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SOME EVIDENCE ON THE ETHICAL DISPOSITION OF ACCOUNTING STUDENTS: CONTEXT AND GENDER IMPLICATIONS

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ABSTRACT. Research into the ethical disposition of students has been popular in recent years. However, research into the ethical disposition of accounting students in particular has been sparse. Because of the unique characteristics of those who choose to enter the field of accounting, generalizing findings of business students to accounting students may not be valid. Consequently, additional studies of accounting students are useful.

This study investigates context (academic vs. business)-based and gender-based differences in accounting students' ethical intent. We find mixed support for gender-based mean differences; these results are consistent across context. With regard to context we find a greater variability in respondents' behavioral intent in an academic context relative to a business context. We also find gender-based differences in how ethical issues are grouped (that is, the perceived cognitive structure of ethical issues). Implications of these findings are discussed with particular interest relative to education.

KEY WORDS: accounting, context differences, ethics, ethical disposition, gender, students

INTRODUCTION

Ethics education continues to be an increasingly important component of all business disciplines. The accounting discipline traditionally has approached the study of ethics from the professional perspective. Audit texts (for example, Meigs et al., 1977; Grobstein et al., 1985) have long dedicated a chapter or chapter section to professionalism and the AICPA code of ethics. Indeed, research (Fulmer and Cargile, 1987; Green and Weber, 1997) finds that the study of both the code of ethics and profes-

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sional conduct has a positive impact on student ethics. In the past decade, the study of ethics in the accounting curriculum has broadened, possibly in response to a number of high-profile audit failures such as the saving and loan crisis. Increased ethics education has been formally called for in reports (Treadway, 1987; AAA, 1986). No doubt this interest was motivated, at least in part, by "a desire on the part of the accounting profession and society to raise the level of ethical behavior and professionalism" (Loeb, 1991, p. 79).

In conjunction with the concern for formal accounting ethics education, educators began developing additional materials for classroom use. To this end, a number of ethics texts relying on business-based cases or vignettes were written (for example, Knapp, 1993; Mintz, 1990; Windal, 1991). In addition, short ethics cases now appear in traditional intermediate financial and managerial accounting texts (for example, Horngren et al., 1998; Kieso and Weygandt, 1998). A potential downside to business-based cases is that students may view ethics as an academic exercise rather than as a moral position to be internalized. For example, with regard to the classroom understanding of integrity, Dirsmith and Ketz (1987, p. 132) state "in passively accepting the importance of integrity, students may fail to appreciate the difficulty of maintaining integrity." Dirsmith and Ketz (1987) conducted an experiment involving academic integrity and suggested that discussion with subjects "forces them (the students) to personalize the concept of integrity" (133).

The purpose of our study is to examine the ethical disposition of accounting students from a behavioral intent perspective in both academic and business contexts. We also hope to gain insights into the relative value of using academic and/or business cases in the classroom. In addition, we consider gender. Gender is of particular interest to accountants because of the nearly 50–50% split of accounting students and practitioner entrants (Daidone, 1992; Schwartz, 1996). Thus, we examine context-based and gender-based differences both in reported ethical disposition (behavioral intent) and in decision processes (organization of issues) of accounting students.

We find mixed support for gender-based mean ethical differences in both contexts; however, the differences are stronger in an academic context. The strongest support for gender-based differences is the disproportionate number of male students in a grouping defined as the least ethical students in both academic and business contexts. We also find a greater variability of responses in an academic context, as opposed to a business context. Finally, in decision processes, we find men tend to group ethical issues on a contextual level (i.e., depending on whether the context

is business or academic) while women tend to consider ethical issues from a more universal perspective (i.e., regardless of whether the context is business or academic).

BACKGROUND AND RESEARCH QUESTIONS

In the past 15 years, ethical research using business students as subjects has abounded (Borkowski and Urgas, 1998). Despite this abundance, generalizing results from business students as a whole to accounting students may not be valid due to inherent differences between the two groups. The more formal *rule orientation* of the accounting discipline, together with the professional culture of accounting, may attract a specific type of individual whose ethical disposition may be different from that of business students in general. Hence, studies of ethics focusing on context and gender differences among accounting students may shed light on the unique elements of future accounting professionals' ethical orientation and provide guidance regarding educational choices to enhance the ethical climate of accounting.

Research on accounting ethics can be classified (as illustrated in Table I) along two dimensions: context and ethical measurement. Context refers to whether academic or business situations are used. Ethical measurement refers to assessing ethical disposition by looking at either ethical judgment or behavioral intent. Ethical judgment is captured by questions with responses such as, "No, that is not an ethical behavior," and behavioral intent is captured by questions with responses such as, "No, I would not do that."

Stanga and Turpen (1991) looked at accounting students' behavioral intent regarding a number of ethical dilemmas in a business context and found no significant differences in how male and female accounting students responded. Ameen et al. (1996), using an academic context, found that female accounting students were "more sensitive to and less tolerant of unethical behaviors, less cynical, and less likely to engage in unethical academic activities" (596) than were males. Thus, referring to Table I, Stanga and Turpen (1991) looked at cell B, behavioral intent in business situations. Ameen et al. (1996) looked at cells C and D, both behavioral intent and ethical judgment in academic situations. One explanation that is consistent with the finding of these papers is that females are more ethically oriented than males in an academic environment, but not in a business environment.

Cohen et al. (1998) considered gender- and discipline-based differences among accounting, business and liberal arts majors using business situations and examining both ethical judgment and behavioral intent (cells A

TABLE I

Dimensions of ethical studies

Context	Ethical judgment	Behavioral intent
Business situations	**A** Cohen et al., 1998 (overall gender differences, but not by discipline) Geiger and O'Connell, 1999 (no gender differences)	**B** Stanga and Turpen, 1991 (no gender differences) Cohen et al., 1998 (overall gender differences, but not by discipline) Geiger and O'Connell, 1999 (no gender differences) Current study
Academic situations	**C** Ameen et al., 1996 (gender differences) Geiger and O'Connell, 1999 (no gender differences)	**D** Ameen et al., 1996 (gender differences) Geiger and O'Connell, 1999 (no gender differences) Current study

and B in Table I). They found "evidence of a stronger concern for duties and obligations" (265) among the women in their sample. Further, they found that "subjects who were from the accounting discipline were more likely to judge the actions as unethical and were less likely to take a similar action, than subjects in other disciplines" (266). It may seem reasonable to conclude that female accounting majors would be more ethically disposed than their male counterparts. However, Cohen et al. (1998) did not look at interaction terms, and their paper does not definitively support such a conclusion. Two questions un-addressed by Cohen et al. (1998), then, are the role of context (as only business situations were studied), and whether the elevation in ethical disposition associated with the accounting discipline displaces the gender difference found otherwise.

Geiger and O'Connell (1999), in studying the impact of formal ethics education on accounting students, examined both ethical judgment and behavioral intent in both academic and business contexts (that is, complete coverage of Table I, cells A, B, C, and D). Using the academic cases of McCuddy and Peery (1996) and the business cases of Stanga and Turpen (1991) as their research instrument, they found no significant ethical disposition or gender differences. They did note that students in their study "consistently indicated that they (students) believed they would act less ethically in the accounting business dilemmas than the

academic dilemmas" (384). Their work, then, suggests that gender is not an important ethical determinate in either business or academic contexts.

Gender

The issue of gender-based ethical differences is complex. The previously discussed accounting literature examines gender-based differences at an outcome level: a mean-scores or proportion-scores basis. However, gender-based differences may also exist in the ethical judgment process, an idea developed in the literature of philosophy and moral psychology. A classic contrast is that of Kohlberg's (1984) *justice* perspective (male) and Gilligan's (1982) *caring* perspective (female) in moral reasoning. In Kohlberg's (1984) model, every individual's moral development evolves through six possible stages, eventually reaching and remaining at one of the six stages. Gilligan (1982), however, posits that males and females undergo very different moral development processes. She believes that males view morality as consisting of rights and obligations, and that fairness and impartiality are very important (Kohlberg's *justice* perspective). In contrast, females have a more *caring* perspective, where the needs of others are relatively more important in determining what is moral or ethical.

Betz et al. (1989), in a study of business students, suggest that gender-based differences in ethical behavior may be explained by other underlying gender-based differences. Betz et al. (1989) considered two possible approaches to explain gender differences in the willingness to act unethically in business situations: the structural approach and the gender socialization approach. The structural approach posits that early socialization causes the difference in ethical disposition between males and females, but that the rewards, costs, and socialization within a chosen occupation overcome this early socialization influence. Hence, males and females in an occupation will tend to develop similar ethical priorities; occupational socialization is the dominant influence in the structural approach.

The gender socialization approach suggests that males and females bring different sets of values to the workplace (similar to Gilligan, 1982), causing males and females to respond differently to the same set of circumstances. Males view achievement as competition, and are more likely to break rules to achieve competitive success. Females are concerned with their own performance and with maintaining harmony in the workplace. Therefore, females are less likely to break rules and are less tolerant of those who do break rules. In their study of business school students, Betz et al. (1989) found support for the gender socialization approach.

However, accounting students may be fundamentally different from business students. These differences, due to self-selection and/or socialization, may overshadow any gender differences in ethical disposition. Either of these potential differences would support the role of the structural approach.

Research questions

Our study is designed to examine differences in the behavioral intent of accounting students by context (cells B and D in Table I) as well as by gender. Like Geiger and O'Connell (1999), we include both academic and business cases. However, they used cases from prior research, and we selected our cases predominantly from actual experience (academic) or academic textbooks (business context). Flexibility in case selection allowed us to construct a number of approximately parallel academic and business cases for the research instrument. We believe these parallel cases improve comparison across context and allow us to investigate added research questions.

Our first research questions are fundamental, and re-examine the issue of gender-based ethical differences. *Are there gender-based differences in the ethical disposition of accounting students? Are the differences consistent across academic and business contexts?* With the exception of Geiger and O'Connell (1999), previous research using accounting students (Stanga and Turpen, 1991; Ameen et al., 1996) focused on either an academic or a business context, but not both. Results of this past research are mixed. Stanga and Turpen (1991), using a business context, suggest that there are no differences; however, Ameen et al. (1996), using an academic context, suggest that female accounting students are more ethically predisposed than male accounting students. Geiger and O'Connell (1999), studying both academic and business contexts using the same sample, found no gender-based differences.

The remaining research questions utilize the parallel cases. The second set asks, *Are there context-based differences in the ethical disposition of accounting students? Are these differences consistent across gender?* In their study Geiger and O'Connell (1999) asked students to evaluate the acceptability of short cases and then to report their behavioral intent relative to the case. Geiger and O'Connell (1999) found that students reported that they would act less ethically in business situations than in academic situations given the situations were equally unacceptable. This result was consistent across gender. In contrast, our parallel situations are selected from actual experience or texts to incorporate a core ethical issue; our situations are not selected to create equally morally intense situations.

Thus, we cannot test mean-score differences of the parallel issues. We can, however, test for gender-based context differences in the mean scores, and for differences in the variances of mean scores.

Our final research question is directed at gender differences in ethical thought or reasoning processes across context: *Are there gender and/or context-based differences in the organization of ethical choices and decision processes of individuals?* In essence, the question is whether, as context changes, male and female accounting students display consistent ethical cognitive structure. By studying ethical intent in parallel academic and business situations, we are able to empirically analyze tendencies to group ethical situations on either a contextual reasoning level or an underlying ethical reasoning level.

METHODS

Sample and Procedure

We asked 137 students to respond to a questionnaire containing ethical situations. The sample consisted of junior and senior accounting majors enrolled in four sections of managerial accounting at a large Mid-western university. Students received the ethics questionnaire toward the end of the semester. The exercise was optional, but could be used to drop the lowest quiz score in the course. The 137 students represented approximately 95% of the class enrollments. No formal class discussions or presentations on ethics had occurred prior to the completion of the instruments; however, summary class responses later served as the basis for class ethics lectures and discussions.

To protect the anonymity of participating students, a unique identification number was the only identification on the questionnaire response. Because we insured confidentiality, we asked students about their behavioral intent rather than their ethical judgment. The ethical judgment approach removes the personal, almost confessional, element of the behavioral intent approach (many individuals, although they might take a particular action, might be unwilling to admit to that action). However, the ethical judgment approach leads to the ethics research problem that most people believe others to be less ethical than they themselves are (Tyson, 1990).

Questionnaire

The questionnaire contained two sets of ethical situations selected to assess student ethical disposition (as measured by behavioral intent). The academic ethics section of the questionnaire contained eight ethical situations. Five of the situations had two parts; thus students provided thirteen responses. Most of these situations were drawn or adapted from actual instances; however, we believe they are recognizable (by both students and faculty) as relatively common. For example, item A1 (return exam points), the first academic situation, is shared with Dirsmith and Ketz (1987) and also Ameen et al. (1996). The other situations are easily envisioned as occurring in an academic setting.

The business ethics section of the questionnaire contained nine ethical situations. Two of the situations had two parts; thus students provided eleven responses. A number of the questionnaire items were adapted from text or casebook exercises. For example, item B6A (tell on audit partner) is adapted from Arens and Loebecke (1997, pp. 101–102) and item B11 (expense requests) is adapted from Mintz (1997, pp. 141–143). Table II presents an overview of the situations; the Appendix contains the complete questionnaire.

Of the questionnaire items, six parallel situations presented a fundamental ethical dilemma framed in both an actual academic context and a business text case context. That is, six pairs of academic and business scenarios addressed essentially the same ethical dilemma. For example, items A7 and B7 both presented situations where the student must consider reporting another individual's personal relationship – a relationship that would impair the individual's actual or perceived objectivity. The contextual difference was that the business situation involved disclosing a personal relationship between an auditor and a client, while the academic situation involved disclosing a relationship between a teaching assistant and a student. Recall that these items are drawn from actual situations or instructional materials; therefore, the parallels are only approximate.

To minimize the possibility that students would misunderstand the situations, 16 students pilot-tested a first draft of the questionnaire and addressed issues of clarity and readability. Modifications to the questionnaire were based upon the test students' comments. As a validity check, some questions reflected moral intensity. For example, items A4a and A4b asked if the student would tell specific or general information about a test. Overall responses to these items are consistent with the predicted moral intensity of the items.

Each situation asked whether the student would take some action (i.e., his or her behavioral intent) based upon the facts presented. Possible

TABLE II

Questionnaire items

Q item #	Short description	Long description
		Academic
A1	Returning exam pts	Return points on an exam that was added incorrectly in your favor.
A2a	Purchase an exam	Accept an offer to purchase an exam copy for $50.
A2b	Tell of purchase offer	Tell the professor of the offer to purchase an exam copy.
A3	Write false memo	Write a false memo so that a part time student employee could change sections in a class.
A4a	Specific exam info	Provide specific information about an exam you have just completed to a fried taking the exam at a later time.
A4b	General exam info	Provide general information about an exam you have just completed to a fried taking the exam at a later time.
A5a	Go along with group	Go along with group members and use outside help on a project; the outside help is explicitly prohibited by the professor.
A5b	Sign group sheet	Sign a sheet stating that no outside help was received when you know that outside help was received.
A6a	Tell on copied HW	Contradict a friend who has copied your HW but claimed not to, and tell the professor that your HW had been copied.
A6b	Confess copied HW	Confess to copying a friend's HW when confronted by a professor.
A7	TA relationship	Insist that a friend who is a TA tell the professor about a romantic relationship with a student in the TA's section.
A8a	Use exam copy	Study a list of questions you were given, which you believe to be actual questions on an exam you will take later today.
A8b	Tell exam copy	Tell the professor about the list of exam questions prior to the exam.
		Business
B1	Return AR overpay	Instruct a clerk to return an A/R overpayment to a customer.
B3	Sign-off on plan	Sign-off on an operating plan which you know is overly conservative. You're responsible for assisting the operating staff in the preparation on the plan and approving the plan.
B5a	Correct the auditor	As a client accountant, correct an auditor who is incorrectly summarizing the adequacy of inventory reserves. A correction would increase inventory reserves.
B5b	Sign the rep letter	Sign a rep letter prepared by an auditor when you know the rep letter is incorrect.
B6A	Tell on audit partner	In preparing tax workpapers for a client you find items "missed" on the past year's audit. The audit partner suggests that the items will be cleaned-up this year. You insist the managing partner be told.
B6Ba	Tell on product yield	As a plant accountant, tell that the production group had mis-stated yields for the past three years – errors you should have caught.
B6Bb	Confess product yld.	As head of a production group, confess to the misstated yields.
B7	Audit Sr. relationship	As a junior staff auditor, tell that a senior staff auditor probably has a romantic relationship with a client.
B9	Personal expenses	As an internal auditor, bring company-paid personal expense items to the attention of upper management. The expenses are for top performers in the company and the AlP manager has already been dressed down for bringing this matter up.
B10	Chg. tax allocations	Make changes to past tax allocation to minimize tax liabilities. Changes are against company policy.
B11	Expense requests	Bring information on false maintenance expense requests to top management. It is possible that management will not allow needed maintenance.

responses ranged from one ("No, I would not do that") to nine ("Yes, I would do that"), with responses such as "No, I would probably not do that" and "Yes, I would probably do that" and "I do not know" available between the extremes. The 'most ethical' response was one in some situations and nine in other situations. Prior to analysis the data were adjusted so that one was always the most ethical choice.

ANALYSIS AND RESULTS

Gender Differences

To investigate the first research question, we first compared gender means for all questionnaire items – academic and business – on an item-by-item basis. We also tested for gender-based differences in variance. Table III presents the results of the *t*- and *F*-tests used for a straightforward comparison of means and variances. Table III also notes whether the mean scores of males or females are more ethical. Of the thirteen academic context items, the mean scores of women relative to men reflect greater ethical disposition on all thirteen items. However, only three items show that difference to be statistically significant. In the business context, nine of the eleven items show women's mean scores to be more ethical than men's mean scores; only one of the differences is statistically significant.

As an alternative approach, we grouped responses into three categories: respondents who indicated they would or probably would take the more ethical action; respondents who indicated they were unsure; and respondents who indicated they would or probably would take the less ethical action. We split these groups by gender and used a Chi-square statistic to test for differences. Overall the groups were remarkably similar.

As opposed to the univariate nature of the above approaches, our final approach was multivariate. We used cluster analysis (k – means) to divide our respondents into groups; we used four means so that the clusters would split approximately into quartiles. The final cluster centers are shown in Table IV – Panel A. The cluster centers show Cluster 2 to be the most ethical and Cluster 3 to be the least ethical. Cluster 1 shows low business ethics and moderate academic ethics. Cluster 4 shows high business ethics and relatively low academic ethics. We next prepared a contingency table (see Table IV – Panel B) of Cluster by gender and tested the proportions via a Chi-square statistic. The Chi-square was significant at the 5% level, largely due to the disproportionately high number of men in the lowest ethics cluster.

TABLE III

Ethical mean responses

Q item #	Description	N (m/f)	Mean response			*t*-stat	Ethical
			Male	Female	Difference		
		Academic situations					
A1	Returning exam pts	76/61	6.526	6.082	0.444	1.00	F > M
A2a	Purchase an exam	76/61	2.578	1.967	0.611	1.94*	F > M
A2b	Tell of purchase offer	76/61	6.355	6.049	0.306	0.76	F > M
A3	Write false memo	76/61	5.040	4.934	0.106	0.24	F > M
A4b	Specific exam info	76/61	4.026	2.853	1.173	2.92**	F > M
A4b	General exam info	76/61	6.724	5.475	1.249	3.33**	F > M
A5a	Go along with group	73/61	5.918	5.771	0.147	0.40	F > M
A5b	Sign group sheet	76/61	4.908	4.853	0.055	0.13	F > M
A6a	Tell on copied HW	76/61	4.053	3.787	0.266	0.65	F > M
A6b	Confess copied HW	76/61	3.250	3.115	0.135	0.39	F > M
A7	TA relationship	76/61	5.908	5.803	0.105	0.26	F > M
A8a	Use exam copy	76/61	4.790	4.492	0.298	0.67	F > M
A8b	Tell exam copy	76/61	7.276	6.934	0.342	1.07	F > M
		Business situations					
B1	Return AR overpay	76/61	1.382	1.115	0.267	2.15**	F > M
B3	Sign-off on plan	76/61	4.434	4.098	0.336	0.96	F > M
B5a	Stop the auditor	76/61	3.184	3.115	0.069	0.21	F > M
B5b	Sign the rep letter	76/61	3.803	3.885	−0.082	−0.23	M > F
B6A	Tell on audit partner	76/61	2.711	2.443	0.268	0.99	F > M
B6Ba	Tell on product yield	76/61	3.868	3.639	0.229	0.67	F > M
B6Bb	Confess product yld.	76/61	3.105	3.000	0.105	0.38	F > M
B7	Audit Sr. relationship	76/61	5.382	5.525	−0.143	−0.40	M > F
B9	Personal expenses	76/61	3.605	3.262	0.343	1.13	F > M
B10	Chg. tax allocations	76/61	3.224	2.672	0.552	1.75^	F > M
B11	Expense requests	75/61	3.320	3.131	0.189	0.71	F > M

** significant at the 1% level; * significant at the 5% level; ^ significant at the 10% level.

Context and Gender Differences (Parallel Situations)

To evaluate the context component of the study, we compared mean differences and variance ratios of the six parallel situations, using first the entire sample (i.e., ignoring gender) and then using gender-grouped subsamples. Mean differences are calculated as academic situation means less business situation means; variance ratios are the academic situation variances divided by business situation variances. Table V presents the paired difference *t*-tests and *F*-tests of both the total sample and sub-samples split by gender. The results of the full sample and gender sub-group

TABLE IV

Cluster analysis

Q item #	Description	Clusters 1	2	3	4
	Panel A – Cluster centers				
A1	Returning exam pts	7.43	3.34	6.79	7.93
A2a	Purchase an exam	1.50	1.29	4.79	2.43
A2b	Tell of purchase offer	6.29	4.97	6.89	7.04
A3	Write false memo	6.14	3.37	5.54	4.61
A4b	Specific exam info	3.50	1.86	6.14	2.86
A4b	General exam info	6.60	4.34	7.46	6.46
A5a	Go along with group	5.86	4.43	6.50	6.93
A5b	Sign group sheet	4.79	3.06	6.29	6.04
A6a	Tell on copied HW	3.57	2.83	5.07	4.79
A6b	Confess copied HW	2.74	2.11	4.43	4.11
A7	TA relationship	6.83	5.20	5.93	5.11
A8a	Use exam copy	4.38	2.51	6.32	6.25
A8b	Tell exam copy	7.52	5.66	7.29	7.96
B1	Return AR overpay	1.05	1.11	1.96	1.11
B3	Sign-off on plan	4.48	4.09	5.36	3.36
B5a	Stop the auditor	3.79	2.31	3.57	3.00
B5b	Sign the rep letter	4.33	3.34	4.32	3.57
B6A	Tell on audit partner	2.95	2.09	3.21	1.96
B6Ba	Tell on product yield	4.93	3.23	4.11	2.54
B6Bb	Confess product yield	3.98	2.31	3.57	2.25
B7	Audit Sr. relationship	6.79	4.97	5.14	4.36
B9	Personal expenses	3.69	2.86	4.32	3.07
B10	Chg. tax allocations	2.79	2.54	4.64	2.14
B11	Expense requests	3.24	2.83	4.04	2.93

Gender		Total	Clusters 1 count (%)	2 (most eth) count (%)	3 (lst eth) count (%)	4 count (%)
	Panel B – Contingency table					
Male	Actual	73	23 (32%)	16 (22%)	22 (30%)	12 (16%)
	Expected		23.0	19.2	15.4	15.4
Female	Actual	60	19 (32%)	19 (32%)	6 (10%)	16 (26%)
	Expected		19.0	15.8	12.6	12.6
Total	Actual	133	42	35	28	28

Chi square statistic from the contingency table is 9.14; 7.81 is significant at the 5% level.

TABLE V

Context mean differences (pairs)

Q item #	Description	Full sample N = 137#		Male sub-sample N = 76#		Female sub-sample N = 61	
		Mean difference	Var ratio	Mean difference	Var ratio	Mean difference	Var ratio
Item 3	False approval	0.708*	1.609**	0.605^	1.540*	0.836^	1.711*
Item 5A	Continue falsehood	2.679**	1.263^	2.699**	1.145	2.656**	1.424^
Item 5B	Sign false statement	1.044**	1.190	1.105**	1.722*	0.967**	1.217
Item 6A	Tell others error	0.168	1.505*	0.184	1.523*	0.148	1.502^
Item 6B	Confess your error	0.131	1.567**	0.145	1.445^	0.115	1.813*
Item 7	Personal relationship	0.416*	1.238	0.526^	1.436^	0.279	1.000

For pair 5A N = 134 and 73 respectively.
** significant at the 1% level, * significant at the 5% level, ^ significant at the 10% level.

analysis are consistent; mean differences and variance ratios across the academic and the business situations are largely unchanged by gender. A single exception may be parallel items A7 and B7, whistle-blowing on a personal relationship. The context difference for this item result may not hold for the female sub-sample. That is, women may be equally loathe to disclose another individual's personal relationship whether in an academic setting or in a business setting, whereas men appear to be more willing to disclose a personal relationship in a business context than in an academic context. Variance ratios are consistently greater than one; that is, the variances for academic situations are greater than the variances for business situations. Further, the variance differences were statistically significant.

The Structure of Ethical Issues

Factor analysis (varimax rotation) of the parallel items facilitated investigation of the research questions regarding organization of ethical choices and decision processes. We first used the entire sample and later split the data by gender. To avoid artificially inducing, or predetermining, factors that would relate mainly to business or mainly to academic situations, only the parallel questionnaire items were included in the factor analysis. Table VI – Panel A presents the results of the first analysis. Five factors with eigenvalues greater than one explained 62% of the variance. Factor loadings suggest that two factors (1 and 2) are primarily related to the business

context,[1] two factors (3 and 5) are primarily related to the academic context and Factor 4 focuses on Interpersonal Relationships. The two business factors are difficult to interpret; on the academic side, Factor 3 appears to represent Academic Peer Pressure, and Factor 5 appears to represent Personal Academic Integrity.

Analysis of the male sub-sample yielded five factors explaining 66% of the overall variance among questionnaire items. The factor loadings (see Table VI – Panel B) are similar to the complete data set loadings in that both tend to split along business and academic contexts with the exception of an Interpersonal Relationship factor (Factor 5). Factors 2 and 4 are clearly academic, duplicating the distribution of the overall sample between Academic Peer Pressure and Personal Academic Integrity, while factors 1 and 3 are clearly business.

Analysis of the female sub-sample (Table VI – Panel C) also yielded five factors with eigenvalues greater than one, explaining 68% of the overall variance. Factor 2, reflecting the Interpersonal Relationship dimension, and Factor 5, reflecting Academic Peer Pressure, are similar to those described above. However, in the other factors, both the factor loadings and their interpretation differ from both the male and the overall loadings. Factor 1 tends to be a business context factor particularly weighted to the production yield situation. The other two factors contain both academic and business context questionnaire items – although not parallel items. Thus, factors 3 and 4 clearly cross contexts.

A similar factor analysis (not shown in tables) was performed with the participants split by ethical disposition, high or low, as defined by cluster analysis (2 means). Both the high and low clusters yielded factor groupings consistent with a context-based and not a universal approach to ethical disposition. Thus the gender-based context vs. universal approach to ethics is not related to overall ethical disposition.

DISCUSSION

Results relating to the first research question are mixed. In the univariate analysis, the data (at a general level) support the premise of no gender-based differences. Even the questionnaire items that are statistically significant may not be significant in a practical sense. Verbally, for example, the

[1] Situation A3 (writing a false memo) was written to be an academic situation, in that the individual's actions could result in a better class schedule for a friend. However, in retrospect, our characterization of the individual as the "business manager of a university organization" may be the reason that A3 tends to load with business, rather than academic, situations.

TABLE VI

Rotated component matrix

Q item #	Description	Components				
		1	2	3	4	5
	Panel A – full sample					
B3	Sign-off on plan	0.549	*	*	*	*
B5a	Correct the auditor	0.686	*	*	*	*
B5b	Sign false rep letter	0.739	*	*	*	*
B6A	Tell on audit partner	*	0.718	*	*	*
B6Ba	Tell on product yield	0.465	0.470	*	*	*
B6Bb	Confess product yield	0.642	0.409	*	*	*
B7	Audit Sr. relationship	*	*	*	0.804	*
A3	Write false memo	*	0.703	*	*	*
A5a	Go along with group	*	*	0.757	*	*
A5b	Sign group false sheet	*	*	0.760	*	*
A6a	Tell on copied HW	*	*	*	*	0.875
A6b	Confess copied HW	*	*	*	*	0.686
A7	TA relationship	*	*	*	0.794	*
	Panel B – Male sub-sample					
B3	Sign-off on plan	0.443	*	*	*	*
B5a	Correct the auditor	0.693	*	*	*	*
B5b	Sign false rep letter	0.853	*	*	*	*
B6A	Tell on audit partner	*	*	*	−0.553	*
B6Ba	Tell on product yield	*	*	0.761	*	*
B6Bb	Confess product yield	0.739	*	*	*	*
B7	Audit Sr. Relationship	*	*	0.529	*	0.601
A3	Write false memo	*	*	0.646	*	*
A5a	Go along with group	*	0.835	*	*	*
A5b	Sign group false sheet	*	0.679	*	*	*
A6a	Tell on copied HW	*	*	*	0.798	*
A6b	Confess copied HW	*	*	*	0.735	*
A7	TA relationship	*	*	*	*	0.825
	Panel C – Female sub-sample					
B3	Sign-off on plan	*	0.401	*	0.531	*
B5a	Correct the auditor	*	*	*	0.751	*
B5b	Sign false rep letter	0.546	*	*	*	0.491
B6A	Tell on audit partner	*	*	0.738	*	*
B6Ba	Tell on product yield	0.778	*	*	*	*
B6Bb	Confess product yield	0.799	*	*	*	*
B7	Audit Sr. Relationship	*	0.740	*	*	*
A3	Write false memo	*	*	0.660	*	*
A5a	Go along with group	*	0.454	*	*	0.673
A5b	Sign group false sheet	*	*	*	*	0.825
A6a	Tell on copied HW	*	*	0.720	*	*
A6b	Confess copied HW	*	*	*	0.795	*
A7	TA relationship	*	0.821	*	*	*

* indicates that loading is less than 0.400 in magnitude.

difference might be characterized as the difference between "I probably would not take that action" and "I don't know if I probably would not take that action." As these are mean differences, one could argue they are of little practical use for using gender to determine an individual's ethical disposition.

The multivariate (cluster) analysis tends to support a gender-based difference; the evidence is consistent with a statement such as "male accounting students are three times more likely than female accounting students to be classified in the least ethically disposed quartile." This quartile consists of students who are least ethical in both academic and business situations; that is, they are most *at risk* for unethical behaviors. We believe that this statement is stronger and (because of its multivariate nature) notably different from conclusions in prior accounting research regarding gender-based ethics differences. Also supporting an overall gender-based difference is the result that in all of the 13 academic situations and in nine of the 11 business situations, the male accounting students' mean scores were less ethical. These findings are consistent with both the general-business and accounting-specific ethics literature. If gender-based differences do exist, then female accounting students are more ethical than their male counterparts and the results are stronger in the academic, as opposed to business, situations.

Results relating to the second research question provide additional evidence that accounting students' behavioral intent is influenced by context. First, students appear to be more ethical in business rather than academic contexts. This conclusion relies on the assumption that the parallel items represented equivalent ethical situations. Although the items were selected to be parallel, they were not equivalent; thus, conclusions from these comparisons are speculative. However, in all parallel situations, student responses are, in contrast to Geiger and O'Connell's (1999) findings, more ethical in the business context. Second, the variances of the academic items were consistently and significantly greater than the variances of the business items. Mean and variance differences across context were practically the same across gender (with the exception of whistle blowing on a personal relationship).

We envision two possible explanations for context-based ethical differences. To students, academic situations are more *real* – less hypothetical. Business situations are less *real* – more hypothetical. Students may therefore provide experience-based responses in the *real* (academic) situations and *right* or *textbook* responses in the hypothetical (business) situations. Alternatively, as the context changes from academe to business, students' perceptions of the *rules* of appropriate ethical behavior change. In this

structural reasoning approach, perceived acceptable ethical behavior in an academic context may not be perceived as acceptable in a business context. The data suggest that students, both male and female, impose higher and more consistent (less variance) ethical norms in a business context. In either case, it seems that responding to academic situations in contrast with business situations provides a different thought experience to students.

The third research question relates to ethical thought or reasoning processes. To proxy for these processes, we examined how three varimax rotation factor analyses grouped individual questionnaire items. Recall that the factor analyses were run using responses from questionnaire items designed to be parallel. The first factor analysis used the entire sample (male and female students) and generally indicated grouping by context – business versus academic. Two factors load primarily with academic items; two factors load primarily with business items. The remaining factor may be interpreted as isolating a willingness to address, confront or whistle-blow relative to another individual's personal relationship which may impair objectivity. These context-based groupings support a *structural* thinking model.

Factor analyses on the male and female subgroup data showed a notable gender-based contrast in the factor loads, reflecting a contextual grouping for males and a cross-context grouping for females. These groupings may indicate a *socialization,* or more universal, approach to ethics by women and a more *structural* approach to ethics by men. To see the extent of a possible male *structural* approach, consider interpretation of the male group's academic factors, 2 and 4. These factors seem to be, even within context, very situation-oriented. For example, men treat the copying of homework similarly – independent of who does the copying (Factor 2). Yet their business factor loads suggest a more function-based interpretation; men load together situations that require Accepting Responsibility (Factor 1) or Whistle-blowing (Factor 3).

Cross-context loads found on the female factors may indicate an absence of structural impact on ethical decision process groupings, and thus a *socialization* or more universal approach to ethics. For example, female loadings strongly split the two Copied Homework questionnaire items which males grouped. Mitigating the cross-context interpretation is Factor 1 of the female analysis, which clearly loads on business situations.

Gender-based similarities are also present. The strongest is the inclusion of a personal relationship factor in both analyses. Another is the pairing by both genders of the group project academic questionnaire items.

We suggest that educators consider the probability that both *structural* and *socialization* processes are at work in the accounting classroom.

CONCLUSION

Our study was motivated by the increasingly important role of ethics in accounting education and the limited research specifically relating to accounting students and context/gender-based ethical differences. Within the frame of ethics education we study the combined roles of context and gender. Interest in context is driven by the potential differences of student appreciation for ethical concepts as context changes; interest in gender-based ethical differences is driven by the increasing role of women in accounting programs and careers.

Our basic findings provide conflicting evidence regarding whether female accounting students are, on average, more ethically predisposed than their male counterparts. Univariate (item-by-item) analyses of mean and proportion differences showed few statistical and arguably no practical gender-based differences. However, for all thirteen academic situations and nine of eleven business situations, female mean responses were more ethical than male mean responses. Multivariate cluster analysis of the same data found a disproportionately high and statistically significant number of men in the cluster grouping for the least ethically predisposed.

Both male and female mean scores reflect a more ethical disposition in business than in an academic context; we could not conclude, due to the nature of the questionnaire, that accounting students were more ethically predisposed in business contexts. The variances of responses were significantly greater for both genders in the academic context. This result reflects a *structural* approach to ethics by both genders. Possibly this reflects a greater variety of intent based on actual life experience rather than textbook experience. Thus, despite the cluster analysis results, we conclude that with regard to ethical intent the genders are more alike than different.

A very interesting finding was the gender-based difference in how various questionnaire items were grouped by a factor analysis. Men grouped items based on context or situation; women's groupings were more universal. This finding seemed to be independent of overall ethical disposition, and is consistent with the argument that men use a more *structural* approach than women with regard to behavioral intent in ethical situations. This finding provides evidence that while *outcomes* of ethics are similar across gender, decision *processes* may vary across gender; a finding consistent with the *socialization* approach.

Our study, of course, has limitations. First, by relying on a survey, we use behavioral intent to infer behavioral action. Second, our sample is taken from a single university and by design is limited to accounting majors. Thus, our results may not be generalizable to other accounting majors. Certainly, as discussed earlier in the paper, results from accounting majors may not be generalizable to other business majors. However, our findings related to context may exist for business majors and could be studied. A final limitation is a potential for a social desirability bias, this bias relates specifically to gender-based mean differences. Both Cohen et al. (1998) and Geiger and O'Connell (1999) detected and controlled for a social desirability bias among accounting students. The impact of such a bias would be to overstate (favorably) the ethical disposition of women. This bias should not impact results related to variability of responses.

Past accounting research relating to context and gender documents support for either concluding or not concluding that a meaningful gender-based ethical difference exists. However, finding a gender-based ethical difference does not imply that all female accounting students are more ethical than all male accounting students. Thus, the educator has been left with little value.

In contrast, our research suggests that in ethics-based case studies context matters. That is, academic cases generate different responses from students than do business cases. Academic cases generate more variability in response. Certainly greater variability of intended actions, which may result from life experiences (academic situations) rather than textbook experiences (business situations), provides students more opportunity to re-evaluate their ethical choices. This finding was consistent across gender. The gender-based difference we did find was a tendency for male accounting majors to group on context and female accounting majors to group more universally (independent of context). These differing perspectives may have classroom implications – one being the value of group diversity, another being the study of both academic and business situations in ethics courses. In light of their education implications, these differences deserve further study.

APPENDIX

A1.) The second exam in your BUS YYY class was recently returned to you with a score of 87 (90 and above is an A). While reviewing your exam, you notice that the points have been added incorrectly; your actual score should be a 77. Would you report this grading error to your professor?

A2.) Final exams start next week. In one of your courses, BUS XXX, you have a 'solid B' – you would really like to have an 'A' in this course. A TA in the computer lab (a student in another of your courses) claims to have accessed faculty M-drives and found a draft of your BUS XXX exam. She offers to sell you the exam for $50 – an amount you can easily afford.

a) Would you pay the $50 and get the exam?

b) Would you tell the Professor of BUS XXX of the offer?

A3.) You are the business manager of a University organization which employs a number of students on a part time basis. As business manager one of your duties is to schedule hours for part-time student employees; you have not yet set the schedule for this semester. One of the part-time employees (also a business student) asks you to write a memo stating that because of job commitments he can only be enrolled in the 10:00 am section of BUS XXY rather than the 3:00 pm section. Would you write the memo?

A4.) It is 11:50, you have just completed an exam for BUS XXY – it was rough. A friend of yours has her BUS XXY exam at 2:00; she sees you in the hall and asks you what was on the exam.

a) Would you tell her specific information about the exam?

b) Would you tell her general information about the exam?

A5.) You are working on a group project for your BUS XXZ class, the Professor clearly states that only the group members may contribute to the project. One of the requirements is an analysis of a firm's financial statements. As the project nears completion you learn that the group member responsible for the analysis has a brother who works in the financial analysis department of a Fortune 500 company. This member has had his brother review the work and make suggestions. Other group members are joking around because they are sure to 'Ace' this piece of the project.

a) Would you go along with the others or insist the analysis be reworked by other group members? ('Yes' indicates you 'Would go along with the others.')

b) Suppose that the Professor requires all group members to sign a sheet stating that no outside person contributed to the project. Assume the project includes the suggestions of and has been influenced by the group member's brother. Would you sign the sheet?

A6.) In your BUS XYZ class, it is a very large lecture class which meets at 12:00, the professor collects and grades homework. The course syllabus clearly states that homework is to be your own work, but you may get help from the professor or a TA. A friend, who is also in your 9:00 class, has often asked to see your homework to check answers. You have agreed to do this. Going into the final you are cruising in BUS XYZ with an easy 'A'; your friend has a low 'C'. In the last week of classes the professor of BUS XYZ asks to see you and your friend in her office. The professor notes unusual similarities in the most recent homework solutions and asks the two of you for comments. Neither of you have anything to say. When you leave the professor's office your friend admits to having copied a

number of your homeworks. After the next class the professor asks to see the two of you again. This time the professor produces a number of homeworks which are unusually similar. The professor states that it appears the two of you have worked together on homework during the semester and together you only deserve one set of homework scores. She plans to take back half the homework points from each of you. She offers you a chance to explain.

a) Your friend states that you have worked together. You know that by saying nothing you will probably Ace the final exam and still get an 'A' and your friend will have a chance at a 'C'. Would you tell the professor the truth?

b) Now suppose you are the friend who copied. If you tell the truth the professor will give all (or most) of the homework points to your friend, you will most certainly get a ' D', Your friend will probbaly ace the final exam and get an 'A' regardless. Would you tell the truth?

A7.) It is the fall semester. Last Spring you and a friend both applied for and received TA positions for the introductory accounting class. You and he are both very excited about having a TA position; further, working for the Professor teaching the course is great. Your duties include leading discussion sections, writing and giving pop quizzes in discussion sections, helping students with homework problems, and grading (homeworks, quizzes and exams). One student in your friend's section was frequently in for help on homework at the beginning of the semester, more recently she stops in and just says hello or chats. You ask your friend how she (the student) is doing in the class. He says "very well". That weekend you see your friend downtown with this student. You also see them together the following weekend. Would you insist your friend tell the Professor?

A8.) It is 12:00 noon, you are studying in the library for your BUS XZZ exam; you have a high 'B'. The exam begins at 4:00pm. Your study partner finds you and says she has a Xerox of a list of questions from the 9:00 section of BUS XZZ. The midterm for both sections was the same and students in the 9:00 am section are required to sign a statement agreeing not to discuss the exam until 5:00pm. She leaves a copy on the table.

a) Would you use the copy?

b) Would you take the copy to the professor?

B1.) You are supervising the accounts receivable (AR) department of your firm. An AR clerk comes to you and points out that a customer has paid the same invoice twice. You review all the backup documents and determine that an overpayment has truely occurred. Would you instruct the clerk to return the overpayment?

B3.) You work as a financial planner for a large retailer. Every year you assist the merchandising staff prepare an operating plan for the following year. You must also 'sign-off' (approve) this plan before it goes to management. You also work with the staff to analyze differences between plan and actual. This year the operating staff's plan is very conservative (numbers which you feel are well below expectations, but still above current years). You know that turning in conservative

numbers increases the probability and size of staff bonuses. When you meet with the operating staff, they argue that the numbers are above current year and in line with other divisions of the company. They are unwilling to change the plan. Would 'sign-off' on the conservative plan?

B5.) You are working as a cost accountant at a manufacturing plant. It is close to year end so you meet with the Cost Accounting manager to discuss the upcoming audit. Together you decide that the books (cost accounting records – those which cost accounting is responsible) are in good shape except you may be under-reserved in shrinkage and/or obsolescence. (That is, inventory may be overvalued.) You decide to see if the auditors come to the same conclusion. A few weeks later the auditors arrive and start performing audit tests, etc; part of this work is testing the reserves (shrinkage and obsolescence). Related to these tests you provide the auditors with inventory data and your worksheets calculating the reserve amounts. Two days later the auditor returns saying that your reserves appear adequate but he has a few issues he would like to present. He asks you to correct him if you disagree with any of his assumptions, interpretations, or estimates. He discusses his approach, for the most part, it seems reasonable. However, there are a few issues where you think he is confused – you know that if you stop him and fully explain the issues it will increase his estimates of your reserves. Any adjustment would be income-reducing.

a) Would you stop the auditor and explain the issues?

b) Suppose you did not stop the auditor and explain the issues. The next day the auditor returns with a letter for you to sign (a representation letter). The letter outlines the discussion from the previous day; by signing you state that you agree with the contents of the letter. You tell the auditor you will read the letter in the afternoon and ask him to return at the end of the day. Would you sign the letter?

B6a.) You are working as a manager in the tax department of a BIG 6 accounting firm. You are preparing the return for the CEO of one of your firm's audit clients. In preparing the return you notice some unusual items relating to the CEO's individual and business activities. You ask the audit partner about them hoping that he can explain the items. The audit partner's explanations are weak and you keep pressing. Finally, the audit partner says "we blew the audit last year – we missed a few item that weren't exactly clean. . . . they're related to the issues you have found. Hopefully everything will be cleaned-up this year. It's best to just let it go." Would you insist the audit partner bring these issues to the attention of the Office Managing Partner?

B6b.) You are the chief accountant at a petroleum plant; your primary responsibilities are product costing and process control. Over the past three years the plant has been very successful – largely due to high production yields (favorable variances) above industry standards. (Because of this success, top managers at the plant have enjoyed bonuses.) These yields are computed by the production group and verified by the accounting group. The only unfavorable item over these years has been inventory shortages or shrinkage in the plant. This year, after the

physical counts shortages again occurred. The plant manager insists that "we get a handle on these shrinkages and prevent them next year." While investigating you find the reason for the shrinkage – a flaw in the process undetected because the production yields have been overstated. You call the plant manager and tell him you have found the explanation for the shrinkage; he wants to meet with you at 8:00 tomorrow morning. Next, you go down to see the head of production. After two hours of questioning, she confesses that she has know about the overstated yields. She explains "at first is was a mistake on a spreadsheet and the accounting check didn't catch it, we all got a bonus, and the plant was doing so well.that we just didn't fix the mistake and let the yields be overstated." She did not know about the production flaw. She then notes that by eliminating the production flaw the inventory shrinkage would stop and that would offset a good part of the loss in production yields. You tell her there is an 8:00 am meeting with the plant manager tomorrow and she should be there.

a) At the 8:00 am meeting you tell the plant manager the 'mistake' in a spread sheet caused production yields to be overstated, a production flaw to be undetected, and the flaw has caused the shrinkages. The plant manager remarks "For three years!?" You look at the head of production – she shrugs her shoulders. Would you tell the plant manager the production group had knowingly overstated the yields?

b) Suppose you are the head of production and at the 8:00 am meeting. The chief accountant has presented the source of the overstated yield problem as a mistake in a spreadsheet that was detected by neither production nor accounting. The plant manager is not very happy and plans to bring in an internal audit team from corporate to find "what else is going wrong in here." Would you tell the plant manager the truth?

B7.) You are a first year staff auditor working on a client audit of a small firm. One senior supervises you and two other staff auditors. Occasionally the manager and partner have stopped by to check on things. The audit work is almost complete and seems to have gone very well. The senior recently said " we are almost done, under budget and there are no major client problems." Further, the last time the Partner stopped by he seemed very pleased and you overheard him tell the manager "this senior – she is really good, I think she's ready for a promotion after this job." The client's accounting manager has invited the audit staff to join him and his staff for a party at his place to "celebrate the smooth audit and its completion – also we would like to thank you for being so good to work with." This is a fairly routine practice and you have been to similar events with other clients so you are comfortable that there is no independence problem. The party goes really well, even the manager stops by. As people start leaving you walk around to say goodbye and thankyou to your host. You, the senior, and the client accounting manager are the only ones left. You all walk to the door. You leave but the senior does not follow. You turn around to see the senior and the client accounting manger standing in the door way – they wave. Would you tell the audit manger about this?

B9.) You are an internal auditor at a firm; your duties include expense analysis and control. Consequently you are reviewing employee expense reports in the marketing department. You find a number of items which appear to be of a personal nature included on company expense reports. You ask the Accounts Payable supervisor for explanations. She tells you "... these items are most probably personal but are also commonplace ... I've asked the same question *once* of the marketing VP ... his answer ... These are top salesman you're looking at!" Would you force this issue at higher levels?

B10.) You are an accountant at the corporate headquarters of your firm. Among other responsibilities you allocate corporate charges to divisions. A manager in the corporate tax group stops by one day and asks you to adjust the allocations to the divisions for the current year. She explains "to you these are just allocations, but they have some significant tax implication – cash flow stuff." While she is in the office you call your boss; he agrees that changing the allocations is a good idea and it was talked about the prior week at the staff meeting. A week later the tax manager returns. She asks that you make some adjustment to the prior year's allocations as well. You explain that such adjustment will require changing the history files which is definitely against company policy. She explains that large tax liabilities are also against company policy, but she didn't ask any questions she just did her job – she suggests that you do the same. Would you change the prior year's allocations?

B11.) You are a Cost Accounting Manager working in a steel plant. Recently, sales have been slow and profits reduced. In response, top management has mandated an across the board 10%–20% cost reduction. As part of this cost reduction plan large expenses need to be approved. Approval is based on financial analysis; consequently some expense requests will be denied. In the first two months of the cost savings program expenses are down significantly. The third month shows a significant increase in expenses, especially 'maintenance expense'. While investigating the details of the maintenance expenses you find that most are routine maintenance, but the financial analysis misleadingly suggests that the work will also produce productivity improvements. When confronted, the production staff admits to providing false data on expense requests. However, they believe that 'skipping' maintenance will lead to equipment breakdowns and other long term costs. You review the production staff's arguments and agree with their position. You are considering bringing this issue before top management and arguing for the approval of routine maintenance expense. However, you know that if top management does not agree with you (which is a possibility), a good deal of the routine maintenance will not be approved. Would you go to top management?

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