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INTRODUCING ETHICAL DILEMMAS INTO COMPUTER-BASED SIMULATION EXERCISES TO TEACH BUSINESS ETHICS

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ABSTRACT

This paper discusses how to introduce ethical dilemmas into computer-based business simulation exercises to teach business ethics. Simulations have an inherent advantage over other pedagogies for teaching ethics because simulations provide students with both an intellectual and a behavioral exposure to the topic. Issues addressed include considerations before writing ethical dilemmas, the writing of ethical dilemmas, and process issues for introducing ethical dilemmas. An example is developed and discussed. Through the process described, instructors can better prepare students for a lifetime of tough business decisions.

INTRODUCTION

Managers frequently confront tough business decisions that involve ethical issues. Sometimes the ethical choice is also the profit maximizing choice. But some of the toughest decisions involve situations where the manager has to choose between profit maximization or ethical conduct. The challenge that business instructors face is to prepare students for this challenging reality. While there are many ways to do this, this paper discusses introducing ethical dilemmas into computer-based business simulation exercises.

In particular, this paper discusses the need to teach business ethics, whether ethics can be taught, why simulations should be used to teach business ethics, issues that need to be considered before writing ethical dilemmas, the construction of ethical dilemmas, and processes issues involved in the introduction of ethical dilemmas into the simulation exercise. An example of an ethical dilemma for use in a computer-based business simulation is also provided.

WHY TRY TO TEACH ETHICS?

The ethical practices of people in business is a subject of considerable concern (Bird & Waters, 1989; Hanson, 1985). This attention to business ethics is not an entirely new phenomena. Four decades ago, for example, Peter Drucker wrote "But what is most important is that management realize that it must consider the impact of every business policy and business action upon society. It has to consider whether the action is likely to promote the public good, to advance the basic beliefs of our society, to contribute to its stability, strength, and harmony" (1954: 388). If businesses are to implement Drucker's suggestion, then they will need to pay greater attention to dealing with ethical issues. Indeed, Thompson and Strickland argue that 'A strong corporate culture founded on ethical principles and sound values is a vital driving force behind continued strategic success' (1995: 299).

The problem for organizations is to develop this ethical corporate culture. Accomplishing this goal is complicated by the fact that, as Piper suggests, there is a societal cynicism about our political and economic systems and, more specifically, about business" (1993: 2). For example, a 1988 Gallup survey of the U. S. public's confidence in institutions found that big business ranked last in a list of ten institutions (Piper, 1993).

Some of the public's lack of confidence in business may be due to scandals that have raised questions about greed and self-interest versus integrity and ethics (Marcus, 1993). Even Milton Friedman, who argues that it is the responsibility of management "to conduct the business in accordance with [the desires of the owners of the business], which generally will be to make as much money as possible," adds that this is to be done while conforming to the basic rules of society, both those embodied in law and those embodied in ethical custom (1993: 56). Indeed, when Adam Smith asked rhetorically why humans behave in generous and noble ways, he answered that it is due to "reason, principle, conscience, the inhabitant of the breast, the man within, the quiet judge and arbiter of our conduct" - these are ethical principles (Smith, 1790, quoted in Bear & Maldonado-Bear, 1994: 28). -Thus, we argue that ethical principles have a legitimate place in the analysis of business situations.

CAN BUSINESS ETHICS BE TAUGHT?

If one grants that business ethics is important, the logical next question is whether ethics can be taught. We argue on both conceptual and empirical grounds that business ethics can be taught.

In conceptual terms, there is no basis to believe that ethics is any different from any other subject. That is, just as people are not born with a native understanding of economic principles or legal principles or marketing principles or financial management principles, so too there is no conceptual reason to believe that people are born with a native understanding of ethical principles - the principles must be learned. Educators can play an active role in this developmental process, just as they do with other disciplines.

In empirical terms, researchers have examined the hypothesis that ethics can be taught. In a review of the psychological literature, Rest (1988) reached five major conclusions:

1. Dramatic and extensive changes occur in young adulthood (the 20s and 30s) in the basic problem solving strategies used by the person in dealing with ethical issues.
2. These changes are linked to fundamental' reconceptualizations in how the person understands society and his/her stake in

Developments In Business Simulation & Experiential Exercises, Volume 23, 1996

- society.
3. Formal education (years in college/professional school) is a powerful and consistent correlate to this change.
 4. Deliberate educational attempts (formal curriculum) to influence awareness of moral problems and to influence the reasoning/judgment process can be demonstrated to be effective.
 5. Studies link moral perception and moral judgment with actual, real life behavior.

Parks concluded that the available research “strongly suggests that moral development can continue into adulthood, and that particularly dramatic changes can occur in young adulthood in the context of professional school education” (1993: 13).

WHY USE SIMULATIONS FOR TEACHING BUSINESS ETHICS?

The range of pedagogies that can be used to teach business ethics are no less diverse than those available for instruction in other business topics. Lectures, case studies, critical incidents, and rote-plays, along with simulations, are all viable methods for informing students about the issues and principles surrounding business ethics. As has been discussed elsewhere, each of these pedagogies has its own inherent strengths and weaknesses (see, for example, Anderson & Lawton, 1991a, 1992a, 1992b; Anderson & Woodhouse, 1982; Gosenpud & Washbush, 1994; Greenlaw & Wyman, 1973; Keys, 1976; Trapp, Peel, & Ward, 1995; Wolfe, 1981, 1985, 1990; Wolfe & Chanin, 1993).

Much of the early ABSEL research focused on comparing the advantages and disadvantages of the business simulation relative to other pedagogies (see, for example, Anderson & Lawton, 1991 b; Anderson & Woodhouse, 1982; Greenlaw & Wyman, 1973; Miles, Biggs, & Schubert, 1986). More recently, research on the simulation method has focused on its ability to affect learning at the higher levels of Bloom’s Taxonomy (Bloom, Englehart, Furst, Hill, & Krathwohl, 1959; see, for example, Anderson & Lawton, 1995; Washbush & Gosenpud, 1995) and to motivate student learning through the development of persona’ relevance (Burns, Gentry, & Wolfe, 1990).

But can the advantages found in the simulation method be applied specifically to the teaching of business ethics? ABSEL researchers have frequently advocated experiential’ exercises and simulation games to teach business ethics (Chiesl, 1994; Fritzsche & Rosenberg, 1989; Jennings, Hunt, & Cretien, 1992; Maddox, Armstrong, & Wheatley, 1991; Ricci & Markulis, 1992; Smith, 1979; Ullmann & Brink, 1992). The simulation method has a number of features that can provide it with unique advantages over other pedagogies for the teaching of business ethics.

As has been demonstrated, the simulation method can enhance student motivation by involving them psychologically and emotionally, rather than only intellectually, in the situation and by connecting them with the consequences for the actions they take (Burns, Gentry, &

Wolfe, 1990; Schumann, Scott, & Anderson, 1994). This connection of consequences and actions allows the student to witness the distinction between intention and behavior when an individual has a personal stake in the outcome of a decision. None of the other pedagogies provide this insight and experience. While a student can pretend to be part of the situation presented in a case study, critical incident, or role-play, he or she will not have to live with the consequences of any decision made in conjunction with these pedagogies (Ullmann & Brink, 1992). Therefore, using a simulation to teach ethics addresses Ullmann and Brink’s (1992) concerns regarding detachment - it moves the students from a purely intellectual exposure to the topic of ethics, to include a behavioral exposure as well. With the simulation as the platform, the students can be safely exposed to an ethical dilemma where they have to both make a choice of action and live with the consequences of that choice.

The student having a personal stake in the outcome and having to manage the consequence of the personal actions taken (i.e., personal behavior versus statements of intentions) sets the simulation method apart from all other pedagogies. This is particularly true when student performance in the simulation affects the student’s grade in the course. Therefore, simulation exercises have an inherent advantage over other pedagogies for teaching ethics.

However, most business simulations are designed to focus on marketing, finance, and operations management decisions without explicitly incorporating ethical issues. To use business simulations to teach ethics thus requires the instructor to write a case problem that makes use of the simulation as the vehicle to present students with an ethical dilemma. However, before undertaking the construction of ethical’ dilemmas, an instructor should consider certain issues.

CONSIDERATIONS BEFORE WRITING ETHICAL DILEMMAS

There are four issues that an instructor should consider before constructing ethical dilemmas for use in a computer-based business simulation. These issues are instructor readiness, student readiness, the ethical principles that are to be taught, and the flexibility of the simulation model that is to be used.

Instructor Readiness

The instructor must be ready in at least three ways to use a computer-based business simulation to teach ethics. First, the instructor must be willing to undertake the learning curve associated with becoming familiar with a computer-based simulation model. For current simulation users this is not a concern because they already know the simulation they use. Second, the instructor must be comfortable with discussing ethical principles and their application to business dilemmas. Although familiarity with ethical principles would enrich the discussion, it is not necessary for the instructor to be an expert in ethical principle’s to be effective in

Developments In Business Simulation & Experiential Exercises, Volume 23, 1996

leading discussions involving ethics. Third, and perhaps most challenging for some instructors, they must be willing to release some of the control they would have in the classroom using more traditional pedagogies. Students will undoubtedly challenge various elements of the dilemma they are forced to confront, whether it be the circumstances presented or the options offered. Instructors unwilling to accept these challenges should stay with safer pedagogies such as the lecture.

Student Readiness

The instructor needs to write an ethical dilemma that students are ready to confront. This has implications for both the construction of the dilemma and the process issue (discussed later) regarding when to introduce the dilemma. The instructor should consider three aspects of student readiness before constructing ethical dilemmas for use in the simulation.

First, the instructor needs to consider the level of understanding of the simulation that students will have at the time the ethical dilemma is introduced. Students should have a basic understanding of the mechanics and decisions of the simulation before the instructor introduces additional confusion and frustration in the form of an ethical dilemma into the students' management of the exercise. Introducing the problems of an ethical dilemma too soon can lead to students "throwing numbers" at the decision because the demands became too great and they gave up trying to comprehend the situation.

Second, the instructor needs to tailor the ethical dilemma to the students' stage of moral development and understanding of ethical principles. Instructors should not expect their students to recognize the more subtle ethics of some situations prior to having experiences at managing more obvious ethical challenges.

Third, the instructor needs to consider the level of team development existing at the time of the dilemmas introduction, and construct dilemmas that encourage the students to further their team's development. Highly emotionally charged dilemmas should not be introduced before the team has had the opportunity to learn how to manage the conflicts 'likely to be elicited.

Ethical' Principles to be Taught

The instructor must decide which ethical principles are to be taught before writing the ethical dilemmas. The use of ethical principles in the construction of the dilemmas helps ensure that the dilemma in fact raises ethical issues, gives the students practice in applying the principles to identify and analyze ethical dilemmas, and provides the instructor a discussion vehicle for debriefing students on the dilemmas. There are three common ethical principles that can be used to help construct ethical dilemmas: utilitarianism, rights, and justice. A brief description of these principles follows (for a more detailed discussion, see, for example, Velasquez, 1992).

The utilitarian principle focuses on whether the ends (results) of the action are morally justifiable. This principle says that the morally correct action is the one that maximizes net social benefits, where net social benefits are social benefits minus social costs. The social benefits and costs consider all benefits and costs borne by anyone affected by the decision at any point in time; they are not limited to the costs and benefits borne only by the decision-maker.

The rights principle focuses on whether the means to the ends are morally justifiable. This principle says that the morally correct action is the one that the person has a moral right to take, that does not infringe on the moral rights of others, and that furthers the moral rights of others. Three considerations can be used to determine whether a person has a moral right to do something. First, the person would be willing to have the action in question done to himself or herself (reversibility). Second, it is possible to conceive of everyone performing the action in question (universalizability). Third, the action treats people with respect, which means treating them in a manner in which they have freely consented to be treated, and not merely as a means to one's ends. When rights conflict, it is necessary to examine the interests protected by the conflicting rights, decide which interest is more important, and give precedence to the right that protects the more important interest.

The justice ethical principle says that the morally correct action is the one that produces a fair distribution of benefits and burdens. A fair distribution is one in which similar people are treated similarly. However, people frequently disagree on the bases for deciding whether people are in fact similar. Egalitarians hold that people are similar in all relevant respects so that the only fair thing to do is to treat everyone exactly the same. Capitalists hold that a person's contributions are what's relevant in deciding whether people are similar - it is fair that people who make a larger contribution to some success should get a larger share of the benefits that result from the success, and that people who make a larger contribution to a problem should shoulder a larger contribution to solving the problem. Socialists hold that abilities and needs are what's relevant in deciding whether people are similar - it is fair that people with greater needs should get a larger share of the benefits and people with greater abilities should shoulder more of the burdens. Libertarians hold that only a person's free choices are relevant - what is fair is whatever results from the free choices of the people involved.

Simulation Model Flexibility

In order to use ethical dilemmas effectively with a simulation exercise, the simulation needs to allow the instructor to manipulate the variables that are part of the ethical dilemma. For example, if the dilemma centers around paying a safety inspector a bribe to ignore safety requirements that would hamper worker productivity, then the simulation must allow the instructor to manipulate the worker productivity and the cash payments of each individual company.

Developments In Business Simulation & Experiential Exercises, Volume 23, 1996

Thus, before the instructor begins writing an ethical dilemma for use in a simulation, the instructor needs to examine the simulation model to see which variables can be manipulated. The more simulation model flexibility available to the instructor, the wider the range of ethical dilemmas that can be constructed. Also, the more flexibility the model has, the more responsive the instructor can be to creative options developed by the students that were not part of the original options in the dilemma.

The following simulation features provide the instructor with flexibility in the design of ethical dilemmas:

- A. Flexibility to Directly Change Individual Company Costs
 1. Material Costs
 2. Material Availability
 3. Labor Costs
 - a. Wage rates
 - b. Overhead
 4. Labor Productivity
 5. Labor Availability
 6. Marketing Costs
- B. Flexibility to Directly Change Individual Company Demand: Increase or Decrease Unit Sales
- C. Flexibility to Directly Change Individual Company Finances
 1. Cash Inflows and Outflows (refunds and fines)
 2. Access to Financing
- D. Flexibility to Directly Change the Probabilities of Various Events
 1. Worker turnover
 2. Lost shipments

THE CONSTRUCTION OF ETHICAL DILEMMAS

Once the instructor has thought over the four issues that should be considered before writing ethical dilemmas discussed previously, the instructor is ready to write the dilemma.

Sources of Ideas

There are any number of sources that can be used for ideas in the construction of ethical dilemmas. These would include major news events or items in local and national media or business publications. Instructors can take the idea stimulated by one of the above sources and change the details to fit the simulation and the instructor's purposes.

Elements

Instructors constructing ethical dilemmas for use in simulation exercises should ensure that these dilemmas contain the following elements:

1. *Clear violation of an ethical principle.* It is essential that the action taken or rejected can be tied to one or more of the ethical principles used in the teaching of business ethics (as previously discussed).
2. *No easy answer.* The students must be faced with a true dilemma, one where there is no easy, automatic answer available. The response options offered by the dilemma

could simply present students with two options (e.g., higher profits or ethical conduct). Alternatively, as the students develop their ethical analysis skills, the options could present a wider array of choices among shades of gray.

3. *Magnitude of Consequences.* The potential loss or gain as a consequence of the action taken must have significant impact on a company's performance results. This forces the students to resolve not only their desire to look good to the instructor, but also their competitive instinct to beat the competition. This also means that if the instructor includes negative consequences for unethical decisions as part of the dilemma, those consequences should not be so large that ethical behavior becomes the rational choice from a purely self-interested point of view. That is, if there is no perceived potential pain in taking the ethically correct decision, there has been no true test of the student's moral principles, which reduces the value of the exercise in terms of teaching students how to make tough choices involving ethics.
4. *Timing.* How early or late the students will be presented with the dilemma should also be factored into the design of the dilemma. The later a dilemma is introduced, the more severe should be the consequences of the decision taken. If the consequences are minimal, the students can correctly reason that the impact of the action they take is too small to have any influence on the choice they make. Generally, it is advisable to introduce the ethical dilemma early enough in the simulation exercise so that the payoff or handicap (i.e., the consequence of the action taken) has to be lived with (i.e., managed) by the students over a number of subsequent simulation decision rounds. This forces the students to feel the consequences of their action over time, rather than in just one painful "hit." If faced with a decision that will jeopardize their competitive position, the student's willingness to stand by his or her moral beliefs is truly tested, enhancing the value of the exercise.

PROCESS ISSUES FOR INTRODUCING ETHICAL DILEMMAS

Regardless of how well a dilemma is constructed, the instructor's learning objectives may still not be achieved if the dilemma is poorly introduced into the simulation exercise. There are three general process issues that an instructor must consider.

Approaches to Introducing Ethics

There are two different approaches that can be used to teach ethics by using a business simulation. First, the instructor can make a formal presentation of ethical principles before the ethical dilemma is presented. With this approach, students are more likely to see the dilemma as involving the ethical principles, and so they are more likely to use those principles in analyzing the dilemma.

Alternatively, the instructor can present the ethical

Developments In Business Simulation & Experiential Exercises, Volume 23, 1996

dilemmas without a formal presentation of ethics and without calling attention to the fact that the dilemma raises ethical issues. With this approach, students may not necessarily realize that the dilemma raises ethical issues and, even if they do, may struggle to reach a decision. In some cases, this may be a positive experience. As identified by Chiesl (1994), identifying issues as ethical in nature can lead students to give ethical responses they otherwise would not offer, or perhaps even consider.

Timing of the Debriefing

The instructor needs to determine when the debriefing discussions would be most valuable to student learning. The instructor can lead discussions immediately following the dilemma decision or make it a part of an end-of-term wrap-up discussion of the simulation experience. On the one hand, if the discussion is held immediately following the dilemma decision, students may be less open about their actions and may engage in gaming behavior during the discussion in an attempt to “psych out” their competitors. On the other hand, if the discussion is held at an end-of-term wrap-up session, there is the risk that the ethical dilemma learning points may get lost among the discussion of the other important issues students confronted in the simulation exercise. Learning to manage the trade-offs associated with the timing of the discussion is part of the art of teaching that only comes with experience.

Instructor Behavior

The instructor needs to recognize the importance of his or her behavior. First, it is critical that the instructor behaves ethically when using the simulation to teach ethics. Instructors should treat students with the same respect the instructor would want if roles were reversed and the instructor was playing the game.

Second, it is important that the instructor does not embarrass students or react judgmentally to the decisions students make regarding an ethical dilemma. The students are learning something about themselves while they play the simulation: an awareness of their values, how their values affect their choices, and the consequences of their choices. They are learning that it may be difficult to translate ethical intentions into ethical behavior when faced with realistic pressures. If the instructor becomes judgmental and calls public attention to the unethical acts of specific students, it could have the adverse effect of leading students to focus more on face-saving than learning. Therefore, during debriefing sessions, attention should be focused on the issues and not on any individual student. Attention can also be directed to the lesson of the difficulty of translating ethical intentions into ethical behavior when faced with the pressures of business.

Third, the instructor should be fair in the application of the consequences of students’ decisions. The instructor should plan during the development of the dilemmas what consequences will follow from the various decisions that

students may make. The instructor should decide in advance whether the consequences will be applied with certainty, or whether the consequences will be determined by some random process. If a random process is used, the instructor should decide in advance how the process will be implemented and to what extent the process and the probabilities will be communicated to students. Regardless of the instructor’s decisions on these issues. The students should be given complete assurance that the consequences are being determined honestly and fairly, and that the instructor is not “picking on” students who have selected some specific course of action. This issue is especially important if the consequences are being determined by the instructor “off the game” rather than by the simulation model. If the instructor does not follow this advice, then students will spend their time trying to determine what the instructor expects for a decision rather than analyzing the simulated situation. That is, the students end up gaming the instructor rather than managing the game.

Fourth, the instructor should see himself or herself more as a coach than a teacher. There is value in allowing students to struggle a bit to find their answers to the dilemmas. At the same time, the instructor as coach should be sensitive to not allowing students to become so frustrated that learning is threatened. Sometimes the instructor as coach may wish to provide targeted suggestions to help students get back on track. Sometimes it is the questions that the instructor asks, rather than the answers the instructor provides, that yield the greatest insights by students. Furthermore, the instructor needs to be prepared for students coming by individually or in teams to discuss the dilemma, its consequences, and their anxieties regarding the implications of the issue they need to resolve.

Finally, the instructor should be willing to experiment. Unforeseen problems should not be entirely a surprise when trying new things. There will be the opportunity to make improvements for the next time. The instructor can try to improve the dilemma itself by changing the timing of the dilemma, the payoffs associate with the various decision options, or the wording of the dilemma. The instructor can also try to improve his or her management of the dilemma process. This would include how the topic of ethical dilemmas in management is presented to the class and the debriefing discussions that follow the students’ decisions. Taken together, this means the instructor must be willing to engage in a process of self-examination and continuous improvement.

AN EXAMPLE

Consider the following dilemma:

The safety inspector has found several safety violations in your manufacturing plant. Correcting these violations will cost \$60,000. The inspector has offered to ignore the violations in return for a secret payment of \$10,000. The workers will never be told about the safety violations and the inspector will file a report stating that the plant passes all the safety

Developments In Business Simulation & Experiential Exercises, Volume 23, 1996

regulations.

This dilemma provides a simple illustration of our pedagogical method. In terms of the simulation model, this example only requires that the simulation allows the instructor to charge each company either \$10,000 or \$60,000.

In terms of student readiness, this dilemma does not raise excessively complex ethical issues while still providing a difficult choice and the opportunity for an interesting discussion both within the company team and in the debriefing session. Instructors could complicate the analysis by incorporating additional issues such as the effects of correcting the safety violations on worker productivity and the risk of worker injuries if the safety violations are left uncorrected. The company team discussion can expose differences within the teams. The resulting debate can drive the team to improve its communication, problem solving, and teamwork skills.

In terms of the ethical principles, the dilemma illustrates all three principles. First, the bribe is unethical on utilitarian grounds because by paying the bribe one is circumventing regulations that maximize net social benefits provided they are designed to do so. Second, one does not have a moral right to pay a bribe to get an inspector to ignore violations because much behavior cannot be universalized and because to pay bribes to get people to violate their duty treats people merely as means to ends. Finally, the bribe is not fair on libertarian grounds, for example, because the workers have not freely chosen to work with safety violations of which they do not know.

Finally, in terms of the elements for constructing ethical dilemmas, the example dilemma provides a clear violation of the ethical principles, no easy answer, and, depending on the timing of its introduction, significant consequences. If this dilemma was introduced five quarters from the end of the simulation exercise and quarterly profits for the industry ranged from \$10,000 to \$20,000, the student would be faced with either paying the bribe or having all the remaining profits the company might generate lost to correcting the safety violations.

Since the dilemma does not specify consequences, the instructor would need to determine what consequences to impose, if any, and the method to impose them. For example, the instructor who wants to include consequences might at a later point in the exercise have a second inspection occur in which, on a random basis, some of the companies who paid the bribe get caught and are required to correct the safety violations and pay a fine. The instructor would need to determine the probability of getting caught and the size of the fine. These amounts would need to be carefully determined so as to keep paying the bribe the rational choice from a purely self-interested position. For example, the instructor could specify that "Each quarter there is a 5% random probability of a new safety inspection with a different inspector: companies that are caught will be required to correct the safety violations and pay a \$1,000 fine."

CONCLUSIONS

Ethics has both intellectual' and emotional components. Frank (1988), for example, has talked about the importance of the strategic role of one's emotions. That is, morality involves facts, moral principles, and emotions. The emotional consequences of one's decisions can have long-lasting effects.

Most participants take the experience of a computer-based business simulation very seriously. As a result, team members can ride an emotional' roller coaster when they rise to first place or fall to last place as they live with the consequences of their decisions. They can also ride an emotional roller coaster as they grapple with the ethical dilemmas. This emotional roller coaster can provide students with valuable lessons they will long remember.

Those students who work the numbers and have a well-integrated strategy usually do better in the exercise than those students who gamble and make decisions purely on gut-instincts. As instructors, however, we know that managers do more than just "crunch the numbers." Managers make decisions that have consequences for both profits and ethics. The discussions and arguments among students about the ethical decisions often continue long after they make their other decisions. They learn that their decisions have consequences, including consequences that raise questions of ethics. Students learn that their teammates and competitors can and do make unethical choices. We have shown in this paper how an instructor can use a business simulation to prepare students for this tough reality. Through this process, instructors can better prepare students for a lifetime of tough business decisions.

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Developments In Business Simulation & Experiential Exercises, Volume 23, 1996

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