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### ABSTRACT

Management games based on enterprise simulation models have been widely used to train capitalist industrial managers. The authors have recently modified such a model (the model of a manufacturing corporation used in the New York University Management Game) to establish a training program for industrial enterprises in Poland. In this session we will discuss the problems associated with a transfer of management technology from a capitalist to a socialist economic system.

### I. THE NYU/POLISH PROJECT

In September 1971 the Graduate School of Business Administration at New York University (NYU) began to work with the Polish Management Development Center (now The Institute of Management Development in State Administration, a state-owned management research, consulting, and educational institute) in Warsaw to design a management game that reflects the conditions of the Polish industrial system. One objective of the game was to allow the players - Polish managers and staff analysts attending management development programs - to experience vicariously some of the problems of directing the activities of an enterprise. However, the principal objective of the game was to teach line and staff executives the new economic system in Poland.

Poland, like most of the other socialist nations, has been implementing a sequence of "economic reforms" during the past 15 years. The purpose of the reforms is to increase the efficiency of the industrial system and to make the system more responsive to consumer demands. This is being accomplished by delegating to lower-level managers the authority to make decisions that had formerly been made at higher levels and by establishing incentive systems at the lower levels to encourage industrial managers to increase the efficiency of production in their

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enterprises and to respond to consumer demands. The most recent economic reforms in Poland (implemented in January, 1973) have resulted in the "new economic system."

The most difficult task in converting the NYU Game to the Polish Game was to make the simulated enterprise look as much as possible like a real Polish enterprise operating under the new economic system. This type of realism can occur only if the information received and decisions made by the Game participants are similar to the information received and decisions made by a Polish industrial manager. This in turn required that the joint American/Polish research team examine in detail the operations of (state owned) Polish enterprises and their relationships to the higher levels of government and that it anticipate the ways in which these operations and relationships are expected to change as the new economic system is being fully implemented. These issues will be discussed during the workshop session.

### II. CONCLUSIONS

We have drawn four conclusions from this effort. The first and most surprising conclusion is that it is possible to transfer a realistic management game based on a complex enterprise simulation from a capitalist to a socialist environment. Although this transfer required considerable effort (approximately five man-years), we estimate that it would have taken at least three times this effort to design a Polish management game from scratch. Such a straightforward transfer of management technology from a capitalist to a socialist economic system would have been impossible a decade ago, and it would have been difficult even five years ago. The economic reforms in Poland (and in some of the other socialist nations) have brought about a degree of decentralization that is approaching the increasingly centralized industrial systems of the most advanced capitalist nations. This greatly facilitated the adaptation of the NYU Game to the Polish environment.

Our second conclusion is that one cannot simulate an enterprise in a socialist economy without understanding the workings of the entire economy. Although certain interactions between the enterprise and the remainder of the economic system

were omitted, it was necessary to understand these interactions sufficiently well to determine the merits and demerits of omitting them.

Our third conclusion is that troublesome linguistic problems arise in transferring a sizeable computer program from one nation to another. The output of the NYU program had to be translated from English to Polish. In some cases the output statements had to be modified or completely rewritten as well. A single English word often translated into two or three Polish words. Since many of the English-language statements were arranged in tabular form, the translation of Game outputs led to a number of time consuming formatting problems.

Our fourth conclusion is that in transferring a Management Game from one nation to another, it is essential that clear communication be established between the two nations. Much of the conversion effort was accomplished at NYU (by Poles and Americans). On the other hand, most of the data needed to implement the conversion were in Poland. Fortunately, the communication process was greatly facilitated by the availability of a computer system in Warsaw similar to the system at NYU, by the availability of funds for international travel, and - most important - by a continuing close and cooperative working relationship between the Poles and Americans participating in the project.