

Developments In Business Simulation & Experiential Exercises, Volume 19, 1992

USE OF SIMULATION FOR ETHICS EDUCATION IN MANAGEMENT

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ABSTRACT

The experiences gained with the G*A*M*E in integrating ethical aspects into a management simulation are summarized. It is argued that simulations offer significant advantages relative to cases in business ethics instruction.

INTRODUCTION

The G*A*M*E has been used for the last 16 years as the culminating capstone experience of the graduate program. It is a comprehensive total enterprise simulation due to two crucial aspects: On the one hand it requires the Strategic integration of several managerial functions for organizational performance since it provides a large number of decision variables pertaining to marketing, production, human resources, and finance (Keys, 1987). On the other hand it is labeled comprehensive because, contrary to many other simulations which are used as a component in the business policy course, the G*A*M*E is offered as a stand-alone, semester-long intensive experience equivalent to 1.5 courses and encompasses 24 decisions for 2 years playing time. It is played during the last semester of the MBA curriculum following the business policy course, which is offered the semester before. This weighing is justified by the workload and the fact that the computer simulation forms the core of the course around which are grouped a variety of behavioral incidents and exercises, many of which require additional instruction and considerable research and preparation by the teams.

BASIC CONFIGURATION OF THE G*A*M*E

The G*A*M*E is based on the Carnegie Tech Management Game (Cohen, Dill, Kuehn, & Winters, 1964; Uretzky, 1973; Wheatley, Roberts, & Einbecker, 1990) which is considered to be one of the most complex simulations available. Over the years, it has been significantly upgraded to integrate the changing technology (e.g. PC-based software, electronic mail) and to reflect changing educational needs, for instance familiarity with decision support systems (Jauch, Snodgrass, & Szewczak, 1989), international business, and business ethics. The G*A*M*E is played in two parallel industries of up to 6 teams each, a team consisting of 6-9 players. While the two industries do not compete with each other directly, agreements between companies belonging to different industries are permitted.

A distinctive characteristic of most versions of simulations based on the Carnegie Tech Management Game is their integration of a variety of experiential exercises related to but not programmed into the simulation itself, for instance: labor negotiations, securing loans from a bank, licensing warehouse space, establishing joint ventures with another company in the G*A*M*E, mergers and acquisitions, performance evaluations of company officers. Each G*A*M*E company has a board of directors comprised of executives from local businesses, professions, and nonprofit organizations. These exercises expose students to situations where they are forced to apply concepts, methods and techniques acquired in a variety of courses including some which might not be covered in the standard MBA curriculum (McCormack, 1984). These activities accentuate the need to work as a team, which is reinforced by seminars on dealing with conflicts and working in assigned teams. A second important aspect of these exercises is that students interact with professionals (bankers, lawyers, business executives, etc.) who are able to provide a different perspective, whose expectations and demands may exceed those of faculty and who frequently have more credibility than faculty. A third point worth mentioning is that these exercises drill communication and negotiation skills, which in recent years

have gained in importance as critical tools for MBAs. These ancillary tasks thus represent valuable and realistic extensions of the course work and provide a true capstone experience.

ETHICS IN THE MBA CURRICULUM

Ethical issues continue to gain in importance in the business community. Evidence of the growing sensitivity to moral issues are reports published by the Conference Board (Berenbeim, 1987) and the Business Roundtable (Business Roundtable, 1988) both of which documented the practices of a number of large corporations. A further indicator of the importance attributed to ethical issues in business is the attention cases of unethical practices have received in the press.

Parallel to the increasing awareness of ethical aspects of managerial practice, these issues have also received more attention in higher education. Best known in this respect are the report published by The Wharton School (Wharton School, 1986) and the multi-million dollar project at the Harvard University. Furthermore, the academy of Management has issued recommendations concerning the role and place of business ethics in the undergraduate and graduate curricula. The American Assembly of Collegiate Schools of Business requires the core curriculum to include a background of the economic and legal environment as it pertains to profit and/or non-profit organizations, along with consideration of the social and political influences as they affect such organizations." (AACSB, 1989:34)

These declarations, recommendations and proposals by no means reflect new thinking. Indeed, already in the 1920's business ethics was viewed as an element of the management curriculum as indicated by James Melvin Lee's *Business Ethics: A Manual of Modern Morals*, published in 1926. The incorporation of ethical issues into the curriculum seems to be especially important for the capstone course. It is here, at the end of the curriculum where managerial and moral competence need to interact. An awareness of ethical dimensions in business and the ability to make an ethical decision has no value

"if it is not linked to managerial competence, the ability to create and coordinate the resources for which one is responsible, to shape the context in which managerial decisions must be made, rather than be shaped by them" (Powers & Vogel, 1980: 44).

INTEGRATING ETHICS: CASES VS. SIMULATIONS

The Wharton Report

The Wharton Report discusses three approaches toward covering ethics in the MBA curriculum: a Separate required ethics course, a separate elective in ethics, and directly integrated in other courses. The Report clearly favors the integrated approach:

"A separate course on ethics, without more, implies that ethics is exogenous to the basic business functions. Students study management, finance and marketing in several courses in the program, but only encounter ethics in a discrete, separate course. Even worse, students may encounter functional faculty who unmistakably convey the impression that ethics is irrelevant in their subject matter. Students then must resolve the conflict between the view of the "real world" oriented functional instructor and the "ethicist" (who may even lack any business credentials!) teaching the ethics course. Many students may conclude that the functional faculty member is the one who is really 'telling it like it is.'"

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"A related problem is that students may behave differently in the ethics course than in a functional course... In a sense, students wear their "ethical hats" when they take an ethics course. A student who might suggest in a law course that dangerous products be sold in Latin America to avoid domestic products liability problems would never think of making that suggestion in an ethics course, and would be castigated by peers if he or she dared to do so. Thus, the "realness" of the learning may be far greater when ethics is integrated directly into a core course, as contrasted to teaching it solely in a separate course." (Wharton, 1986: 13-14).

The Report makes a number of topical suggestions, lectures, readings, group projects and testing procedures for each functional module. The case method plays a particularly important role in integrating ethics into the courses. The reason for this is that cases do not have a clear solution, they reconstruct real-life moral business decisions, and students are forced via active participation to place themselves in the center of the moral and practical concerns the real manager is exposed to (Gragg, 1940).

Shortcomings of the Case Method

In spite of its widespread popularity, the case method does not fully overcome the drawbacks of students remaining somewhat outside the situation described in a case. They might have difficulties fully internalizing the situation, and, most importantly, they need not face the consequences of their recommendations, even when the instructor brings the class to the point where the likely implications of the recommended action plane are discussed.

It is particularly with regard to these two aspects that the simulation goes beyond the case method. Through their ongoing involvement, students are immersed in the situation to a much higher degree. There is less need to push the students to assessing the consequences of various options, they do that by themselves. Also, the likelihood that students will put on their "ethical hats" vis-a-vis the "hats of hard-nosed managers" is even smaller in a simulation than in a case.

APPROACH CHOSEN

For these reasons, our MBA curriculum uses a three-pronged approach. Based on the resolutions passed at a faculty retreat, ethical issues are integrated in lectures and readings in the business and society course; readings, discussions and cases are used in functional courses as well as the strategic management course. The G*A*M*E as the capstone experience par excellence includes an ethical issue which forces students to live through the moral and operational dilemmas, find a solution and deal with the consequences of their decisions. Integrating ethics in a business simulation was chosen over using a separate ethics simulation (e.g. Shirts, 1977) for the same reasons that a separate ethics course is rejected. In the past, issues integrated into the simulation were: unfunded pension liabilities, water pollution caused by the production of detergents, carcinogenic effects of raw materials used in the production of cereal. Below glimpses of the cancer scare are presented.

Date Collection Method

The material was collected in several ways. First of all, the electronic mail between the companies and the Game administrative Council (GAC) was available. Second, a large part of the electronic interactions between the teams was retrieved after conclusion of the simulation. Third, all public statements of the teams as well as the material prepared by the teams for the board of director meetings were available. Finally, since GAC members sit in all board meetings as silent witnesses for later debriefing and coaching, the GAC members notes of these meetings could also be used.

The Cancer Scare

Halfway through the 1990 G*A*M*E, just as students were preparing for their second annual board meeting, the following announcement reached them over e-mail:

Date: 3/22 [real time]
From: Cereal Manufacturers Association
Subject: Cancer Warning

As some of you may have heard, an article was published in the April issue of the New England Journal of Medicine claiming that raw materials B and C cause cancer when fed in large amounts to rats. As usual among academics, the two researchers from the Stanford University's medical school couched their conclusions in many caveats, but these invariably get lost when the results are publicized in the daily press.

We have issued a strong statement to the FDA regarding these results. In summary, we said that as an industry committed to the physical well being of the consumer, we are, of course, concerned about these findings. We stressed that more research is needed and that our C. Real Munch, Director of CMA's Research Laboratory, will contact Stanford University. We also pointed out that, based on the methods described in the paper, excessive amounts of the two incriminated raw materials were fed to the animals. We are allocating \$3 million from our emergency fund to counter-publicity and research.

In view of the importance of this issue, we will keep you posted on any further developments. While it is premature to speak of a crisis, we suggest that you carefully study the implications of this news for your operations.

The two raw materials selected were randomly chosen. A secretary not involved in the simulation was asked to pick two letters between A and G. As a consequence, the impact on the companies varied significantly. For some, neither of the two substances were present in products currently marketed; for others, these were major ingredients.

On 3/26 [i.e. 1 G*A*M*E month later] the Cereal Manufacturers Association announced:

We just received a paper by Mt. Sinai Hospital, submitted to the New England Journal of Medicine for publication next week. In this study, the Stanford study was confirmed with one very important difference: Intakes of components B and C caused cancer in rats at much lower dosages than in the Stanford study. Needless to say, we must be concerned.

However, there is also a positive development to report. The Yale University Center of Population studies reports of a re-analysis of data of two Indonesian tribes who have used components B and C, respectively, as part of their diets for centuries. Neither tribe shows a higher incident of cancer than tribes living in similar environments not using B or C.

Among those teams who were faced with a moral dilemma, a variety of decisions could be observed. Some examples:

CFP Company tried to play down the widely publicized Scientific results after the Yale study was out and announced that, given the latest findings, it would resume marketing their products containing B and C. There was widespread protest (from other companies) and Ralph Nader [simulated by the GAC] threatened it with a class action suit upon which CFP came out with an announcement that the first statement did "not represent CFPs policy in dealing with the cancer concern situation".

ESC Cereal Co. had an interesting experience during its board meeting. This team comprised of part-time students working in local industry had put together a detailed report of their operation in a very effective presentation. After 45 minutes of reports by 5 different company officers, the president gave an overview of the beginning of the new year for which two monthly decisions had been made. His

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presentation included the words: "There's one little twist." Directors asked about the twist and at that point, the president revealed the cancer scare in a manner that seemed designed to characterize it as minor.

Director A: "What do you plan to do?"

President: "We plan to get the industry together to plan a strategy and minimize the impact. If we see a detrimental impact, we will act-consumer trust is an important matter. We want to keep our reputation as a socially responsible company."

Director B: "I was an employee of Union Carbide at the time of the Bhopal disaster in India. I understand what it's like to get this kind of news. If we tell you not to use raw materials B and C, what will you do?"

President: "We have a small inventory. Both our products A and B include those raw materials. We'd suffer a small loss of one half to one million dollars. We have a new product coming out next month without these raw materials. We could also do cross licensing. If you decide that, we'll do it."

Director B: "You need to insure the perception of responsibility."

Board Chairman: "When will you report to us the impact of dumping the tainted products and raw materials?"

The board members were pressing the team now, having sensed that the students had not wanted to open up a potentially sore subject and now wanted to go on to other matters.

Director R: "Where would you have gone without us?"

President: "This was prepared last night. It's a very sensitive issue".

Director B: "Did you notify the chairman? Within 36 hours (real time) of the Bhopal catastrophe in India, the Union Carbide board had met and outlined a strategy for responsible action. You should have notified the chairman."

After the presentation, the students left the room and the directors evaluated them in executive session. They expressed disappointment that the team had not told the chairman about the cancer scare before the meeting, and that the subject had not been brought up till the meeting was half over. The students returned for a strong statement by the board.

Flakes 'R' Us, Inc. 's annual board meeting came one G*A*M*E month [five real days] after the cancer news. In the first few minutes of his opening summary remarks, the president said that there had been a cancer warning and then he said: "We're well covered by insurance." He then went on to mention an offer from outside the industry of a product license for a product without the incriminated materials, and told of 3 other companies dumping their finished goods containing B and C. Director A: "Do we have enough insurance?" The president assured him that the company's product liability insurance should be enough for any liability. The meeting shifted to a discussion of market preferences for products with various attributes and possible addition of a new machine to the production process.

Director D: "Did you recall any product because of the cancer scare?"

Answer: "No."

Director D: "Did the competition do the same?"

Answer: No. "Three companies dumped product."

Director D: "Even after the scare, you continued to produce?"

Production VP: "yes."

Director A: "Did you analyze the possible cost of dumping raw materials B and C vs. using them and making and selling finished goods with them?"

Production VP: "No."

Director A: "There's a moral question here. Are we doing the prudent and socially responsible thing?"

Marketing VP: "We tried to avoid panic and figured that we could wait it out."

Director C: "You should analyze the potential costs."

Director A: "Are we harming people and, therefore, ourselves?"

President: "We have nothing to replace these products with."

Director D: "Did financial aspects prevail over ethical?"

In Company S5, a student concluded based on extensive outside research that the suspected material had to be sugars and proposed replacement with other sweeteners or a research project with the objective to purify the materials. The research proved to be successful [i.e. the GAC deemed the student's effort as such] and the company was able to sell a license to a fictitious engineering company [created by the GAC for this purpose]. The latter offered to sanitize inventories of contaminated raw materials; finished goods could not be decontaminated. The sanitizing process was publicly challenged by Super Cereal, Inc.

The cancer scare ended with the following announcement:

Date: 4/2/90
Subject: Cancer Scare
From: Cereal Manufacturers Association

We have just received a paper from the Institute Pasteur in Paris, France. We are happy to report that this paper solves the problem we have been faced with. According to this most recent report, it is the combination of B and C, which causes cancer, i.e. the simultaneous presence of both substances which interact in a yet unknown way in the metabolism to cause cancer. This result explains the contradiction in the research findings published previously.

On 4/19/90, many G*A*M*E months later, the FDA published its findings which concluded that

"while some negative effects cannot conclusively be excluded given the status of knowledge at this time, it is the FDA's opinion that the maximum incidence of cancer is so small based on our calculations that the costs of prohibiting these components far outweigh the benefits. Therefore, the FDA will not take any further action at this time, except for continuous monitoring and data collection . . . The FDAs team has concluded that the [sanitizing] process indeed has a beneficial effect in the direction claimed. However, it is impossible to say whether the carcinogenic effect can be totally eliminated in this way."

CONCLUSIONS AND RECOMMENDATIONS

Based on our observations of the students' reactions to the ethical issue they were faced with, the following conclusions can be drawn:

Conclusion 1: The level of involvement is much higher in a simulation based ethical issue than in case related dilemmas.

This conclusion is based on a comparison of students' reactions to the ethical issue in the G*A*M*E compared to the level of involvement in ethical issues in cases during the prior policy course taught by the G*A*M*E Academic Director.

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Looking at the types of behaviors as a function of potential exposure to the downside risk, the following can be hypothesized:

Conclusion 2: Shirking becomes more likely the larger the potential financial loss caused by ethical behavior. We could not, however, detect a clear relationship between financial health of the company and the propensity to shirk.

This hypothesis is based on a comparison of the teams' behaviors relative to the significance of the carcinogenic substances in their products. Implied in this is the assumption that the level of individual ethicalness did not vary significantly across teams, an assumption which needs to be tested in future research.

Concerning the role of and interaction with boards we conclude:

Conclusion 3: Outside directors, perhaps because of their professional business experience, proposed altruistic reactions in the cancer scare case. Some students, even some night students with full-time jobs, considered the cancer issue secondary to their company's income statement, and did not tell the board about it until the meeting was half over. They seemed to be hoping not to be caught. It appears that ethical responses have to be learned from experience and the G*A*M*E is a suitable milieu in which to learn ethics with minimum risk.

Based on our experience, we can make the following recommendations for integrating ethical issues in simulations:

Recommendation 1: The ethical issue has to be sufficiently ambiguous so that a wide range of reactions is possible encompassing different degrees of ethicalness.

Recommendation 2: The issue should be presented in such a way that the range of responses is not obvious. There should be room for creative solutions. There should also be room to reward creative approaches to these dilemmas.

Recommendation 3: In order to compel students to fully investigate the possibilities it is important that the issue has significant impact and that the weight of the entire simulation is sufficiently high to affect the students' grades.

Recommendation 4: Discussion of proposed action plans and review of actions taken are critical. A three-stage debriefing process has proven to be optimal. In the G*A*M*E, the board members first role-play a real board. At the end of the meeting after an executive session, the directors switch to a coaching mode and discuss their impressions with the team. Then, after the board has left, the faculty who does not grade the presentation in contrast to the board provides comments as a mentor. The credibility of the board is enhanced by the stature of the directors as executives.

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