Journal of Forensic & Investigative Accounting
Vol. 5, Issue 2, July - December, 2013

The Effects of Communication Media and Client Familiarity on Auditors' Confidence in Deception Detection

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1. INTRODUCTION

The release of Statement on Auditing Standards 99 – Consideration of Fraud in a Financial Statement Audit, hereafter referred to as SAS 99, refocused the accounting profession on the importance of fraud detection. Auditors are required to make inquires of management regarding the potential for fraud. To understand an entity's susceptibility to fraud and management's awareness of fraudulent activities, the auditors are required to gather information from both management and internal auditors (AICPA, 2002). Evaluating the truthfulness and comprehensive nature of the information provided may require auditors to make judgments regarding the forthrightness of the company contacts. Auditors use multiple forms of communication media to gather information during the audit. Despite the intense requirements of SAS 99, auditors are challenged to balance effectiveness in detecting fraud with the efficiency required by audit budgets. Forms of communication such as email are more efficient means for gathering information, but the auditor may be trading off effectiveness in detecting deception that could indicate fraud for efficiency. Face-to-face interviews that provide richer forms of communication may help in more effective detection of deception and fraud. Face-to-face interviews are a richer form of communication that provide more synchronicity; thereby, making

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rich media more appropriate based on various communication criteria (Burgoon et. al., 2010, Carlson and George, 2004).

Rich media, such as face-to-face communication, provide more synchronicity than lean forms of communication and provides a larger number of communication cues. Hence, it may be closely associated with the ability to detect deception since rich media provide more communication cues associated with detecting deception. Media richness is "the ability of information communicated on the medium to reduce equivocality" (Carlson & George, 2004). Media richness can be determined by assessing the immediacy of feedback, the number of cues present, language variety and personal focus (Carlson & George, 2004; Sheer & Chen, 2004). This research paper investigates the effects of communication mode, familiarity with the audit client, and impression on participants' confidence in their ability to detect deception.

Communication during audits between the auditor and the audit client increasingly occurs through lean media such as electronic mail for efficiency gains. However, for increased audit effectiveness, there are certain points in an audit client's relationship lifecycle when it may be more beneficial for the external auditor to use rich communication modes such as face to face interviews. Although increased use of rich forms of communication may result in less efficiency (i.e. more time consuming), rich communication modes can reduce equivocality (Daft & Lengel, 1986). By understanding when it is beneficial to use rich forms of communication, the auditors can conduct their audits more effectively while balancing the need to conduct efficient audits.

As forms of communication commonly used for information exchange purposes in the field of auditing switch from those rich in nature to those considered to be leaner in nature, a gain in efficiency may be observed. However, an increase in risk (i.e., the inability to detect deception) may prove to be a byproduct of this switch in modes of communication. As

communication takes leaner forms, multiple communication cues are lost in the process. A common form of lean communication mode used today is computer-mediated communication; this mode of communication can change the dynamics of communication, information exchange, and cognition.

Computer-mediated communication (CMC) increases the desire of a person to be perceived positively (Carlson, Burgoon, Adkins & White, 2004). Individuals using CMC may be subject to an increased pressure to avoid negative disclosures, those that are often most pertinent to assessing risk. The pressure on the sender of the information to be perceived in a positive manner and the loss of information cues when communicating via CMC may affect auditors' confidence in their ability to detect deception. Therefore, our research question is as follows: How does communication mode and familiarity with the audit client affect auditors' confidence in their ability to detect deception?

This paper is organized into six Sections. Section 2 examines prior research and develops the hypotheses. Section 3 describes the research method and the experimental procedures. Section 4 presents the results, Section 5 provides a discussion of the results, and Section 6 concludes the paper.

2. THEORY AND HYPOTHESES

Communication Theory

Media Richness Theory (Daft & Lengel, 1986) suggests that rich media is more appropriate for reducing equivocality. Equivocal tasks are tasks for which multiple interpretations of the information communicated could occur, thereby increasing the number of possible meanings (Dennis & Kinney, 1998). Communication media is ranked in descending order of richness: face-to-face, telephone, documents and electronic mail. Full support for Media

Richness Theory is not always found (Salmon & Joiner, 2005); therefore, we use it only as a starting point.

In addition to the content of the message that can be communicated using a rich or a lean communication mode, the communicator's choice of the communication mode can be a signal by itself. For example, scheduling a face-to-face interview, the auditor may be communicating a concern. Similarly, in another context, a when the Internal Revenue Service asks a citizen to come in personally for an interview, the "message is medium." Media Features Theory identifies usability as the ability of a channel to clearly convey information (Salmon & Joiner, 2005). Applying this theory to management's need to communicate financial data and to generate an audit trail, Salmon and Joiner (2005) hypothesize that regardless of the level of equivocality associated with the information to be transferred, the "…current climate of concern for corporate governance, a written form of communication (either written or email) is likely to be the most preferred channel" (p. 57). While a written formal document can convey a message by itself, the complexity of the information may also lend itself to a specific communication mode. In an auditing context, communication takes place many times during each stage of the audit process (i.e. planning, fieldwork, and reporting stages). The form of the communiation media chosen for information exchange between an auditor and his client may change based on the stage of the audit and the complexity of the information communicated. The communication goal between auditor and audit client should be clarity and understanding.

Communication research notes the common goal of communication between a sender and a receiver is that of understanding. To support this goal, receivers assume that the sender of the information has constructed the message to be both truthful and comprehensible (Grice, 1989). Therefore, before any information has been exchanged, the receiver has a "truth bias"

(McCornack & Parks, 1986; Levine & McCornack, 1992). This truth bias predisposes the receiver of information, in this case the auditor, to accept that information communicated by the client is the truth. The receipt of communication cues may influence the level of truth bias exhibited by the auditor and subsequently, the likelihood of the auditor to question the information provided by the client.

According to Channel Expansion Theory (Carlson & Zmud, 1994, 1999), familiarity with the sender of information, communication medium, topic, and context influence the ability of the individual to communicate in a rich manner using a specific medium. Hence, an individual is likely to pick up on a greater number of cues when communicating with a person with whom s/he is familiar. The resulting increase in the number of cues detected would affect the number of cues available to the receiver for the purpose of determining the truthfulness of the communicated information, thereby, increasing the richness of the communication regardless of the medium.

Receivers of information feel more confident in their ability to detect deception when they are more familiar with the sender of the information (Carlson & George, 2004). Receivers are better able to process the subtle cues contained in messages originating from familiar sources (Carlson & Zmud, 1999). Additionally, prior research has found that people are able to more accurately detect deception when they have a baseline communication with which to compare the new communication (Vrij & Mann, 2004). People are able to become better at detecting deception when they are familiar with the baseline of truthful behavior for the person with whom they are communicating (Brandt, Miller, & Hocking 1980a,b, 1982; Feeley, deTurck, & Young 1995).

Deception Cues

Deception may take form in a number of different ways, from direct deception to equivocations (Carlson, et. al., 2004). Prior research has shown that multiple communication cues are necessary to increase the rate of deception detection. Using single communication cues does not result in high levels of deception detection; therefore, it is essential to work with forms of communication with multiple cues.

Communication cues that are more often present with liars include a higher pitched voice, less involvement in the communication, more uncertain information and a tense demeanor. Liars may also behave in a less cooperative and less pleasant manner (Vrij & Mann, 2004). Physical mannerisms such as a decrease in hand and finger movements and an increase in "micro-expressions" are more prevalent in deceptive communication (Ekman & Friesen, 1972). Micro-expressions are those facial expressions which are only displayed for a moment, but are telltale signs of deceptive communication (Ekman, 1985/2001). Many of the communication cues are nonverbal and auditory cues (Vrij & Mann, 2004).

Zuckerman et al. (1981) found that dilated pupils, increased blinking, more frequent speech disturbances and speaking in a higher pitch were cues to deception related to generalized arousal present in liars. Based on these four cues to deception, a face-to-face communication would be necessary to detect two of the four cues (i.e., greater pupil dilation and increased blinking).

Other deception cues portray the feelings of the liar (Zuckerman et al., 1981). Such cues include: fidgeting, using less eye contact and sounding unpleasant. Further, lying requires greater cognitive effort than truth telling. The increase in cognitive effort manifests itself in deceivers through delayed response time for answers, hesitations, and fewer hand movements that would

serve to illustrate speech. Using a lean form of communication such as email in which communication occurs in an asynchronous manner may allow deceivers the time needed to formulate a plausible deceptive response. Most receivers of such communication would naturally attribute the lack of timeliness in response to the sender to not being available at the time the email was sent and would therefore, not attribute the delay in response to the sender's intention to deceive. This cue is effectively nonexistent when using asynchronous communication. Finally, because liars attempt to control their communication and their behaviors, they may appear less spontaneous in their communications (Zuckerman et al., 1981). This may prescribe that auditors need to ask "unexpected" questions. If the audit client is well schooled in the typical questions asked by auditors, then auditors will need to find new ways of seeking insight into the operations by asking innovative questions. Auditing educators may need to consider integrating critical thinking exercises into auditing classes to encourage the development of students' ability to ask the unexpected questions.

Deception cues may be thinking cues or feeling cues (Ekman, 1985/2001). Feeling cues are deceptive cues where the deceiver could feel guilty about the deception or could feel what is termed "duping delight": excitement about succeeding at the challenge of deceiving another person. Many of the cues for detecting deception when the liar is feeling guilty, such as lower pitch tone and downward gazing are parallel opposites of the cues present when the person is experiencing the thrill of lying, such as higher pitch tone and use of illustrators. Therefore, the receiver of the information might not be able to identify deception based on feeling cues since the cues exhibited may be inconsistent.

Communication can be viewed as an ongoing process where the presence of deception cues is strongest or most detectable at the beginning of the communication (Burgoon et al.,

1996). Initially the deceiver will be consistently seeking feedback from the receiver to judge whether the deception is being detected. As the deceiver judges the deception to be undetected, he may become more confident in his ability and fewer typical deception cues will be available. The deceiver may begin to be more pleasant and exhibit more composure as the communication proceeds and he perceives that he has successfully deceived the receiver. Therefore, if we apply Burgoon et al.'s (1996) finding to an audit context, then the cues of deception will be most potent at the beginning of the communication process. This may be the auditors' best opportunity to judge the client's forthrightness with the company's financial and business information.

Using leaner forms of media, deception cues are more likely to be lost in the communication, but rich media is valued for deception detection because cues are less likely to be lost (Carlson & George, 2004). Therefore, fewer cues available might adversely affect auditors' confidence in their ability to detect deceptive communication. We state our hypotheses in a manner consistent with Carlson and George (2004).

> **H1**: Auditors feel less confident in their ability to detect deception when leaner forms of media are used.

Auditors may also feel less confident in their ability to detection deception when they are unfamiliar to clients (new clients) than when dealing with familiar clients (repeat clients). For repeat clients, auditors have an anchor available to them based on prior year workpapers and may adjust each year's audit accordingly. Prior research has shown that anchors create a bias by affecting judgment (Tversky & Kahneman, 1974; Brewer & Chapman, 2002). As an example, auditors may anchor to the prior year's risk assessment and adjust the current year's risk assessment in light of their previous judgment regarding risk. Studies have shown that auditors employ the use of anchors during judgment and decision-making activities (Morris, 1993).

Anchors can be used to reduce the level of uncertainty associated with the situation. For repeat audit clients, a higher number of anchors are available for the auditor's use.

Auditors working on repeat engagements have the benefit of anchors from prior year work with the client. These anchors may include a familiarity with the client's demeanor and business and may be used as a baseline to which the auditor can tie his/her expectations. Variation from this baseline may provide cues to the auditor that some information provided is false. The ability to detect deception increases when a baseline communication is available (Vrij & Mann, 2004). Though prior research did not find a significant effect for familiarity with the interviewee's communication style (Lee & Welker, 2010), we expect to find that in an audit context, the familiarity of a client will impact participants' judgments. Therefore, participants may be more skeptical of information provided by a new client as opposed to that which is provided by a repeat client. We develop the following hypotheses:

> **H2**: Auditors feel less confident in their ability to detect deception with unfamiliar (new) clients than with familiar (repeat) clients**.**
>
> **H3:** Auditors will evaluate information provided by a familiar source (repeat client) as less likely to be deceptive than information provided by an unfamiliar source (new client).

As discussed above, some deception cues are only available in face-to-face communication. Deception cues such as fidgeting, avoiding eye contact and sounding unpleasant (Zuckerman et al., 1981) may be present in face-to-face communication, but absent in email communication. Auditors could use the presence of these cues in a face-to-face communication to judge the truthfulness of the information communicated by the audit client. When the communication mode is email, prior research has found that different deception cues take a different form from those found in face-to-face communication. The ratio of typos in the email is higher for deceivers than for truthtellers, negative affect is higher for deceivers during initial

communications, the use of group rather than self references is higher for deceivers, and less lexical and content diversity are present in deception email communication (Zhou, Burgoon, & Twitchell, 2003). Therefore, despite familiarity and media richness, perceptible deception cues are present in both face-to-face and computer mediated communication and they result in a negative impression of the information provided by the client. When deception cues are present, the auditor is more likely to perceive the information as deceptive. To test if a negative impression (deception cues present) communication is perceived as more likely to contain deceptive information than a positive impression (deception cues absent) communication, we develop the following hypothesis:

> **H4**: Auditors will perceive information as more likely to be deceptive when provided by clients in the negative impression condition (deception cues present) than by clients in the positive impression condition (deception cues absent).

3. METHOD

Design

We designed a 2x2x2 experiment to test the hypotheses presented in Section 2. The independent variables, each consisting of two categories, include media richness (i.e., rich or lean), familiarity with sender (i.e., repeat or new) and impression (i.e., positive or negative) given by the sender. In this study, the term "impression" is used to identify when deception cues are present or not present in the communication with the client. The term "positive impression" is used to identify cases in which deception cues are not present, while "negative impression" represents a communication in which deceptive cues are present. To test the effect of each of the categories of the independent variables on the dependent variable of confidence in ability to detect deception, we created eight different cases that represent the eight different possible

combinations of independent variables in our experiment. Simulating scenarios for evaluation is often used in auditing fraud research (Gillett & Uddin, 2005).

For each variable, we developed a paragraph to operationalize the concept in the experiment. Using these paragraphs, we formed independent cases by compiling them in such a way that each of the eight cases represented a different combination of the paragraphs describing each of the independent variables. We asked every participant to read and respond to each case. We assigned different company names to each of the eight cases to help the participants clearly distinguish between the cases and to help establish each case as an independent case. A sample case is provided in Appendix A. The eight cases were then included in a case packet. The order in which the cases were presented in the case packets differed to address the concern of possible order effects.

Participants

We administered the experiment to Junior and Senior level students attending intermediate accounting classes at a large public American university. A total of 90 students completed the experiment cases during one class session, and 84 usable responses were collected. Ashton and Kramer (1980) found that using students as surrogates in human information processing settings is appropriate and results in conclusions that are statistically similar to those found using auditors when the task tests human information processing and the subjects are motivated. In these situations, students are adequate surrogates for auditors. Given that the purpose of our research is to test a person's ability to detect deception, a human information processing task, the use of students as surrogates is appropriate for the current experimental task. Additionally, prior deception detection research has used students as proxies for entry level auditors (Lee, 2000; Lee & Welker, 2007).

Procedures

We provided each participant with a case packet. Each packet contained eight independent cases that differed based on communication method (i.e., rich or lean), familiarity with the sender, and impression (i.e. positive or negative) of the client (i.e., new or repeat). Participants were instructed to complete the cases as independent cases and in the order in which the cases were presented in the packet. Because of the brevity of each case, the case packet could be completed in approximately 20 minutes. Directly following each case, we asked the subject to complete a brief survey consisting of ten questions. Appendix B provides a sample case evaluation. The first five statements in the instrument follow the format used by Carlson and George (2004). The questions elicited the participant's confidence regarding his/her ability to detect deception and the appropriateness of the communication mode given in the scenario. The second section of the survey contained five statements used as a manipulation check for each case. The manipulation check questions are discussed below.

Finally, participants were asked general information questions which were designed to elicit their overall comfort levels with face-to-face and email communication. The statements used to evaluate this were modeled after those used by Carlson and George (2004). The results of these questions are presented in Table 1. Students received extra credit for participating.

Operational Measures of Variables

The experiment consists of three independent variables at the conceptual level: media richness, familiarity with the sender, and impression. Media richness is operationalized in the experiment by the manipulation of the mode in which the communication with the audit client takes place. Email communication is used to represent a lean form of communication. A description of a face-to-face communication is used to represent a rich form of communication.

Familiarity with sender is operationalized by providing the subject with information from a repeat client or a new client. We operationalized the impression given by the client by providing descriptive visual cues for the face-to-face cases or written cues in the email cases. For example, we operationalized negative communication cues in the face-to-face scenario to include physical cues identified by Vrij and Mann (2004) as indicative of deception and we operationalized negative communication cues such as ratio of typos in computer-mediated-communication based on the cues identified by Zhou, Burgoon and Twitchell (2003).

Our primary dependent variable (DV) of interest at the conceptual level is the participants' confidence in their ability to detect deception. The DV was operationalized in a manner consistent with prior research by Carlson and George (2004). The questions following each case measure the level of confidence felt by the research participant. Using a seven point Likert scale, participants were asked to rate the extent to which they agreed with the statement.

Manipulation Check

Participants evaluated five statements for each case for testing the proper operationalization of the manipulations. Participants provided answers regarding whether the client was a new or repeat client, the communication mode was rich or lean, prior year data existed to represent familiarity, and the impression given by the client was positive or negative. Accurate answers to the statements demonstrated awareness and hence proper understanding of the operationalization of the manipulations of the independent variables.

4. RESULTS AND ANALYSIS

We collected data from 90 participants and performed statistical analyses using SPSS. We checked the case packets for completeness and only used packets with responses to all statements for each of the eight scenarios in the analysis. Out of the total of 90 participants, 84 provided

complete and usable cases. Table 1 provides descriptive statistics for our sample. Overall our sample population scored high regarding experience with email and feeling competent using email as a communication media with mean scores of 5.86 and 6.00 respectively, on a seven-point Likert scale.

Although we used Likert scales which produce categorical data, we use analysis methods reserved for continuous data. Likert scales may be treated as continuous if they use seven or more points in the scale (Gillett & Uddin, 2005; Bollen, 1989). Thus, we used seven point Likert scales to ensure that we could analyze the data as continuous.

Table 1
Sample Descriptive Statistics

Question Description	N	Mean (SD)	Min Value	Max Value
Email Experience	84	5.86 (0.97)	3	7
Email Ease of Use	84	5.90 (1.04)	3	7
Comfort in FTF Communications	84	5.85 (0.95)	3	7
Feels Competent Using Email	84	6.00 (1.06)	1	7
Skilled Communicating via Email	84	5.92 (0.91)	4	7

As stated in hypothesis H1, we expected to find that participants' confidence in their ability to detect deception would be higher in the face-to-face scenarios than in the CMC scenarios. A paired samples t-test was conducted to compare the participants' judgments of their confidence in their ability to detect deception. There was a significant difference in participants' confidence in their ability to detect deception between the face-to-face condition (M = 4.30, SD = 1.16) and

the CMC condition (M = 3.73, SD = 1.24); t (83) = -5.55, p = .000. Hence, hypothesis H1 is supported.

As stated in hypothesis H2, we expected to find that participants' would be less confident in their ability to detect deception in scenarios with unfamiliar (new) clients than in the scenarios with familiar (repeat) clients. A paired samples t-test was conducted to compare the participants' judgments of their confidence in their ability to detect deception. There was a significant difference in participants' confidence in their ability to detect deception between the unfamiliar (new) client condition (M = 3.78, SD = 1.26) and the familiar (repeat) client condition (M = 4.25, SD = 1.15); t (83) = -4.45, p = .000. Hypothesis 2 is supported. The results for testing hypotheses H1 and H2 are depicted in Table 2.

Table 2
Confidence in Detecting Deception:
Means (Standard Deviations) and Paired Samples T-test Results

Hypothesis Tested	Paired Sample Description	Mean (SD)	Mean (SD)	Mean Difference	T-Stat	P Value (two-tailed)	
1	Computer-Mediated-Communication *	3.73	4.30	(0.57)	(5.55)	0.000	***
	Face-to-Face	(1.24)	(1.16)				
2	New Client *	3.78	4.25	(0.47)	(4.45)	0.000	***
	Repeat Client	(1.26)	(1.15)				
Additional	Negative Impression *	4.09	3.93	0.16	1.94	0.056	*
Analysis	Positive Impression	(1.17)	(1.16)				

*, **, *** Significant at p<.10 level, p<.05 level, and p<.01 level respectively.
Dependent measure = confidence in detecting deception

As stated in hypothesis H3, we expected to find that participants' evaluate information provided by a familiar source (repeat client) as less likely to be deceptive than information provided by an unfamiliar source (new client). A paired samples t-test was conducted to compare the participants' judgments of the likelihood that the information they received was deceptive. There was a significant difference in participants' evaluation of the likelihood that deceptive

information was communicated between the familiar (repeat) client condition (M = 3.72, SD = 1.03) and the unfamiliar (new) client condition (M = 4.25, SD = .94); t (83) = 5.48, p = .000. Participants evaluated the information received from new clients as more likely to contain deceptive information than that which was received from repeat clients; therefore, hypothesis H3 is supported.

As stated in hypothesis H4, we expected to find that participants' would perceive information as more likely to be deceptive when provided by clients in the negative impression condition (deception cues present) than by clients in the positive impression condition (deception cues absent). A paired samples t-test was conducted to compare the participants' judgments of the likelihood that the information they received was deceptive There was a significant difference in participants' evaluation of the likelihood that deceptive information was communicated between the negative impression condition (deception cues present) (M = 4.65, SD = 1.02) and the positive impression condition (deception cues absent) (M = 3.32, SD = 1.09); t (83) = 10.60, p = .000. Participants evaluated the information received from negative impression clients as more likely to contain deceptive information than that which was received from positive impression clients; therefore, hypothesis H4 is supported. The results for testing hypotheses H3 and H4 are depicted in Table 3.

Table 3

Likelihood that Deceptive Information Communicated:
Means (Standard Deviations) and Paired Samples T-test Results

Hypothesis Tested	Paired Sample Description	Mean (SD)	Mean (SD)	Mean Difference	T-Stat	P Value (two-tailed)	
Additional Analysis	Computer-Mediated-Communication * Face-to-Face	3.97 (1.11)	4.00 (0.86)	(0.03)	(0.28)	0.784	
3	New Client * Repeat Client	4.25 (0.94)	3.72 (1.03)	0.53	5.48	0.000	***
4	Negative Impression * Positive Impression	4.65 (1.02)	3.32 (1.09)	1.33	10.60	0.000	***

*, **, *** Significant at p<.10 level, p<.05 level, and p<.01 level respectively.
Dependent measure = likelihood that there was deception information communicated

Additional Analyses

We performed additional analyses on several data points. First, we performed a paired samples t-test to test participants' confidence in their ability to detection deception given a negative client impression as opposed to a positive client impression. The mean for negative client impression (M = 4.09, SD =1.17) is higher than the mean for positive client impression (M = 3.93, SD = 1.16); t (83) = 1.94, p = .056. Please see the last row of Table 2.

Additionally we performed analyses on three measures that reflect the sufficiency of the information communicated to detect deception, the sufficiency of the information communicated using the communication mode specified, and the appropriateness of the communication mode. Although not formally hypothesized, we expected to find that participants would prefer a rich form of communication mode over a lean form of communication mode. The results for each measure are consistent between the face-to-face and computer-mediated-communication conditions. For each analysis, we find that the face-to-face communication mode is evaluated as

more appropriate and sufficient as compared to computer-mediated-communication. Table 4 provides the results of this analysis.

Table 4
Comparisons of Face-to-face and Computer-mediated-communication Conditions: Means (Standard Deviations) and Paired Samples T-test Results

	Dependent Measure	Face-to-face Condition Mean (SD)	Computer-mediated-communication Condition Mean (SD)	Mean Difference	T-Stat	P Value (two-tailed)	
Additional Analysis	Have the information needed to detect false information	3.61 (1.14)	3.07 (1.03)	0.54	5.89	0.000	***
Additional Analysis	Communication media provides enough information to detect deception	3.77 (1.26)	2.52 (0.96)	1.25	9.59	0.000	***
Additional Analysis	Communication media used was most appropriate for this situation	5.83 (1.09)	2.32 (1.04)	3.51	19.17	0.000	***

*, **, *** Significant at p<.10 level, p<.05 level, and p<.01 level respectively.
Paired sample t-tests performed for face-to-face and computer-mediated-communication conditions.

5. DISCUSSION

This research contributes to the state of knowledge of how forms of communication affect auditors' confidence in their ability to detect deception. The results suggest that the use of computer mediated communication is more appropriate with repeat than with new clients; therefore, we provide support for Channel Expansion Theory in an auditing context. The appropriateness of the form of communication is a factor of the communication media's ability to convey information cues to the auditor to allow him/her to detect deception.

Further, the results emphasize the importance of awareness of common deception cues and the respective manifestations of such cues in a multi-media communication environment. The efficiency sought in an auditing environment and effectiveness in detecting questionable or deceptive information provided by an audit client can have tradeoffs of which the auditor should be aware.

Implications

The overall profitability of a new engagement (new client) versus a repeat engagement (repeat client) may need to factor in a loss of efficiency with new clients based on the need for richer, less efficient forms of communication. A new client may require more rich interaction while much of the interaction with repeat clients can take place using a lean communication media. Furthermore, as the occurrence of online auditing procedures increases, auditing firms may become more reluctant to accept new clients and consequently, charge a premium for accepting them.

The results of this research have the potential to lead to increased audit efficiency and reliability and decreased risk of communication failure and ambiguity in communications between auditors and their clients. Further research is needed to identify the appropriate point in the audit client's lifecycle to utilize forms of media with low richness, but increased efficiency. In addition to client lifecycle considerations, researchers may consider factors affecting the auditor/client relationship such as significant accounting policies selected by management, auditor disagreements with management, and difficulties encountered during an audit particularly those difficulties that arise because of management imposed limitations.

Further, researchers may consider the type of information being sought and the appropriate communication medium to gather that information. Though some auditor/client communication forms are specified by the auditing standards (e.g. communicating in writing an engagement letter or a material weakness in internal controls to the audit committee), communication modes for other audit topics are not specified (e.g. management inquiries may be verbal or via email depending on the topic). Therefore, the topic and complexity of the

information sought by the auditor should be considered when determining the appropriate communication mode to use.

Future research may concentrate on communication associated with other types of assurance services. For example, additional research could focus on communication during performance audits rather than financial audits. Additionally, research on communication media appropriateness can inform the effectiveness and efficiency of other services, such as online tax services for new and repeat clients.

This research expands the understanding of the ability to detect deception using different communication media. It also illustrates that the familiarity and impression of the client can mitigate the impact of communication mode on auditing practice.

Limitations

While we controlled the experimental conditions for internal validity, the reader should be cautious about extending the results of this study beyond the conditions that define this study. The conclusions drawn from this research are specific to the task and setting used to conduct the research. However, the results can have important implications for the conduct of auditing when increasingly lean forms of communication are becoming the norm of communication between the clients and the auditors.

6. CONCLUSION

Auditors should consider a number of issues when choosing the form of media with which to communicate with a client. The auditor should consider his/her familiarity with the client. For example, is the client a new client or a repeat client? Auditors must also take into account the likelihood of detecting deception using a certain form of communication and the implications of not detecting deceptive communication. The results suggest that it is more

appropriate to use rich forms of media early on in the audit client's lifecycle (new client) in order to increase the auditor's ability to detect deception. Careful attention to the appropriateness of a given communication media for a new versus repeat audit client may help increase the effectiveness of the future auditing professionals who will undoubtedly be increasingly faced with decisions to maximize online interaction with clients.

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Appendix A
Case 2 (NFN)

Imagine that you are an auditor for a large accounting firm. A description of the audit that you are conducting follows.

You will be auditing Mertins, Inc. This is a new client for the firm. Mertins was previously a client with a different accounting firm and has decided to engage your firm as its new auditors. A limited amount of prior year information will be made available by the previous audit firm.

You attend a meeting with the head of the accounting department.

Upon arriving at the office, you notice that items on the desk are a bit scattered. There are many file folders stacked on the desk. Loose papers appear to be haphazardly stacked in one corner of the desk. A large filing cabinet, apparently unused, stands in the corner. The drawers of the filing cabinet are not labeled. An in-box overflowing with papers and folders sets on the desk.

The Director of Accounting enters the office hurriedly, 10 minutes late, appearing a bit disheveled. He hands to you a sheet of paper with the following account balances:

Profit & Loss Fluctuation Analysis

Account Name	FINAL
	12/31/2004
SALES - SCBA SPARE PARTS	3,799,524.00
COST OF GOODS SOLD	334,156.00
LABOR - PRODUCTION MACHINING	24,722.00
LABOR - FINAL ASSEMBLY	165,484.00
OVERTIME PAY	78,089.00
AUTO EXPENSE	1,095.00
BUILDING MAINTENANCE	6,602.00
EQUIPMENT MAINTENANCE	3,199.00
SALARIES - MANAGER	82,717.00
OTHER EXPENSES	30,000.00
BANK CHARGES	5,274.00
OTHER INCOME	(24,060.00)

He begins to explain some of the account balances. As you ask questions, you notice that he seems preoccupied and is a bit uncertain of some of the information. His demeanor seems tense and he does not use many hand movements when explaining the data. As the meeting concludes, he shakes your hand and escorts you to the door.

Appendix B
Case Evaluation Sheet – Case X
Section I
Based on the case that you just read, indicate your level of agreement with each of the following sentences. Be sure to record your first impression as it occurs to you.

Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neutral	Slightly Agree	Somewhat Agree	Strongly Agree
1	2	3	4	5	6	7

_____ 1. It is likely that some of the information which I received is deceptive (i.e., is intentionally false or misleading).

_____ 2. I feel confident that I could detect any deceptive information which was communicated.

_____ 3. I have the information needed to evaluate the likelihood that false information has been provided.

_____ 4. A face to face meeting provides enough information for me to detect deceptive information.

_____ 5. I think that communicating in a face to face meeting is the most appropriate form of communication for this situation.

Please rank from 1 to 3 your top three choices for the **next** communication with this client (1 = most preferred).

E-mail	Telephone	Face-to-face	Voicemail	Fax	Videoconference

Section II
Please clearly mark "T" for true and "F" for false for the following statements.

_____ 1. The client was a new client for the firm.

_____ 2. The communication was completed via a face to face meeting.

_____ 3. The client provided current and prior year financial data.

_____ 4. The client conducted the communication in a professional manner.

_____ 5. The client gave a positive first impression.

Please turn the page and continue to Case X.