

## Computer Simulation and Learning Theory, Volume 3, 1976

### EXPERIENCING PRACTICAL APPLICATIONS AND IMPLICATIONS OF VARIOUS ECONOMIC SYSTEMS THROUGH THE NON-COMPUTERIZED SIMULATION SIM ECO SOC

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Exchange of ideas across disciplinary lines is important today, especially in a world which is becoming more interrelated and interdependent. As social scientists teaching history, sociology, anthropology, and social psychology, we would like to share with you some of the insights we have gained from our use of simulation in the social science classroom that we have found to be applicable to business disciplines~,

About eighteen months ago, we began designing a non-computerized simulation we call SIM ECO SOC, short for simulated economic societies, to give social science students an opportunity to create their own society and to analyze and explain some of the developments which occurred within the simulation by referring to specific concepts and theories from various social scientists. We have been extremely pleased with the results: SIM ECO SOC has proved to be an exciting learning experience for us and our students.

We have also discovered serendipitously that this particular simulation is very useful for business majors because as the participants make business decisions, they make them in the context of a total society. It is not simply a game whose success or progress is measured by profits and losses. Business majors begin to realize the societal implications of their decisions. This realization comes to them as they participate in an ongoing society they have created--a society which develops as a result of the interactions among the participants as they explore their own human potential.

It seems to us there is a need for simulations which allow for or, better yet, encourage the development of the human dimension--that non-quantitative, immeasurable dimensions of the art of living. This deals with an aspect of reality that is so often ignored in many simulations; yet this human dimension is absolutely necessary for any simulation which attempts to replicate life in our complex world.

SIM ECO SOC is a model of a mass, modern, industrial society which has big businesses, small businesses, farmers, a labor union, two political parties, a government, a charity organization, a hospital, and the mass media. A three-part simulation, SIM ECO SOC is designed to replicate in sequence three economic systems--mixed, collective, and free market. Participants in this simulation assume roles such as a labor leader, a politician, a law enforcement officer, a farmer, a worker, or the head of a business.

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During each 90-minute session of the simulation, businessmen purchase raw materials (puzzles) at the Natural Resource Center.. These puzzles are of several varieties--anagrams, word games, mazes, jigsaw puzzles, etc. Once the businessmen have purchased these puzzles, they return to their home regions. There are four such regions, each representing an economic stratum of a mass, modern society from the most affluent to the ghetto~. When they have solved the puzzles, they return them to the Natural Resource Center for validation; if the puzzle has been properly solved or completed, the businessman receives a product-token (subsistence ticket, travel ticket, munchie ticket, etc.) which can be sold (for play money) within the simulated society, hopefully, for the businessman's sake, at a profit. How many puzzles they buy, how much technology they invest in, how many people they hire to help them solve the puzzle, how much they charge for their manufactured product when they sell it, are all decisions they must make on their own within the context of the society.

Also part of the simulation's design are modern societal problems such as crime, drug abuse, health care, hard-core unemployment, and social protest movements. Therefore, during the simulation, students directly experience the emotional, moral, economic, psychological, and sociological problems which are particularly engendered by each of the three economic systems. As the students attempt to deal with the situations which arise, they gain an understanding of the problems faced by businessmen, farmers, laborers, and other groups and individuals in a complex urban society. They also begin to understand themselves as persons in society and develop awarenesses and skills to understand others in a social world--whatever that "world" may be. (We say this, of course, because wherever two or more people are interacting--in an office, in a conference room, at a sales-meeting, during an interview--there is a group, a mini-society, a microcosm of the social world. The simulated society in SIN ECO SOC is a microcosm of a mass, modern, industrial society.) Furthermore, participants begin to see the workings of the various economic systems and gain insights into how these systems succeed or fail in dealing with the problems that emerge within the simulated society.

In SIM ECO SOC, as in all business simulations, the participant who is assigned the status of a businessman is confronted with a problem or decision regarding finance, production, marketing, etc. However, he must not operate from his business perspective alone; he must operate in a total societal context. He must therefore be prepared to develop an awareness of--and the skills to deal with--societal reactions and pressures which emerge as the ramifications of his business decisions spread throughout the society.

Let us take a specific example to illustrate this point. One of our sophomore students, John, was assigned the role of

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a wealthy businessman in the affluent section of the society He faced a situation not unlike the one that confronted American businessmen in the last half of the 19th century: he was a manufacturer who depended upon several smaller supplying companies to provide him with various parts he needed to manufacture his product. John was quick to perceive his situation and-like the business pioneers of the 1800's--he saw the necessity and advantage of gaining control over as many phases of a single industry as possible thus assuring his company an uninterrupted flow of supplies at a price over which he had virtual control~ John quickly bought out the several smaller businesses which supplied him with the needed products and consolidated them into one big business.

Although John had come to grips with one of his business problems--and many simulations might have ended with this important lesson--he faced a new problem. He discovered--as did his 19th century counterparts--that there were many in the society who were outraged at the wealth and power he had accumulated. He had to confront and deal with a situation which emerged spontaneously from the simulated society. This was something that was not programmed into the simulation; it unfolded as the human dimension came into play.

Such unfoldings occurred often within the framework of the three economies--mixed, collective, and free market--which are an integral part of SIN ECO SOC. We let the students explore the possibilities and implications that each economic system has for business in relationship to other businesses, to labor, to government, and to society as a whole.

In the mixed economy, for example, students experienced confusion at first and a lack of communication within their society. Both employers and employees found the minimum wage laws and taxes problematic Hard-core unemployed people from SIN ECO SOC's ghetto were a source of difficulty for society, because it was costly for business to take the responsibility for training them and frustrating for the hard-core unemployed, because they could not work and earn at least the minimum wage, until they had completed their training. Business could not devote much of its time to rehabilitating potential workers from the ghetto, which necessitated government's providing the society with a welfare system to care for the unemployable members of society.

The collective or socialistic economy is usually the only one that contemporary students see as an alternative to the problems of the mixed market.

In the collective economy in SIN ECO SOC all society's resources were placed in the hands of several commissars. Efficient management of all the businesses was simply too much for them to handle, and this resulted in a lack of productivity for

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the society and need for greater coordination of activities. But the leaders soon learned that the economic power they held meant political power, as well, and thus they were reluctant to relinquish control of society's resources. Food (subsistence) and free health care were provided for all who needed it in the society and workers were given specific economic tasks to perform. For their work, subsistence was supplied, but employees complained of boredom and alienation on the job. A society developed in which there were no starving people, but at a great cost. That cost was in terms of the tremendous class leveling that took place--everyone (with the exception of commissars) was living at subsistence level. In one run of the simulation, students developed an underground political party called S.I.N.E. or "subsistence is not enough,"-indicating that humans have higher levels of needs--needs beyond mere survival.

The free market, which is generally passed over in most economics courses, is not usually seen as an alternative to the present system or mixed market. The ideas of Adam Smith, usually dismissed in econ courses as anachronistic (after all, they were written in 1776~) become much more viable as an alternative to today's system. Since there is no minimum wage, no taxation, and no government interference with business in the free economy, there is an obvious increase in students' economic activities and creativity. In one of our trial runs, the entire ghetto region pulled itself up by its bootstraps and became self-sufficient. The standard of living in all runs continually rises higher and higher. This aspect of the simulation was in agreement with predictions of the free marketeers--that a free economy, allowing the formation of monopolies and conglomerates, can be beneficial to the welfare of society. The free market fosters individual enterprises. The Protestant Ethic is reinforced, as well as the idea that failure in business is a result of personal inadequacy. On the other hand, predictions made by the critics of the free market were also validated. Students complained of being isolated as persons. Fear of failure was intensified. In most runs of the simulation the rich got richer, the poor got poorer and attitudes of social Darwinism developed. Strong feelings of regionalism also occurred and the wealthy areas found they could function well without the less affluent regions.

Although we designed SIN ECO SOC primarily as a social science simulation, we feel it has great potential as a business simulation for three reasons. First, in SIM ECO SOC, business students experience practical situations in which they must make business decisions and confront business problems. This experience is made more valuable and meaningful because these decisions are made in the context of a total society.

Second, SIM ECO SOC allows for the inclusion of the human dimension in the simulation. Since this dimension is an

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unquestionably important and undeniable part of everyday life, it should be an important part of any simulation that attempts to replicate the real world, Business majors have reported to us that they valued the opportunity to become aware of this dimension.

Third, because SIM ECO SOC does create a mass, modern, industrial society under three economic systems, business majors can better understand the vast implications of the mixed, collective, and free market economies. This is especially valuable to business majors who will soon be working in an increasingly interdependent world where a practical, not just a theoretical-- knowledge and understanding of various economic systems will be essential.