An Analysis of the Impact of Education and Experience on Ethical Reasoning in the Accounting Profession

Honors Senior Thesis

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Introduction

Ethics and ethical decision-making is a huge issue in the accounting profession worldwide. One unethical decision can make or break a company. The accounting scandals in the first part of the century, including Enron and WorldCom, contributed to new federal legislation requiring increased ethical behavior for accountants and amplified the profession's interest in how to develop moral reasoning in its members. Accounting's interest in this area continues to increase as the United States moves towards adopting international accounting standards which rely more on professional judgment than current U.S. rules.

An ability to recognize and correctly evaluate the ethical dilemmas in decision situations is a necessary prerequisite to good ethical decisions. I feel that the results of prior similar studies in this field are outdated, and we need a new, fresh set of results to determine where we stand in teaching ethics, and in what areas we need improvement in ethics courses and employee training programs. Through my study, I hope to find and pinpoint differences in ethical reasoning between entry-level accounting students, senior-level accounting students, and accounting professionals. I will also be looking for differences between different age groups. Using my results, I hope to determine whether university, early professional training, and work experience are succeeding in providing professionals with the ability to recognize ethical issues in the course of their practice, define the norms, principles, and values related to the situation, identify their alternative choices, and decide on the most appropriate course of action when such dilemmas are encountered. I can also use my results to identify specific patterns in moral reasoning, which can be remedied in training programs.

Previous research

There is a large volume of research examining ethical decision-making practices and ideas among all levels of accountants. Our study is replicating a study titled "An Examination of Differences in Ethical Decision-Making between Canadian Business Students and Accounting Professionals." The study was done by Jeffrey R. Cohen, Laurie W. Pant, and David J. Sharp. It was published in the *Journal of Business Ethics* in April 2001.

The Cohen et al. (2001) study analyzed the differences in entry-level business students, senior undergraduate business students (many, but not all, were enrolled in accounting classes and/or were accounting majors), and public accounting professionals with 3-5 years of practice experience. Their goal in testing these three groups was to provide "initial insight into potential consequences of the selection-socialization processes (Ponemon, 1992) which take place between each stage, and provide an indication of where, if at all, the selection-socialization processes may be deficient, and how training programs might be designed to address the deficiencies" (Cohen et al., 2001).

Their study and analysis were focused on three measures that are important in the ethical decision-making process. These three are: ethical (moral) awareness, ethical orientation, and willingness to perform questionable acts. The measures of ethical (moral) awareness capture the extent to which respondents felt that a particular action was unethical according to each of several ethic criteria. The measures of ethical orientation capture the weight respondents placed on each of the criteria in their evaluation of the overall morality of an action. The measures of willingness to perform questionable acts capture the extent to which a respondent perceives that he/she would perform the action. (Cohen et al., 2001)

Cohen et al. (2001) developed a survey with eight vignettes describing a wide variety of ethical dilemmas that might be faced by any businessperson, and which would be meaningful for all three sub-samples. The vignettes were designed to avoid "off-the-shelf" solutions (Cohen et. al, 2001), which means they avoided issues that are covered explicitly in codes of conduct. They also avoided anything that was blatantly unethical. The survey asked each participant to rate the action in each vignette on a multidimensional ethics scale (Cohen et al., 2001) (see Exhibits 1 and 2). This scale comprises a multi-item scale on which respondents indicate the extent to which they believe that a particular action, described in the vignette at the beginning of the survey, is ethical or otherwise according to a given criterion. This MES scale was used in the Flory et al. (1992) study and the Cohen et al. (1996) study. It has also been validated by the Cohen et al. (1993) study.

Four ethical theories were included in these measures, and will also be used to analyze the surveys. They are: justice (the idea of fairness to all), deontology (the extent to which an action is consistent with an individual's duties or unwritten obligations), relativism (the extent to which an action is considered acceptable in a culture), and utilitarianism (the extent to which an action leads to the greatest good for the greatest number of people). (Cohen et al., 2001)

When measuring ethical awareness, they found significant differences in deontology and utilitarianism between the three groups on one vignette, and differences in justice and relativism in another vignette. They also had significant differences between genders. They concluded that differences in ethical awareness appear to be issue-contingent, and the effect of gender was much stronger than they had anticipated.

When measuring ethical orientation, gender was again significant among the professional group in three of the vignettes, and among graduating students in one vignette. They found that

the professionals' overall evaluation is significantly driven by utilitarianism, but the graduating students were more focused on the morality of the action. However, there were very little differences in ethical orientation between the three groups; in several cases, the orientation of the three groups was surprisingly similar.

The last measure is ethical intention (willingness to perform questionable acts). Respondents believed that the actions were only marginally questionable, since mean responses were generally near the midpoint of the scale. Gender differences were highly significant in 5 of the vignettes. In every case where gender was significant, women reported a lower likelihood that they would take the action than did the male respondents. Women also consistently viewed the actions as less ethical than the male respondents. In all but one of the vignettes, the professionals' scores were higher (less willing to undertake the action) than the students'.

Other results found included that all three groups ranked the overall morality of the eight actions very similarly. All results suggested that the cumulative effects of the selection-socialization processes in Canada during university studies and early professional experience have little effect on ethical decision making. The difference between the two groups of students was very small, and in many cases, the seniors were more willing than entry-level students to take a questionable action. Their conclusion was that the effect of university accounting and business education in Canada on moral awareness and orientation appears to be small. They also concluded that the selection-socialization processes in which the three groups were involved had minimal effect on ethical awareness. There was more presence of a gender effect than any difference between the groups.

As an extension to our study, I did some research on a concept called "neuroethics" or "neurological ethics." The basic idea behind neuroethics is this: people develop different levels

of moral reasoning as they age, fairly consistent with one another. Education and experience can help individuals develop morally, but age is key, perhaps even a determining factor. Lawrence Kohlberg first introduced this idea with his "stages of moral development" model.

The Armon and Dawson (1997) study tested 50 individuals, ranging in age from 5-72, with varying races, years of education, and genders. Participants were divided into 3 age groups: 5-14, 23-45, and 50-72. Participants were interviewed four times at approximately 4-year intervals from 1977-1990. They found that the relationship between moral reasoning and age were not extremely significant, however, the trend suggests different incident rates of development during different periods of the lifespan, with diminished occurrence as adulthood advances. Ages 35 and 24 were found to be slightly significant in the results of the Armon and Dawson (1997) study.

Hypotheses

Hypothesis 1a: *The level of moral awareness of entry-level students does not differ from that of auditing (senior-level) students.*

Hypothesis 1b: *The ethical orientation of entry-level students does not differ from that of auditing (senior-level) students.*

Hypothesis 1c: *The willingness of entry-level students to take questionable actions does not differ from that of auditing (senior-level) students.*

Studies suggest that college education and the exposure to ethical training in business courses should enhance moral development and ethical reasoning, but actual results have shown that this is not always the case (as seen above), or at least the results are not as significant as we would expect.

Hypothesis 2a: *The level of moral awareness of auditing (senior-level) students differs from that of practicing accountants.*

Hypothesis 2b: *The ethical orientation of auditing (senior-level) students differs from that of practicing accountants.*

Hypothesis 2c: *The willingness of auditing (senior-level) students to take questionable actions differs from that of practicing accountants.*

We believe that training and on-the-job experience of the practicing accountants after college will cause their ethical reasoning to change and develop.

Hypothesis 3a: *The level of moral awareness of AgeGroup=0 (30 and below) differs from that of AgeGroup=1 (above age 30).*

Hypothesis 3b: *The ethical orientation of AgeGroup=0 (30 and below) differs from that of AgeGroup=1 (above age 30).*

Hypothesis 3c: *The willingness of AgeGroup=0 (30 and below) to take questionable actions differs from that of AgeGroup=1 (above age 30).*

Because of the effect of neuroethics, we believe that age will make a difference in ethical reasoning among the respondents. Age 30 was chosen as the split based on the number of participants in each category, and based on the results of the study of moral reasoning by Armon and Dawson (1997).

Methodology

After close examination of our base study, we decided to change a few things when doing our study. The Cohen et al. (2001) study only examined differences between the groups, and in fact only surveyed professional accountants with 3-5 years of experience. Therefore, most people surveyed were probably fairly young (under the age of 30). Based on the theory of neuroethics

described above, we have added an age factor to our study to examine differences in ethical reasoning between different ages.

We also decided to survey private accountants instead of public because of availability of subjects. However, we feel that by using private accountants, our results will be more significant because more professionals work in private accounting than in public.

We also used a much smaller and different sample size. We surveyed only one entry-level class and one senior-level class, both at MSSU. All of the professionals were from around this area.

After initial research, we prepared two surveys: one for accounting students and one for accounting professionals. (Both surveys can be found in appendix 1 and 2). We decided to only use one vignette instead of eight like in the Cohen et al. (2001) study, in order to save time. I administered the student survey to an Accounting 201 class and an Auditing class at the end of the fall 2011 semester. The professional survey was administered by Dr. Huffman at an IMA CPE seminar on ethics. A participant consent form was attached to each survey.

The student participants were asked on their survey to indicate whether they were an entry-level or senior-level accounting student, their gender, and their age. The professional participants were also asked about gender and age, and how many years they have worked in the accounting field. Both surveys included the same choices of age groups. The participants were then instructed to respond to one vignette (Cohen et al., 2001) using the multidimensional ethics scale mentioned earlier (Cohen et al., 2001). The vignette that we chose looks at which employee to let go during recessionary times. Each response on the scale is numbered one through seven, with seven being that the action is less ethical. The scale and vignette can be seen in appendix 1 and 2.

After the surveys were completed, I input the data into an Excel spreadsheet. Some items had to be reverse scored so that we could more easily and logically analyze the data. Dr. Smith and I also had to classify each component of the ethics scale into one of the four ethical theory categories mentioned earlier (justice, deontology, relativism, and utilitarianism). Then, the data from the 64 usable responses were ready to be analyzed.

Results

Our formatting for the results replicates the Cohen et al. (1996) study.

The results in Table 1 show the means and standard deviations between genders, the three groups, and the ages. The most significant difference we see is between the age groups.

		Justice	Relativism	Utility	Deontology	SameActSelf	SameActPeers	Ethical
Female n=39	Means	4.60	3.58	5.10	3.68	4.90	4.23	4.31
	Std. Deviation	1.10	1.37	1.27	1.67	1.79	1.69	1.47
Male n=25	Means	4.27	3.52	4.72	3.26	4.56	4.00	4.20
	Std. Deviation	1.30	1.41	1.49	1.58	1.89	1.58	1.71
201 n=14	Means	4.54	4.61	5.07	4.36	5.43	5.07	4.43
	Std. Deviation	1.14	1.53	1.38	1.20	1.45	1.73	1.65
411 n=18	Means	4.72	3.67	4.58	3.22	4.28	3.78	4.39
	Std. Deviation	1.07	1.36	1.56	1.41	1.90	1.70	1.58
Professional n=32	Means	4.30	3.03	5.11	3.31	4.75	3.94	4.13
	Std. Deviation	1.26	1.02	1.23	1.83	1.88	1.46	1.54
AgeGroup = 0 n=34	Means	4.90	3.96	5.19	3.85	5.44	4.47	4.68
	Std. Deviation	0.99	1.50	1.37	1.66	1.37	1.69	1.45
AgeGroup = 1 n=30	Means	3.98	3.10	4.68	3.13	4.00	3.77	3.80
	Std. Deviation	1.20	1.07	1.32	1.55	1.98	1.52	1.56

Table 1

Following Cohen et al. (2001), we subjected the overall measure of morality "Would you do it?" to repeated measures ANCOVA using gender as a covariate. In addition, we ran the same test using both gender and AgeGroup as covariates following the literature on neuroethics. The results of these tests can be seen in Table 2.

Our results showed significant differences in how the three groups evaluated the vignette for Justice, Relativism, and Utilitarianism. Overall, the student groups found the vignette to have less ethical Justice and Relativism scores than the professionals, while the professionals found more ethics in the Utilitarianism score. This result was consistent using both gender and AgeGroup as covariates. Our results varied from the original study which showed only the Utilitarianism score varying between the groups.

Ethical Criterion	Gender as covariate - Summed scale items F-value		Gender and AgeGroup as covariates - Summed scale items F-value	
Justice	24.62	***	20.05	***
Relativism	6.72	**	6.04	**
Utility	4.25	**	3.20	*
Deontology	0.50		0.52	

***** $p < 0.01$**
**** $p < 0.05$**
*** $p < 0.10$**

Table 2

Following the original research, we modeled the overall ethical evaluation of the vignette as a linear weighting of each of the four measures of awareness. The regression coefficients of overall evaluation on the four measures of awareness estimate this weighting, and we test for

differences in the regression coefficients between the groups to test for differences in ethical orientation in the three groups. We regressed the overall evaluation score on the four awareness measures (mean scale scores) in each of the three groups, and included gender as a control variable (seen in Table 3, Panel A), as follows: $Evaluation_i = a_0 + b_1*(justice)_i + b_2*(deontology)_i + b_3*(utilitarianism)_i + b_4*(relativism)_i + b_5*(gender)_i + e_i$ where subscript i refers to an individual, and the slope coefficients are estimates for each of the three groups. We also did another test using gender and AgeGroup as control variables (seen in Table 3, Panel B), as follows: $Evaluation_i = a_0 + b_1*(justice)_i + b_2*(deontology)_i + b_3*(utilitarianism)_i + b_4*(relativism)_i + b_5*(gender)_i + b_6*(agegroup)_i + e_i$.

The regression coefficients and their significance are shown in Table 3. We found that Justice was used strongly in two of the three groups. There was a significant difference in Justice between the entry-level students and senior-level students in Panel A. Cohen et al. (2001) found that for our particular vignette, Relativism was significant in two of the groups. However, we found that Relativism was not relied on. Deontology and Utility were not used other than a weak Deontology presence among the professionals.

OLS Regression coefficients of overall evaluation on four ethical criteria						
Panel A	**Gender as Control Variable**					
	201 Students		**411 Students**		**Professionals**	
Ethical Criterion						
Justice	0.14		1.19	***	0.46	**
Relativism	0.50		-0.09		0.03	
Utility	-0.57		-0.11		0.33	
Deontology	0.27		-0.01		0.23	*
Adjusted R^2	1.82%		40.19%		45.99%	
Panel B	**Gender and AgeGroup as Control Variables**					
	201 Students		**411 Students**		**Professionals**	
Ethical Criterion						
Justice	-0.27		1.16	**	0.46	*
Relativism	1.15	**	-0.10		0.03	
Utility	-1.51	**	-0.12		0.32	
Deontology	0.37		-0.02		0.23	
Adjusted R^2	46.38%		34.96%		43.85%	
***** $p < 0.01$**						
**** $p < 0.05$**						
*** $p < 0.10$**						

Table 3

Table 4 shows that our differences in results between the 201 and 411 students, and the 411 students and professionals are all non significant.

Differences in Ethical Orientation Between the Three Groups - Chow Test

	Gender as Control	Gender and AgeGroup as Control
	F	F
201 and 411	1.19	2.48
411 and Professionals	0.95	0.74

All results non-significant

Table 4

When measuring ethical intention (willingness to perform questionable acts), we found no differences in gender, and 201 students were less likely to perform questionable actions than the 411 students and professionals (seen in Table 5, Panel A). Our results also showed support for differences in age, with the younger subjects not willing to perform the action (seen in Table 5, Panel B).

We also found interesting results regarding social desirability bias. Social desirability bias is "the probability that my peers and colleagues would do the action" (Cohen et al. 2001). There was a large desirability bias ($F=4.153$ $p<.05$). Although the Cohen study found a gender bias, we found no gender bias. The professionals showed a greater gap in social desirability ($p < .10$) than either the 201 or 411 subjects. We also found a significant ($p < .05$) social desirability gap for younger subjects. This gap provides support for Hypothesis 3c; AgeGroup=0 was less likely to take questionable actions than AgeGroup=1.

Means and ANCOVAS of intention scores with Gender and AgeGroup as Covariates

Panel A – Gender as a Covariate

	201 Students		411 Students		Pro-fessionals	Sample group (main effect) F		Gender (co-variate) F
Would you perform the action?	5.43		4.28		4.75	1.6		0.6
Would you colleagues perform the action?	5.07		3.78		3.94	3.1	*	0.3
Is it ethical?	4.43		4.39		4.13	0.2		0.0

Panel B – Gender and AgeGroup as Covariates

	201 Students		411 Students		Professionals		Sample group (main effect) F		Gender (co-variate) F	Age-Group (co-variate) F	
	AgeGroup =0	AgeGroup =1	Age-Group =0	Age-Group =1	Age-Group =0	Age-Group =1					
Would you perform the action?	5.73	4.33	5.00	2.40	5.70	4.32	1.9		0.7	13.6	***
Would you colleagues perform the action?	5.18	4.67	4.08	3.00	4.20	3.82	2.5	*	0.0	1.6	
Is it ethical?	4.45	4.33	4.85	3.20	4.70	3.86	0.1		0.3	5.0	**

***** $p < 0.01$**

**** $p < 0.05$**

*** $p < 0.10$**

Table 5

Conclusion

We found limited support for Hypothesis 1. The entry-level students are using Deontology more, while the senior-level students are relying more on Justice, but there is no practical difference. Also, the entry-level students think their peers are more likely to avoid the action as compared to the senior-level students.

We found no support for Hypothesis 2. No significant differences arise between senior-level students and practicing accountants.

We found some support for Hypothesis 3. Age is significant for both the subjects' intentions to perform the action and whether they find it ethical. The younger subjects are more likely to find the action unethical and to not perform the action. We believe these results are a good example of "neuroethics" at work.

We have considered that our support for neuroethics in Hypothesis 3 may be limited because of the vignette chosen. As stated above, the younger subjects were more likely to find the action unethical and not perform the action. Did they answer this way because the action chosen was to lay of the younger employee (comparable to themselves), as opposed to the "long-time employee" who is probably older?

There also some are some other limitations to our study. All respondents were located in southwest Missouri. Because of limited resources, we used a much smaller sample size than what was used in the Cohen et al. (2001) study.

Based on our results, it appears that current ethics courses, training programs, and work experience all have little to no effect on the ethical reasoning of our subjects. Instead, there seems to be support for "neuroethics"; age is more correlated to changes in ethical reasoning. This does not mean that training or education by itself is not important, but that ethical training may need to go beyond the more rule-based focus used in most accounting curriculums.

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Appendix 1 (student survey)

An Analysis of the Impact of Education and Experience on Ethical Reasoning in the Accounting Profession by Kristen Epperson

Accounting Student Survey

Please circle one of the following phrases in each parenthesis:

1. **I am a(n) (entry level/senior level) accounting student.**

2. **Gender: (Male/Female)**

3. **Age: (22 or below 23-25 26-30 31-35 over 35)**

Please read the scenario below and rate the action taken on the ethics scale by placing an "X" in the box that most corresponds to your view of the action.

A firm has been hard hit by recessionary times and the partners realize that they must scale back. An analysis of productivity suggests that the person most likely to be terminated is a long-time employee with a history of absenteeism due to illness in the family. *Action:* Instead, the partner-in-charge lays off a younger, but very competent, recent hire.

Multidimensional ethics scale

Just	_____	Unjust
Unfair	_____	Fair
Morally right	_____	Not morally right
Not acceptable to my family	_____	Acceptable to my family
Culturally acceptable	_____	Culturally unacceptable
Traditionally unacceptable	_____	Traditionally acceptable
Not self-promoting for the actor	_____	Self-promoting for the actor
Personally satisfying for the actor	_____	Not personally satisfying for the actor
Produces the greatest utility	_____	Produces the least utility
Minimises benefits while maximises harm	_____	Maximises benefits while minimises harm
Does not violate an unwritten contract	_____	Violates an unwritten contract
Violates an unspoken promise	_____	Does not violate an unspoken promise
Shows compassion or caring	_____	Shows no compassion or caring
The probability that I would undertaketakethe same action is High	_____	Low
The probability that my peers would undertake the same action is High	_____	Low
The action described above is Ethical	_____	Unethical

Thank you very much for your participation!

Appendix 2 (professional survey)

An Analysis of the Impact of Education and Experience on Ethical Reasoning in the Accounting Profession by Kristen Epperson

Accounting Professional Survey

Please circle one of the following phrases in each parenthesis and fill in the blank:

1. **I currently work in (public/private) accounting. I have been in this field for _____ years.**

2. **Gender: (Male/Female)**

3. **Age: (22 or below 23-25 26-30 31-35 over 35)**

Please read the scenario below and rate the action taken on the ethics scale by placing an "X" in the box that most corresponds to your view of the action.

A firm has been hard hit by recessionary times and the partners realize that they must scale back. An analysis of productivity suggests that the person most likely to be terminated is a long-time employee with a history of absenteeism due to illness in the family. *Action:* Instead, the partner-in-charge lays off a younger, but very competent, recent hire.

Multidimensional ethics scale

Just	|__|__|__|__|__|__|__|__|	Unjust
Unfair	|__|__|__|__|__|__|__|__|	Fair
Morally right	|__|__|__|__|__|__|__|__|	Not morally right
Not acceptable to my family	|__|__|__|__|__|__|__|__|	Acceptable to my family
Culturally acceptable	|__|__|__|__|__|__|__|__|	Culturally unacceptable
Traditionally unacceptable	|__|__|__|__|__|__|__|__|	Traditionally acceptable
Not self-promoting for the actor	|__|__|__|__|__|__|__|__|	Self-promoting for the actor
Personally satisfying for the actor	|__|__|__|__|__|__|__|__|	Not personally satisfying for the actor
Produces the greatest utility	|__|__|__|__|__|__|__|__|	Produces the least utility
Minimises benefits while maximises harm	|__|__|__|__|__|__|__|__|	Maximises benefits while minimises harm
Does not violate an unwritten contract	|__|__|__|__|__|__|__|__|	Violates an unwritten contract
Violates an unspoken promise	|__|__|__|__|__|__|__|__|	Does not violate an unspoken promise
Shows compassion or caring	|__|__|__|__|__|__|__|__|	Shows no compassion or caring
The probability that I would undertaketakethe same action is High	|__|__|__|__|__|__|__|__|	Low
The probability that my peers would undertake the same action is High	|__|__|__|__|__|__|__|__|	Low
The action described above is Ethical	|__|__|__|__|__|__|__|__|	Unethical

Thank you very much for your participation!

Appendix 3

		Mean	Std. Dev.
Justice	Justice	4.45	1.52
	Fairness	4.94	1.66
	Morality	4.22	1.65
	Acceptability to family	4.27	1.58
Relativism	Culturally Acceptable	3.56	1.52
	Traditionally Acceptable	3.55	1.59
Egoism	Self-promotion	3.45	1.69
	Personally satisfying	4.20	1.76
Utility	Utility	5.39	1.62
	Benefits vs. Harm	4.52	1.61
Deontology	Unwritten contract	3.39	1.87
	Unspoken promise	3.64	1.85
Intentions and Overall	Same action - self	4.77	1.82
	Same action - peers	4.14	1.64
	Ethical	4.27	1.56

	Means of Factor Scores			
	Justice	**Relativism**	**Utility**	**Deontology**
Mean	4.47	3.55	4.95	3.52
Std. Dev.	1.18	1.37	1.36	1.64