

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

***“On Doing Well by Doing Better O.R. -
Thirty Years and Counting”***

***Robert E. D. (Gene) Woolsey
Professor of Economics and Business
Director, OR/MS Program
The Colorado School of Mines
RWoolsey@mines.edu***

<http://www.mines.edu/Academic/econbus/faculty/woolsey.htm>

<http://www.mines.edu/research/org>

7:30 P.M., Friday, May 11, 2001

This presentation outlines the applied Operations Research (O.R.) Program at the Colorado School of Mines as of May 2001. This program is dedicated to the concept that there are no technological problems in this world, just psychological, behavioral, and political problems that might have a facade of technology. This is generally considered to be the most relentlessly applied O.R. program in the world. Every student is expected to complete one or more projects *Pro Bono Publico* in either the public or private sector that, at least, gets used and, preferably, saves money. Students who, before or after graduation have done projects that save in excess of \$1,000,000 in one calendar year are awarded a diamond stickpin. As of late last year the students and ex-students in the program had generated verified savings in the public and private sector of \$270,715,918.00. However two recent letters from the Department of the Army and the Joint Chiefs verified savings of \$204,000,000 and \$337,000,000 respectively. These two letters now bring the total of verified savings from students in this program up to a present total of **\$811,715,918.00**. A selection of these letters of verification will be presented and the projects discussed. A number of examples of the author's personal consulting engagements over thirty years with and without students will be presented with the wit and humor expected by the speaker. These examples will argue that the only way to improve a flawed process is to DO IT until the person you are shadowing will take a day off and let you do their job. In short, I am going to tell you how I did it and how you can too, and (maybe) have as much fun as I have doing O.R..

***Robert E. D. (Gene) Woolsey
Professor of Mathematics
Director, OR/MS Program
Colorado School of Mines***

Gene Woolsey is the director of the Management Science/Operations Management Program at the Colorado School of Mines. In order to graduate from this program, a student must do a *Pro Bono Publico* project for a company or agency that, at least, gets used, and preferably saves money. Any student, before or after graduation, that has, in one year on one project saved his or her company or agency one million dollars at present worth is given a diamond stickpin. Verified savings from this plan now are in excess of **\$811,715,918.00**. He is past international president of The Institute of Management Sciences (now INFORMS). He is the first recipient of the Harold Larnder Prize for Distinguished International Achievement in Operations Research. He has, personally, graduated more people into the profession of O.R./M.S. than anyone alive or dead. One of the areas of research in which he participated effectively doubled the world supplies of Lithium. He is the editor emeritus of the *Production & Inventory Management Journal* (17,000 circulation in 125 countries), (2) *Interfaces*, the practice Journal of INFORMS, (3) *The Journal of Operations Management*, (4) *The Transactions of the Institute of Industrial Engineers*, and (5) *The Colorado School of Mines Quarterly*

of Science and Engineering. He has held, or still holds presently, adjunct or visiting teaching positions at seven other colleges or universities in four countries, four of which are still active. He has written eight books in Management Science/Operations Management, Production Scheduling, Assignment & Distribution, Linear Programming, and Operations Research and Engineering Design Using Geometric Programming. He has over one hundred published papers. For the past decade he has worked *Pro Bono Publico* for any religious group or government agency of any government of sufficiently conservative, capitalist form with which he politically agrees. For this work he has been given the Logistics Badge (Honorary) of the Israeli Air Force for logistical work done for them, and awarded the Commander's Medal, the Outstanding Civilian Service Medal, and the Distinguished Civilian Service Medal of the United States Department of the Army. He was also elected a "Colonel of the Regiment," for the 115th Engineers. In 1999 he was given the INFORMS award for the Teaching of OR/MS Practice.

WHAT IS GENE WOOLSEY REALLY LIKE?

Gene Woolsey is a successful, witty, pompous ass. He is short, fat, bald, and looks like the second vice president of a Midwest Kiwanis Club that sings in a barber shop quartet.

Biographical Sketch From the First Arnoff Lecture - May, 1992

Robert E. D. (Gene) Woolsey has a B.A. and M.A. (Mathematics) and a Ph.D. (Mechanical Engineering) from the University of Texas at Austin and is a Professor of Mathematics and Director of the OR/MS program, Colorado School of Mines. He is Editor of ***Production and Inventory Management*** and a Past President of The Institute of Management Sciences. Professor Woolsey has held adjunct professorships at the University of Waterloo, Canada, Instituto Tecnológico de Monterrey, Mexico, and University of the Witwatersrand, Johannesburg, South Africa and he has been a Distinguished Visiting Lecturer at the United States Military Academy, West Point. Professor Woolsey was a recipient of the Harold Larnder Memorial Prize for Distinguished Civilian Service by The United States Department of The Army. For the past decade he has worked pro bono for any government of a sufficiently conservative, capitalist form with which he politically agrees. For this work he was decorated by the government of Israel. Professor Woolsey is retired, undefeated, as Editor of ***Interfaces*** and the ***Transactions of the Institute of Industrial Engineers***. He is a principal gadfly to the Operations Research Society of America (ORSA) and The Institute of Management Science (TIMS) academic community for more practical utility and fun in the profession. Professor Woolsey is witty and not known to suffer fools gladly. Even his friends admit his pomposity, but that he is a uniformly undull speaker. Professor Woolsey's principal aim: to graduate the entrepreneurs of tomorrow so the socialists have someone to tax, and graduate people who have had as much fun doing MS/OR as he has.

Extracted From:

"Lecturers Preach What They Practice"

OR/MS Today, p. 12, August, 1993.

Robert E. D. (Gene) Woolsey, professor at Colorado School of Mines, delivered the first E. Leonard Arnoff Memorial Lecture on Practice in the Management Sciences at the University of Cincinnati.

Arnoff was co-author of the first book in operations research with Wes Churchman and Russ Ackoff. In addition, Arnoff was a long-time employee of Ernst and Whinney, and dean of the College of Business Administration at the University of Cincinnati. This lecture series is sponsored by the Department of Quantitative Analysis and Operations Management at the University of Cincinnati and Omega Rho International Honor Society for operations research, management science, and related areas.

Woolsey delivered the first address to a large evening crowd of approximately 200 operations research professionals, faculty and students. Visitors from Indiana University, University of Kentucky and Ohio University attended. His talk was entitled, ***"Success in MS/OR – How to Do it in Spite of Your Education"***.

The many experiences as an applied operations researcher and consultant that Woolsey conveyed had one major underlying theme: MS/OR professional must become intimate with the nuances of each application setting and not overlook simple, practical solutions to a problem or opportunity. Woolsey also enlivened five classes in the College of Business Administration during the day with his wit, humor and no-nonsense approach to MS/OR.

The TIMS Visiting Lecturer Program also supported this lecture.

The Arnoff Lecture Series is intended to provide a forum to display and recognize excellence in the practice of MS/OR and to bring MS/OR professionals together. ORSA and TIMS members in Cincinnati, Dayton, Lexington, and surrounding areas are encouraged to attend future lectures.

Call (513)556-7140 if you would like to be placed on the mailing list (ground mail or email) for future Arnoff lectures.

“Woolsey Wisdom”

Portfolio, University of Cincinnati, College of Business

Administration, Volume 3, p. 16, Spring/Summer, 1992.

“Principal aim: To graduate the entrepreneurs of tomorrow so the socialists have someone to tax, and people who have had as much fun doing MS/OR as I have.”

--Excerpt from the resume of Robert E. D. (Gene) Woolsey, professor of mathematics and director of the Operations Research/Management Science Program at Colorado School of Mines.

If you thought the fields of operations research (OR) and management science (MS) had no lighter side, you’ve obviously not had the pleasure of spending an hour or so with the charismatic and colorful Gene Woolsey. Over 300 students, faculty, and business professionals had this unique opportunity last May when Woolsey visited Lindner Hall at the invitation of Omega Rho International Honor Society, Operations Research Society of America and The Institute of Management Sciences Visiting Lecturers Program, and CBA’s Department of Quantitative Analysis and Operations Management.

Woolsey spent the day speaking to CBA classes, followed by an evening public lecture entitled, ***“Success in MS/OR – How To Do It in Spite of Your Education”***. The lecture was a memorial tribute to his friend and colleague, former CBA Dean E. Leonard Arnoff.

The self-proclaimed “Principal gadfly...for more utility and fun in the profession,” recounted highlights of his professional experiences and offered advice to future OR/MS practitioners in the witty style for which he is so well known. “He delivers the best of everything,” remarked on student who heard Woolsey in class, then returned for the evening lecture. “I laughed from the beginning to the end of his lectures. And I came away knowing a lot more than I did when I arrived.”