A SECOND MEASUREMENT OF THE PERCEIVED "ACCEPTABILITY" OF INFORMATION ETHICAL DILEMMAS

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Two groups, separated by five years, of undergraduate students in a core Information Systems class were given a scenario-based survey to measure their ethical decision-making. The first group in 1993 differed from the 1998 group in only two of the 32 scenarios. Traditional teaching methods that simply use textbooks with more coverage of ethics and a few associated standard lectures may not significantly change students' ethical decision making. Methods and techniques beyond most business professors' training may be required to impact their students' ethical behavior.

Taylor and Benham, 1993, reported the impact of a nontraditional ethics lecture on their students' responses on the Dejoie, Fowler and Paradice (1991) scenario-based survey instrument. That controlled experiment demonstrated that a new approach to presenting general ethical analyses had a favorable impact on students' responses to question dealing exclusively with information systems and their associated technology.

The novel approach to teaching the ethical decision making process reported by Taylor and Benham, 1993, was not incorporated into the semester to semester teaching of the College's Information Systems class because of the logistics of multiple professors teaching the class and the desire for a common syllabus. In fact, the unique ethics lecture was used only in a few Introduction to Management courses taught by one of the authors. This Introduction to Management class is a prerequisite to the Information Systems class, however.

Many authors have provided research and opinions about the teaching of ethics in Information Systems classes (Mason, 1986; Rifkin, 1991; Parker, Swope and Baker, 1990; Mowshoitz, 1981; Cougar, 1984; Cohen and Gotlieb, 1989; Paradice, 1990; Abratt, 1992, and Morris, Jones and Rubinsztein, 1993; Baxter and Rarick, 1987, and Kohlberg, 1972). But there is no generally agreed upon technique, procedure or content to effectively teach ethics in information systems courses. The students used in this study were exposed to standard ethics chapters in mainstream textbooks and listened to traditional lectures corresponding to the text's material.

After five years, it was of interest to see if the College's students had changed their ethical standards in regard to information systems dilemmas. There was baseline data from 1993. The same survey was administered to 129 students in 1998 to measure the change, if any, of the response patterns from the 1993 "control" group.

METHODS

Respondents

There were two groups in this experiment. The first was 42 students enrolled in the College's core (required) Information Systems class during the fall 1993 semester. The second group was 129 students enrolled in the spring 1998 College's core Information Systems class and in a senior level Information Systems elective class. The null hypothesis tested was that there was no difference between the two group's measured "ethical" behaviors.

Measurements

An identical scenario-based survey instrument was administered to both groups. Scenario-based survey instrument/questionnaire for assessing ethical attitudes in information systems can be traced to Parker. The questionnaire used was developed directly from Paradice. It reproduces in its entirety the twelve scenarios and nineteen hypothetical situations used by Paradice. Respondents are asked to classify the actor's behavior as Acceptable, Questionable, or Unacceptable. Eight additional scenarios presenting twelve additional hypothetical situations have been added and used by Morris, Jones and Rubinsztein (1993) among others. The full 20 scenarios with 31 hypothetical situations can be found in Dejoie, Fowler and Paradice (1991).

Although there are not "right" or "wrong" responses to the situations presented in this instrument, most of the behaviors described, with the one noted exception discussed below, would probably be judged as unacceptable by information systems professionals. Thus, it was assumed that students who chose "unacceptable" more frequently than "acceptable" or "questionable" were considered to have more mature and professionally acceptable ethical standards.

Experimental Treatment

The "treatment" in this experiment is technically and simply the passage of time. Students' ethical standards were measured in 1993 and a different group of students in the same classes were measured again in 1998. It can be argued that many variables have changed over the five years. Textbooks have changed with many providing a more broad coverage of information-systems ethics. The textbooks were different for the two groups. However, the professors' lectures, in-class exercises and homework assignments were not substantially different for the two groups, but did include some additional time discussing ethics in a traditional manner. The news media has chosen to expand coverage of ethical issues, including those associated with technology and its use. Thus it was of interest to see if students' perceptions changed over the five years.

RESULTS

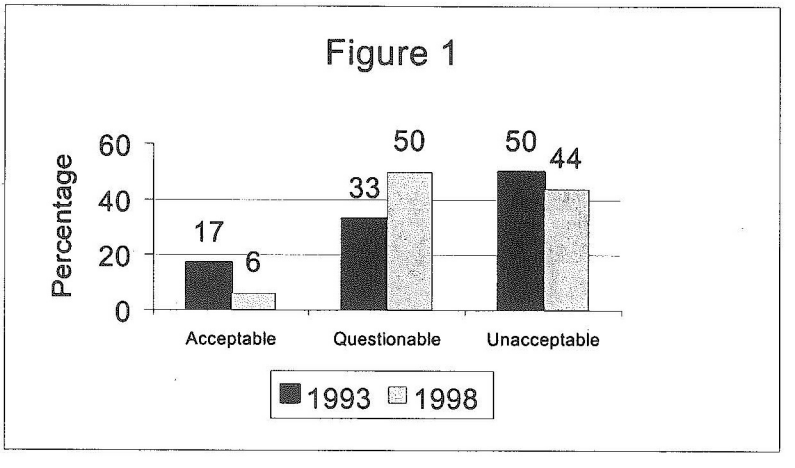
The Dejoie, Fowler and Paradice (1991) information systems ethical scenarios were administered to the two groups of students. The first group completed the survey in the spring of 1993 and the second group took it during the spring of 1998.

Respondents indicated whether they viewed the behavior described in the scenarios as "Acceptable", Questionable" or "Unacceptable." Out of the thirty-one behavioral judgments made concerning the twenty scenarios, the two groups' responses were significantly different from each other at the 5% level on only two items.

Although the Chi-Squared test's alternative hypothesis is only that the response patterns were different, inspection of the response patterns indicates that the 1998 group was more likely to judge a behavior as "unacceptable" than the 1993 group on the first item that reached statistical significance. Specifically, this scenario:

> A scientist developed a theory that required construction of a computer model to prove. He hired a computer programmer to build the model, and the theory was shown to be correct. The scientist won several awards for the development of the theory, but he never acknowledged the contribution of the computer programmer.
>
> Was the scientist's failure to acknowledge the computer programmer's contribution?
>
> ☐ Acceptable ☐ Questionable ☐ Unacceptable

The responses of both groups are displayed in Figure 1, which indicates that the 1998 group was less tolerant of the scenario's described behavior. They thought that it was unethical to not give the programmer more acknowledgements.



The second analysis that produced statistically different response patterns was the following scenario:

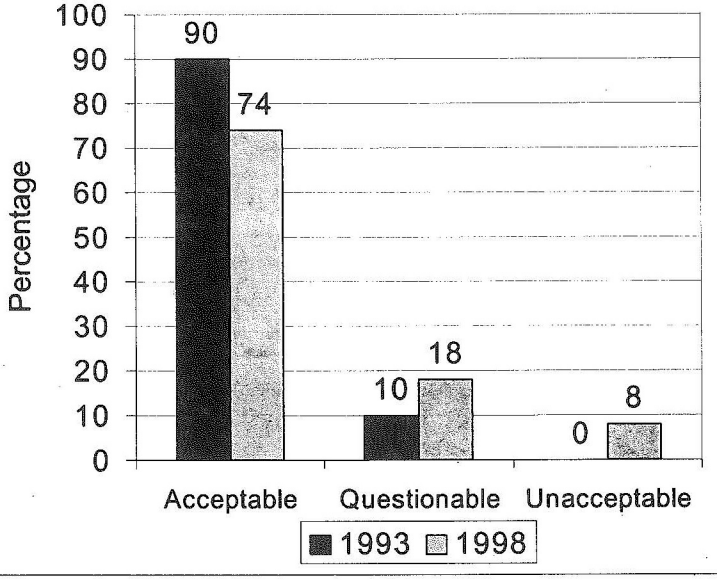
> An engineer needed a program to perform a series of complicated calculations. She found a computer programmer capable of writing the program, but would only hire the programmer if he agreed to share liability that might result from an error in her calculations. The programmer said he would be willing to assume any liability due to a malfunction of the program, but was unwilling to share any liability due to an error in the engineer's calculations.

Was the programmer's position in the situation?

☐ Acceptable ☐ Questionable ☐ Unacceptable

In 1993, 90% of the students thought the programmer's position as Acceptable, while only 74% of the 1998 thought the same. This is the only question on the survey where an "Acceptable" choice is more ethical. Figure 2 presents the responses generated by this scenario with regard to the programmer.

Figure 2



It can be argued that the two questions that produced significantly different response patterns showed conflicting results. One response pattern showed that the 1998 groups was more ethical in regard to giving people credit for their work, whereas the other result showed that the 1998 group is less ethically critical of the programmer's position by not supporting it with vigor.

As reported earlier, the major finding of this study was that there were no significant differences between the two groups on 30 of 32 question about ethical decisions based on information systems scenarios. The 1998 group's ethical standards were virtually identical to the students tested five years earlier.

Since the two groups did not respond differently on nearly 94% of the questions, it was of interest to see where the students were on a relative scale measuring the ethical decision-making based on the information-system scenarios. Excluding the question on the programmer discussed above which ethical should be answered as "Acceptable", all the

answers to all the questions were combined to determine the relative proportions of those chooses "acceptable" versus "questionable" versus "unacceptable." Again, it was argued that most information-systems professionals would mark the questions "unacceptable".

The students picked "unacceptable" 52.1% of the time, "questionable" 35.3% of the time and "acceptable" 12.6%. They have ethical standards, but these standards allow of some latitude as to what is ethical behavior. They do not have an ethical decision making process that produces clear "black and white" responses to admittedly tough ethical decisions.

DISCUSSION

There is now no debate as to whether ethics should be taught in business classes. All agree that they should be a mandatory topic in most syllabi. All of the widely used textbooks in introduction to management and introduction to information systems include either chapters or extensive coverage of ethics throughout the book. Most professors teaching these courses also have lectures, in-class exercises and homework assignments with ethical components.

The results of this study suggest that only changing the text book and the course material directly associated with the book may not produce the desired improvement in students' ethical decision making process. If professors want to positively impact students' ethical standards, they may have to dramatically change the way ethics are traditionally taught in business schools. Simply choosing a textbook that provides more coverage of ethical issues may not be enough. Professors should experiment with various techniques and test their effectiveness.

Taylor and Benham (1993) reported that a non-traditional lecture based on non-business sources was effective in changing students' ethical responses. However, the material used to develop that lecture was not part of most professor's training and it would be very difficult to have professors not familiar with the theory and training involved to comfortably include it in their classes. But it opens an interesting debate about professors' ability to change student ethical standards. Traditional graduate education may not prepare business professors to effectively facilitate ethical change. To be able to modify student perceptions about acceptable versus unacceptable behavior may be beyond traditional teaching methods and material. Simply adding the topic to a textbook and modifying lectures and student work to closely correspond to the new material may not be sufficient to actually change student ethical standards.

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