Authors :	D'Arcy A. Becker, Ingrid Ulstad
Title:	Gender Differences in Student Ethics: Are Females Really More Ethical?
Publication info:	Ann Arbor, MI: MPublishing, University of Michigan Library 2007
Rights/Permissions:	This work is protected by copyright and may be linked to without seeking permission. Permission must be received for subsequent distribution in print or electronically. Please contact mpub-help@umich.edu for more information.
Source:	*Gender Differences in Student Ethics: Are Females Really More Ethical?* D'Arcy A. Becker, Ingrid Ulstad vol. II, 2007
Article Type:	Paper
URL:	http://hdl.handle.net/2027/spo.5240451.0002.009
PDF:	Download full PDF [323kb]

Gender Differences in Student Ethics: Are Females Really More Ethical?

D'Arcy A. Becker

Ingrid Ulstad

E-mail: dbecker@uwec.edu, ulstadic@uwec.edu

Abstract

Investigations of gender differences in student ethics have yielded conflicting results. This study seeks to determine whether gender effects persist when a student's major, psychological gender and impression management are included in the analysis. Prior research has considered these variables individually as they relate to ethics, and each one would theoretically cause gender differences to disappear. Students at three universities participated in our research. Results from 515

students reveal significant gender differences that do not fade as the three additional variables are included in the analysis.

Introduction

The formalization of ethics training for accounting students has become a major concern following reports of rampant cheating at the college level and recent business scandals. Ethics education, which provides training in systematic thinking and reasoning about ethics, may be essential at the college level if personal and business ethics are to be improved (Bampton and Maclagan, 2005). Shafer, Morris and Ketchland (2001) identify the need to align personal and societal ethics as a cornerstone of efforts to improve ethical decision making. If ethics training is to accomplish the goal of aligning ethical beliefs, we need to understand the current status of student ethics as we design an ethics curriculum.

It is also essential to understand how student ethics vary across subsets of students. Factors reported in the literature include student gender (Ameen, Guffey and McMillan, 1996) and student major (Jeffrey, 1993), among others. To the extent these individual student differences translate to different views about ethical issues, they may impact the design of ethics training.

This study reports results of a survey measuring how acceptable students find some common forms of academic cheating. We examine student ratings in light of the societal expectation that all forms of cheating are completely unacceptable. Our results show female students find the cheating behaviors to be much less acceptable than do male students. We investigate how robust these gender differences are by considering the impacts of psychological gender, impression management, and student major on the results. Overall, biological gender effects persist after consideration of these variables.

Literature and Hypotheses

Investigations of gender effects on student ethics have produced varied results. To the extent that biological gender has been found to have an impact, females are generally shown to be more ethical. This study looks for gender effects in a decision setting with which students are very familiar: academic cheating. Students should understand the consequences of acting unethically in academia. Most schools have codes of ethics that

address these consequences, and many faculty include those consequences in their course syllabi.

Females may try to avoid the negative consequences of cheating and tend toward ethical action. This is consistent with females' general tendency toward risk aversion. For example, females generally prefer to avoid shame (Tibbetts, 1997) and financial risk (Jianakopolos and Bernasek, 1998). Conversely, males may be more prone to risk-taking, focusing more on perceived benefits of cheating and less on the consequences of being caught. These differences may lead to gender effects in student attitudes about cheating behaviors, which is hypothesis 1 (in null form):

> **H1**: There will be no biological gender difference in student ratings of cheating behaviors.

A possible explanation of inconsistent results in prior research may be a concentration on biological gender rather than on psychological gender. Regardless of biological gender, adopting the social conditioning of one's psychological gender may impact attitudes toward ethics. Socialization is partly a function of conditioned behaviors, which tend to be gender-specific (Terpstra et. al., 1993). Many theories about gender and ethics are based on socialization theory (McCabe, Ingram, and Dato-on, 2006). Women may be conditioned to reject less ethical actions to obtain desired outcomes because they have been conditioned to take actions which gain the approval of others. Men may be conditioned to accept less ethical actions to obtain desired outcomes because they have been conditioned to be more aggressive and competitive (McCabe, Ingram and Dato-on, 2006).

The Personal Attributes Questionnaire (PAQ) (Spence et. al., 1975) measures psychological gender in terms of instrumental and expressiveness strengths. The strength of assertiveness traits (generally considered to be male characteristics) is measured by the instrumental scale, while the strength of desirable, socially-oriented traits (generally considered to be female characteristics) is measured by the expressiveness scale.

Rather than biological gender, it may be the strength of expressiveness conditioning that determines ethical attitudes. This implies that students with higher expressiveness will be less accepting of cheating behaviors. This leads to hypothesis 2 (in null form):

H2: There will be no biological gender difference in student ratings of cheating behaviors once student expressiveness is taken into account.

Another possible reason for the inconsistent results in prior research could be the failure to account for a social desirability bias in the data. In any study of ethics attitudes, survey respondents may give false responses in an effort to obscure their true feelings. Ethics are an intensely personal matter and respondents may not want anyone to know they would take unethical actions to gain desired outcomes. There is a pervasive tendency to present oneself in the most favorable light relative to prevailing social norms (King and Bruner, 2000). This interest in answering in a socially desirable manner is known as impression management; impression management should be controlled for in ethics research using self-reported data (Bernardi et al., 2003). In most ethics research on gender, impression management is not measured and therefore it may be a missing explanatory variable for some of the inconsistent results.

In a variety of settings females have been less inclined to engage in impression management (e.g. Singh, Kumra and Vinnicombe, 2002); this may also be true in academia. Respondents engaging in impression management in this study are more likely to rate academic cheating as unacceptable, which could obscure gender differences. This leads to hypothesis 3 (in null form):

H3: There will be no biological gender difference in student ratings of cheating behaviors once impression management is taken into account.

In addition to psychological gender and impression management, student major may impact the relationship between biological gender and ethics. In the accounting curriculum there is substantial ethics-related content; graduates in accounting are exposed to such content. This should reduce gender differences by improving the ethics of all accounting students. Ethics content of curricula in other business fields may not be the same, which would allow gender differences to persist among those students. Therefore, we investigate whether gender effects are present for accounting majors and non-accounting business majors separately.

We hypothesize (in null form) this relationship between gender and major:

H4: There will be no biological gender difference in student ratings of cheating behaviors once student major is taken into account.

H4a: There will be no biological gender difference in student ratings of cheating behaviors for accounting majors.

H4b: There will be no biological gender difference in student ratings of cheating behaviors for non-accounting business majors.

Additional Moderating Variables

There are possible explanations beyond psychological gender (expressiveness), impression management and student major for the inconsistent gender results found in studies with students. The number of hours working and the number of hours spent studying may have an effect. This study measured both self-reported hours worked per week and hours spent studying per week, and included these variables in the analysis.

Method

Undergraduate students from three AACSB-accredited universities participated in this study. Participating schools included two from the Midwest, one public and one Jesuit school; and one East coast Jesuit school. Institutional Review Board approval for this study was obtained from all three schools.

Students answered a 10-minute, 4 section survey during class time. Participation was voluntary and anonymous; no extra credit was given for participation. In the first section, students provided demographic information. Subsequent sections contained questions measuring attitudes toward academic behaviors, impression management, and psychological gender. Two orders of the survey were used; all students answered the demographic questions first. Half of the respondents answered the academic behavior questions next, followed by the gender and impression management questions. The other half of the students answered the gender and impression management questions next, followed by the academic behavior questions. The order of the survey questions was not a significant variable in any of the results.

Figure 1. Academic Dishonesty Scale

1. Do more than your share of work in a group project	1	2	3	4	5
2. Use unfair methods to learn what was on a test before it is given	1	2	3	4	5
3. Copy material and turn it is as your own work	1	2	3	4	5
4. Use material from a published source in a paper without giving the author credit	1	2	3	4	5
5. Help someone else cheat on a test	1	2	3	4	5
6. Study for exams with other students in the same course	1	2	3	4	5
7. Collaborate on solutions to an assignment when collaboration is specifically prohibited	1	2	3	4	5
8. Copy from another student during a test	1	2	3	4	5
9. Prevent other students from copying from you during a test	1	2	3	4	5
10. Keep exam information private from students in later sections of the same course	1	2	3	4	5
11. Receive substantial help on an individual assignment without your instructor's permission	1	2	3	4	5
12. Cheat on a test in any way	1	2	3	4	5
13. Memorize questions from quizzes that may appear on exams	1	2	3	4	5
14. Use a textbook or notes on a test without your instructor's permission	1	2	3	4	5

In the second section, students rated the acceptability of 14 academic behaviors (Figure 1). Nine of the items are from the Academic Dishonesty Scale of McCabe and Trevino (1997); all nine items are considered academically dishonest. Five items (1, 6, 9, 10 and 13) were added which are not considered to be dishonest actions (shown in **bold** print). A mix of items helped ensure students had to read and consider each item individually rather than just marking replies to each item in the same way. Responses were given on a Likert scale from 1 (completely dishonest) to 5 (completely honest). Using this scale, Bolin (2004) showed that attitude toward academic dishonesty was a strong predictor of a student's level of cheating.

The Academic Dishonesty Scale has been shown to be highly reliable (Cronbach alpha of .90). Confirmatory factor analysis showed the items in the Academic Dishonesty Scale in one factor and the five additional (honest) items in another factor. Each student's ratings of the nine items in the Academic Dishonesty Scale were summed to create one variable (CHEAT). The higher the value of CHEAT, the more accepting the student was of the cheating behaviors.

In the third section of the survey, students answered questions to measure their levels of impression management (see Figure 2). The twenty items are from the Balanced Inventory of Desirable Responding (BIDR), version 7 (Paulus, 1998). The major use of this scale is in differentiating fakers from non-fakers; it helps determine if respondents are purposely enhancing their replies when completing questionnaires (Paulus, 1998). The scale has strong reliability, with a Cronbach Alpha of .83, and has high test-retest correlation (Robinson, Shaver and Wrightsman, 1991).

Figure 2. Impression Management Scale

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

Not True 1 2 3 4 5 6 7 True Very True

____ 1. I sometimes tell lies if I have to.

____ 2. I never cover up my mistakes.

____ 3. There have been occasions where I have taken advantage of someone.

____ 4. I never swear.

____ 5. I sometimes try to get even rather than forgive and forget.

____ 6. I always obey laws, even if I'm unlikely to get caught.

____ 7. I have said something bad about a friend behind their back.

____ 8. When I hear people talking privately, I avoid listening.

____ 9. I have received too much change from a salesperson without telling him or her.

____ 10. I always declare everything at customs.

____ 11. When I was young I sometimes stole things.

____ 12. I have never dropped litter on the street.

____ 13. I sometimes drive faster than the speed limit.

____ 14. I never read sexy books or magazines.

____ 15. I have done things I don't tell other people about.

____ 16. I never take things that don't belong to me.

____ 17. I have taken sick leave from work or school even though I wasn't really sick.

____ 18. I have never damaged a library book or store merchandise without reporting it.

____ 19. I have some pretty awful habits.

____ 20. I don't gossip about other people's business.

In determining whether a student is engaging in impression management, an impression management rating (IMR) is obtained. Note in Figure 2 that the odd-numbered items would be answered as 1 or 2 if a respondent was trying to make a good impression. Also note that the even-numbered items would be answered 6 or 7 if a respondent was trying to make a good impression. In reality, most of us would answer somewhere in the middle of the scale to nearly all items. Scoring of the BIDR uses this knowledge to create the IMR. For the odd-numbered items, sum the number of 1's and 2's; for the even-numbered items, sum the number of 6's and 7's. The overall sum creates one IMR for each respondent that ranges from 0-20. The higher the IMR, the more the person has engaged in impression management.

In the fourth section of the survey, students answered questions from the Personal Attributes Questionnaire (PAQ) (Spence et. al., 1975) to measure their instrumental and expressive traits (see Figure 3). The Scale has high reliability (Cronbach Alpha of .76). Males are expected to have a higher rating on the

instrumental scale while females are expected to have a higher rating on the expressiveness scale.

Figure 3. Personal Attributes Questionnaire *

Not at all independent	1	2	3	4	5	Very independent
Not at all emotional	**1**	**2**	**3**	**4**	**5**	**Very emotional**
Very passive	**1**	**2**	**3**	**4**	**5**	**Very active**
Able to devote self completely to others	1	2	3	4	5	Not at all able to devote self completely to others
Very rough	1	2	3	4	5	Very gentle
Not at all helpful to others	1	2	3	4	5	Very helpful to others
Not at all competitive	**1**	**2**	**3**	**4**	**5**	**Very competitive**
Not at all kind	1	2	3	4	5	Very kind
Not at all aware of feelings of others	1	2	3	4	5	Very aware of feelings of others
Can make decisions easily	**1**	**2**	**3**	**4**	**5**	**Has difficulty making decisions**
Gives up very easily	**1**	**2**	**3**	**4**	**5**	**Never gives up easily**
Not at all self confident	**1**	**2**	**3**	**4**	**5**	**Very self confident**
Feels very inferior	**1**	**2**	**3**	**4**	**5**	**Feels very superior**
Not at all understanding of others	1	2	3	4	5	Very understanding of others
Very cold in relations with others	1	2	3	4	5	Very warm in relations with others
Goes to pieces under pressure	**1**	**2**	**3**	**4**	**5**	**Stands up well under pressure**

* Instrumental scale in bold print; expressive scale in regular print.

Items shown in bold print measure instrumental traits while the remaining measure expressive traits. Confirmatory factor analysis showed the eight instrumental items in one factor (variable name INSTRUM) and the eight expressive items in another factor (variable name EXPRESS). For each scale, a student's total responses to items are used to create one rating ranging from 8 to 40.

Results

Table 1 shows the distribution of students across different majors. The 515 participants were all business majors. 400 students attend the public university; 79 attend a Jesuit university in the Midwest, and 36 attend a Jesuit university on the East coast. The study included 220 accounting majors and 295 non-accounting business majors.

Table 1. Student Participant Information

	Number of Participants		
Major	**FemaleStudents**	**MaleStudents**	**TotalStudents**
Accounting	106	114	220
Finance	46	17	63
Management Information Systems	19	8	27
Management	53	33	86
Marketing	23	40	63
Business Administration	35	13	48
Other Business	5	3	8
Totals	**287**	**228**	**515**

Table 2 shows demographic information including students' age, year in school, and self reported GPA (on a 4-points scale), separated by major. Accounting majors are similar to students in other fields for age, year and self-reported GPA. This facilitates comparisons of accounting majors' versus non-accounting majors' attitudes about ethics.

Table 2. Student Participant Demographic Information

Mean (Standard Deviation)

Major	**Age**	**Year***	**GPA****
Accounting	21.71	3.18	3.29
	(3.06)	(0.87)	(0.37)
Finance	21.27	3.21	3.36
	(3.43)	(0.54)	(0.37)

Management Information Systems	20.56	2.70	3.11
	(1.42)	(0.82)	(0.35)
Marketing	21.37	3.32	3.12
	(1.37)	(0.80)	(0.39)
Management	21.70	3.19	3.18
	(2.75)	(0.85)	(0.36)
Business Administration	21.21	3.29	2.99
	(1.43)	(0.87)	(0.42)
Other Business	20.88	3.13	3.13
	(1.25)	(0.99)	(0.49)
Non Business	20.67	2.67	3.49
	(0.57)	(0.58)	(0.21)

* Year is 1=freshman and so forth.

** GPA is self-reported grade point average, 4-point scale.

Table 3. Academic Dishonesty Scale, Overall Ratings *

		Mean	**(Std Dev)**
2.	Use unfair methods to learn what was on a test before it is given	1.95	(0.99)
3.	Copy material and turn it is as your own work	1.52	(0.82)
4.	Use material from a published source in a paper without giving the author credit	1.65	(0.88)
5.	Help someone else cheat on a test	1.48	(0.82)
7.	Collaborate on solutions to an assignment when collaboration is specifically prohibited	2.19	(1.04)
8.	Copy from another student during a test	1.25	(0.69)
11.	Receive substantial help on an individual assignment without your instructor’s permission	2.41	(1.06)
12.	Cheat on a test in any way	1.37	(0.77)
14.	Use a textbook or notes on a test without your instructor’s permission	1.35	(0.80)

* Item numbers correspond to item numbers in the original survey; see Figure 1.

We examined the mean dishonesty ratings of the items in Figure 1. If students believed an item reflected completely dishonest behavior, they would give it a rating of 1. Students do not universally agree that these behaviors are completely unacceptable; there is significant variability in the ratings for each item. However, all means except one item associated with collaboration are statistically the same as the scale minimum rating of one. The item for which student and faculty opinions differ marginally is item 11 (receive substantial help on an individual assignment without your instructor's permission). The students' mean rating is marginally significantly above the scale minimum (p=.08). On average, students share faculty beliefs about the honesty or dishonesty of these actions.

Hypothesis Testing

We compared the ratings of female and male students to determine if there are gender differences in beliefs about cheating. The results are shown in Table 4. As shown in Panel A of Table 4, there is a biological gender difference in beliefs, with female students consistently rating the items as less acceptable than male students. [1]

To test hypothesis 1, each student's total cheating rating was computed as one score by summing the student's ratings of the nine items; the variable CHEAT is analyzed for gender effects (see Table 4). As shown in Panel B of Table 4, biological gender is a significant determinant of CHEAT. Based on these results, hypothesis one is rejected; there is a difference in the ratings of cheating behaviors.

Table 4. Academic Dishonesty Scale

Overall Gender Results

Panel A: Ratings by Biological Gender*		**Female (287)****		**Male (228)**	
2.	Use unfair methods to learn what was on a test before it is given	1.90	(1.00)	1.99	(0.99)
3.	Copy material and	1.42	(0.73)	1.61	(0.88)

	turn it is as your own work				‡
4.	Use material from a published source in a paper without giving the author credit	1.55	(0.79)	1.72	(0.95) ‡
5.	Help someone else cheat on a test	1.36	(0.80)	1.58	(0.83) ‡
7.	Collaborate on solutions to an assignment when collaboration is specifically prohibited	2.02	(1.01)	2.34	(1.04) ‡
8.	Copy form another student on a test	1.20	(0.66)	1.29	(0.72)
11.	Receive substantial help on an individual assignment without your instructor's permission	2.28	(1.09)	2.52	(1.03) ‡
12.	Cheat on a test in any way	1.26	(0.70)	1.46	(0.81) ‡
14.	Use a textbook or notes on a test without your instructor's permission	1.23	(0.68)	1.45	(0.88) ‡
Panel B: ANOVA for Gender Effect on CHEAT* **					
Source	**Sum of Squares**	**df**	**Mean Square**	**F**	**Prob.**
Gender	388.42	1	388.42	12.61	0.0004
Error	15895.66	513	30.98		
Total	16284.08	514			

* ‡ Difference significant at p<.05

** Mean (standard deviation)

*** CHEAT is sum of each student's rating of all items in Panel A

To test hypothesis 2, the variable EXPRESS was added to the analysis as a covariate (see Table 5). EXPRESS was created by summing each student's responses to the expressiveness questions from the PAQ. Panel A of Table 5 shows the means for EXPRESS for each gender. The means are significantly different, with females having a higher expressiveness rating on average. Panel B of Table 5 shows that Gender is still significant (p<.01) but EXPRESS is not a significant covariate in the analysis (p=.22). [2] Hypothesis 2 is rejected; biological gender effects persist after including student expressiveness in the analysis.

Table 5. Academic Dishonesty Scale: Gender Effects with Expressiveness Covariate

Panel A: Expressiveness Ratings*					
	Female		**Male**		
Expressiveness Mean	31.35		30.17 ‡		
Expressiveness Std Dev	2.91		3.63		
Panel B: ANCOVA for Gender Effect on CHEAT with Expressiveness Covariate					
Source	**Sum of Squares**	**df**	**Mean Square**	**F**	**Prob.**
Gender	332.99	1	332.99	10.82	0.0010
Express	45.16	1	45.16	1.47	0.2258
Error	15850.51	510	31.08		
Total	16228.66	512			

* ‡ Difference significant at p<.05

To test hypothesis 3, we added IMR (see method section for description) as a covariate in the analysis (see Table 6). Panel A of Table 6 shows the mean IMR for each gender. Panel B of Table 6 shows that Gender is still significant (p<.02) and IMR is a significant covariate (p<.01). Hypothesis 3 is rejected; biological gender effects persist after including students' efforts at impression management scores in the analysis. [3]

Table 6. Academic Dishonesty Scale

Gender Effects with Impression Management Covariate

Panel A: IMR Ratings*		
	Female	**Male**
IMR Mean	6.38	4.99 ‡
IMR Std Dev	3.37	3.29

Panel B: ANCOVA for Gender Effect on CHEAT with IMR Covariate					
Source	**Sum of Squares**	**df**	**Mean Square**	**F**	**Prob.**
Gender	171.44	1	171.44	5.90	0.0151
Express	928.25	1	928.25	31.94	0.0000
Error	14967.41	510	29.35		
Total	16067.71	512			

* ‡ Difference significant at p<.05

To test hypothesis 4a, whether biological gender effects are present for accounting majors, ANOVA for the effect of Gender on CHEAT was conducted for the 220 accounting majors in the study (see Table 7). Panel A of Table 7 shows that Gender is a significant determinant of cheating acceptability ratings for accounting majors (p<.01). Hypothesis 4a is rejected.

To test hypothesis 4b, whether biological gender effects persist for non-accounting majors, ANOVA for the effect of Gender on CHEAT was conducted for the 295 non-accounting business majors in the study. Panel B of Table 7 shows that Gender is a significant determinant of cheating acceptability ratings for non-accounting majors (p=.02). Hypothesis 4b is rejected.

Table 7. Academic Dishonesty Scale

Gender Effects by Major

Panel A: ANOVA for Accounting Majors					
Source	**Sum of Squares**	**df**	**Mean Square**	**F**	**Prob.**
Gender	235.40	1	235.40	7.18	0.0079

Error	7145.44	218	32.78		
Total	7380.84	219			
Panel B: ANOVA for Non-Accounting Business Majors					
Source	**Sum of Squares**	**df**	**Mean Square**	**F**	**Prob.**
Gender	140.65	1	140.65	4.80	0.0292
Error	8594.50	293	29.33		
Total	8735.15	294			

Additional Moderating Variables Testing

We also investigated whether time pressure might provide a reason for the difference in cheating beliefs by measuring both hours spent working and hours spent studying per week. Prior research has shown that time pressure can lead to student cheating because students see cheating as a way of solving their time shortage.

The mean hours spent studying was 13.79 hours per week. Females (mean 15.76 hours) report studying significantly more than males (mean 12.23 hours) ($p=.02$). When this variable is added to the analysis, gender is still a significant determinant of cheating ($p<.01$). Time spent studying does not account for the difference in cheating attitudes.

The mean hours spent working was 11.89 hours per week. Females (mean 12.33 hours) report working about as much as males (mean 11.53 hours) ($p=.25$). When this variable is added to the analysis, biological gender is still a significant determinant of cheating ($p<.01$). Time spent working does not account for the difference in cheating attitudes.

Discussion and Conclusions

Many students in this study were too accepting of cheating behaviors; the ethical beliefs of these students do not conform to faculty expectations. This is consistent with prior research showing that many students have different beliefs about cheating than do faculty. For example, Stevens and Stevens (1987) found students' ratings varied significantly from those of faculty; Newstead, Franklyn-Stokes and Armstead (1996) found that

students define cheating more narrowly (they consider fewer things cheating) than faculty.

Some unethical behaviors may result from a failure to correctly identify the behavior as unethical: “I did not know this was cheating.” Others may result from failure to accept the behavior as unethical: “I do not agree this is cheating.” Some behaviors may result from the conscious decision to be unethical: “I don’t care if this is cheating.” For those students who knowingly cheat, it may not be the concepts of right or wrong that prevail, but the perceived benefits of cheating which outweigh the risks. Prior research has shown that risk taking behaviors tend to be stronger for men than for women.

We investigated whether there were differences in the ratings of male and female students, and found a significant effect from biological gender in the cheating ratings. We also investigated whether the biological gender effect would disappear when psychological gender was introduced in the analysis. Biological gender effects persisted when psychological gender was included in the analysis.

The possibility that students were engaging in impression management with their survey answers was also investigated. We found females engaged in significantly more impression management than did males. This is contrary to some prior research (e.g. Singh, Kumra and Vinnicombe, 2002), which found females were less willing to engage in impression management than were males. We also found that biological gender effects persisted when impression management was included in the analysis. Impression management does not appear to be the driver behind the biological gender differences.

We also investigated whether the biological gender effect existed for accounting as well as non-accounting majors. It is possible that curricular differences between different business disciplines might negate biological gender effects. The results did not support that premise; there appears to be a biological gender effect for both accounting and non-accounting business students.

A limitation of the study is that the students in this study had not completed much of the extra ethical content usually included in the accounting curriculum. The mean year in school for the accounting majors is 3.18 (junior), making it plausible that this content had not been completed. Future research may measure

specific ethics content to help determine whether it leads to differences in ethical views.

Each one of the above factors could theoretically cause biological gender differences in beliefs to disappear. However, results of our study reveal significant biological gender differences that persist when psychological gender, impression management and student major are factored into the analysis.

Research has theorized that social conditioning may lead males toward unethical action more often than females, especially when they feel the end justifies the means (Buckley, Wiese and Harvey, 1998). Weber, Blais and Betz (2002) and Byrnes (1999) demonstrated that males are more likely to take risks than are females in a variety of contexts. If risk taking is part of a perceived social norm for males, this may be reflected in the cheating ratings by males.

Conversely, females may be more influenced by potential sanctions such as a reduction in status (Leming, 1980), and may be more prone to obey societal rules as long as they have no special reason or justification for acting unethically. However, females will act unethically when they are able to make excuses for themselves about why it is acceptable to break laws or rules, or when they fail to see the consequences of their actions as important (Ward and Beck, 1990). This opens the door for females and males to act similarly with regard to cheating.

If biological gender differences are driven by socialization, curriculum content may be able to help both personal and social ethics. If students do not hold appropriate academic ethical beliefs, it is unlikely that ethics curricula such as learning about accounting scandals can ensure students achieve appropriate levels of business ethics. Basic ethical beliefs provide a foundation for understanding and utilizing business scenarios and theoretical discussions used in formal business ethics training. Ethics curricula in business should focus more heavily on these basic concepts.

One important basic concept is general societal ethics. Societal norms for honesty, respect, lawfulness and other ethical elements are essential to ethical decision making (Copeland, 2005). Knowing that many students do not truly have a good understanding of what is and is not ethical within a narrowly defined area of their own lives can help in ethics course development.

Content could directly address the importance of consequences in ethical decision making. For example, when consequences are limited, is society implying that an unethical action is permissible? Or, if the likelihood of getting caught doing something unethical is low, should the unethical act be committed? Under what circumstances are unethical acts committed, and is this a problem for society? Student cheating examples could be used in each of these situations. Both male and female students would benefit from this type of analysis, perhaps for different reasons. Women may become more able to correctly identify and assess consequences of ethical actions. In each case, students may become better able to weigh consequences more realistically and may become more aware of when (and why) they are taking ethical risks.

References

Allmon, D.E., D. Page and R. Roberts. (2000). Determinants of perceptions of cheating: Ethical orientation, personality and demographics. Journal *of Business Ethics, 23* (4), 411-422.

Ameen, E.C., D.M. Guffey and J.J. McMillan. (1996). Gender differences in determining the ethical sensitivity of future accounting professionals. *Journal of Business Ethics, 15*(5), 591-597.

Bampton, R. and P. Maclagan. (2005). Why teach ethics to accounting students? A response to the skeptics. *Business Ethics: A European Review, 14*(3), 290-300.

Bernardi, R.A. and D.F. Arnold. (1997). An examination of moral development with public accounting by gender, staff level and firm. *Contemporary Accounting Research, 14*(4), 653-668.

Bernardi, R.A., E.L. Delorey, C.C. LaCross and R.A. Waite. (2003). Evidence of social desirability response bias in ethics research: An international study. *The Journal of Applied Business Research, 19*(3), 41-51.

Brown, B.S. and J. Abramson. (1999). The academic ethics of graduate business students: A survey. *Journal of Education for Business. 70*(3), 151-156.

Brown, B.S. and P. Choong. (2005). A investigation of academic dishonesty among business students at public and private United

States universities. *International Journal of Management, 22*(2), 201-214.

Buckley, M.R., D.S. Wiese, M.G. Harvey. (1998). An investigation into the dimensions of unethical behavior. *Journal of Education for Business, 73* (5), 284-291.

Byrnes, J.P., Miller, D.C., Schafer, W.D. (1999). Gender differences in risk taking: A meta-analysis. *Psychological Bulletin, 125*(3), 367-383; *22*(2), 201-214.

Coleman, N. and T. Mahaffey. (2000). Business student ethics: Selected predictors of attitudes toward cheating. *Teaching Business Ethics, 4*(2), 121-135.

Copeland, J.E. (2005). Ethics as an imperative. *Accounting Horizons, 19*(1), 35-43.

Graham, M.A., J. Monday, K. O'Brien and S. Steffen. (1994). Cheating at small colleges: An examination of student and faculty attitudes and behaviors. *Journal of College Student Development. 35* (July), 255-260.

Jeffrey, C. (1993). Ethical development of accounting students, non-accounting students and liberal arts students. *Issues in Accounting Education, 8*, 86-96.

Jianakopolos, N.A. and Bernasek, A. (1998). Are women more risk averse? *Economic Inquiry, 36*(4), 620-630.

King, M.F. and G.C. Bruner. (2000). Social desirability bias: A neglected aspect of validity testing. *Psychology and Marketing, 17*(2), 79-103.

Malone, F.L. (2006). The ethical attitudes of accounting students. *Journal of American Academy of Business, 8* (1), 142-147.

McCabe, A.C., R. Ingram and M.C. Dato-on. (2006). The business of ethics and gender. *Journal of Business Ethics, 64*, 101-116.

McCabe, A.C. and L.K. Trevino. (1997). Individual and contextual influences on academic dishonesty: A multicampus investigation. *Research in Higher Education, 38* (3), 379-397.

Merritt, J. (2002, Dec. 9). You mean cheating is wrong? *Business Week*, 8.

Newstead, S.E., A. Franklyn-Stokes and P. Armstead. (1996). Individual differences in student cheating. *Journal of Educational Psychology, 88*(2), 229-241.

Paulus, D.L. (1998). Paulus deception scales: The balanced inventory of desirable responding version 7. Multi-Health Systems, Inc: North Tonawanda, NY.

Radtke, R.R. (2004). Exposing accounting students to multiple factors affecting ethical decision making. *Issues in Accounting Education, 10*(1), 73-85.

Robinson, J.P., P.R. Shaver and L.S. Wrightsman. (1991). *Measures of Personality and Social Psychological Attitudes*. New York: Academic Press.

Roxas, M.L. and J.Y. Stoneback. (2004). The importance of gender across cultures in ethical decision-making. *Journal of Business Ethics, 50*, 149-165.

Shafer, W.E., R.E. Morris and A.A. Ketchland. (2001). Effects of personal values on auditors' ethical decisions. *Accounting, Auditing and Accountability Journal. 14*(3), 254-278.

Singh, V., S. Kumra and S. Vinnicombe. (2002). Gender and impression management: Playing the promotion game. Journal *of Business Ethics. Dordrecht. 37* (1) part 2, 77-90.

Spence, J.T., R.L. Helmreich and J. Stapp. (1975). The personal attributes questionnaire: A measure of sex-role stereotypes and masculinity and femininity. *Journal of Personality and Social Psychology, 32*, 29-39.

Stern, E.B. and L. Havlicek. (1986). Academic misconduct: Results of faculty and undergraduate student surveys. *Journal of Allied Health, 5*, 129-142.

Stevens, G.E. and Stevens, F.W. (1987). Ethical inclinations of tomorrow's managers revisited: How and why students cheat. *Journal of Education for Business. 63*, 24-29.

Terpstra, D.E., E.J. Rozell and R.K. Robinson. (1993). The influence of personality and demographic variables on ethical

decisions related to insider trading. *The Journal of Psychology, 127*(4), 375-390.

Tibbetts, S.G. (1997). Gender differences in students' rational decisions to cheat. *Deviant Behavior, 18*(4), 393-414.

Tibbetts, S.G. (1999). Differences between women and men regarding decisions to commit test cheating. *Research in Higher Education, 40*(3), 323-342.

von Dran, G.M., E.S. Callahan and H.V. Taylor. (2001). Can students' academic integrity be improved? Attitudes and behaviors before and after implementation of an academic integrity policy. *Teaching Business Ethics,* 5.

Ward, D.A. and W.L. Beck. (1990). Gender and dishonesty. *Journal of Social Psychology, 130* (3), 333-339.

Weber, E.U., Blais, A., Betz, N.E. (2002). A domain-specific risk-attitude scale : Measuring risk perceptions and risk behaviors. *Behavioral Decision Making, 15*(4), 263-290.

West, T., S.P. Ravenscroft, and C.B. Shrader. (2004). Cheating and moral judgment in the college classroom: A natural experiment. *Journal of Business Ethics, 54,* 173-183.

Woolley, D.J. and M.M. Eining. (2006). Software piracy among accounting students: A longitudinal comparison of changes and sensitivity. *Journal of Information Systems. 20* (1), 49-64.

Notes

1. When an indicator variable for school type (private or public), hereafter SCHOOL, is added to this analysis as a covariate, biological gender is still significant (p=.03) and SCHOOL is not significant (p=.54).

2. When SCHOOL is added to the analysis as a second covariate, the results are substantially unchanged, and SCHOOL is not significant (p=.33).

3. ANCOVA with two covariates (EXPRESS and IMR) shows that Gender is still significant (p=.02), EXPRESS is not significant (p=.98) while IMR is significant (p<.01). Similar to above, the addition of SCHOOL does not impact these results.

Dr. D'Arcy Becker, CPA is Professor of Accounting at the University of Wisconsin - Eau Claire. Her specialty teaching area is auditing. Her main research areas concern student ethics and student decision making. Email her at dbecker@uwec.edu.

Ms. Ingrid Ulstad, CPA is Senior Lecturer in Accounting at the University of Wisconsin - Eau Claire. Her specialty teaching area is financial accounting. Her main research areas concern student ethics and student learning. Email her at ulstadic@uwec.edu.

We gratefully acknowledge funding for this project from the Office of Research and Sponsored Programs and the College of Business at the University of Wisconsin - Eau Claire.