

Development In Business Simulation & Experiential Exercises, Volume 18, 1991

ON THE TRANSFER OF MARKET ORIENTED BUSINESS GAMES TO SOCIALIST CULTURES

Joseph A. Wolfe, The University of Tulsa

ABSTRACT

Europe's socialist countries have begun to implement market-based restructuring of their economies. The use of experiential learning techniques in general and the specific use of American-style, market-based management games, can be of particular interest and value to these nations as they begin to implement *perestroika*. The paper attempts to capitalize on the wealth of gaming experiences already residing in each national block and to accelerate the management education and development process by encouraging the joint use and adaptation of the gaming tools and techniques already in existence in these formerly antagonistic nations.

INTRODUCTION

With accelerating swiftness Europe's socialist Warsaw Pact countries have begun to implement market-based restructuring of their economies. Although real long term materialistic benefits will eventually occur, in the short term each country's consuming public will face even greater retail shortages and seller's market conditions will prevail for a number of years. Moreover, tremendous challenges will confront the management groups that will have to adjust to these new competitive conditions. These challenges will be difficult to overcome. Within the Soviet Union few managers have ever operated under the economic decision making conditions posed by free market structures while its East European satellite nations have not experienced capitalism for over 40 years.

In their quest for insight and a preparation for the new demands forced upon them through the mechanics of international trade and internal free markets, the socialist countries have seen the creation of both public and private management schools based on the American MBA model (Fogel, 1990). While numerous criticisms (Behrman and Levin, 1984; Hayes and Abernathy, 1980; Lynton, 1984; Oviatt and Miller, 1989; Porter and McKibbin, 1988; Van Doren, Smith and Begun, 1986) exist within the United States regarding the emphasis and curriculum content of its graduate and undergraduate programs in management, almost wholesale adoptions of the programs favored by the American Assembly of Collegiate Schools of Business (AACSB) have been made in East Europe and the Soviet Union. A four-year training effort has existed at the Executive Training Center in Kranj, Yugoslavia with an MBA program slated to begin under the partial support of the Ljubljana Chamber of Commerce. Within the Soviet Union Geneva's International Management Institute has agreed to create an MBA-level management school in Kiev with the Ukrainian Academy of Sciences. Kiev is also the site of BIZNEX, which operates the Ukrainian School of International Business for middle and senior level managers in the area of foreign trade. Clemson University is scheduled to offer course work in Moscow leading to an MBA while the Soviet Ministry of Foreign Economic Relations has established the Higher Commercial Management School with 20 centers slated for operations throughout the Soviet Union. Moscow's Plekhanov Institute will open the Mirbis School under the initia-

tives of NOMISMA, a group situated in Bologna, Italy.

In other countries the Ministry of Industry in Czechoslovakia is currently attempting to form a management training center in cooperation with various American foundations, the National Bank of Czechoslovakia, and a Canadian Czech entrepreneur, while Poland has already created the International Business School in Warsaw and the School of Management in Poznan. Due partially to its relative degree of openness and longtime efforts to become a more market-oriented economy dating back to its New Economic Mechanisms of 1968, Hungary has progressed the furthest in implementing full-time Western MBA-type programs. Budapest's International Management Center will begin its second class of MBAs in Fall, 1990 under a jointly taught University of Pittsburgh program while the University of Economics (nee Karl Marx University) will soon offer its own MBA degree course work.

Concomitant with the advent of these American-type programs comes the importation of the textbooks and pedagogical methods employed by American and West European faculty. While certain transitional problems will have to be overcome it is believed that the use of experiential learning techniques in general, and the specific use of American-style, market-based management games, can be of particular interest and value to these nations as they begin to implement *perestroika*. As an aid to the more rapid conversion of socialist cultures to market based economies, this paper reviews the problems and potentials for enhanced management gaming applications. In doing so the paper attempts to capitalize on the wealth of gaming experiences already residing in each national block and to accelerate the management education and development process by encouraging the joint use and adaptation of tools and techniques already in existence in these formerly antagonistic nations.

MANAGEMENT GAMES IN SOCIALIST CULTURES

Although the widespread growth and use of management games in the United States has been well documented by those such as Dale and Klasson (1964), Faria (1987), Graham and Gray (1969), Horn and Cleaves (1980), Kibbee, Craft and Nanus (1961) and McRath and Goeldner (1962), the mere existence and extent of this activity within the Warsaw Pact nations was relatively unknown in the West until the mid-1980s. In reality the basis of much of America's gaming activities is of European origin. Our management games can trace their derivations to European war games created in the 17th and 18th centuries (Sayre, 1908; Young, 1956) and by the end of the 19th century both free and rigid war games had spread throughout Western and Eastern Europe (Cohen and Rhenman, 1961). Given the Russian nation's love for intricate puzzles and games, combined with the elaborate use of Leontief's input/output tables and analyses to implement its planned economic programs of the 1930s (Leontief, 1966; Wheatcroft, 1985), only a short theoretical step was needed to apply the country's concept of action learning to the use of planning games. Mary Birshtein (Gagnon, 1987) developed a simulation game in 1932 to train managers to operate the assembly shop at the Ligovo typewriter factory (Birshtein, Zhukov, and Timofayevsky, 1985). In 1936 a production game,

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now known as Red Weaver (Yefimov and Kamarov, 1980), simulated production conditions involving adjusting machinery, reassigning workers and changing production flows. Between 1932 and 1940 Birshtein and her colleagues designed about 40 games dealing with different aspects found in industrial organizations.

While no comprehensive survey of management game usage has been conducted within those countries associated with the Council of Mutual Economic Assistance (CMEA) Assa (1982), Siebecke (1988), and Rohn (1986) have cited a large number of games available for education and development use in selected Socialist countries. To some degree the CMEA nations appear to be operating at a creation and adoption level paralleling the United State's experience of the 1960s (Wolfe, 1985; Wolfe and Teach, 1987). A large number of privately created games have been produced for an institution's on-site use with only a modest degree of dispersion of those games to other institutions and other countries. To some great degree the game's creator is also its adopter although such organs as the International Simulation and Gaming Association and its proceedings issues, the conferences of the International Seminar of the Socialist Countries, Simulation & Gaming, and the seven annual seminars of the Management Simulation Games Project held in various CMEA countries from 1974 to 1980 have helped to make the availability of games known to potential adopters and users.

Augmenting an analysis suggested by Assa (1982), Figure 1 indicates that the vast majority of management games available within the CMEA are

basically closed system, functionally-related planning games. This propensity for planning games accompanied by a great emphasis on implementation within bounded resource sets is a natural result of political and economic systems which exercised centralized command power over both the society's agenda and the deployment of its resources while simultaneously operating under conditions of chronic under-capacity and seller's markets (Lawrence and Vlachoutsicos, 1990).

SOCIALIST PRECEDENCES FOR MARKET-BASED GAMES

While in the main Soviet and East European games have emphasized a planned and closed system optic, certain internally and externally generated precedences in the use of market-based games have occurred. As also shown in Figure 1 various games have begun to capture the ambiguities and environmental turbulences associated with market-based economic structures. OwnerTransform LE (Naumienko and Dlugosz, 1990) exposes players to the ramifications of Poland's privatization process where participants change the Company's legal structure, and deal with debt, equity and tax issues. EXPORT (Selbirak, 1989) demonstrates the international conditions under which Poland now operates as it attempts to become more competitive in international markets while the Joint Venture Came (Naumienko and Dlugosz, 1989) provides managers an exposure to what may consider to be these countries most feasible strategy for rapid economic development. Within the Soviet Union both Choice of Managers (Arutyunov, 1989) and

FIGURE 1
REPRESENTATIVE DOMESTICALLY PRODUCED MANAGEMENT GAMES BY CMEA COUNTRY,
INSTITUTION, AND MAJOR LEARNING OBJECTIVES

Country	Institution	Learning Objectives
BULGARIA Economic Mechanism	Institute for Social Management, Sofia	Industry and inventory planning; distribution of resources
Mono-Resource Allocation Planning	Institute for Social Management and Institute of Engineering Cybernetics, Sofia	Resource allocation planning
CZECHOSLOVAKIA Management of an Industrial Production Organization	Institute for Social Management, Prague	Creation of five-year plans for total enterprises Planning dialogue between ministry and its enterprises
EAST GERMAN! Economic Mechanism IN-1 Management Game BES 1-4 Kombinat	Humboldt University, Berlin Humboldt University, Berlin Humboldt University, Berlin	Planning Dialogue between ministry and its enterprises Factory level operations and planning Managerial behavior and planning systems in socialist enterprises
HUNGARY Hake a Decision	Institute at the Ministry of Labor, Budapest	Toy factory production process
DOENT Agricultural Game	Computing Institute, Ministry of Labor, Budapest Karl Marx University, Budapest	Production process Farm, management
POLAND OwnerTransformLE Joint Venture Game EXPORT	Warsaw University Warsaw University Institute of Public Administration and Management, Warsaw	Ownership transformation and privatization Logistics Organizational consequences of Polish economic reforms Improved skills in in export-oriented activities and foreign trade
SOVIET UNION Project: Plan: Competition maintenance, assignment, Stimuli of Production <u>Red Weaver</u> <u>Choice of Managers</u> <u>Capitalist Production</u>	Institute of Control Sciences, Moscow Leningrad Institute of Engineering and Economics Institute of Further Education of Intonation Workers, Moscow Novosibirsk University	Plant level management process Textile plant management and production processes Preparing and implementing the choice of managers under economic restructuring Factory operation under employee ownership

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Capitalist Production (Valtyukh and Rybakova, 1989) seek to prepare students and managers for the nature of the competitive marketplace under perestroika and glasnost.

In addition to these internally generated management games, Figure 2 shows that an exposure to market-based games has occurred by importing them from Western developers while Figure 3 lists three additional simulations created by individuals associated with New York University's original Management Decision Laboratory project team. While the ICL Management Exercise (Radosinski, 1985) has been employed in Poland, the NYU Management Game (Uretsky, 1973), in both its pure and altered versions, has provided yeoman service in Poland and Hungary. Additionally, as itemized in Figure 3, it has spurred the creation of other games predicated on its basic model.

THE VALUE OF MANAGEMENT GAMES AS SKILLBUILDING AND ATTITUDE CHANGING MANAGEMENT EDUCATION AND DEVELOPMENT DEVICES

Although conventional management education and development techniques such as lectures, textbooks, and case examples can be employed as devices for changing the attitudes, skills, and behaviors of the socialist world's managers, experiential techniques appear to be especially appropriate given the managerial changes required and the experiential approach's strengths. As these command economy nations move towards market-based or demand economies their managers will face turbulent economic and political conditions. These conditions will, in turn, demand greater managerial ambiguity tolerances, loose and organically decentralized organizational structures, and managerial initiative and personal accountability. While operantly conditioned to

FIGURE 2
A SAMPLE OF IMPORTED MARKET-BASED GAMES

POLAND ICL Management Exercise	Institute for Training Management Staff, Warsaw
NYU Management Game	Institute for Public Administration and Management and the University of Lodz
HUNGARY NYU Management Game	Karl Marx University, Budapest and the Hungarian Management Development Center

Notes:

E. Radosinski (1985) Simulation and gaming in Poland. ISAGA Newsletter, 49 (December, 1985), p. 6.

^bM. Uretsky, L. Moses and H. MacWilliams (1983) Transfer of gaming technology: a US-Hungarian case study. In I. Stahl (Ed.), Operational gaming: an international approach. Oxford, England: Pergamon, p. 129.

FIGURE 3
GAMES DEVELOPED BY FOREIGN NYU
MANAGEMENT GAME COLLEAGUES

HUNGARY Complex Enterprise Management	Hungarian Management Development Center, Karl Marx University
General Enterprise Decision Game	Hungarian Management Development Center, Karl Marx University
POLAND Polish Management Game ^b	Institute for Public Administration and Management

Notes:

M. Uretsky, L. Mozes and H. MacWilliams (1983). Transfer of gaming technology: a US-Hungarian case study. In I. Stahl (Ed.), Operational gaming: An international approach. Oxford, England: Pergamon, p. 139.

^bM. Uretsky (1987). A Project to Promote and Study Trade with Hungary, Poland, and the Soviet Union. Stern Graduate School of Business Administration, New York University, p. 39.

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Be both bureaucratically mechanistic and cautious yet politically adroit regarding the harboring of resources, the ex-socialist manager will now have to flexibly respond to fluid, open-systems circumstances never before experienced.

Based on their work with almost 5,000 Polish managers in management gaming assessment situations, Naumienko and Dlugosz (1989) believe that Poland's managers will inappropriately apply their old thought patterns to the new economic conditions created by the Polish Parliament. Because Polish managers suffer from "a barrier of routinized perception" (Naumienko and Dlugosz, 1990, p. 6) it is feared they are neither prepared for economic reform nor will they capitalize on the new economic growth conditions afforded them. The strength and ramifications of past closed-system conditioning has also been noted by Lawrence and Vlachoutsicos (1990) in their comparative managerial study of eight matched Soviet and American electric utility/motor plants and diesel engine factories (Puffer, Walton, Naumov and Ozira, 1990). Exhibit 1 summarizes a number of behavioral differences found for Soviet managers emanating from their unique cultural history, decision theories, and economic framework cast by socialism's ideology and dictates.

Given these attitudes and behaviors will have to be altered if the managers are to be successful in less structured decision-making environments, the use of management games appears to be especially appropriate due to their inherent nature. Management games allow players to experience and practice new behaviors in relatively safe learning situations. These players can ex

perience firsthand the nature of turbulent markets, the transfer accommodation of that turbulence within the firm, as well as deal with the new accounting and profit and loss definitions associated with capitalistic organizations. Games have been found to be superior for both teaching decision making in ambiguous and turbulent circumstances (Thompson and Keon, 1982), for studying decision making methods (Gladstein and Reilly, 1985), and for honing information processing skills (Partridge and Sculli, 1982). Management games also provide lifelike managerial experiences (Byrne, 1979; Lucas, 1979) and they allow players to experiment with different strategies within alternative company environments (Segev, 1987). Most importantly, games facilitate attitude change (Lee and O'Leary, 1971; Pierfy, 1977; Williams, 1980, 1987; Williams, McCandless, Hobb and Williams, 1986) and it is in this area of attitude change where the use of appropriately designed and administered games is especially appropriate.

SUGGESTIONS FOR THE SMOOTH TRANSFER OF MARKET-BASED GAMES

The general portability of management games was severely restricted during the movement's earliest years due to the unique operating systems employed by the various mainframe computers for which certain university-related games were programmed. By the mid-1960's, however, portability increased because the publishers of these simulations demanded more standardized programming techniques and the IBM mainframe computer became the archetype to which all commercially successful games had to be written. While game adopter's still had to deal with unsympathetic and recalcitrant computer

EXHIBIT 1 UNIQUE SOVIET DECISION MAKING PATTERNS

1. Soviet managers are very aware of their official responsibilities and are cautious about involving themselves in affairs for which others are officially responsible
1. Soviet managers make a great use of official mechanisms for resolving conflicts.
2. Soviet managers utilize short daily meetings to conduct their affairs: they practice closer supervisory control and their organizations tend to be more centralized
3. Soviet managers rely on rules and regulations to integrate their factory's operations: they obey the letter of the rules although they willingly manipulate them to serve their own purposes.
4. Soviet managers expect rigidity in manipulating plans to accommodate changes in market circumstances
5. Soviet managers are unaccustomed to working with blurred and overlapping responsibilities
6. A low Proportion of Soviet managers directly handle relationships with outside groups such as customers, suppliers and regulators.
7. Soviet managers are more cautious about taking risks and assuming specific obligations for achieving results
8. Soviet managers emphasize the fulfilling of output goals: they often define problems as being ones of supply shortage.

Source: Adapted from P.R. Lawrence and C.A. Vlachoutsicos (1990) Managerial patterns: Differences and commonalities. In P.R. Lawrence and C.A. Vlachoutsicos (Eds.), *Behind the factory walls: Decision making in Soviet and US Enterprises*. Boston: Harvard Business School Press, 274-284.

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Center personnel, even those problems have been eliminated through either the creation of personal computer-based games or the wide scale downloading of popular mainframe games to the personal computer (PC) (Fritzsche, 1987; Wolfe and Teach, 1987). Given this personal administrative control over the computer's operation plus immediate portability between computers due to higher education's adoption of the IBM family of PCs and their work-alikes, the problem of transferring management games between economic cultures is no longer machine bound (Hutchings and Robertson, 1983). Instead the problems of transporting market-based games to socialist cultures lie more in the areas of player manual language and unique Western business terminology and jargon, output formats and accounting conventions, and transitory but still unique capital, labor, and resource markets and distribution systems.

Because the socialist countries will either ultimately emulate the market-based economies of the Western world or its current set of managers or manager trainees will need an exposure to the decision making world faced by a market-based manager, it is assumed that the basic structure found in American business games is valid. What is basically needed then is a tailoring of the particular game for native language, taxation schedules, local currency values, and resource and labor conversion rates. Based on the experience of those who have transferred games between cultures both within and across divergent economic cultures (Gernert, Assa, Habedank and Wagner, 1983; Hutchings and Robertson, 1983; Uretsky, Mozes and MacWilliams, 1983) the following elements would facilitate the smooth transfer of computer-based games given the current level of technological diffusion existing within the gaming movement today:

1. Work closely with a business expert from the game's target country. This expert should translate the player's manual after having had an intimate, playing exposure to the simulation. A glossary of business terminology along with definitions of each line item on the simulation's printout should be included in the manual. The target country's expert should also appraise the game author of local labor rates, tax schedules, depreciation rates, and expected product price/quality tradeoffs so these unique elements can be programmed in to the simulation and the player's manual.
2. If creating a simulation "from scratch" create it for the IBM family of personal computers or its compatibles. The upper technology bound is the 80286 class of machines with the PC-AT being the most common computer available. The performance of the game's main program structure should be altered through the use of parameters and parameter tables. Accordingly, hard coding should be avoided within all structural equations so all relationships and results can be tailored to local conventions and company performance expectations by the use of altered parametric values.
3. The simulation's main program can be supplied to the user in either a compiled (for faster run times) or non-compiled form (if hard-coded formulas and print statements need to be altered directly for local usage). The simulation's software would ideally be transported on 3.5-inch diskettes although 5.25-inch floppies are still the standard medium.
4. Line entries on the simulation's output should be tailored to the target language by either supplying parametric substitutes accessed in the program's PRINT statements or by directly altering hard-coded PRINT statements. Laser printers are very rare and nine-pin dot matrix printers are most common.

CONCLUSION

A large stable of proven general and functional PC-based games (Biggs, 1987; Keys, 1987) are available for management education and development applications within East Europe and the Soviet Union. Moreover, a growing cadre of international management games are also available (Klein and Fleck, 1990) given an increasing emphasis on internationalizing America's business school curriculum (Casse, 1982; Chung, 1985; Edge and French, 1986; Murray and Murray, 1986; Newman, 1986; Porter and McKibbin, 1988). The transfer of these simulations can now be more easily accomplished because of the standardization, which exists between the hardware employed at the university level in all developed nations and a gravitation towards international accounting procedures, terminology, and practices by the formerly socialist block countries. With proper considerations the designers of new PC-based games can incorporate features which will make these games not only highly transferable but also highly translatable to different economic cultures. Those who have already created successful American games are urged to reprogram their simulations by using parameter files so that countries wishing to become demand economies can accelerate their rate of economic development through the use of management games.

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