

The Impact of Client Expertise, Client Gender and Auditor Gender on Auditors' Judgments

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THE IMPACT OF CLIENT EXPERTISE, CLIENT GENDER AND AUDITOR

GENDER ON AUDITORS' JUDGMENTS

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THE IMPACT OF CLIENT EXPERTISE, CLIENT GENDER AND AUDITOR GENDER ON AUDITORS' JUDGMENTS

ABSTRACT: The purpose of the current study is to assess the extent to which auditors' judgments are affected by client expertise, client gender and auditor gender. Prior audit research suggests that auditors place more weight on evidence received from clients who possess higher, relative to lower, expertise (Anderson et al. 1994b; Bamber 1983; Hirst 1994; Margheim 1986; Rebele et al. 1988). We extend this line of research by suggesting that client expertise interacts with client gender during the auditor-client inquiry process, and examining the degree to which male and female auditors respond differently to these two source attributes. A total of 158 experienced auditors participated in a between-participants experiment with two manipulated variables (client expertise - low or high; client gender - male or female) and one measured variable (auditor gender - male or female). In a client-inquiry scenario, the auditors exhibited greater belief revision when the client possessed relatively higher expertise and when the client was male. A significant three-way interaction suggests that when client expertise was high, relative to low, the *male favorability bias* was reduced for male auditors; however, surprisingly, the bias was increased for female auditors. Post-experiment debriefing items indicate that male (female) auditors believe that male managers inherently possess a higher (similar) level of managerial ability. Comparing the managerial ability findings to the behavioral responses suggests a potential disconnect between the female auditors' beliefs and actions. Since one of the hallmarks of the audit profession lies in the concept of objectivity, the results of this study indicate that audit researchers and practitioners need to better understand the implications of negative gender stereotypes toward women managers.

Keywords: *gender stereotypes, client expertise, client gender, auditor gender.*

I. INTRODUCTION

Auditors often rely on client-provided evidence to form judgments and make decisions. Such evidence is typically sought when unusual trends, fluctuations or valuations in the client's accounts require further explanation. One concern regarding client inquiry is that source attributes may bias auditors' judgments. Indeed, research findings indicate that auditors are sensitive to source credibility differences, particularly source expertise (Anderson et al. 1994b; Bamber 1983; Hirst 1994; Margheim 1986; Rebele et al. 1988), source integrity (Beaulieu 2001; Goodwin 1999; Peecher 1996) and source objectivity (Brown 1983; Hirst 1994; Joyce and Biddle 1981). Prior research suggests that auditors place more weight on evidence received from clients who are deemed higher, relative to lower, on these three dimensions, all of which comprise source credibility.

Gender stereotype theories (Berger et al. 1977; Eagly and Karau 2002; Kernahan et al. 2000; Norton et al. 2004) suggest that client gender is another important source attribute auditors consider when they assess the credibility of client-provided explanations. The current study complements and extends prior literature by asserting that auditors' belief revisions in light of client-provided evidence are affected by an interaction of source expertise and gender. Further, we examine the differential response of male and female auditors to these two source attributes.

The first hypothesis (H1) predicts that auditors will respond more favorably to a client with relatively higher expertise, and the second hypothesis (H2) posits that auditors will react more favorably to a male versus a female client. The third hypothesis (H3) asserts an interaction between client expertise and gender, such that a *male favorability bias* will be observed in the high and low expertise conditions; however, the bias will be smaller in the high expertise treatment. In the form of a research question (RQ), we also investigate the extent to which auditor gender interacts with client gender and client expertise. To test our assertions, we administered a between-participants experiment, in which we manipulated two factors (client expertise and client gender) and measured one factor (auditor gender).

The experimental results, obtained from 158 experienced auditors, indicate significant main effects supporting the predictions of client expertise (H1) and gender (H2). The 'expertise by gender' interaction (H3) was significant, but yielded a different pattern than predicted, which was manifest in a significant three-way interaction. Study results indicate that male auditors responded as predicted by H3 while female auditors reacted in a contrary

fashion; that is, the male favorability bias was larger when client expertise was high as compared to low.

Post-experimental psychological debriefings offer further insight into the experimental results. First, we asked participants to report explicitly whether male or female managers inherently possess more, less or equal levels of managerial ability. Male auditors indicated that male managers hold higher ability levels, while female auditors suggested that male and female managers hold equal ability levels. Yet, both male and female auditors treated male clients more favorably in the experiment—suggesting a possible ‘disconnect’ between the female auditors’ beliefs and actions. Further probing into the auditors’ gender stereotype of woman as managers indicated that both male and female auditors were raised to believe that male managers inherently hold higher levels of managerial ability than female managers. This evidence suggests that gender stereotypes developed during one’s formative years are persistent, and can influence adult behavior at conscious and subconscious levels.

This study extends previous audit judgment and decision-making research by demonstrating that auditors’ acceptance of clients’ explanations is influenced by an interaction of client gender, client expertise and auditor gender. The experiment also contributes to gender stereotype theories by suggesting that a cultural typecast of female managers as inferior to male managers can consciously and subconsciously bias male and female auditors’ judgments in favor of male clients. Given that objectivity is one of the cornerstones of the audit profession, auditing researchers and practitioners need to understand how stereotypes of this nature are formed, examine the extent to which such stereotypes can bias audit judgments, and develop ways to negate any prejudicial effects arising negative stereotypes of women as managers.

The remainder of this paper is organized as follows. The next section reviews relevant literature, sets forth study hypotheses and offers a research question. The third and fourth sections describe the research methodology and present study findings. The final section summarizes the study, discusses the implications for practice and theory, and proposes future research directions.

II. THEORY AND HYPOTHESES

Client inquiry constitutes a major source of audit evidence and is particularly important in cases where the auditor has detected unexpected fluctuations, trends or valuations in the client’s accounts. In such instances, the auditor commonly approaches client personnel (e.g., the client’s CFO) for potential explanations. The client typically provides the

auditor with one or more plausible explanations. Subsequently, the auditor might revise his or her initial belief, depending on the persuasiveness of the evidence and perceived credibility of the source (client).

According to psychological theories of persuasion (see Eagly and Chaiken 1993 for a review), message recipients follow two distinct routes when processing persuasive information—the central (systematic) or the peripheral (heuristic) route. When individuals reflect on the validity of arguments in a communication, they are following the central route. However, when a peripheral information-processing strategy is employed, decision-makers focus on non-content related cues, such as source attributes. We examine the impact of two peripheral source cues on auditors' belief revision during client inquiry—source expertise and source gender.

Source Expertise

In social psychology, source expertise represents the perceived correlation between a source's report and the outcome of empirical investigation (Birnbaum and Stegner 1979). Expertise¹ is one of three dimensions comprising source credibility², and credibility has been shown to be a major determinant of persuasion (e.g., Birnbaum and Stegner 1979; Chaiken and Maheswaran 1994; Eagly and Chaiken 1993; McGinnies and Ward 1980). Thus, a highly credible source is often found to induce more belief revision toward the source's advocated position, relative to a low-credibility source. Studies that deal with the specific dimension of source expertise generally show the same results in various communication contexts (see Pornpitakpan 2004 for a review).

A number of auditing studies have investigated the effect of source expertise on auditor judgment and decision-making, and have drawn similar conclusions. For instance, Bamber (1983) found that audit managers' reliance on the work of audit seniors dropped as the senior's perceived expertise declined. Margheim (1986) reported that auditors' adjustments to the nature and extent of audit procedures were affected by the perceived expertise of internal auditors, in that planned audit hours were reduced when the source possessed a high level of perceived competence. Rebele et al. (1988) reported that when forming judgments related to the valuation of a client's uncollectible receivables, auditors placed more reliance on evidence from a high-expertise versus a low-expertise source. Anderson et al. (1994b) found that auditors judged client-provided explanations as more persuasive when the source was described as possessing high versus low competence. Finally, Hirst (1994) showed that auditors considered explanations for unexpected differences

reported by a more competent source as more diagnostic than the same evidence provided by a less competent source. In summary, prior research suggests that auditors place more weight on evidence received from clients who are deemed to possess higher, relative to lower, expertise.

In our first hypothesis, we similarly predict a positive effect of client expertise on auditors' judgments, measured in terms of auditors' belief revisions in the light of client-provided explanations. It is important that we replicate prior audit findings in this regard so that we can establish a firm basis for the upcoming interaction hypothesis.

H1: Auditors will exhibit significantly greater belief revision, in favor of the client's position, when the client possesses high relative to low perceived expertise.

Source Gender

According to the theories of *expectation states* (Berger et al. 1977) and the *social category bias* (Norton et al. 2004), social categories such as race, age and gender are highly salient factors in individuals' decision-making and information processing activities. Decision-makers consciously and subconsciously engage in the process of stereotyping to place individuals in groups of easily recognized members. Once stereotyped as a member of a particular social category, people tend to make tacit and often biased assumptions about the target person's behaviors, skills and capabilities. Norms of the category in question are automatically associated with the assumed member, even when the particular situation does not provide corresponding indications.

Prior research in psychology has confirmed the presence of social category bias for expectations toward a target's gender. For example, evidence suggests that men and women alike tend to associate the male gender with greater overall abilities than the female gender (Williams and Best 1990). Research evidence also suggests that perceived managerial abilities are linked with masculine characteristics (Heilman et al. 1989; Powell and Butterfield 1989; Schein 2001), while women managers are often perceived as lacking the necessary attributes for managerial success (Heilman et al. 1989). For example, in a study by Heilman et al. (1995), working managers from a range of industries described female managers as decidedly less competent, active and potent than their male counterparts.

It is widely believed that such gender stereotypes are created as well as maintained by the ongoing under-representation of women in higher managerial and executive ranks (e.g., Eagley 1987). Indeed, a recent survey (Catalyst 2004) examined 353 'Fortune 500' companies and found that while women hold 50.3 percent of management professional and

related occupations, there is a sharp drop-off for senior management positions, with women representing only 15.7 percent of Fortune 500 corporate officers in 2002.³ Theories of *expectation violation* (Kernahan et al. 2000) and *role congruity* (Eagly and Karau 2002) claim that widely held gender stereotypes make it difficult for women to succeed in such male-dominated domains. They posit that female managers who attempt to succeed in male-dominated (and thus male-gendered) workplaces are often subjected to punishment in various ways for violating commonly accepted stereotypes; meaning, since male managers are typically expected to occupy highly-ranked leadership roles and possess the associated skills, a potential prejudice occurs when female managers apply for or hold such positions. Some psychology studies offer evidence of such role incongruity effects. For example, Heilman and Haynes (2005) found that while mixed-sex dyad members contributed equally to a male sex-typed teamwork task, the male members were evaluated more favorably than the female members. Further, a phenomenon known as the *backlash effect* (Rudman 1998; Rudman and Glick 2001) suggests that women who are successful, behave confidently and act assertively in typically male occupational roles are less liked and more derogated (by both male and female evaluators) than men with the same attributes (Fuchs et al. 2004).

In the current study, we examine how gender stereotype expectations among auditors can influence their judgments in response to evidence provided by male or female clients. In this regard, extant research has demonstrated that individuals typically agree more frequently with men's than with women's contributions, and defer more often to the opinions of men than women (Wagner and Berger 1997; Berger et al. 1977). Further, individuals are generally more open to the influence of men than women in domains that are stereotypically masculine (Carli 2001; Lockheed 1985; Propp 1995; Schneider and Cook 1995).

To our knowledge, there is no prior research regarding the effects of client gender on auditors' judgments and decisions. However, a number of auditing studies have examined the influence of gender on auditors' performance evaluations of their peers and suggest that the theories presented herein also apply to the auditing profession. For example, Anderson et al. (1994a) asked practicing auditors (male and female) to indicate their perceptions of success for hypothetical audit seniors and found that seniors who were described as female were generally perceived to be less likely to succeed than male seniors. Johnson et al. (1998) reported that male and female audit managers with a low tolerance for ambiguity evaluated a female audit senior's performance lower than the same performance by a male audit senior.

These findings suggest that male and female auditor judges tend to assess female auditors' professional abilities as inferior, relative to male auditors, thus supporting the notion

that source gender may be an important aspect that auditors consider when evaluating the persuasiveness of client-provided evidence. With regard to auditor-client inquiry, we note that corporate financial positions at high ranks, which constitute a common source for inquiry, are dominated by men. Statistics of AICPA members indicate that only 17.20 percent of all CFOs and financial officers were female in 2005 (AICPA 2005). Hence, female CFOs are relatively rare and may therefore create an impression of role incongruity or expectation violation among auditors. Accordingly, we suggest that auditors will exhibit gender stereotypic behavior when assessing the persuasiveness of client-provided evidence. Based on the reviewed theories, as well as prior audit research findings, we expect that auditors will react more favorably to client-provided explanations when the client is male as opposed to female.

H2: Auditors will exhibit significantly greater belief revision, in favor of the client's position, when the client is male as compared to female.

Interaction between Source Expertise and Gender

The next hypothesis asserts an interaction effect of the client expertise and client gender on auditors' belief revisions. Extant research suggests that decision-makers are particularly sensitive to gender stereotype expectations when little information diagnostic of the source's expertise is available (Lockheed 1985; Postmes et al. 1998). In the absence of such information, people often automatically assume that women are less qualified for positions typically held by men (Heilman and Blader 2001; Heilman and Haynes 2005; Heilman et al. 1991). For example, in a meta-analysis of 21 studies examining gender discrimination during personnel selection, Tosi and Einbender (1985) concluded that there is higher likelihood of discrimination when judges have limited information about the qualifications of the applicant because social category bias increases in situations where there is ambiguity about the source's skills and abilities (Fuchs et al. 2004). In the absence of positive context-related cues (i.e., expertise), individuals perceive the gender cue in isolation and assign women to a social category that is judged to be less qualified. However, when women demonstrate the possession of task-specific or task-related expertise, gender biases tend to dissolve (Lockheed 1985). Thus, we predict that the perceived level of expertise will mitigate the biasing effect of client gender on auditors' belief revision.

The interaction hypothesis posits that when client expertise is relatively low, auditors will exhibit greater belief revision when the client is male, as compared to female. Due to the gender stereotypic assumption that men are generally more qualified than women, and in the

absence of specific countervailing information, a male source with low expertise will result in greater belief revision among auditors than a female source with low expertise. On the other hand, when the client's perceived expertise is high, we expect that this male-centric gender bias will be significantly reduced.

H3: Auditors will exhibit significantly greater belief revision difference between a male versus a female client with relatively low expertise than a male versus a female client with relatively high expertise.

Auditor Gender

This study also considers the effect of auditor gender. While audit research has not yet investigated the interactive effect of client and auditor gender on auditor judgment, results of some studies suggest that gender expectations vary across male and female auditors. First, Hull and Umansky (1997) reported that male audit managers evaluated female leaders as less effective than male leaders, while female managers did not exhibit this bias. Further, in a study by Trapp et al. (1989), over 69% of female public accountants believed that women had the same level of commitment to public accounting as men, while less than 37% of the male respondents agreed. Finally, Pillsbury, Capozzoli and Ciampa (1989) found that female respondents viewed their lack of upward mobility as a function of the "old boys' network", while male respondents believed it to be a function of women's individual ability.

Social psychology research in management contexts has produced mixed findings with regard to the source and recipient gender interaction. First, consistent with audit research findings, several surveys on men's and women's attitudes toward women as managers confirm that female respondents are generally more accepting of women in management positions than are male respondents (e.g., Owen and Todor 1993; Peters et al. 1974; Terborg et al. 1977; Brenner and Beutell 2001; Stevens and DeNisi 1980). Research on a phenomenon known as the 'automatic in-group bias' reveals that women generally prefer female gender, whereas men typically show neutral gender attitudes (Nosek and Banaji 2002; Richeson and Ambady 2001). Interestingly, however, studies that camouflaged the purpose of the questionnaire (e.g., Schein 1973, 1975, 2001) have found that both men and women exhibit negative attitudes toward female managers. One explanation for these seemingly contradictory results is offered by research findings on implicit versus explicit gender stereotypes (Rudman and Kilianski 2000). It appears that gender differences exist on explicit measures of gender stereotypes, with women's explicit gender attitudes being more egalitarian than men's attitudes, whereas implicit stereotypical attitudes toward the female

gender are similar for men and women (e.g., Banaji and Hardin 1996; Blair and Banaji 1996; Greenwald and Banaji 1995).

In sharp contrast to these findings, however, Rudman (1998) found that in some circumstances, women even react more negatively than men to other women who exhibit male-stereotypical behavior. The backlash effect, described earlier, therefore appears to affect female judges more strongly than male judges. For example, Rudman (1998) demonstrated that women (but not men) found self-promoting women to be less competent, less socially attractive, and subsequently less hireable than self-promoting men.

In summary, some findings indicate that women are less influenced by gender stereotypes than men, which for our study would suggest that female auditors should favor male clients to a lesser extent than male auditors. However, there is also reason to believe that female auditors should exhibit the same or even stronger stereotyping behavior (against female managers) than male auditors. Given the lack of consistent theory and findings in this area, we pose a research question regarding the potential effect of auditor gender.

RQ: Does auditor gender interact with client gender and client expertise?

III. EXPERIMENTAL PROCEDURE

We designed and administered a computerized laboratory experiment to test the research hypotheses and investigate the research question. The experiment reflects a between-participants 2 (client expertise: high, low) by 2 (client gender: male, female) design, in which we blocked participants according to their gender (male, female). Participants within each of the two blocks were randomly assigned to the four treatment conditions.

The case used in this study is an adaptation of an inventory obsolescence case by Nöteberg and Hunton (2005). Participants assumed the role of a partner in a large accounting firm, in charge of the audit of a computer manufacturer, called MicroClone Inc. According to the background information, the auditor's current task is to evaluate whether client-provided explanations account for problems that have been detected in the company's finished goods inventory, currently valued at \$2 million. Specifically, participants learned that the client's inventory appears to be overvalued by about \$400,000, due to potential obsolescence of one product line ("4th generation computers"). Thus, it seems that this product line should be written down by \$400,000 (initial anchor), since it will be difficult to sell at the current price.

Upon reading background information, participants stated their initial belief (anchor) by recommending the amount by which, in their opinion, the client should write down the potentially obsolete inventory. Participants then learned that the client's CFO offers

additional evidence that might be relevant in determining the auditor's final judgment. Here, the source expertise and gender treatments were introduced. Participants then read multiple client-provided explanations, each defending full valuation of the product line. To preclude any order effects, the order of the explanations was randomized. After reviewing the explanations, participants were afforded the opportunity to revise their initial beliefs by recommending a final write-down amount, which constituted the dependent variable. Participants then responded to a post-experimental questionnaire, which collected data on manipulation checks, various psychological debriefing items and demographic measures. The order of all post-debriefing items was randomized.

Experimental Treatments

Source expertise was manipulated by varying the client's certification, education (Anderson et al. 1994b) and experience (Rebele et al. 1988; Jenkins and Haynes 2003). Thus, we described the CFO either as possessing a CPA and Master's degree and having 15 years of accounting experience (high expertise), or as possessing neither CPA nor Master's degree and having 5 years of accounting experience (low expertise).

Regarding the source gender treatment, we used an adaptation of the Goldberg experimental paradigm (Goldberg 1968), where identical experimental materials are judged under different gender-assumptions. In a typical Goldberg-paradigm study, one treatment group is led to believe that the message source is male, while the other group is told that the source is female. Inferences about the source should thus systematically vary solely on the basis of gender. Hence, source gender was manipulated by multiple mentions of the CFO's name, which either signified a man ("Tom") or a woman ("Mona") client. The manipulation was reinforced throughout the experiment by either repeating the name or referring to the CFO as "he" or "she", respectively.

Dependent Measure

The dependent variable reflects participants' final recommended write-down amount for the potentially obsolete inventory, adjusted for the initial anchor amount. Lower write-down amounts indicate greater belief revision toward the client's position. In order to capture participants' belief revision in light of client-provided explanations, we asked them to recommend a write-down value both before and after experimental treatments. The initial measurement constitutes the anchor and stated: "Given the available information and realizing that you have yet to receive a response from Tom/Mona, if you had to make a recommendation at this point, by how much would you recommend MicroClone write down

their 4th generation inventory (between \$400,000 and \$0)?” The post-treatment measure, constituting the dependent variable, stated: “Having read Tom’s/Mona’s position on this matter, by how much would you recommend MicroClone write down the 4th generation inventory (between \$400,000 and \$0)? Recall, the CFO, Tom/Mona has a (no) CPA and Master’s degree, and he (she) has 15 (5) years of accounting experience. Your previous estimate was {anchor}.” Note that during dependent variable measurement, participants were reminded of their initial belief (anchor) and that expertise and gender treatments were reinforced.

IV. RESULTS

A total of 158 auditors participated in the experiment with a mean (standard deviation) age of 26.32 (2.93) and years experience of 4.52 (2.69). There were 77 male and 81 female auditors, of which 82 were senior and 76 were manager auditors. The participants were newly hired experienced auditors from other CPA firms who were attending an introductory training course for one of the Big-4 firms. Regarding the participants’ last employer, 105 were employed by one of the other Big-4 firms, 16 hailed from regional firms, and 37 arrived from local firms. Over the course of two months, there were two training courses. Statistical testing indicates that all demographic factors (above) were non-significant across the treatment conditions, thus, the randomization procedure was deemed effective.⁴ At the beginning of each training class, all auditors volunteered to participate in the study. Additional descriptive statistics are shown on Table 1.

[Insert Table 1 about here]

Manipulation Checks

For the client gender manipulation, participants answered the following question: “Was the CFO male or female?” All participants responded correctly in accordance with their randomized conditions. Regarding the client expertise treatment, participants responded to the following statement: “Considering the CFO’s combined education and experience, I believe that the CFO’s expertise level is (1 = below average, 5 = average, 9 = above average). The mean (standard deviation) for the low and high expertise conditions, respectively, were 3.36 (1.20) and 6.56 (1.10) [$t = 17.42, p < .01$].⁵ Based on the results of manipulation check items, the treatments were deemed successful. Additionally, during pre-test measurement, all participants initially agreed that the obsolete inventory should be written-down by \$400,000;

thus, this amount reflected a constant anchor for subsequent recommended write-down amounts.

Hypotheses and Research Question Testing

Presented on Table 2 are the results of an ANOVA analysis on the dependent variable—final recommended write-down value for the potentially obsolete inventory. As indicated on Panel A (Table 2), all main effects are significant, as are two of the two-way interactions and the three-way interaction ($p < .01$).⁶ The results of multiple pairwise testing on treatment means are presented on Panel B (Table 2).

[Insert Table 2 about here]

The first hypothesis asserts that participants will exhibit greater belief revision for a client with more, relative to less, perceived expertise. The main effect for client expertise is significant (see Table 2, panel A), indicating a lower mean (standard deviation) recommended write-down amount of \$190,815 (95,723) for a client with relatively more expertise than the mean (standard deviation) write-down amount of \$321,714 (65,477) for a client with relatively less expertise. H1 is supported, suggesting that the auditors' recommended inventory write-down amounts were more favorable to the client when the client's expertise was perceived to be relatively higher.

The second hypothesis posits that the participants' belief revision will be greater when the client is male, as compared to female. The significant main effect for client gender (see Table 2, panel A) indicates that the mean (standard deviation) recommended write-down amount of \$194,659 (86,397) for a male client is less than the mean (standard deviation) write-down amount of \$319,290 (83,104) for a female client. This result signals greater belief revision, in favor of the male client, as predicted by H2.

The third hypothesis predicts an interaction between client gender and client expertise, such that auditors will exhibit significantly greater belief revision difference between a male versus a female client with relatively low expertise than a male versus a female client with relatively high expertise. The significant two-way interaction between client gender and expertise (see Table 2, panel A) is illustrated on Figure 1.

[Insert Figure 1 about here]

Unexpectedly, the nature of the interaction was opposite of our prediction; that is, the difference between a relatively high expertise male and female client (\$153,654) is significantly greater than the difference between a relatively low expertise male and female

client (\$94,355) [$t = 3.60, p < .01$]; thus, H3 is not supported. However, an explanation for this unexpected finding is found in the three-way interaction, discussed next.

The research question (RQ) examines whether male and female auditors will respond differently to client gender and client expertise. The significant three-way interaction (see Table 2, panel A) suggests a response differential by auditor gender. Figure 2 illustrates the client gender by client expertise interaction, holding auditor gender constant at male. Overall, male auditors exhibited greater belief revision when the client's gender was male, as compared to female. Additionally, male auditors revised their beliefs significantly more when they perceived that the client possessed higher, as opposed to lower, expertise. Finally, when comparing male to female clients, the difference in belief revision was greater (in favor of a male client) when expertise was deemed relatively low (\$101,547), as compared to relatively high (\$56,900) [$t = 2.37, p = .02$]. Interestingly, this interaction pattern is the same as predicted by H3.

[Insert Figure 2 about here]

Depicted on Figure 3 is the client gender by expertise interaction, holding auditor gender constant at female. The same main effect patterns for client gender and client expertise indicated by male auditors obtain for female auditors. However, when comparing male to female clients, relatively higher client expertise resulted in a greater belief revision difference (\$251,529) than relatively low expertise (\$88,672) [$t = 24.48, p < .01$], which is the opposite finding for male auditor participants.

[Insert Figure 3 about here]

Women as Managers

To gain further insight into why male and female auditors responded differentially to a male and female client, we administered some psychological debriefing items after the experimental results were recorded.⁷ To determine the male and female auditors' explicit attitudes toward women as managers, we administered a portion of the 21 item "Women as Managers Scale (WAMS)" (Peters et al. 1974), which has been used in prior studies (e.g., Owen and Todor 1993; Terborg et al. 1977; Bluedorn 1983; Brenner and Beutell 2001). Some studies have performed factor analyses on the WAMS (e.g., Crino et al. 1981; Cordano et al. 2002, 2003) and one stable factor emerges—managerial ability. Thus, we administered the 6 items from the 21-item scale comprising the managerial ability factor, as found by Crino et al. (1981).

Specifically, participants responded to the following items (1 = men much more, 5 = men and women alike, 9 = women much more):

1. In your opinion, who is more ambitious to be successful in the business world?
2. In your opinion, who is more capable of learning mathematical and mechanical skills?
3. In your opinion, who is more competitive to be successful in the business world?
4. In your opinion, who is more assertive in business situations that demand it?
5. In your opinion, who is more aggressive in business situations that demand it?
6. In your opinion, who possesses more self-confidence required of a good leader?

Inter-item reliability among the items was high (Cronbach's $\alpha = .88$); thus item responses were averaged to form a managerial ability index.

The same ANOVA model as shown on Table 2 was run using the managerial ability index as the dependent variable. The only significant factor was auditor gender (F-ratio = 1155.32, p -value < .01); all other factors were non-significant ($p > .15$). The overall mean (standard deviation) index response was 4.30 (0.82), with male and female auditor means (standard deviations) of 3.51 (0.22) and 5.05 (0.32), respectively. As indicated by the significant ANOVA main effect ($p < .01$), the auditor gender means were different from each other. Additional tests were conducted to determine whether the male and female auditor means were significantly different from the mid-point of the scale (5). The male auditor mean of 3.51 was significantly less than the mid-point ($t = 61.52$, $p < .01$), while the female auditor mean of 5.05 was not significantly different from the mid-point ($t = 1.29$, $p = .20$).

The finding that the male auditor index mean was significantly less than the mid-point of the scale suggests that they believe, according to their explicit beliefs, women managers are less ambitious, capable, competitive, assertive, aggressive and self-confident than male managers. Their stereotypical beliefs in this regard are consistent with their experimental responses; that is, the male auditors, on whole, responded more favorably to the male client in this study. Conversely, although the female auditor index mean was not significantly different from the mid-point of the scale, they too responded more favorably to the male client in the experiment. This result indicates a possible cognitive 'disconnect' between the female auditors' explicit beliefs and their actions, as similarly found by Rudman and Kilianski (2000). One reason for such a 'disconnect' could be rooted in the subconscious influence of stereotype beliefs, as examined next.

Incongruence between Beliefs and Actions

After responding to the six items comprising the managerial ability index, we asked participants the following: “Please think about a close friend of your gender from your hometown – i.e., the place where you lived at the age of 7-11. In your opinion, if your friend were asked the following questions today, how do you think he or she would respond?” The reason for asking respondents to reflect on what a close friend of their gender might say is rooted in the concept of social projection. According to social projection theory, when people are asked how their referent peers might respond to the same stimuli, they often project their own subconscious or repressed conscious beliefs onto referent others (e.g., Clement and Krueger 2000; Mikulincer and Horesh 1999; Ruvolo and Fabian 1999; Smith 1997). We asked the participants to think about their hometown during the formative years of 7-11 because prior research suggests that stereotypical gender beliefs are embedded within the social context in which individuals are immersed (i.e., hometown) during such formative years (Beal 1994; Best et al. 1977).

Within-subject debriefing of this nature can offer valuable insight into the behavioral effects of subconscious biases and stereotypes. This type of debriefing also allows participants to reflect on the relationship between the independent and dependent constructs of interest, unconfounded by the experimental treatment condition to which they were assigned (Kahneman and Tversky 1996; Libby and Tan 1999; Tan et al. 2002). An accounting study dealing with the effect of contingent economic rents on auditor independence used social projection theory to help explain why auditors believed they were independent, yet recorded biased behaviors (Beeler and Hunton 2002).

We asked participants to respond to the same six items comprising the managerial ability index, except we changed the wording “In your opinion” to “In your friend’s opinion”. As with the first administration of the six items, inter-item reliability was high (Cronbach’s $\alpha = .81$); thus item responses were averaged to form a referent-managerial ability index.

The same ANOVA model as shown on Table 2 was run using the referent-managerial ability index as the dependent variable. The only significant factor was auditor gender (F-ratio = 8.34, p-value < .01); all other factors were non-significant (p > .30). The overall mean (standard deviation) index response was 2.51 (0.71), with male and female auditors’ means (standard deviations) of 2.67 (0.67) and 2.35 (0.75), respectively. The male auditor mean was significantly greater than the female auditor mean, as indicated by the significant main effect (p < .01). Also, the male auditor mean was significantly lower than the mid-point of the scale (5) (t = 30.47, p < .01), as was the female auditor mean (t = 33.24, p < .01).

The difference between the managerial ability index and the referent-managerial ability index for male auditors of 0.84 (3.51 – 2.67) is significant ($t = 10.43, p < .01$), as is the difference of 2.70 (5.05 – 2.35) for female auditors ($t = 110.69, p < .01$). Further, the difference between indices for female auditors (2.70) is significantly greater ($t = 16.92, p < .01$) than the difference for male auditors (0.84), suggesting that female auditors have changed their explicit beliefs from their formative-years significantly more than male auditors. These results, combined with the auditors' recommended write-off amounts lead to the following question: Does the calibration of stated beliefs and actions differ between male and female auditors?

Recall from Table 2, the interaction between client gender and auditor gender was significant ($p < .01$). Figure 4 graphically depicts the findings from this two-way interaction. While both male and female auditors made write-off recommendations that were more in favor of a male client than a female client, the client gender gap for female auditors (\$172,527) was significantly greater than the client gender gap for male auditors (\$76,626) [$t = 3.82, p < .01$].

[Insert Figure 4 about here]

Taken as a whole, male auditors' explicit beliefs are as follow: male managers are more ambitious, capable, competitive, assertive, aggressive and self-confident than female managers. Their managerial ability gender stereotype in this regard, as reflected by the referent-managerial ability index, appears to be consistent with their explicit beliefs as well as their behaviors in this study. Female auditors' explicit beliefs are that both male and female managers are equally ambitious, capable, competitive, assertive, aggressive and self-confident; however, they too appear to give preferential treatment to the arguments of a male client in the current experiment. Analysis of the referent-managerial ability index suggests a possible explanation; that is, gender stereotypes of "women as managers" that are formed during one's formative years subconsciously affect the behaviors of women auditors, even though they genuinely state their beliefs about the equality of men and women managers.

V. DISCUSSION

The purpose of this study was to investigate whether auditors' judgments and decisions during the auditor-client inquiry process are affected by client expertise, client gender and auditor gender. We extend prior audit research by demonstrating that client expertise and gender interact in their effect on auditors' belief revision in light of client-

provided audit evidence. Furthermore, we demonstrate that male and female auditors appear to react differentially to client gender and client expertise.

First, consistent with prior audit research findings (e.g., Bamber 1983; Rebele et al. 1988), auditors revised their beliefs more strongly, in favor of the client's position, when the client possessed high, relative to low expertise (H1). Further, supporting theories of expectation status, social category bias, expectation violation and role congruity, we found that auditors were generally more persuaded by male as compared to female clients (H2). Study results also reveal an unexpected interaction between client expertise and client gender when assessing the effect on auditor belief revision (H3), which is further explained when incorporating auditor gender in the analysis (RQ).

While H3 anticipated that the gender bias would dissolve or at least weaken when the client possessed high relative to low expertise, this interaction pattern was observed only for male auditors. Consistent with prior research (Lockheed 1985; Tosi and Einbender 1985), male auditors appeared to incorporate client expertise into their judgments of a female client's persuasiveness. Indeed, additional analyses revealed that male auditors were more strongly influenced by a female client's expertise than a male client's expertise. A plausible explanation for this finding could be that male auditors reached a ceiling effect in their belief revision when the client's gender was male. On the other hand, when the client's gender was female, the additional source cue of expertise mitigated the gender stereotype effect and therefore had a stronger impact on belief revision. The findings also suggest that male auditors appear to attribute relatively low credibility to a female client, unless she is deemed to possess a relatively high level of expertise.

For the female segment of the sample, the opposite interaction pattern occurred. Unexpectedly, female auditors' belief revision behavior revealed that the favorable male gender gap for high expertise was significantly greater than low expertise. Thus, when confronted with a high expertise client, female auditors' apparent "discrimination" toward their own gender was even more pronounced than with a low expertise client. Furthermore, female auditors incorporated client expertise more strongly in their belief revision judgments when the client's gender was male as opposed to female; that is, when the client's gender was female, they only marginally acknowledged source expertise in their belief revision judgments. Thus, while source expertise mitigated the favorable male gender bias for male auditors, it exacerbated the bias for female auditors.

These findings are particularly interesting when contrasted to prior audit research on gender stereotypes. While previous studies (e.g., Hull and Umansky 1997; Pillsbury et al.

1989; Trapp et al. 1989) commonly conclude that gender stereotypes are more pronounced among male as opposed to female auditors, the current results suggest that female auditors are at least as prejudiced in their behavior as male auditors, if not more. On the other hand, the findings are consistent with previous psychology research, which reports that the backlash effect, where women who behave incongruently with their gender role are often subject to discrimination, appears to be particularly strong when the judge is female (e.g., Rudman 1998; Rudman and Glick 2001). Consistent with this proposition, the female auditors in the current study appeared to punish high expertise women more severely than low expertise women for violating their gender role. This observation suggests that female auditors react more strongly to perceptions of role incongruity than their male auditor counterparts.

Another possible explanation for female auditors' unexpected belief revision behavior is a phenomenon that has been referred to as the "queen bee syndrome". Coined by Staines et al. (1974), this notion claims that women who have been successful in male-dominated environments (e.g., female auditors) place extremely high expectations on other women (e.g., female clients), because they wish to maintain the organizational culture in which they have performed so well (Gibson and Cordova 1999). Hence, some women judges perceive other successful women as a threat to their own professional well-being. Hence, the very strategies that female auditors employ to achieve career success may ultimately cause them to discriminate against other women.

Another valuable finding is the apparent cognitive 'disconnect' between female auditors' actions on one hand and their explicitly stated attitudes toward women as managers on the other. Despite the female auditors' stereotyping behavior in favor of male clients, when asked overtly, they claimed to believe that men and women possess equal levels of managerial ability. Therefore, it seems that female auditors are not conscious of their stereotyping behavior. Recall that prior studies in auditing (e.g., Hull and Umansky 1997; Pillsbury et al. 1989; Trapp et al. 1989) have generally concluded that female auditors exhibit less stereotyping behavior than male auditors. We suggest that female auditors' apparent unawareness of stereotyping behavior partly explains the inconsistency between the current results and previous gender stereotype studies in auditing, in that measures of stereotyping in past studies tapped into auditors' explicit beliefs, which are equivalent to our managerial ability measure. When responding to these measures, auditors are aware of the study's purpose. However, it seems that such obvious measurement of stereotypic beliefs triggers socially desirable responses among female auditors (i.e., gender equality), while their behavior remains stereotypical when the purpose of the study is camouflaged, as shown by

our experimental results (see also Banaji and Hardin 1996; Blair and Banaji 1996; Greenwald and Banaji 1995; Schein 1975).

Indeed, our findings suggest that subconscious gender stereotypic beliefs (as measured by the referent-managerial ability index) cause behavior that favors male clients, thereby resulting in the observed cognitive disconnect. More specifically, female auditors' subconscious beliefs about managerial ability corresponded with their behavioral responses, thereby suggesting a strong but suppressed gender stereotype. Male auditors, on the other hand, consistently expressed gender stereotyping in both their actions and overtly stated beliefs. This finding constitutes a valuable contribution to the psychology literatures on the creation and maintenance of gender stereotypes. It indicates that gender stereotypes developed during an individual's formative years are persistent, and are reflected in adult behavior even when overtly stated beliefs express gender equality, as was the case for the female auditors in this study.

Regarding study limitations, our manipulation of client gender was limited to the mentioning of "Tom" versus "Mona" and "he" versus "she", while client gender is a far more complex construct and incorporates many more aspects than simply a name. Hence, our findings may not accurately predict auditors' reactions to client gender in practice. On the other hand, study results show that auditors' reactions to client gender were quite strong, despite the mild manipulation. Another potential threat of using sex-typed names is that the names themselves can create connotations independent of gender, thus potentially confounding the gender manipulation (Kasof 1993). To exclude this validity threat, we recommend replication of the current study with different sex-typed names.

The preferential treatment afforded to a male client in this study by both male and female auditors is undesirable and warrants further investigation. This finding suggests further research into ways to change both the beliefs and actions of auditors. First, researchers and professionals need to examine ways to alter the stated beliefs of male auditors that male managers are inherently more able (i.e., ambitious, capable, competitive, assertive, aggressive and self-confident) than female managers. If their stereotypical beliefs of women as managers did not affect their actions, one could argue that a call for more research and training in this area might be unnecessary. However, male auditors in this study exhibited favoritism toward a male client; thus, their objectivity appears to be significantly biased by gender stereotyping.

Second, further research is also needed to help female auditors understand and overcome the apparently powerful and persistent effects of gender stereotypes that are molded

during their formative years, for they too gave preferential treatment to a male over a female client, even though their stated beliefs reflected gender equality. Future research should specifically investigate why female auditors suppress their gender stereotypes more severely than male auditors and exercise particularly harsh judgment toward high expertise female clients.

Third, future research could investigate intervention techniques for avoiding or at least reducing gender bias in auditors' judgments. For example, a follow-up study could examine whether group-based, as opposed to individual, decision making would mitigate or aggravate the gender bias. Prior research on the effects of gender stereotypes on jurors' judgments would suggest the latter (McKimmie et al. 2004).

Fourth, the current study considered an arguably male-stereotyped context with regard to not only the source's profession (financial officer), but also the audited business domain (manufacturing of personal computers). Future research should investigate whether results on gender biases differ when the audited business domain is stereotypically female, such as an elderly care center or a retailer of beauty products.

Fifth, aside from client gender, this study only manipulated one of many client attributes (expertise), while extant research suggests that other aspects, such as integrity (Beaulieu 2001; Goodwin 1999; Peecher 1996) and independence (Brown 1983; Hirst 1994; Joyce and Biddle 1981) may also have an impact on client persuasiveness. Future research may investigate the extent to which client and auditor gender interact with these and other client attributes.

Finally, extending the results of this study to other cultures than the United States, further research could examine whether the observed stereotypes are comparable to those exhibited by auditors in other countries. Also, findings could be extended beyond the auditor-client relationship to the influence of gender stereotypes *within* public accounting (e.g., audit teams), thus extending prior research in this area (e.g., Hooks 1992; Hull and Umansky 1997; Johnson et al. 1998; Maupin and Lehman 1994). In conclusion, since one of the valuable hallmarks of the audit profession lies in the concept of objectivity, the results of this study suggest that researchers and practitioners need to pay more attention to potential negative effects of gender stereotyping of client managers.

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Table 1: Descriptive Statistics

Sample Size:

<u>Treatment Condition</u>	<u>n</u>
Male Client x Low Expertise x Male Auditor	19
Male Client x Low Expertise x Female Auditor	21
Male Client x High Expertise x Male Auditor	20
Male Client x High Expertise x Female Auditor	22
Female Client x Low Expertise x Male Auditor	18
Female Client x Low Expertise x Female Auditor	19
Female Client x High Expertise x Male Auditor	20
Female Client x High Expertise x Female Auditor	<u>19</u>
Total Sample Size	158

Summary Experimental Results

Mean (Standard Deviation) Elapsed Time to Complete Experiment: 18.86 (3.87)
Mean (Standard Deviation) Initial Recommended Inventory Write-Down: \$400,000 (0)
Mean (Standard Deviation) Final Recommended Inventory Write-Down:

<u>Treatment Condition</u>	<u>Mean (\$)</u>	<u>Std. Dev (\$)</u>
Male Client x Low Expertise x Male Auditor	249,842	(20,852)
Male Client x Low Expertise x Female Auditor	300,381	(17,551)
Male Client x High Expertise x Male Auditor	144,500	(16,256)
Male Client x High Expertise x Female Auditor	91,682	(21,173)
Female Client x Low Expertise x Male Auditor	351,389	(76,581)
Female Client x Low Expertise x Female Auditor	389,083	(11,616)
Female Client x High Expertise x Male Auditor	201,400	(24,790)
Female Client x High Expertise x Female Auditor	343,211	(15,483)
Overall	254,608	(105,131)

Table 2: ANOVA Analysis ^a

Panel A: ANOVA Model (Dependent Variable = Final recommended write-down for the potentially obsolete inventory)

Source	d.f.	S.S.	M.S.	F-Ratio	p	Results
A = Client Expertise	1	63.95 E10	63.95 E10	654.58	.01	H1 - Supported
B = Client Gender	1	61.16 E10	61.16 E10	626.07	.01	H2 - Supported
C = Auditor Gender	1	3.44 E10	3.44 E10	35.18	.01	
A x B Interaction	1	7.72 E10	7.72 E10	79.06	.01	H3 – Opposite
A x C Interaction	1	0.00 E10	0.00 E10	0.00	.97	
B x C Interaction	1	8.13 E10	8.13 E10	83.18	.01	
A x B x C Interaction	1	10.59 E10	10.59 E10	108.42	.01	RQ
Error Term	151	14.65 E10	0.10 E10			
Total	158	173.52 E10				

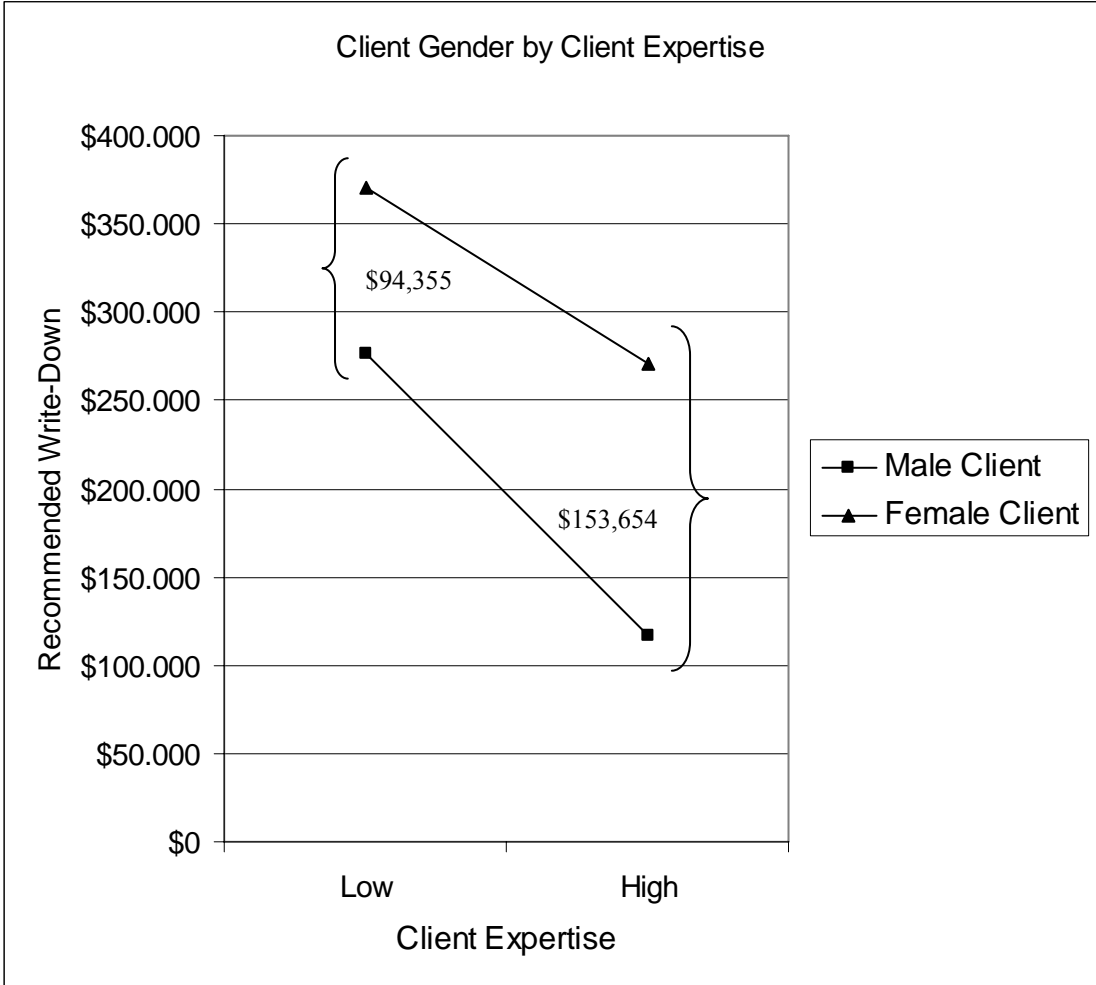
^a The following potential covariates were non-significant ($p > .10$): Age, Years Experience, Position Level (senior or manager), Elapsed Time, & Training Class (1 or 2), Prior Employer (Big-4, regional or local firm)

Panel B: Multiple Pairwise Comparisons (Higher obsolete write-down means indicate that the auditor agreed less with the Client) ^b

						<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
1. Female Client	x	Low Expertise	x	Female Auditor	(\$389,053)	-							
2. Female Client	x	Low Expertise	x	Male Auditor	(\$351,389)	-	-						
3. Female Client	x	High Expertise	x	Female Auditor	(\$343,211)	S	-	-					
4. Male Client	x	Low Expertise	x	Female Auditor	(\$300,381)	S	S	S	-				
5. Male Client	x	Low Expertise	x	Male Auditor	(\$249,842)	S	S	S	S	-			
6. Female Client	x	High Expertise	x	Male Auditor	(\$201,400)	S	S	S	S	S	-		
7. Male Client	x	High Expertise	x	Male Auditor	(\$144,500)	S	S	S	S	S	S	-	
8. Male Client	x	High Expertise	x	Female Auditor	(\$91,682)	S	S	S	S	S	S	S	-

^b Bonferroni and Scheffe’ test results both agree. The letter ‘S’ indicates that the means are significantly different at $\alpha = .05$

Figure 1: Illustration of Significant Two-Way Interaction (H3)



1. Higher recommended obsolete inventory write-down values indicate that participants agreed less with the client relative to lower inventory values.

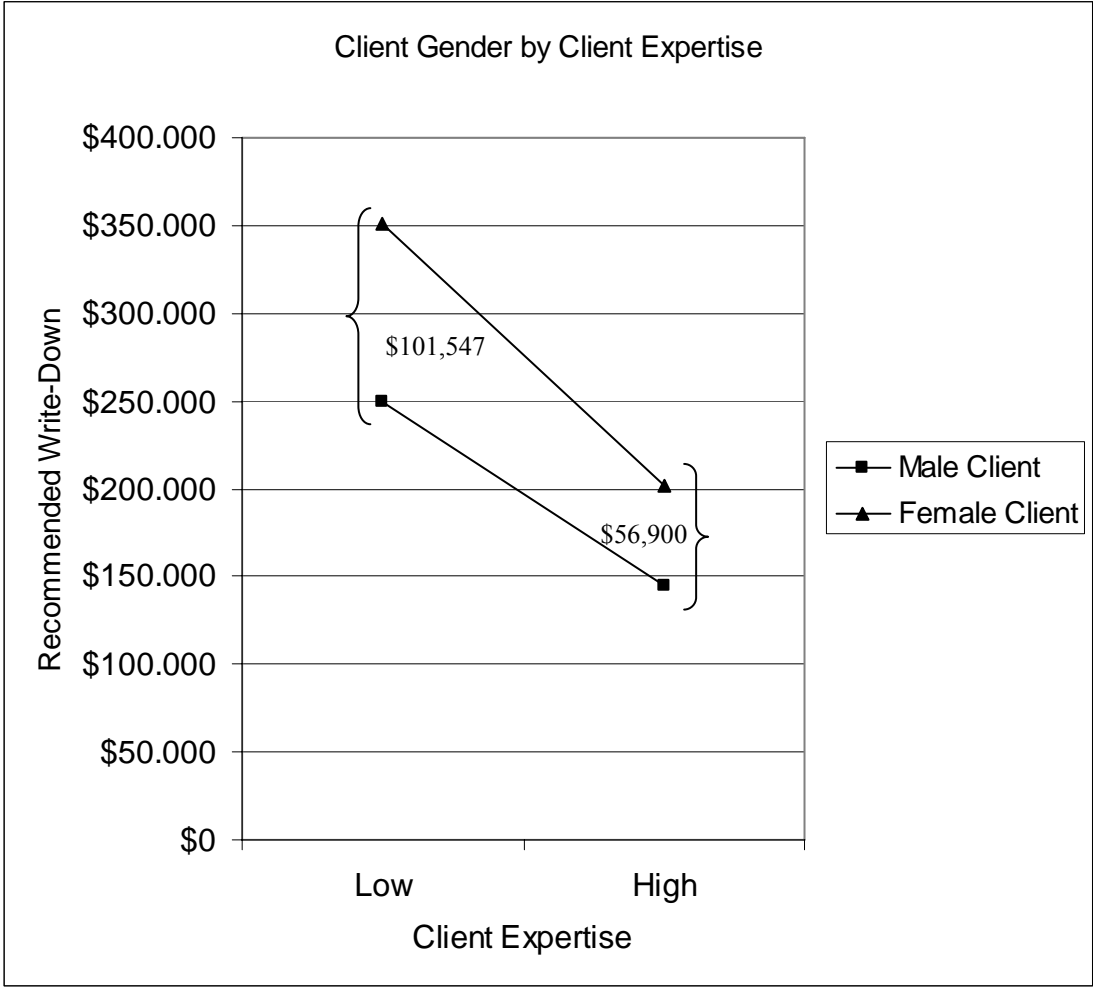
2. Results of Scheffé’s and Bonferroni’s Multiple Pairwise Tests ($\alpha = .05$)

Female Client/ <u>Low Expertise</u>		Male Client/ <u>Low Expertise</u>	=	Female Client/ <u>High Expertise</u>		Male Client/ <u>High Expertise</u>
\$370,730	>	\$276,375		\$270,487	>	\$116,833

3. Contrast Testing

<u>Low Expertise</u>		<u>High Expertise</u>		<u>t-statistic</u>		<u>p-value</u>
(\$370,730 – 276,375)	<	(\$270,487 – 116,833)		3.60		< .01

Figure 2: Illustration of Significant Three-Way Interaction (Male Auditor)



1. Higher recommended obsolete inventory write-down values indicate that participants agreed less with the client relative to lower inventory values.

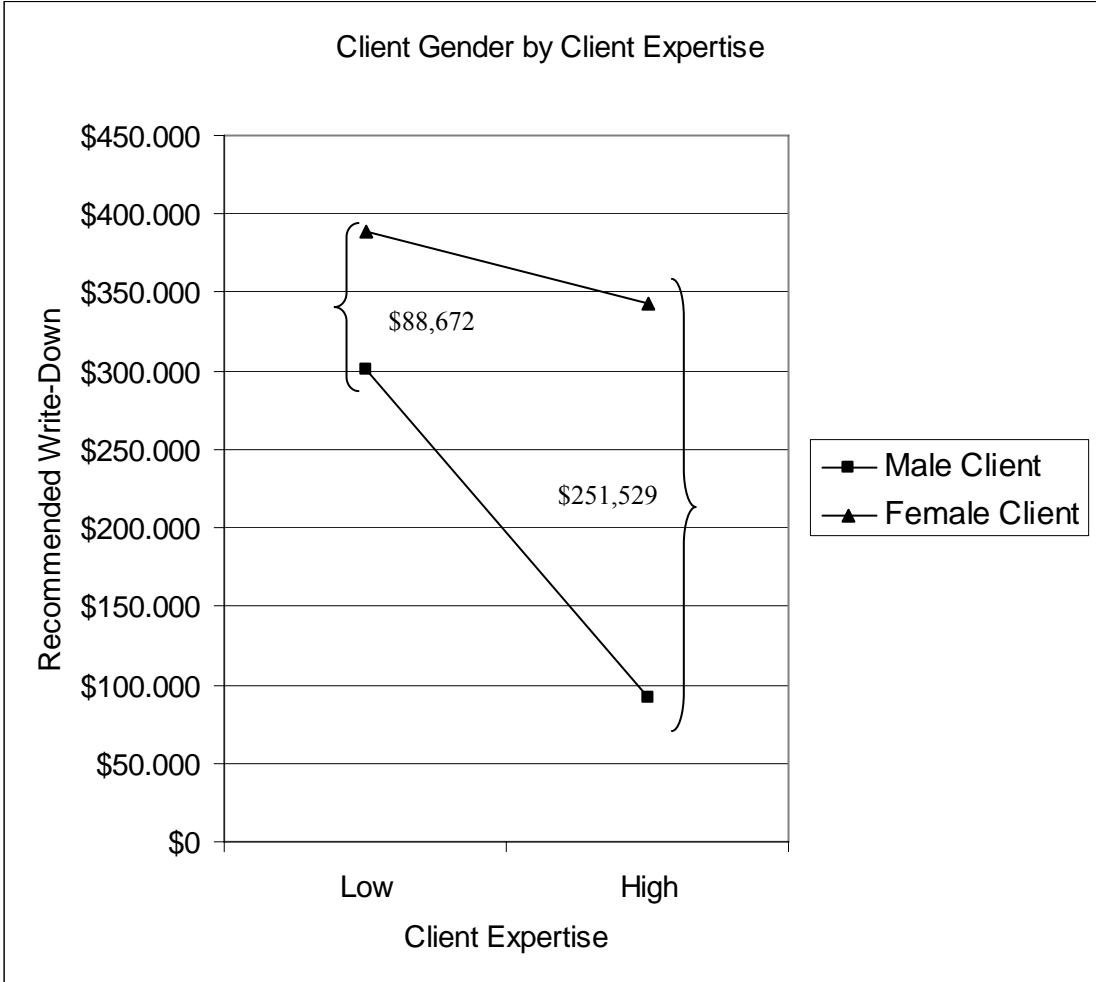
2. Results of Scheffé’s and Bonferroni’s Multiple Pairwise Tests ($\alpha = .05$)

Female Client/ Low Expertise	Male Client/ Low Expertise	Female Client/ High Expertise	Male Client/ High Expertise
\$351,389	\$249,842	\$201,400	\$144,500

3. Contrast Testing

Low Expertise	High Expertise	t-statistic	p-value
$(\$351,389 - 249,842)$	$(\$201,400 - 144,500)$	2.37	= .02

Figure 3: Illustration of Significant Three-Way Interaction (Female Auditor)



1. Higher recommended obsolete inventory write-down values indicate that participants agreed less with the client relative to lower inventory values.

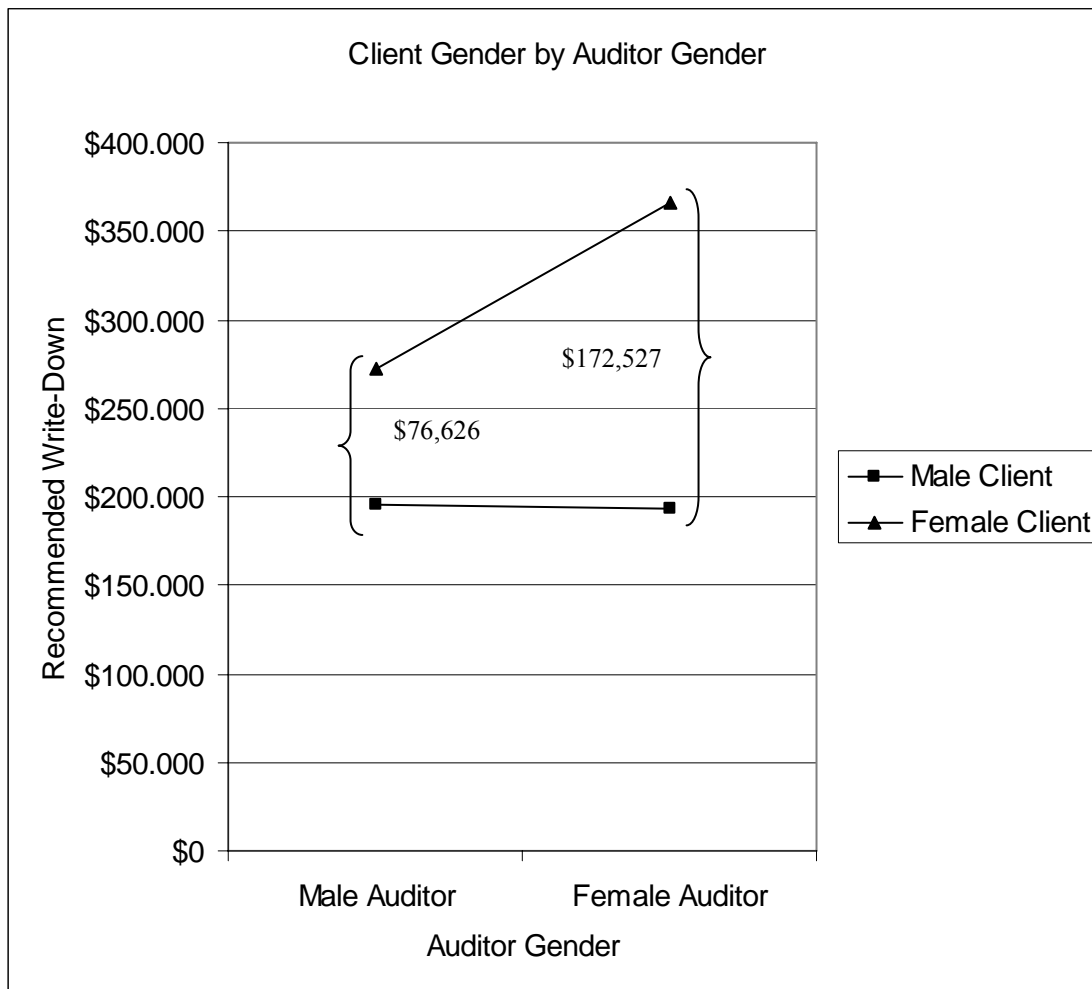
2. Results of Scheffe’s and Bonferroni’s Multiple Pairwise Tests ($\alpha = .05$)

<u>Female Client/</u> <u>Low Expertise</u>	>	<u>Female Client/</u> <u>High Expertise</u>	>	<u>Male Client/</u> <u>Low Expertise</u>	>	<u>Male Client/</u> <u>High Expertise</u>
\$389,053		\$343,211		\$300,381		\$91,682

3. Contrast Testing

<u>Low Expertise</u>		<u>High Expertise</u>		<u>t-statistic</u>	<u>p-value</u>
(\$389,053 – 300,381)	<	(\$343,211 – 91,682)		21.48	< .01

Figure 4: Illustration of Significant Two-Way Interaction



1. Higher recommended obsolete inventory write-down values indicate that participants agreed less with the client relative to lower inventory values.

2. Results of Scheffé’s and Bonferroni’s Multiple Pairwise Tests ($\alpha = .05$)

Female Client/ <u>Female Auditor</u>		Female Client/ <u>Male Auditor</u>		Male Client/ <u>Male Auditor</u>		Male Client/ <u>Female Auditor</u>
\$366,132	>	\$272,447	>	\$195,821	=	\$193,605

3. Contrast Testing

<u>Male Auditor</u>		<u>Female Auditor</u>		<u>t-statistic</u>		<u>p-value</u>
(\$272,447 – 195,821)	<	(\$366,132 – 193,605)		3.82		< .01

Footnotes:

¹ In this paper, we regard source expertise synonymously with source competence, as suggested by DeZoort et al. (2003).

² The other two dimensions are source trustworthiness (often referred to as ‘integrity’ in audit research (Beaulieu 2001; Goodwin 1999; Peecher 1996)) and source objectivity (often referred to as ‘independence’ in audit research (Brown 1983; Hirst 1994; Joyce and Biddle 1981)).

³ Nevertheless, there is also evidence that women’s proportion of leadership positions is on the rise (see Eagley and Carli 2003 for a review).

⁴ There were no significant differences across treatment conditions for the following demographic variables: Age ($F = .586, p = .766$), Years Experience ($F = .127, p = .996$), Position Level ($F = 1.262, p = .273$), Prior Employer ($F = .043, p = .999$), Training Class (1 or 2) ($F = .088, p = .999$), and Auditor Gender ($F = .048, p = .986$).

⁵ An ANOVA model was run using the ‘Client Expertise’ manipulation check item as the dependent variable, and client gender, client expertise, auditor gender and all interaction terms as the independent variables. The client expertise variable was significant ($p < .01$) and all other variables were non-significant (smallest $p = .22$), indicating that the client expertise treatment was not confounded with client gender or auditor gender.

⁶ We do not use ANCOVA analysis, where the participants’ initial recommended write-down value is used as a covariate, because all participants initially anchored on the suggested write-down of \$400,000.

⁷ Controls designed into the computerized experiment prevented the participants from navigating back to prior screens to view or change their experimental responses.

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