = dichotomous variable that equals 1 when auditors can informally communicate among themselves and 0 when they cannot.

Auditor's Social Bond with Manager = the summation of questions 1 through 7 on the post-experimental questionnaire in Appendix C. A higher score indicates a stronger social bond.

Auditor's Assessment of the Honesty of the Manager's Representation = the average of the auditor's assessments of the honesty of his/her manager's representation. A value of 100 indicates the auditors assessed the manager's representation as honest 100% of the time, and a value of 0 indicates the auditors assessed the manager's representation as dishonest 100% of the time.

Supplemental Analysis of Auditor Behavior

Recall again that I remove the opportunity to informally communicate for all players in the final five rounds of the experiment. I split the data between the chat and no chat rounds (rounds 1-10 and 11-15, respectively) and perform the same analysis as above. I find no qualitative differences in the chat rounds from the analysis on all 15 rounds. However, in the analysis of the no chat rounds I find that the direct effect of an auditor's (past) informal communication with the manager does not affect the auditor's assessment of the manager's honesty (coeff = 3.767; $p = 0.291$, one-tailed, untabulated) while holding the other factors constant. Thus, while there is still a positive relationship, the effect is not significant, which suggests that an auditor's past informal communication with a manager itself does not impact future assessments of manager honesty. Yet, the indirect effect (for both auditor-auditor informal communication conditions) is still significant (untabulated) suggesting that the auditor's social bond with the manager has a lingering effect resulting in higher assessments of manager honesty even after informal communication has ended.

Next, I investigate the relationship between the auditor's assessment of the honesty of the manager's representation and the auditor's choice of audit effort. For this analysis, I first divide the data between instances where the manager represented to the auditor that he/she chose the conservative reporting option and where the manager represented that he/she chose the aggressive reporting option. Next, I examine the correlation coefficients between the auditor's assessment of the manager's honesty and the auditor's audit effort choice. I find that when the manager represents to the auditor that he/she chose the conservative reporting option, there is a positive association between the auditor's assessment and effort choice ($r = 0.295$; $p < 0.001$, two-tailed; untabulated). Specifically, a higher assessment of honesty is associated with instances of

low effort audits, which is the rational choice of audit effort if the auditor believes the manager is honest. However, when the manager represents to the auditor that he/she chose the aggressive reporting option, there is a no significant association between the auditor's assessment and effort choice ($r = 0.081$; $p = 0.1683$, two-tailed; untabulated). Two potential explanations for this include first, in instances when the manager discloses that he/she chose the aggressive reporting option, the only rational choice for the auditor is a high effort audit regardless of whether the auditor believes the manager is honest or not. Or second, it could be evidence that the auditor and manager chose to collude to maximize individual payoffs. Consequently, an auditor's assessment of the manager's honesty is only associated with the auditor's action when the manager represents that he/she chose the conservative option.

Finally, I perform a separate mediation analysis to determine if an auditor's illusion of control mediates the relationship I find between the auditor's informal communication with the manager and the auditor's assessment of the manager's honesty. I perform a separate mediation analysis for this and do not find a significant indirect effect (coeff = -0.275 ; LLCI = -2.339 , ULCI = 1.738 ; untabulated). I measure the auditor's illusion of control with question 15 on the post-experimental questionnaire, which asks participants to rate how risky they believed the experimental choice to be. I expect that a participant who believed to have control over the outcome to have rated the choice as not risky.¹⁷ Informal communication between the auditor and manager does not create an illusory feeling of control for the auditor (coeff = 0.206 ; $p = 0.687$, two-tailed; untabulated). Thus, it appears that it is the auditor's social bond and not an

¹⁷Furthermore, because the auditor's outcome is dependent on the manager's choice, I also perform this analysis using question 18 from my post-experimental questionnaire, which asks how much control the auditor felt over the manager. I do not find a significant indirect effect with this analysis either.

illusory feeling of control affecting auditor behavior when the auditor and manager informally communicate.

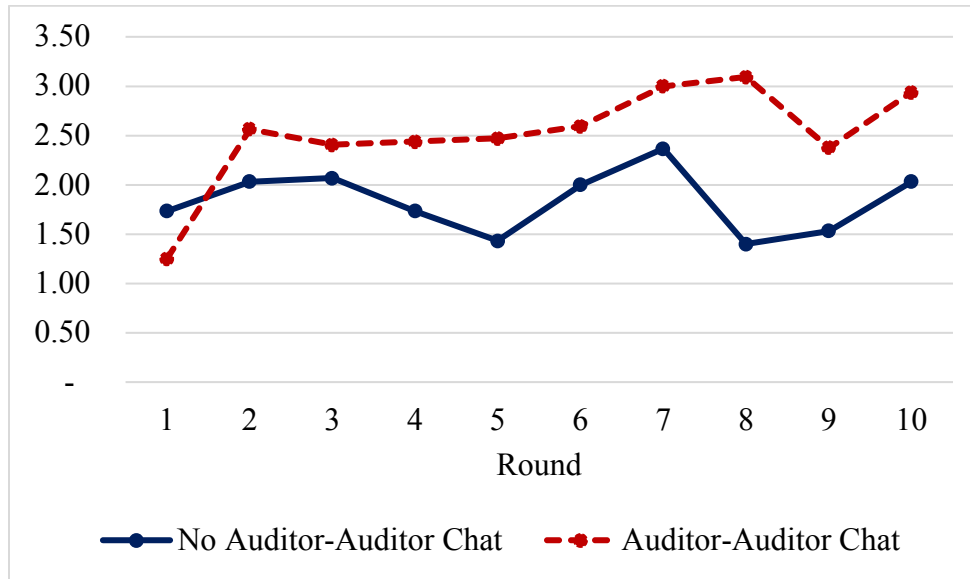
Analysis of Chat

I analyze the volume and content of the informal communication that the auditors and managers exchanged as well as the informal communication among the auditors. First, I report the volume of the informal communication exchanged by condition and type. I measure the volume in two ways: number of messages exchanged each round and words exchanged each round. Figure 6 shows the average number of messages exchanged each round by chat type. Specifically, Panel A reports the average number of messages exchanged between auditor and manager pairs by round between auditor-auditor informal communication conditions. Panel B reports the average messages exchanged among the auditors by round between auditor-manager informal communication conditions. Table 7 reports the average words exchanged each round by chat type. I find that auditors and managers exchanged more words on average each round when the auditors were not also chatting with other auditors (5.815 v. 4.934; $p = 0.010$, two-tailed). But, Panel B of Table 7 reports that there is no significant difference in the number of words exchanged each round among the auditors regardless of whether the auditors also informally communicated with the manager (5.158 v. 5.117; $p = 0.938$, two-tailed). Thus, the volume of chat between the auditor and manager is different depending on whether auditors also informally communicate with other auditors.

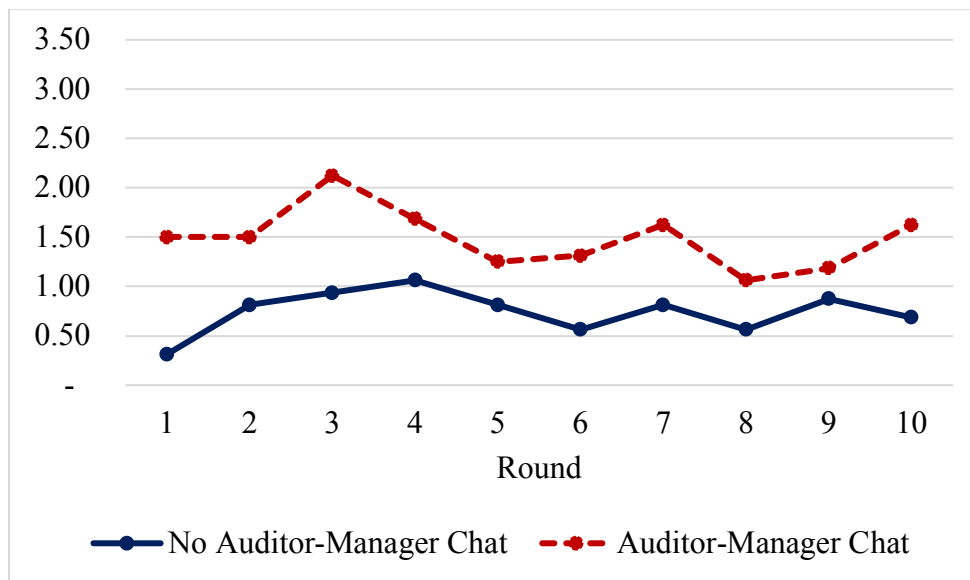
FIGURE 6

Auditor-Manager and Auditor-Auditor Chat Volume by Round

Panel A: Auditor-Manager Chat Volume¹



Panel B: Auditor-Auditor Chat Volume²



Notes:

¹Auditor-Manager Chat Volume is the average number of messages exchanged each round between the auditor and manager pairs.

² Auditor-Auditor Chat Volume is the average number of messages exchanged each round among the auditor participants.

Next, I examine the content of the chat. I first code the content of each message exchanged as one of three mutually exclusive categories. The three categories are ‘game related,’ ‘social,’ and ‘other.’ I create a dichotomous variable for each content category and set the value of the variable to 1 if the message contains that content and 0 otherwise. Specifically, I code a message as ‘game-related’ if the message discusses strategy, a player decision, or payoff (e.g. “I don’t trust my green so I’m going down every time”, “okay I put up”, or “10 points three times in a row”). If the message contains a greeting (e.g. “hey” or “what’s up”) or a subject matter that is not game related (e.g. “Did you get your football tickets yesterday” or “Kind of a cold day we’re having.”), then I code the message as ‘social.’ Finally, if a message contains a statement of boredom, frustration, or confusion (e.g. “I hope this doesn’t take longer than an hour”, “I hate that its partially up to chance...” or “tbh [to be honest] kind of clueless how this works”, I code the content of the message as ‘other.’

Table 7 reports the average content of the informal conversation exchanged by chat type. Specifically, Panel A shows the average content of the conversation exchanged each round between the auditor and manager. I find that the auditor and manager discuss the game more when the auditors are also talking to other auditors (0.730 v. 0.582; $p = 0.002$, two-tailed). Furthermore, the informal conversation between the auditors and managers is less social when auditors are also communicating with other auditors (0.229 v. 0.348, $p = 0.006$, two-tailed). However, there is no difference in proportion of the conversation that is related to boredom, frustration, or confusion. Panel B of Table 7 reports the average content of the informal conversation exchanged among the auditors each round between the auditor-manager informal communication conditions. I find no significant differences in the content of the conversations

the auditors have each round regardless of whether the auditors also informally communicate with the managers.

TABLE 7

Descriptive Statistics of Chat Volume and Content and Mediation Analysis of The Auditor’s Informal Communication with Other Auditor’s on Manager and Auditor Behavior Mediated by the Content of the Auditor and Manager Informal Communication

Panel A: Means (Std Error) of Auditor-Manager Chat Volume and Content for Each Auditor-Manager Pair per Round by Auditor-Auditor Chat Conditions

	Auditor-Auditor Chat			
	Chat	No Chat	<i>p</i>-value¹	
Words Exchanged	4.934 (0.166) n = 147	5.815 (0.296) n = 132	0.010	**
Content: Game Related	0.730 (0.028) n = 147	0.582 (0.037) n = 132	0.002	***
Content: Social	0.229 (0.026) n = 147	0.348 (0.034) n = 132	0.006	***
Content: Other	0.041 (0.011) n = 147	0.070 (0.017) n = 132	0.148	

TABLE 7 (CONTINUED)

Panel B: Means (Std Error) of Auditor-Auditor Chat Volume and Content per Round by Auditor-Manager Chat Conditions

	Auditor-Manager Chat		
	Chat	No Chat	<i>p</i>-value¹
Words Exchanged	5.117 (0.308) n = 20	5.158 (0.446) n = 14	0.938
Content: Game Related	0.503 (0.066) n = 20	0.600 (0.096) n = 14	0.395
Content: Social	0.472 (0.063) n = 20	0.356 (0.086) n = 14	0.272
Content: Other	0.026 (0.012) n = 20	0.044 (0.032) n = 14	0.587

Panel C: Regression Model of *Game-Related Content of Auditor-Manager Informal Communication*

	<u>Path</u>	<u>SE</u>	<u>t-stat</u>	<u><i>p</i>-value¹</u>	
	<u>Coefficient</u>				
<i>Auditor-Auditor Informal Communication</i>	0.181	0.092	1.977	0.058	*

TABLE 7 (CONTINUED)

Panel D: Regression Model of *Manager's Reporting Strategy*

	<u>Path Coefficient</u>	<u>SE</u>	<u>t-stat</u>	<u>p-value¹</u>	
<i>Auditor-Auditor Informal Communication</i>	-0.011	0.091	-0.124	0.903	
<i>Game-Related Content of Auditor-Manager Informal Communication</i>	0.345	0.173	1.997	0.056	*
Indirect Effect					
	<u>Mediator</u>	<u>Path Coefficient</u>	<u>SE</u>	<u>LLCI²</u>	<u>ULCI²</u>
	<i>Game-Related Content of Auditor-Manager Informal Communication</i>	0.063	0.049	-0.004	0.183
n = 31					

Panel E: Regression Model of *Honesty of Manager's Representation*

	<u>Path Coefficient</u>	<u>SE</u>	<u>t-stat</u>	<u>p-value¹</u>	
<i>Auditor-Auditor Informal Communication</i>	0.072	0.109	0.665	0.511	
<i>Game-Related Content of Auditor-Manager Informal Communication</i>	0.208	0.207	1.008	0.322	
Indirect Effect					
	<u>Mediator</u>	<u>Path Coefficient</u>	<u>SE</u>	<u>LLCI²</u>	<u>ULCI²</u>
	<i>Game-Related Content of Auditor-Manager Informal Communication</i>	0.038	0.052	-0.056	0.155
n = 31					

TABLE 7 (CONTINUED)

Panel F: Regression Model of Auditor's Audit Effort Choice

	<u>Path Coefficient</u>	<u>SE</u>	<u>t-stat</u>	<u>p-value¹</u>	
<i>Auditor-Auditor Informal Communication</i>	0.049	0.070	0.702	0.489	
<i>Game-Related Content of Auditor-Manager Informal Communication</i>	0.282	0.133	2.123	0.043	**
Indirect Effect					
	<u>Mediator</u>	<u>Path Coefficient</u>	<u>SE</u>	<u>LLCI²</u>	<u>ULCI²</u>
	<i>Game-Related Content of Auditor-Manager Informal Communication</i>	0.051	0.047	-0.007	0.170

n = 31

Panel G: Regression Model Auditor's Assessment of the Honesty of the Manager's Representation

	<u>Path Coefficient</u>	<u>SE</u>	<u>t-stat</u>	<u>p-value¹</u>	
<i>Auditor-Auditor Informal Communication</i>	2.558	7.189	0.356	0.725	
<i>Game-Related Content of Auditor-Manager Informal Communication</i>	3.480	13.678	0.254	0.801	
Indirect Effect					
	<u>Mediator</u>	<u>Path Coefficient</u>	<u>SE</u>	<u>LLCI²</u>	<u>ULCI²</u>
	<i>Game-Related Content of Auditor-Manager Informal Communication</i>	0.630	2.227	-4.736	4.580

n = 31

Notes:

This table reports the descriptive statistics of the volume and content of the auditor-manager chat and the auditor-auditor chat in Panels A and B. Panels C through G report the results of a regression-based mediation analysis of the effect of auditor-auditor informal communication on manager and auditor behavior mediated by the content of the auditor-manager informal

TABLE 7 (CONCLUDED)

communication. For the mediation analysis, I used the PROCESS macro (Hayes 2017) model 4 and specified the confidence level for all confidence intervals to be 95%.

¹*, **, *** indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. All reported p-values are two-tailed.

²95% confidence intervals (CI) for path coefficients are obtained through bootstrapping techniques. Bootstrap confidence intervals are based on 10,000 bootstrap samples. A coefficient is considered statistically significant if the 95% CI does not contain 0.

Variable Definitions:

Words Exchanged = The average number of words exchanged in a conversation each round either between an auditor and manager or among the auditors.

Content: Game Related = The proportion of a conversation that was related to the experimental game. A value of 1 indicates the conversation was entirely game focused and a value of 0 indicates that no portion of the conversation was focused on the game.

Content: Social = The proportion of a conversation that was of a social nature. A value of 1 indicates the conversation was entirely social and a value of 0 indicates that no portion of the conversation was social.

Content: Other = The proportion of a conversation that was not related to the experimental game or of a social nature. A value of 1 indicates the conversation was entirely focused on non-game or social topics and a value of 0 indicates that no portion of the conversation was focused on topics other than the game or a social nature.

Auditor-Auditor Informal Communication = dichotomous variable that equals 1 when auditors can informally communicate among themselves and 0 when they cannot.

Game-Related Content of Auditor-Manager Informal Communication = The average proportion of the auditor and manager conversation that was related to the experimental game. A value of 1 indicates the conversation was entirely game focused and a value of 0 indicates that no portion of the conversation was focused on the game.

Manager's Reporting Choice = an average of the manager's choice to report conservatively or aggressively. A value of 1 indicates the manager reported conservatively 100% of the time, and a value of 0 indicates the manager reported aggressively 100% of the time.

Honesty of Manager's Representation = an average of the manager's choice to make an honest representation to the auditor. A value of 1 indicates the manager was honest 100% of the time, and a value of 0 indicates the manager was dishonest 100% of the time.

Auditor's Audit Effort Choice = an average of the auditor's choice of audit effort. A value of 1 indicates the auditor chose a low-effort audit 100% of the time, and a value of 0 indicates the auditor chose a high-effort audit 100% of the time.

Auditor's Assessment of the Honesty of the Manager's Representation = the average of the auditor's assessments of the honesty of his/her manager's representation. A value of 100 indicates the auditors assessed the manager's representation as honest 100% of the time, and a value of 0 indicates the auditors assessed the manager's representation as dishonest 100% of the time.

Finally, to determine whether the content of the chat is related to manager and auditor behavior, I perform several mediation analyses. I employ a regression-based approach and use model 4 of the PROCESS Macro (Hayes 2017). Because I find that there is a difference in the amount of game-related content the auditors and managers exchange depending on whether the auditors are also talking to other auditors, I examine whether that content leads to any differences in auditor and manager behavior. Specifically, I analyze the manager's behavior through two variables: the manager's reporting choice and the honesty of the manager's representation. I also analyze the auditor's behavior with two variables: the auditor's choice of audit effort and the auditor's assessment of the manager's honesty. My independent variable is the auditor-auditor informal communication, and the game-related content is the mediator.

Table 7 Panels C through E report the results of my mediation analyses on the manager's behavior. I find that when the auditors also talk to other auditors, there is a marginally significant increase in the game-related content of the informal conversation between the auditor and manager (coeff = 0.181; $p = 0.058$, two-tailed). The results reported in Panel D show that the content of the auditor and manager conversations have a significant effect on the manager's reporting choice (coeff = 0.345; $p = 0.056$, two-tailed). Specifically, more game related discussions lead the manager to choose the conservative reporting option. However, the indirect effect is not significant at the 95% level. Panel E shows that there is no relationship between the content of the auditor and manager conversations and the manager's honesty. Thus, the content seems to affect the manager's reporting choice, but not the representations the manager makes about those choices.

Panels C, F, and G report the results of my mediation analysis on the auditor's behavior. The results of Panel C are discussed above. Panel F shows that the content of the auditor and

manager conversations have a significant effect on the auditor's choice of audit effort (coeff = 0.282; $p = 0.043$, two-tailed). Specifically, the auditor chooses more lax audits following informal conversations that have higher levels of game-related content. However, the indirect effect is not significant at the 95% level. Finally, Panel G shows that there is no relationship between the content of the auditor and manager conversations on the auditor's assessment of the manager's honesty. Thus, again the content appears to impact the auditor's choice of effort, but not the auditor's beliefs about the manager.

V. CONCLUSION

This study examines the effect of auditors' recurring, informal communication in the audit process on financial reporting outcomes. Specifically, this study explores how an auditor's informal conversations with fellow auditors interacts with the auditor's informal conversations with client management and impacts auditor and manager behavior. The behavior I examine is the manager's honesty, the auditor's beliefs about the manager's honesty, and the audit outcome.

To address my research question, I conduct an experiment according the traditions of experimental economics and use a 2×2 full factorial design where I manipulate the auditor's ability to informally communicate in two ways. First, I manipulate the auditor's ability to chat online with the manager. And second, I manipulate the auditor's ability to chat online with other auditors. Participants are assigned the role of either auditor or manager and play an interactive, strategic game that models the auditor-manager relationship in a stylized audit setting. Participants play this game for 15 rounds during which I observe the manager's honesty, the auditor's beliefs about the manager's honesty, and the final audit outcome.

In my first hypothesis, I predict that when the auditor and manager informally communicate, the manager will make more honest representations to the auditor and this will occur because of the social bond that will form between the auditor and manager through their informal communication. As predicted, I find that managers make more honest representations on average when they informally communicate with the auditor because of the social bond the manager forms with the auditor. However, the direct effect of the manager's informal

communication with the auditor on the manager's honesty is negative. Thus, without the social bond, the manager uses the communication as cheap talk, but the social bond undoes this effect. I also predict that the manager's knowledge that auditors also informally communicate will have a positive moderating effect on the relationship between the manager's feeling of accountability to the auditor and the manager's honesty. I find marginal support for this hypothesis. My findings suggest that managers are sensitive to interactions with the auditors, and these interactions can have a positive impact on manager behavior.

My second hypothesis predicts that when the auditors informally communicate with the managers, they will believe the managers are more honest. As predicted, I find that auditors believe the managers are more honest when the auditors and managers informally communicate because of the social bond formed through communication. I also posit that the auditor's informal communication with other auditors will have a negative moderating effect on both the formation of the auditor's social bond with the manager and the relationship between the auditor's social bond with the manager and the auditor's beliefs about the manager's honesty. However, neither of these predictions are supported. Thus, the auditor's informal communication with other auditors appears to have no impact on auditor behavior.

I also perform supplemental analysis on the volume and content of the conversations between the auditor and manager participants and among the auditors. I find that when the auditors also talk to other auditors, the auditors and managers exchange significantly fewer words per conversation. But, a significantly larger proportion of the auditor's conversation with the manager is game-related when the auditors also informally communicate with other auditors. In further analysis, I find that this game-related content has an impact on both the manager's

reporting choice and the auditor's choice of audit effort, but neither the manager's honesty nor the auditor's beliefs about the manager's honesty.

This study makes several important contributions to the accounting literature, accounting profession, and accounting regulators. First, this paper examines the process by which the auditor's informal conversations in the audit environment affects financial reporting outcomes. Specifically, I demonstrate how informal communication impacts audit quality and management reporting choices through the mechanisms of social bonds. I show that informal communication between auditors and managers forms social bonds that impact auditor and manager decisions despite their opposing incentives. Furthermore, the social bond is formed even when their informal communication takes place electronically rather than face-to-face. Second, prior research in accounting that includes communication primarily focuses on the communication between the auditor and manager. My study incorporates informal auditor-auditor communication and finds that it develops a social bond among auditors. This informal communication does not impact auditor assessments of manager honesty, which is meaningful for auditing firms that allow audit teams to be physically separated during the audit (e.g. telecommuting or off-shoring). Third, prior research has not placed a direct focus on how informal conversations between the auditor and client manager impact management's decisions. My study creates a setting that allows managers to be dishonest without penalty, and my findings demonstrate that the manager's social bond with the auditor causes the manager to be more honest. My findings provide a better understanding of the social nature of the auditor-manager relationship, which informs regulators as they set standards for practice. My study also has implications for practitioners as they structure audit teams and plan audits.

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APPENDIX

Appendix A: Participant Instructions

Ground Rules

- **NO TALKING**

I hope that you enjoy participating in this study, but it is serious research. Accordingly, I ask that you refrain from talking to each other during the session—comments, even if intended in jest, could contaminate others' decisions. If you have a question, please raise your hand. Finally, please keep your eyes on your own screen and do not look at other's screens.

- **NO DECEPTION**

I promise that I will conduct the experiment in the exact manner described in these instructions, without any form of deception.

Please do not remove these instructions or other materials from the laboratory, except for the copy of your information sheet.

How will you be compensated?

I will pay you a \$5.00 show-up fee for participating in today's session. Furthermore, as described below, you can earn additional cash compensation during the session.

In today's session, you will have the opportunity to earn points based on the decisions you and others make. Each point you earn will increase your cash payment at the rate of 19 cents per point earned.

Upon completion of this study, and before you leave the room today, you will be paid in US dollars.

Therefore, your compensation for this study may be calculated as follows:

$$\text{Total compensation} = \$5.00 + (\text{Total Points Earned} \times \$0.19)$$

Depending on how you play the game, you could earn anywhere from \$8 to approximately \$34

Please note that the number of points you earn each round will depend on three things as described on page 4

- (1) the action you choose,
- (2) the action chosen by the player you are paired with, and
- (3) random chance.

The decisions that you and the others will make are described in more detail below, but the important thing to keep in mind is that ***the more points you earn, the more money you will be paid.***

Overview of Session

This is a computerized, decision-making study. We expect the entire session to last no longer than 75 minutes. The session will consist of 15 rounds of a computerized, simple decision-making game.

The following pages outline the detailed procedures to be used during this session. At the end of the instructions there will be a short quiz on these instructions to ensure your understanding.

Role Assignment

Just prior to the first round, the computer will assign you to a player type, either BLUE or GREEN. You will remain in the same player type for all 15 rounds. One-half of the participants will be assigned to the BLUE player type, and the remaining one-half will be assigned to the GREEN player type.

Prior to the first round, each GREEN player will be paired with a BLUE player for all 15 rounds. Note that these pairings are anonymous. Therefore, you will never know exactly with whom you are paired. All you will know for sure is that you are paired with one of the participants assigned to the other player type.

Action Choices

Each player must choose between the two options available to them, which leads to 4 possible outcomes for each round. If you are a GREEN player, you will designate your choice by selecting LEFT or RIGHT. If you are a BLUE player, you will designate your choice by selecting UP or DOWN. You will use your computer's mouse to make your choice.

IMPORTANT: You will always make your choice without knowing what the other player has chosen for that round. This is the same for the player you will be paired with.

Next, we describe the points for each possible outcome in a round.

Earning Points

As described in the table below, the number of points you will earn in each round will depend on the decisions you and the other player you are paired with make. Feel free to refer to this table during the session.

		GREEN	
		LEFT	RIGHT
BLUE	UP	<p>GREEN earns: 4 (10% chance) or 6 (90% chance) 5.8 average</p> <p>BLUE earns: 10 (70% chance) or 1 (30% chance) 7.3 average</p>	<p>GREEN earns: 1 (10% chance) or 10 (90% chance) 9.1 average</p> <p>BLUE earns: 10 (30% chance) or 1 (70% chance) 3.7 average</p>
	DOWN	<p>GREEN earns: 4 (90% chance) or 6 (10% chance) 4.2 average</p> <p>BLUE earns: 4 (70% chance) or 6 (30% chance) 4.6 average</p>	<p>GREEN earns: 1 (90% chance) or 10 (10% chance) 1.9 average</p> <p>BLUE earns: 4 (30% chance) or 6 (70% chance) 5.4 average</p>

Notice from the table above that each player’s earnings depend not only on his/her own choice, but also the other player’s choice.

The table can be read as follows...

If the BLUE player selects **UP** and the GREEN player selects **LEFT**:

There is a 70% chance that BLUE will earn 10 points and a 30% chance that BLUE will earn 1 point;

There is a 10% chance that GREEN will earn 4 points and a 90% chance that GREEN will earn 6 points.

On average (if these choices were made repeatedly many, many times), BLUE would earn an average of 7.3 points and GREEN would earn an average of 5.8 points.

If the BLUE player selects **UP** and the GREEN player selects **RIGHT**:

There is a 30% chance that BLUE will earn 10 points and a 70% chance that BLUE will earn 1 point;

There is a 10% chance that GREEN will earn 1 point and a 90% chance that GREEN will earn 10 points.

On average (if these choices were made repeatedly many, many times), BLUE would earn an average of 3.7 points and GREEN would earn an average of 9.1 points.

If the BLUE player selects **DOWN** and the GREEN player selects **LEFT**:

There is a 70% chance that BLUE will earn 4 points and a 30% chance that BLUE will earn 6 points;

There is a 90% chance that GREEN will earn 4 points and a 10% chance that GREEN will earn 6 points.

On average (if these choices were made repeatedly many, many times), BLUE would earn an average of 4.6 points and GREEN would earn an average of 4.2 points.

If the BLUE player selects **DOWN** and the GREEN player selects **RIGHT**:

There is a 30% chance that BLUE will earn 4 points and a 70% chance that BLUE will earn 6 points;

There is a 90% chance that GREEN will earn 1 point and a 10% chance that GREEN will earn 10 points.

On average (if these choices were made repeatedly many, many times), BLUE would earn an average of 5.4 points and GREEN would earn an average of 1.9 points.

Communication

[MANAGER CHAT CONDITION ONLY] For 45 seconds at the beginning of each round, you will be able to chat online with the other player you are paired with. You may chat about anything you wish including the game or other topics, but since you are paired with the other player anonymously, please do not communicate identifying information about yourself. Once the timer in the upper right-hand corner gets to zero the chat will be over.

[AUDITOR CHAT CONDITION ONLY] For 45 seconds at the beginning of each round, each BLUE player will be able to chat online with the other BLUE players. You may chat about anything you wish including the game or other topics, but please do not communicate identifying information about yourself. Once the timer in the upper right-hand corner gets to zero the chat will be over.

[AUDITOR CHAT CONDITION *FOLLOWING MANAGER CHAT*] For 45 seconds after the chat between the GREEN and BLUE players, each BLUE player will be able to chat online with the other BLUE players. You may chat about anything you wish including the game or other topics, but please do not communicate identifying information about yourself. Once the timer in the upper right-hand corner gets to zero the chat will be over.

[ALL CONDITIONS] Each round the GREEN player will first submit his/her action choice (LEFT or RIGHT). After the GREEN player submits his/her action choice, but before the BLUE player submits his/her action choice, the GREEN player will send one of the following messages to the BLUE player:

- “I selected LEFT this round.”
- “I selected RIGHT this round.”

Note: the GREEN player may submit either message regardless of their action choice. That is, the submitted message may match GREEN’s actual choice, or it may not.

After the BLUE player receives the GREEN player’s message, the BLUE player will make his/her action choice (UP or DOWN).

Feedback

After each player has made his/her action choice, you will learn how many points you earned in that round based on the table on page 4. Each person will only be told their own point outcome, but will not be told the number of points earned by any other player. After you receive this report, click “OK” to continue on to the next round.

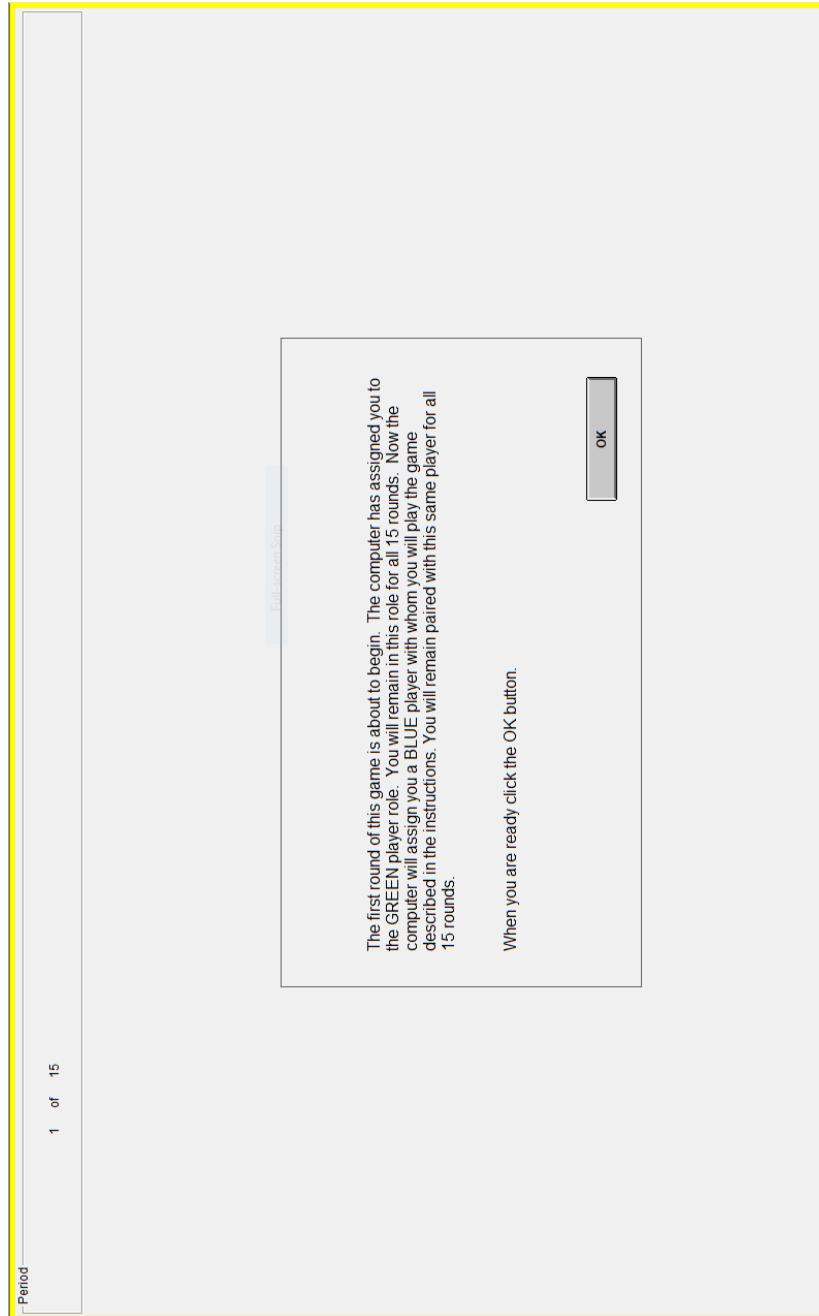
Post-Session Questionnaire and Payment

At the end of the session, I will ask you to complete a short questionnaire about your experience. When you have completed the questionnaire, please wait patiently and the supervisor will pay you for your participation.

Please do not remove these instructions or other materials from the laboratory, except for your copy of the information sheet.

Appendix B: z-Tree Screenshots

[Manager (Green) Player]



Period

1 of 15

Instructions Quiz

1. You will remain the same player type for all 15 rounds of the session.
 TRUE
 FALSE
2. The number of points you earn each round will depend on three things: (1) the action you choose, (2) the action chosen by the player you are paired with, and (3) random chance.
 TRUE
 FALSE
3. You will know the other player's choice before making your own choice.
 TRUE
 FALSE
4. If the BLUE player selects UP and the GREEN player selects LEFT, the BLUE player earns 7.3 points and the GREEN player earns 5.8 points.
 TRUE
 FALSE
5. If the BLUE player selects DOWN and the GREEN player selects RIGHT, there is a 90% chance that GREEN will earn 1 point and a 10% chance that GREEN will earn 10 points.
 TRUE
 FALSE
6. After the GREEN player chooses an action, he or she will send a message to the BLUE player about that choice. The message from the GREEN player must match the GREEN player's choice.
 TRUE
 FALSE
7. All participants will be paid the same amount.
 TRUE
 FALSE

Click the OK button to submit your answers.

OK

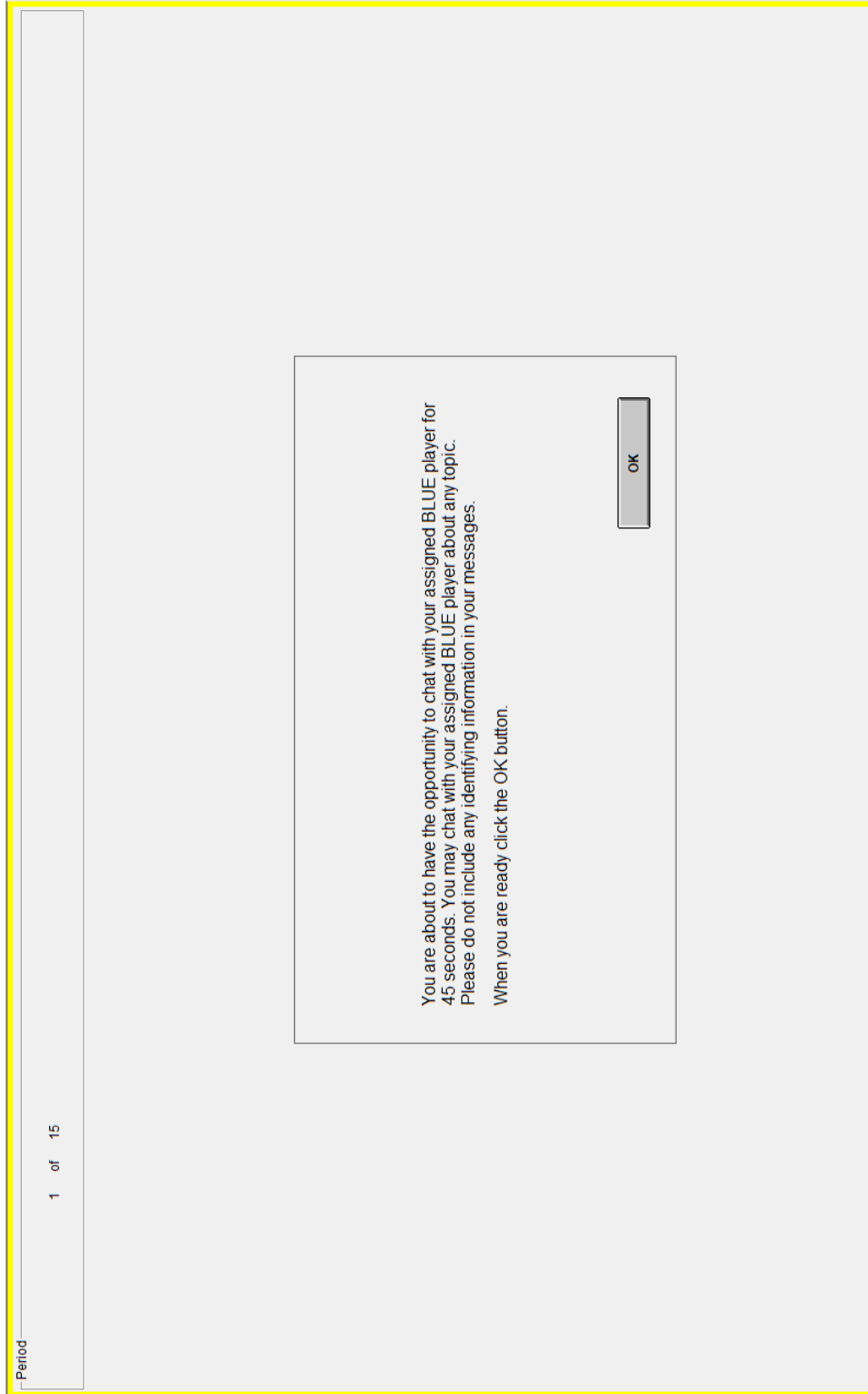
Instructions Quiz

- 1. You will remain the same player type for all 15 rounds of the session.
 TRUE
 FALSE
INCORRECT, you will remain the same player type for the entire session.
- 2. The number of points you earn each round will depend on three things: (1) the action you choose, (2) the action chosen by the player you are paired with, and (3) random chance.
 TRUE
 FALSE
INCORRECT, your earnings each round depend on three things: (1) the action you choose, (2) the action chosen by the player you are paired with, and (3) random chance.
- 3. You will know the other player's choice before making your own choice.
 TRUE
 FALSE
INCORRECT, you will always make your choice without knowing what the other player has chosen for that round.
- 4. If the BLUE player selects UP and the GREEN player selects LEFT, the BLUE player earns 7.3 points and the GREEN player earns 5.8 points.
 TRUE
 FALSE
INCORRECT, there is a 70% chance that BLUE will earn 10 points and a 30% chance that BLUE will earn 1 point, and there is a 10% chance that GREEN will earn 4 points and a 90% chance that GREEN will earn 6 points. BLUE will not earn exactly 7.3 points, and GREEN will not earn exactly 5.8 points.
- 5. If the BLUE player selects DOWN and the GREEN player selects RIGHT, there is a 90% chance that GREEN will earn 1 point and a 10% chance that GREEN will earn 10 points.
 TRUE
 FALSE
INCORRECT, there is a 90% chance that GREEN will earn 1 point and a 10% chance that GREEN will earn 10 points.
- 6. After the GREEN player chooses an action, he or she will send a message to the BLUE player about that choice. The message from the GREEN player must match the GREEN player's choice.
 TRUE
 FALSE
INCORRECT, GREEN'S message may match his or her choice for that round, or it may not.
- 7. All participants will be paid the same amount.
 TRUE
 FALSE
INCORRECT, each participant's earnings depend largely on the number of points the player has earned over the session.

Click the OK button to continue.

OK

[Auditor-Manager Chat Condition Only]



[Auditor-Manager Chat Condition Only]

Period

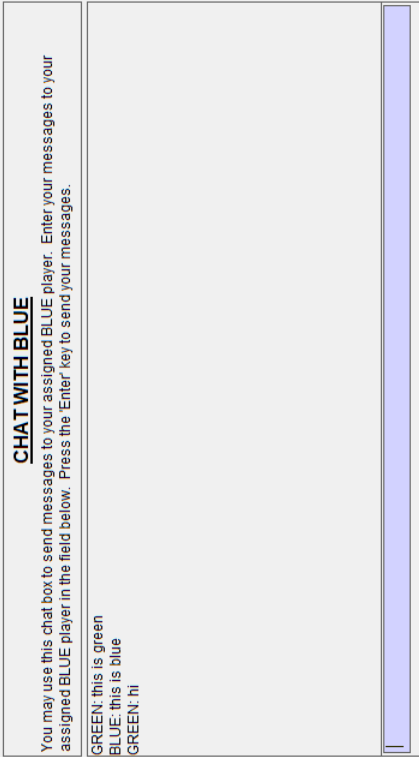
1 of 15

Chat time remaining [sec] 8

CHAT WITH BLUE

You may use this chat box to send messages to your assigned BLUE player. Enter your messages to your assigned BLUE player in the field below. Press the 'Enter' key to send your messages.

GREEN: this is green
BLUE: this is blue
GREEN: hi



[Auditor-Auditor Chat Condition Only]

Chat time remaining [sec] 25

Please wait while your assigned BLUE player chats with the other BLUE players.

The game will continue when the countdown reaches zero.

GREEN DECISION

You are the GREEN player. You may play LEFT or RIGHT. Please select your choice for this round.

LEFT

RIGHT

GREEN MESSAGE

Please choose one of the following messages to the BLUE player. Then click 'OK' to continue.

- I selected 'LEFT' this round.
- I selected 'RIGHT' this round.

OK

Please wait, while the BLUE player makes his or her choice.

Period

1 of 15

OUTCOME SUMMARY

Your choice this period: LEFT

Your points in this period: 6

continue

Period

3 of 15

Full-screen Stop

Please wait. The next period is about to begin.

[Appears at the beginning of each round from rounds 2-15]

Period

2 of 15

The next round of this game is about to begin. You will remain in the GREEN player role for the entire session. You will also remain paired with the same BLUE player in this round as in the prior round.

When you are ready click the OK button.

OK

[Appears at the beginning of round 11 for chat conditions only]

Period 11 of 15

It is now the beginning of period 11. Recall that in rounds 11-15 of this game you no longer have the opportunity to chat.

Press the OK button to continue.

OK

[Appears at the end of the session]

Thank you for participating in today's session. Please complete the post-experimental questionnaire. Once you are finished, please wait until the session supervisor pays you. Once you have received your payment, you are free to leave.

Total points earned in today's session: 21

Your total compensation earned, including the \$5 show-up fee, is \$8.99.

[Auditor (Blue) Player]

Period

1 of 15

The first round of this game is about to begin. The computer has assigned you to the BLUE player role. You will remain in this role for all 15 rounds. Now the computer will assign you a GREEN player with whom you will play the game described in the instructions. You will remain paired with this stame player for all 15 rounds.

When you are ready click the OK button.

OK

Period

1 of 15

Instructions Quiz

1. You will remain the same player type for all 15 rounds of the session.
 TRUE
 FALSE
2. The number of points you earn each round will depend on three things: (1) the action you choose, (2) the action chosen by the player you are paired with, and (3) random chance.
 TRUE
 FALSE
3. You will know the other player's choice before making your own choice.
 TRUE
 FALSE
4. If the BLUE player selects UP and the GREEN player selects LEFT, the BLUE player earns 7.3 points and the GREEN player earns 5.8 points.
 TRUE
 FALSE
5. If the BLUE player selects DOWN and the GREEN player selects RIGHT, there is a 90% chance that GREEN will earn 1 point and a 10% chance that GREEN will earn 10 points.
 TRUE
 FALSE
6. After the GREEN player chooses an action, he or she will send a message to the BLUE player about that choice. The message from the GREEN player must match the GREEN player's choice.
 TRUE
 FALSE
7. All participants will be paid the same amount.
 TRUE
 FALSE

Click the OK button to submit your answers.

OK

Period

1 of 15

Instructions Quiz

1. You will remain the same player type for all 15 rounds of the session.
 TRUE
 FALSE
CORRECT!
2. The number of points you earn each round will depend on three things: (1) the action you choose, (2) the action chosen by the player you are paired with, and (3) random chance.
 TRUE
 FALSE
CORRECT!
3. You will know the other player's choice before making your own choice.
 TRUE
 FALSE
CORRECT!
4. If the BLUE player selects UP and the GREEN player selects LEFT, the BLUE player earns 7.3 points and the GREEN player earns 5.8 points.
 TRUE
 FALSE
CORRECT!
5. If the BLUE player selects DOWN and the GREEN player selects RIGHT, there is a 90% chance that GREEN will earn 1 point and a 10% chance that GREEN will earn 10 points.
 TRUE
 FALSE
CORRECT!
6. After the GREEN player chooses an action, he or she will send a message to the BLUE player about that choice. The message from the GREEN player must match the GREEN player's choice.
 TRUE
 FALSE
CORRECT!
7. All participants will be paid the same amount.
 TRUE
 FALSE
CORRECT!

Click the OK button to continue.

OK

[Auditor-manager chat condition only]

Period

1 of 15

You are about to have the opportunity to chat with your assigned GREEN player for 45 seconds. You may chat with your assigned GREEN player about any topic. Please do not include any identifying information in your messages.

When you are ready click the OK button.

OK

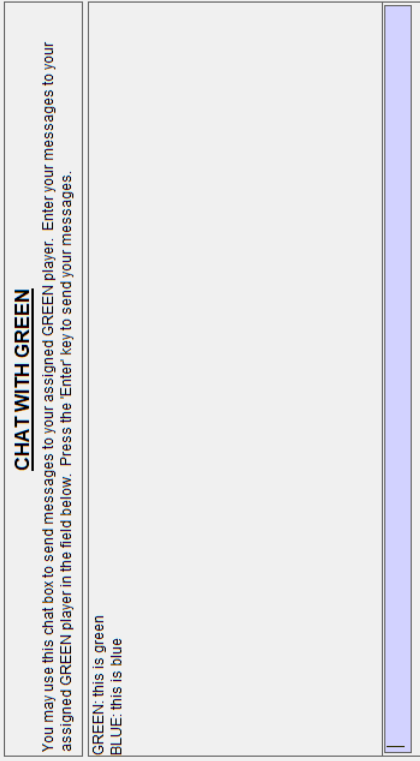
[Auditor-manager chat condition only]

Period 1 of 15 Chat time remaining [sec] 26

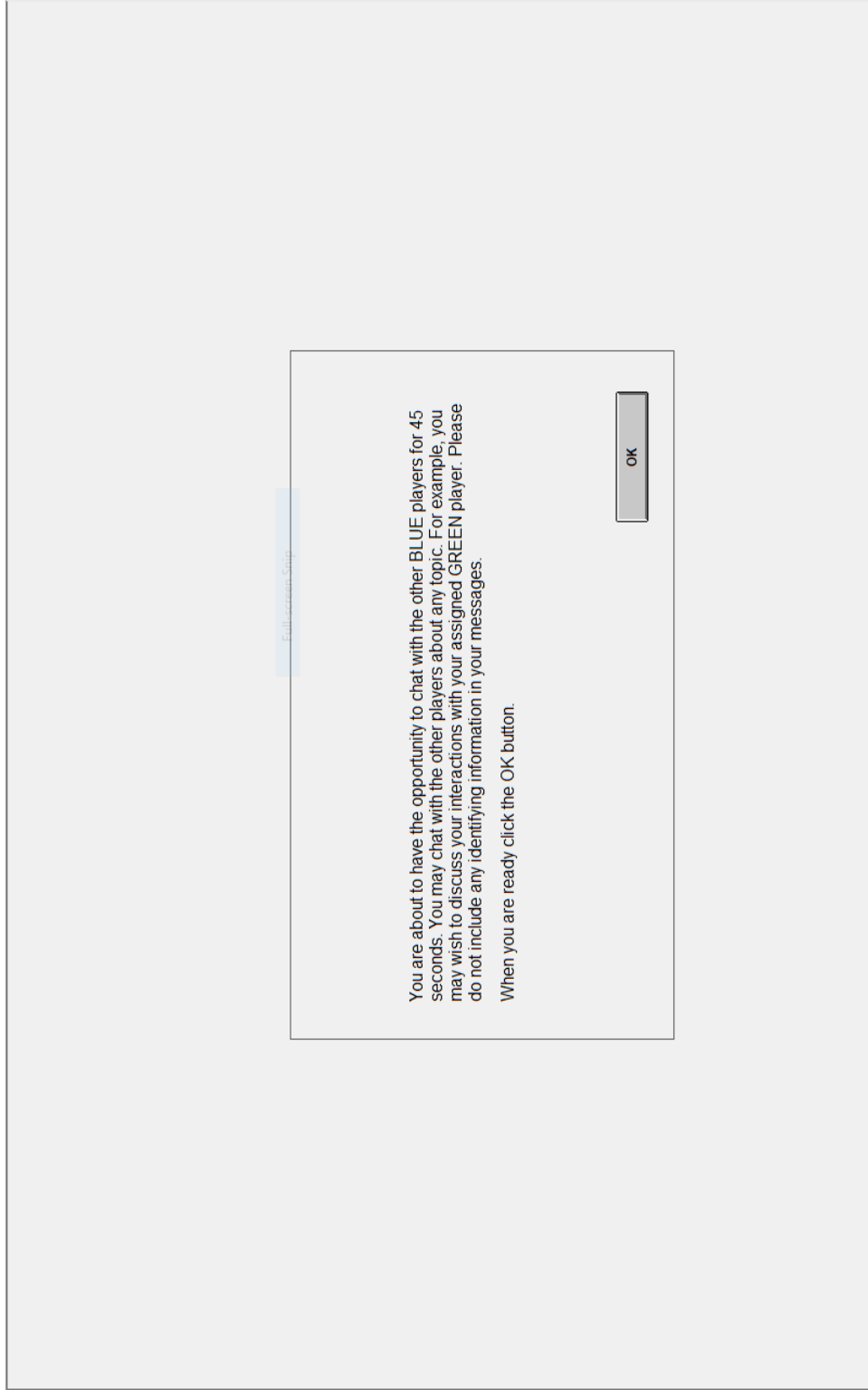
CHAT WITH GREEN

You may use this chat box to send messages to your assigned GREEN player. Enter your messages to your assigned GREEN player in the field below. Press the 'Enter' key to send your messages.

GREEN: this is green
BLUE: this is blue



[Auditor-auditor chat condition only]



[Auditor-auditor chat condition only]

Period

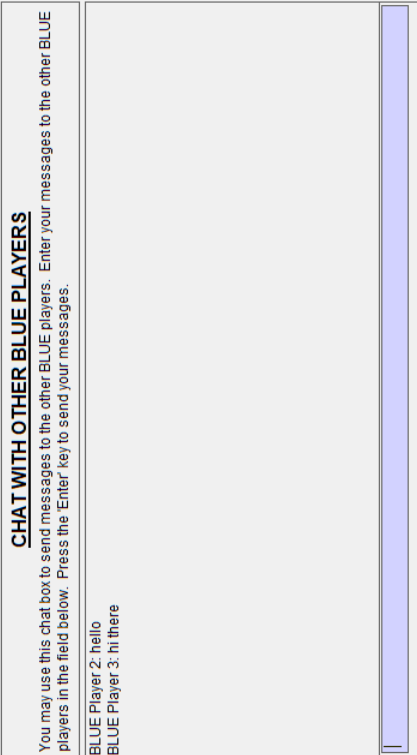
1 of 15

Chat time remaining [sec] 37

CHAT WITH OTHER BLUE PLAYERS

You may use this chat box to send messages to the other BLUE players. Enter your messages to the other BLUE players in the field below. Press the 'Enter' key to send your messages.

BLUE Player 2: hello
BLUE Player 3: hi there



Please wait, while the GREEN player makes his or her choice.

BLUE DECISION

The GREEN player sent you the following message:

I selected 'LEFT' this round.

On a scale of 0 to 100, what is the chance that GREEN is being HONEST in that message?

(Entering 100 means that you think GREEN is being HONEST for sure.)

Click 'OK' to continue.

OK

Period

1 of 15

BLUE DECISION

You are the BLUE player. You may play UP or DOWN. Please select your choice for this round.

UP

DOWN

Period

1 of 15

OUTCOME SUMMARY

Your choice this period: UP

Your points in this period: 10

continue

Period

3 of 15

Full-screen Stop

Please wait. The next period is about to begin.

[Appears at the beginning of each round from rounds 2-15]

Period

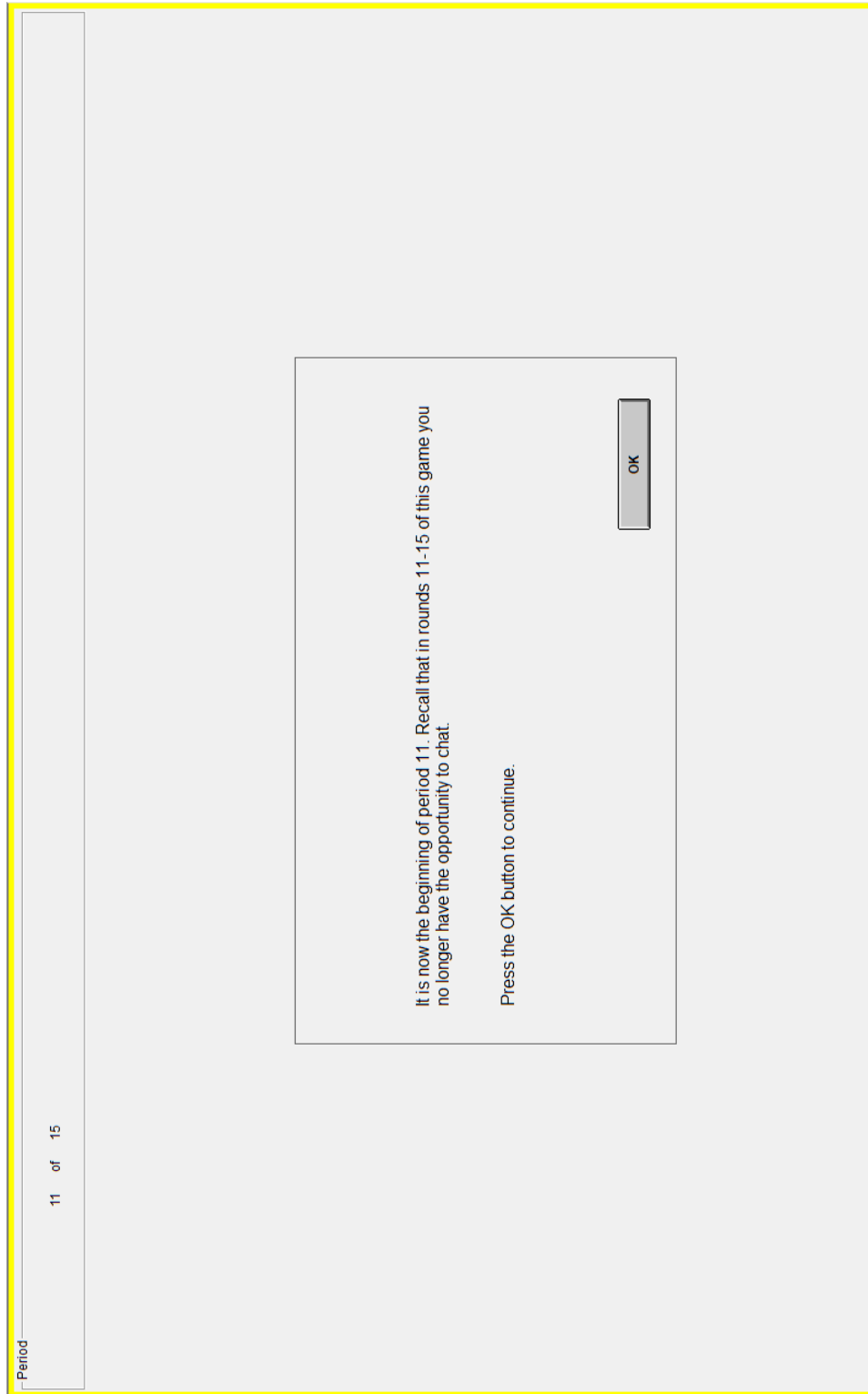
2 of 15

The next round of this game is about to begin. You will remain in the BLUE player role for the entire session. You will also remain paired with the same GREEN player in this round as in the prior round.

When you are ready click the OK button.

OK

[Appears at the beginning of round 11 for chat conditions only]



[Appears at the end of the session]

Thank you for participating in today's session. Please complete the post-experimental questionnaire. Once you are finished, please wait until the session supervisor pays you. Once you have received your payment, you are free to leave.

Total points earned in today's session: 21

Your total compensation earned, including the \$5 show-up fee, is \$8.99.

Appendix C: Post-Experimental Questionnaire

[For Auditor (Blue) Players]

Questionnaire

Instructions: Please circle on the scale how much you agree or disagree with each statement below.

Answer the following in reference to the GREEN player with whom you were paired.

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree
I feel the successes of the GREEN player I was paired with were my successes.	1	2	3	4	5	6	7	8	9
When referring to the GREEN player I was paired with, I think of “we” rather than “he or she”.	1	2	3	4	5	6	7	8	9
I feel like I was on a team with the GREEN player I was paired with.	1	2	3	4	5	6	7	8	9
I wanted the GREEN player I was paired with to succeed.	1	2	3	4	5	6	7	8	9
I feel close to the GREEN player I was paired with.	1	2	3	4	5	6	7	8	9
I have positive feelings towards the GREEN player I was paired with.	1	2	3	4	5	6	7	8	9
I feel like I was working together with the GREEN player I was paired with.	1	2	3	4	5	6	7	8	9

Answer the following in reference to the other BLUE players.

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree
When I talk about the BLUE player role, I usually said “we” rather than “they”.	1		2		3		4		5
		6		7		8		9	
I feel the successes of the other BLUE players were my successes.	1		2		3		4		5
		6		7		8		9	
I feel like I was on a team with the other BLUE players.	1		2		3		4		5
		6		7		8		9	
I wanted the other BLUE players to succeed.	1		2		3		4		5
		6		7		8		9	
I feel close to the other BLUE players.	1		2		3		4		5
		6		7		8		9	
I have positive feelings towards the other BLUE players.	1		2		3		4		5
		6		7		8		9	
I feel like I was working together with the other BLUE players.	1		2		3		4		5
		6		7		8		9	

Answer the following general questions.

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree
I feel my choice between UP or DOWN was a risky choice.	1		2		3		4		5
		6		7		8		9	
I feel accountable to the other BLUE players.	1		2		3		4		5
		6		7		8		9	
I feel accountable to the GREEN player that I was paired with.	1		2		3		4		5
		6		7		8		9	
I feel that I had control over the choices the GREEN player made.	1		2		3		4		5
		6		7		8		9	

Answer the following general questions (continued).

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree
I feel the GREEN player I was paired with was trustworthy.	1	2	3	4	5	6	7	8	9

Demographic Questions:

1. Age: _____
2. What is your current/intended major?
 - a. Accounting
 - b. Finance
 - c. Marketing
 - d. Undecided
 - e. Other; please specify _____
3. Please circle your classification in school.
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior
 - e. Masters
4. Please circle your gender:
 - a. Female
 - b. Male
5. Years of accounting-related work experience: _____

[For Manager (Green) Players]

Questionnaire

Instructions: Please circle on the scale how much you agree or disagree with each statement below.

Answer the following in reference to the BLUE player with whom you were paired.

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree
I feel the successes of the BLUE player I was paired with were my successes.	1	2	3	4	5	6	7	8	9
When referring to the BLUE player I was paired with, I think of “we” rather than “he or she”.	1	2	3	4	5	6	7	8	9
I feel like I was on a team with the BLUE player I was paired with.	1	2	3	4	5	6	7	8	9
I wanted the BLUE player I was paired with to succeed.	1	2	3	4	5	6	7	8	9
I feel close to the BLUE player I was paired with.	1	2	3	4	5	6	7	8	9
I have positive feelings towards the BLUE player I was paired with.	1	2	3	4	5	6	7	8	9
I feel like I was working together with the BLUE player I was paired with.	1	2	3	4	5	6	7	8	9

Answer the following in reference to the other GREEN players.

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree
When I talk about the GREEN player role, I usually said “we” rather than “they”.	1	2	3	4	5	6	7	8	9
I feel the successes of the other GREEN players were my successes.	1	2	3	4	5	6	7	8	9
I feel like I was on a team with the other GREEN players.	1	2	3	4	5	6	7	8	9
I wanted the other GREEN players to succeed.	1	2	3	4	5	6	7	8	9
I feel close to the other GREEN players.	1	2	3	4	5	6	7	8	9
I have positive feelings towards the other GREEN players.	1	2	3	4	5	6	7	8	9
I feel like I was working together with the other GREEN players.	1	2	3	4	5	6	7	8	9

Answer the following general questions.

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree
I feel my choice between LEFT or RIGHT was a risky choice.	1	2	3	4	5	6	7	8	9
I feel accountable to the other GREEN players.	1	2	3	4	5	6	7	8	9
I feel accountable to the BLUE player that I was paired with.	1	2	3	4	5	6	7	8	9

Answer the following general questions (continued).

	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree
I feel that I had control over the choices the BLUE player made.	1	2	3	4	5	6	7	8	9
I feel the BLUE player I was paired with was trustworthy.	1	2	3	4	5	6	7	8	9

Demographic Questions:

1. Age: _____
2. What is your current/intended major?
 - a. Accounting
 - b. Finance
 - c. Marketing
 - d. Undecided
 - e. Other; please specify _____
3. Please circle your classification in school.
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior
 - e. Masters
4. Please circle your gender:
 - a. Female
 - b. Male
5. Years of accounting-related work experience: _____

VITA

EMILY K. HORNOK, CPA

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EDUCATION AND CERTIFICATION

University of Mississippi, *Oxford, MS* May 2019 (anticipated)
Doctor of Philosophy, Accountancy

University of Arkansas, *Fayetteville, AR* May 2010
Master of Accountancy

John Brown University, *Siloam Springs, AR* December 2008
Bachelor of Science in Accounting

CPA License, State of Arkansas, April 2011–Present

PROFESSIONAL EXPERIENCE

University of Mississippi August 2014–Present
Patterson School of Accountancy
Teaching and Research Assistant

John Brown University March 2014–August 2016
Donald G. Soderquist College of Business
Adjunct Instructor

Rasco Winter Abston Moore & Associates, LLP September 2010–July 2014
Staff and Senior Auditor

University of Arkansas August 2009–May 2010
Sam M. Walton College of Business
Graduate Assistant

Rasco Winter Abston Moore & Associates, LLP January–July 2009
Intern

RESEARCH

Interests

Auditing, Strategic Interactions between the Auditor and Manager, Auditor Communication, Audit Quality, Auditor Learning & Knowledge Acquisition (Behavioral)

Dissertation

“The Effect of Auditors’ Informal Communication in The Audit Environment on Financial Reporting Outcomes”

Committee: Kendall O. Bowlin (chair), John P. Bentley, Jeremy B. Griffin, and Rachna Prakash of the University of Mississippi

Working Paper

“The Effects of Auditor Tenure and Complexity of the Information Environment on Auditor and Manager Behavior” with Kendall O. Bowlin and Jeremy B. Griffin of the University of Mississippi. *Preparing for journal submission.*

“The Initial Bridge Between Academia and the Accounting Profession: The AAUIA From 1916-1920” with Dale L. Flesher of the University of Mississippi. *Revise and resubmit at Accounting Historians Journal.*

Presentations

Hornok, E.K. The Effect of Auditors’ Informal Communication in The Audit Environment on Financial Reporting Outcomes

- Dissertation defense; *University of Mississippi*; Oxford, Mississippi; February 1, 2019. (successfully defended)
- Accepted paper; *AAA Auditing Section Mid-Year Meeting*; Nashville, Tennessee; January 18, 2019.
- Three Minute Thesis (3MT) Competition, *University of Mississippi*; Oxford, Mississippi; October 23, 2018.
- Invited presentation; *Ball State University*; Muncie, Indiana; October 10, 2018.
- Invited presentation; *East Carolina University*; Greenville, North Carolina; October 2, 2018.
- Invited presentation; *Baylor University*; Waco, Texas; September 28, 2018.
- Dissertation proposal; *University of Mississippi*; Oxford, Mississippi; March 9, 2018. (successfully defended)
- Invited presentation; *East Carolina University Accounting Research Roundtable Gathering*; Greenville, North Carolina; February 9, 2018.
- Small Group Presentation; *Deloitte Doctoral Consortium*; Westlake, Texas; June 2017.

Bowlin, K.O., Griffin, J.B., and Hornok, E.K. The Effects of Auditor Tenure and Complexity of the Information Environment on Auditor and Manager Behavior

- Accepted paper; *AAA Annual Meeting*; San Diego, California; August 8, 2017.
- Graduate Student Council 7th Annual Research Symposium, *University of Mississippi*; Oxford, Mississippi; March 2, 2017.
- Workshop paper; *University of Mississippi*; Oxford, Mississippi; November 4, 2016.
- Three Minute Thesis (3MT) Competition, *University of Mississippi*; Oxford, Mississippi; November 3, 2016.

Hornok, E.K. and Flesher, D.L., The American Association of University Instructors of Accounting: The First Five Years.

- Accepted paper; *AAA Annual Meeting*; New York City, New York; August 9, 2016.
- Accepted paper; *AAA SE Regional Meeting*; Asheville, North Carolina; April 18, 2015.

CONFERENCE PARTICIPATION

AAA Auditing Section Mid-Year Meeting; Nashville, Tennessee; *January 2019*.

AAA 2018 Accounting Behavior and Organizations Research Conference and Doctoral Consortium; Phoenix, Arizona; *October 2018*.

AAA Annual Meeting; National Harbor, Maryland; *August 2018*.

AAA Auditing Section Mid-Year Meeting and Doctoral Consortium; Portland, Oregon; *January 2018*.

AAA Accounting PhD Rookie Recruiting & Research Camp (observer only); Miami, Florida; *December 2017*.

AAA Annual Meeting; San Diego, California; *August 2017*.

AAA/Deloitte Foundation/J. Michael Cook Doctoral Consortium; Westlake, Texas; *June 2017*.

AAA Auditing Section Meeting and Doctoral Consortium; Orlando, Florida; *January 2017*.

AAA Annual Meeting; New York City, New York; *August 2016*.

AAA SE Regional Meeting; Asheville, North Carolina; *April 2015*.

TEACHING

Courses Instructed

- **ACCY 309: Cost Control**
University of Mississippi Patterson School of Accountancy
Spring 2018 – 2 sections (55 and 50 students)
Fall 2017 – 2 sections (63 and 88 students)
- **ACCY 201: Introduction to Accounting Principles I**
University of Mississippi Patterson School of Accountancy
Spring 2017 – 2 sections (56 and 54 students)

Fall 2016 – 2 sections (53 and 54 students)
Spring 2016 – 1 section (50 students)
Fall 2015 – 2 sections (52 and 48 students)
Summer 2015 – 1 section (47 students)
Spring 2015 – 2 sections (57 and 52 students)
Fall 2014 – 1 section (45 students)

- **BUS 7013: Managerial Accounting** (for MBA students)
John Brown University Donald G. Soderquist College of Business
Summer 2016 – 1 section, online (22 students)
Summer 2015 – 1 section, online (19 students)
Spring 2014 – 1 section (6 students)

Teaching Interests

Auditing, Managerial Accounting, and Financial Accounting

PROFESSIONAL SERVICE

American Accounting Association

- Volunteer reviewer, 2019 AAA Auditing Section Mid-Year Meeting
- Volunteer reviewer and discussant, AAA 2018 Accounting Behavior and Organizations Research Conference
- Volunteer discussant, Auditing Section, 2018 AAA Annual Meeting
- Volunteer reviewer and discussant, 2018 AAA Auditing Section Mid-Year Meeting
- Volunteer reviewer and discussant, Auditing and ABO (reviewer only) Sections, 2017 AAA Annual Meeting
- Volunteer reviewer and discussant, 2017 AAA Auditing Section Mid-Year Meeting
- Auditing Research Summaries Database Instructional Video, Auditing Section of AAA (2016)

Academic Journals

- Ad hoc reviewer, *Research in Accounting Regulation*, 2017

Community

- Member, John Brown University Board of Trustees, July 2017–June 2020
 - Finance, Facilities, and Audit Committee and Audit Sub-committee

PROFESSIONAL AFFILIATIONS

- Member, American Accounting Association: Auditing Section, 2016–Present
- Member, American Accounting Association: Accounting, Behavior and Organizations Section, 2016–Present
- Member, American Accounting Association, 2015–Present
- Member, American Institute of Certified Public Accountants, 2011–2015
- Member, Arkansas State Society of Certified Public Accountants, 2011–2015

SKILLS

- z-Tree Software

HONORS, AWARDS, AND GRANTS

- University of Mississippi Graduate School Dissertation Fellowship, Spring 2019
- University of Mississippi Graduate School Dissertation Fellowship, Fall 2018
- University of Mississippi 2016 Three Minute Thesis (3MT) Competition Finalist
- 2016 University of Mississippi Graduate Student Council Research Grant (1 of 23 awards among all academic disciplines)
- Graduate Achievement Award, Patterson School of Accountancy, April 2016
- Phi Kappa Phi Honor Society, inducted April 2016
- 2010 Glezen Award Winner, Sam M. Walton College of Business
- Member, Beta Gamma Sigma Academic Honor Society, 2010–Present
- 1st Place—Donald W. Reynolds Arkansas Governor’s Cup 2009 Business Plan Competition
- Member, Alpha Chi National College Honor Society, 2007–Present

SCHOLARSHIPS AND ACTIVITIES

- Faculty Guest Coach for the University of Mississippi Football Team, November 2015
- Member, Committee for the Future benefiting Arkansas Children’s Hospital, 2013–2014
- Member, Master of Accountancy Student Advisory Board, Sam M. Walton College of Business, 2009–2010
- Arkansas Society of Certified Public Accountants Student Education Scholarship Recipient, 2008
- Director of Finance and Administration, John Brown University Student Ministries Leadership Team, 2007–2008
- Leadership Scholar, John Brown University, 2005–2008
- President’s List of Distinguished Students for 7 of 7 semesters, John Brown University