

***Sixth Annual E. Leonard Arnoff Memorial Lecture
on the Practice of Management Science***

***"Operations Research/Management Science,
Marketing, and the Internet"***

***John D. C. Little
Institute Professor
Sloan School of Management
Massachusetts Institute of Technology
Former President, INFORMS***

JLittle@MIT.edu

<http://sloancf.mit.edu/vpf/facstaff.cfm?ID=69&ProfType=F&sortorder=name>

7:00 P.M., Thursday, May 15, 1997

We live in a complex world that requires a high degree of coordination within, and among, large interconnected systems. Big databases, high speed communication, and powerful computers have created marvelous opportunities for Operations Research/ Management Science (ORMS) professionals to contribute to the efficiency and effectiveness of organizations. Many ORMS researchers and practitioners are seizing these opportunities. A recent success story is the development of marketing models calibrated on large amounts of data collected at supermarket checkouts. The models and data are heavily used by packaged goods companies for marketing decision support. An example of a breaking opportunity is the rapid growth of the internet. Because almost every operation on the internet must be automated, it provides wonderful technical challenges for ORMS.

Special Presentations for the Edelman Award Finalist Procter & Gamble and University of Cincinnati "North American Product Sourcing Study" Will Precede the Lecture.

Sponsored by Procter & Gamble, Omega Rho Honor Society & the Department of Quantitative Analysis & Operations Management.

***John D.C. Little
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Former President, INFORMS***

John D.C. Little is Institute Professor and Professor of Management Science at the Sloan School of Management at the Massachusetts Institute of Technology. Professor Little specializes in marketing models and their use in solving business problems. In recent years he has focused on the implications for marketing theory and practice of the large databases being collected by bar-code readers in supermarkets. Currently he is avidly following the development of marketing on the internet and is co-teaching a seminar on electronic commerce.

His previous work in marketing includes work on retail site location, advertising models, decision calculus and marketing mix allocation. He has also done research in mathematical programming, queuing, traffic control, and decision support systems. In queuing he is known for "Little's law," which relates the average queue length to the average waiting time in queue.

Professor Little graduated from M.I.T., where he received an S.B. degree in 1948 and a Ph.D. in 1955, both in physics. Before joining the M.I.T. faculty in 1962, he taught operations research at Case Western Reserve University for six years. At M.I.T. Professor Little has been Director of Operations Research Center and, within the School of Management, Head of the Management Science Area and Head of the Behavioral and Policy Sciences Area. In fall 1988 he was a Visiting Professor of Marketing at the European Institute of Business Administration (INSEAD) in Fontainebleau, France.

He has been active in professional societies and was the first president of the Institute for Operations Research and the Management Sciences (INFORMS), created in 1995 by the merger of the Operations Research Society of America and The Institute of Management Sciences. He had previously been president of each of these societies and is a member of the National Academy of Engineering.

Professor Little was born in Boston, February 1, 1928, is married, lives in Lincoln, Massachusetts, and has four grown children.

***“An Old-Fashioned ORMS Revival:
John Little Delivers Sixth Arnoff Lecture”***

***Portfolio, University of Cincinnati, College of Business
Administration, Volume 13, p. 5, Spring, 1998.***

John D. C. Little, Institute Professor and Professor of Management Science at the Sloan School of Management at the Massachusetts Institute of Technology and first President of INFORMS, delivered the Sixth Annual E. Leonard Arnoff Memorial Lecture in the College of Business Administration at the University of Cincinnati on May 15, 1997. Dr. David J. Curry, Professor, Department of Marketing and Director of the Center for Integrated Research Systems at the University of Cincinnati, introduced Dr. Little. His talk was entitled ***“Operations Research/Management Science, Marketing, and the Internet”*** and attracted around 225 marketing professionals, faculty, and students. Professor Little described the internet as a marvelous opportunity for ORMS professionals to contribute to its efficiency and effectiveness because of its rapid growth and because almost every operation on the internet must be automated.

Preceding the lecture, Dr. Little made special presentations for the Edelman Award Finalists Thomas E. Chorman, Franz A. Dill, and Glenn W. Wegryn of The Procter & Gamble Co. and Jeffrey D. Camm, James R. Evans, and Dennis J. Sweeney of the Department of Quantitative Analysis & Operations Management in the College of Business Administration at the University of Cincinnati. Their entry, “Blending OR/MS Judgment, and GIS: Restructuring P&G’s Supply Chain” resulted in a reduction of the number of Procter & Gamble’s North American plants by 20%, saving over \$200 million in pretax costs per year. Each participant received a plaque and plaques were also presented to Robert Wehling, Senior Vice President of Procter & Gamble and to Frederick A. Russ, Dean of the College of Business Administration at the University of Cincinnati, to recognize their units’ participation.

Several generous donations have been received to help endow the Arnoff Lecture. In another presentation, Robert Wehling on behalf of Procter & Gamble presented a check for \$2,500 to Dean Russ and Ed Zeigenhardt, Director of External Relations at the University of Cincinnati. Erin Wullenweber, Vice President of Media Marketing Assessment (MMA)/Carat, procured and later presented \$500 of support. Lecture organizers are sincerely appreciative of their efforts to maintain the Arnoff Lecture as a preeminent gathering for presentations on the practice of management science.

Final presentations for the evening included a clock/plaque presented to Professor Little by Jeffrey D. Camm, Head of the Department of Quantitative Analysis and Operations Management. Dr. Little was then inducted into Omega Rho International Honor Society for Operations Research and Management Science as an Honorary Member and received a framed certificate presented by David F. Rogers, Vice President/President Elect of Omega Rho.

The Arnoff Lecture is held annually in the spring in honor of E. Leonard Arnoff, former dean of the College of Business Administration at the University of Cincinnati, a partner in Ernst and Whinney (now Ernst and Young), and co-author of the first book in operations research with West Churchman and Russell L. Ackoff. Previous Arnoff lecturers were Robert E. D. (Gene) Woolsey, Professor of the Colorado School of Mines, Thomas M. Cook, President of Sabre Decision Technologies, Saul I. Gass, Professor at the University of Maryland, Russell L. Ackoff, Chairman of the Board of the Institute for Interactive Management, and Alfred Blumstein, Professor at Carnegie Mellon University. For information about videotapes of past Arnoff Lectures and regarding future Arnoff Lectures, please contact the Department of Quantitative Analysis & Operations

Program

Welcome & Introductory Remarks: **David F. Rogers**, Associate Professor of Quantitative Analysis and Operations Management & Arnoff Lecture Coordinator

Edelman Award Presentations: **Lewis G. Pringle**, Chair, Marketing Strategy, INFORMS
“**North American Product Sourcing Study**”

Procter & Gamble Team

University of Cincinnati Team

Thomas Chorman

Jeffrey D. Camm

Franz Dill

James R. Evans

Glenn Wegrzyn

Dennis J. Sweeney

Procter & Gamble Presentation: **Thomas Chorman**, Procter & Gamble
Fritz Russ, Dean, College of Business Administration
Ed Ziegenhardt, Director, External Relations

Introduction of Speaker: **David J. Curry**, Professor, Department of Marketing & Director of the Center for Integrated Research Systems

Lecture: “**Operations Research/Management Science, Marketing, and the Internet**”
John D. C. Little, Massachusetts Institute of Technology

Award Presentation: **Jeffrey D. Camm**, Head, Department of Quantitative Analysis & Operations Management

Omega Rho Presentation: **David F. Rogers**, Vice President/President Elect, Omega Rho International Honor Society for Operations Research & the Management Sciences

Reception: Sixth Floor, Carl H. Lindner Hall

Master of Ceremonies Transcript

Good evening and welcome! My name is David F. Rogers, Associate Professor Of Quantitative Analysis and Operations Management and Coordinator of the Arnoff Lecture Series. To our visitors, welcome to the University of Cincinnati and the College of Business Administration. Please leave a business card in the fish bowl outside in the hallway or use the sign-up sheet to receive future mailings. Also pick up any literature regarding CBA programs and a copy of our magazine the CBA Portfolio.

To all, welcome to the Sixth Annual E. Leonard Arnoff Memorial Lecture on the Practice of Management Science. Sponsors include Procter & Gamble, Omega Rho, and the Department of Quantitative Analysis and Operations Management. Len Arnoff was a former Dean of the CBA, a Partner in Ernst & Whinney (now Ernst & Young) and coauthor with Wes Churchman and Russell Ackoff of the first book in Operations Research. It is in his memory that we dedicate this series of lectures and we are quite proud of the list of previous lecturers:

Robert E.D. (Gene) Woolsey

Colorado School of Mines

Thomas Cook

American Airlines Decision Technologies –

now Sabre Technologies

Saul I. Gass

University of Maryland

Russell Ackoff

Interact

Alfred Blumstein

Carnegie Mellon University

Len Arnoff is here tonight. He is here in spirit. His sweat is here in the mortar that holds these bricks together, for Len was instrumental in making this home for the CBA a reality. His influence is here in several faculty. His wife is here. And his daughter is here carrying his genetic code. It is a tradition that the only members of the audience that we recognize are Len’s immediate family. I would like to ask Len’s wife, Ann Arnoff and his daughter Susan Spohr to stand and let’s give them a nice round of applause. Both have

generously supported this lecture series monetarily and we appreciate it greatly.

We have several special presentations tonight. To introduce the first set of presentations please give a warm applause to Professor Michael J. Magazine, Ohio Eminent Scholar in Quantitative Analysis and Operations Management.

For our next presentation I would like to introduce Robert Wehling, Senior Vice President, Procter and Gamble. Accepting on behalf of the CBA will be Fritz Russ, Dean and Ed Ziegenhardt, Director of External Relations

Before introduction of the speaker, I would like to mention that an endowment for the Arnoff Lecture Series has been established to support this lecture for future years. We hope that individuals, but especially companies, will consider designating contributions to the Arnoff Lecture Series. In fact, I would like to make a challenge. I will personally donate \$500 to the Arnoff Lecture Series if within one month, two companies will each pledge \$500 or more. Please contact anyone in the CBA if you would like to accept my challenge.

We ask that you please remain seated after the lecture for two quick presentations. You are all welcome to join us on the 6th floor for a reception immediately after the lecture.

To introduce our speaker, please welcome David J. Curry, Professor, Department of Marketing and Director of the Center for Integrated Research Systems.

Presenting an award on behalf of the CBA is Dr. Jeffrey D. Camm, Head of the Department of Quantitative Analysis and Operations Management.

To close tonight's activities, I am going to wear another hat, that of the Vice President/President Elect of Omega Rho, the International Honor Society for Operations Research and Management Science. I would like to present this certificate to John D.C. Little, in recognition of his enormous contributions to Operations Research and Management Science.