

SIMULATION AND EDUCATION

Linda Weiser Friedman
Assistant Professor
Department of Statistics and Computer Information Systems
Baruch College of the City University of New York
New York, New York 10010

ABSTRACT

The quality and credibility of simulation models are increasing in importance, along with a continual increase in the use of these models themselves. In the final analysis, we all depend on quality having been built into the simulation models designed by many people in diverse disciplines. As educators we must instill professional pride, habitual validation and analysis of data, goal-oriented creativity, and a sense of ethical practice into the simulationists of the future.

INTRODUCTORY REMARKS

The quality and credibility of simulation models are increasing in importance, along with a continual increase in the use of these models themselves.

From its humble beginnings, and starting with only a small circle of admirers, the field of simulation has grown to truly remarkable proportions. The current generation, and the next, will find that simulation has captured the hearts and minds of thinkers and doers, and has somehow made itself invaluable to system builders and decision makers.

Our society and culture has become increasingly dependent upon high technology, and simulation is there. Robotics, electronic funds transfer systems, telecommunications, electronic banking, electronic shopping: simulation is there. Defense, space travel, "futuristics": simulation is there. Expert systems, medical research, behavioral and educational research: simulation is there, too. Society becomes more service oriented and providers of services find that their customers' major complaint is (lo, and behold!) long waiting time: simulation is there, and has been there for a very long time. In fact, simulation is far from being a method of last resort.

Students of simulation can no longer be satisfied with how-to courses in simulation modeling and program development. The key to good quality simulation lies not in the How but in the Who. Professional pride, habitual validation and analysis of data, goal-oriented creativity, ethical practice -- these are characteristics we must build into our simulationists of the future. Space

exploration depends on it; the integrity of our monetary system depends on it; the advancement of medical knowledge depends on it; the fabric of hi-tech society depends on it.

In the final analysis, we all depend on quality (and credibility) having been built into the simulation models designed by many people in diverse disciplines. Who puts it there? As educators, we do.

LINDA WEISER FRIEDMAN is an Assistant Professor of Statistics and Computer Information Systems at Baruch College of the City University of New York. She received her B.A. from Baruch, and her M.S. and Ph.D. (Operations Research) degrees from Polytechnic Institute of New York. Her major research interests are the statistical analysis of simulation output data, applications of multivariate statistical analysis, methods for promoting ethics and professionalism in computer science students, and marketing research. Dr. Friedman has published in several scholarly journals, including the *Journal of Statistical Computation and Simulation*, *Interface: the Computer Education Quarterly*, the *Journal of Advertising Research*, and *Simulation*. She also writes fiction and poetry. Dr. Friedman lives in Brooklyn, New York with her husband and five little girls, some of whom will be of marriageable age in a few years. Interested parties may respond to:

Prof. Linda Weiser Friedman
Department of Statistics and Computer Information Systems
Baruch College - Box 513
17 Lexington Avenue
New York, New York 10010
(212) 725-3168