

**POMS**

**CHRONICLE**

1ST QUARTER 2004

**IN THIS ISSUE**

<b>President's Message</b>	<b>1</b>
<b>POMS Chronicle Editorial Team</b>	<b>2</b>
<b>From the Editor</b>	<b>3</b>
<b>Letters to the Editor</b>	<b>3</b>
<b>What is the True Meaning of POM Education One Perspective</b>	<b>5</b>
<b>POMS Members in News</b>	<b>6</b>
<b>Investigating Operational Failures in Healthcare</b>	<b>7</b>
<b>POMS Elections Results</b>	<b>8</b>
<b>Inventory Rationing and Shipment Flexibility For Direct Market Firms</b>	<b>9</b>
<b>POMS New Appointments</b>	<b>10</b>
<b>Where Did Becky Go? Thoughts on the OB/OM Interface in Service Operations</b>	<b>11</b>
<b>Drivers of Internet Purchasing Success</b>	<b>13</b>
<b>The Marketing-Operations Management Interface: Product-Process Innovation Mini-Conference in Park City Utah</b>	<b>15</b>
<b>Operations, Strategy, and Technology: Pursuing the Competitive Edge (New Book)</b>	<b>17</b>
<b>POMS Cancun Meeting Activities</b>	<b>18</b>
<b>Upcoming Conferences and Call for Papers</b>	<b>19</b>



**Aleda Roth**

**President, POMS 2002-2003.**

Distinguished Mary Farley Ames Lee Professor

Kenan Flagler Business School

University of North Carolina Chapel Hill

aleda\_roth@unc.edu

Two years ago I assumed the role of President of the Production and Operations Management Society and now my term has ended. This period has been a very busy time for POMS, and I am very proud of all our accomplishments, the momentum we have created, and most of all the energy and enthusiasm of our membership. Our membership has grown significantly. As I close out my service as President, I want to share some thoughts with you.

First, I wish to express my deepest gratitude to the POMS Board members who have served with me, the home office staff, and all the other volunteers who have devoted their time, wisdom and talents to improve our society. Without such dedication, the many initiatives that we put forth over the past few years would not have been possible. Importantly, your elected officials and volunteers share my passion and enthusiasm for unifying and nurturing our profession under the POMS umbrella. Through the vibrancy of the POMS leadership and the volunteers' spirit, we have accomplished some amazing things, and together, we share a strategic vision of POMS' role in shaping our professional identity. For me, the best part of my service has been working with the POMS leadership team to tackle strategic challenges and with the many volunteers to create value for our members. A special thanks goes to the many dedicated volunteers who have worked on the POMS's annual and international meetings and on special committees and assignments. Many challenges remain, however, and I hope that you will let your volunteer spirit emerge in supporting your professional society. POMS stewardship is totally dependent upon engaging volunteers like you. I am delighted to welcome the newly elected POMS leadership – President-elect, Kasra Ferdows and Board members, Joe Blackburn (V.P. Finance), Cheryl Gaimon (V.P. Member Activities), Hirofumi Matsuo (V.P. Australasia), Charles Corbett (Secretary), Hau Lee (Board Member), Uday Apte (Board Member), and Sven Ax-sater (Board Member).

## EDITORIAL TEAM

*Editor:* **Rohit Verma** University of Utah, Phone: 801-585-5263. (rohit.verma@business.utah.edu).

*Associate & Feature Editors*

**Sal Agnihotri**, Binghamton University (agni@binghamton.edu): **Scheduling, After Sales Service, Product Support**

**Humberto Cantu**, Monterrey Tech, Mexico (hcantu@itesm.mx): **International Issues**

**Lori Cook**, DePaul University (lcook@depaul.edu): **POM Education**

**Craig Froehle**, University of Cincinnati (craig.froehle@uc.edu): **E-Operations**

**Vidyaranya Gargeya**, The University of North Carolina at Greensboro (vbgargey@uncg.edu): **POM Education**

**Susan Meyer Goldstein**, University of Minnesota (smeyer@csom.umn.edu): **Health Care Operations**

**John Goodale**, University of Oregon (jgoodale@LCBmail.uoregon.edu): **Service Operations**

**Ken Klassen**, Brock University (kklassen@brocku.ca): **Service Operations**

**John Kamauff**, Loyola College (jkamauff@loyola.edu): **POM Practice**

**Lalit Johri**, Asian Institute of Technology (lmjohri@ait.ac.th): **Strategic Management/POM Interface**

**Pranab Majumder**, Duke University (majumder@duke.edu): **Environmental Operations**

**Debashish Mallick**, University of Minnesota (dmallick@csom.umn.edu): **Product Development**

**Larry Menor**, University of Western Ontario (lmenor@ivey.uwo.ca): **Operations Strategy**

**Leslie Morgan**, University of Utah (mgtlm@business.utah.edu): **Operations/Marketing Interface**

**Gerhard Plaschka**, DePaul University (gplaschka@allgrp.com): **Customer Value Management**

**Taylor Randall**, University of Utah (acttr@business.utah.edu): **POM/Accounting Interface**

**Rachna Shah**, University of Minnesota (rshah@csom.umn.edu): **Lean Manufacturing**

**Rajiv Srivastava**, Indian Institute of Management (rks@iiml.ac.in): **International Issues**

**Srinivas Talluri**, Michigan State University (talluri@msu.edu): **Supply Chain Management**

**Don Wardell**, University of Utah (mgtgdgw@business.utah.edu): **Quality Management and Six Sigma**

**Jacob Wijngaard**, University of Groningen (J.Wijngaard@bdk.rug.nl): **POM Problems, Models, Systems, People**

**Kum Khiong Yang**, Singapore Management University (kkyang@smu.edu.sg): **International Issues**

*POMS Chronicle is published four times a year by the Production and Operations Management Society to serve as a medium of communication and to provide a forum for dialogue among its members. Contact POMS Executive Office for subscription and advertisement information*

**Dr. Sushil K. Gupta,**  
*Executive Director-POMS*

*Professor*  
*Decision Sciences & Information Systems*  
*College of Business Administration*  
*Florida International University*  
RB250

11200 Southwest, 8th Street  
Miami, FL 33199, USA  
Phone: 305-348-1413  
Fax: 305-348-6890  
Email: poms@fiu.edu  
Web: www.poms.org

**POMS Membership Information is available at:**

POMS Website: www.poms.org  
or  
Professor Chelliah Sriskandarajah  
Associate Executive Director  
poms@utdallas.edu

Submit feature articles  
news & announcements  
and other information of  
interest to POMS members  
to the Editor Rohit Verma

**Electronic submissions are  
strongly encouraged**

Electronic copies of current and past issues of  
POMS Chronicle are available at:

**www.poms.org**



## FROM THE EDITOR

It gives me great pleasure to present Vol. 11, No. 1 issue of the POMS Chronicle. In addition to news and information about POMS activities, this issue also contains opinion pieces, research translations, book review, and other interesting materials.

I am delighted that this issue includes Professor Skinner's comments related to Professor Gary Thompson's opinion piece published in previous issue (Vol. 10., No. 2) of POMS Chronicle. Building on this momentum, I hope you will also consider writing a "letter to the editor" in one of the upcoming issues. I also invite you to consider sharing news about POMS members and about various events/activities which might be of interest to operations management community. As always, I'm looking for feedback and for new ideas to incorporate in the Chronicle.

Many thanks to Aleda for her leadership and energy during her 2 year term as POMS President. I especially appreciate her enthusiastic endorsement of POMS Chronicle.

With upcoming POMS conference in Cancun, its time for me to stop writing and start looking for my beach- (oops) "formal" attire.

Until then,

Adios

### Rohit Verma

Editor, POMS Chronicle

Associate Professor and Thayne Robson Fellow

David Eccles School of Business

University of Utah

Phone: 801-585-5263

Fax: 801-581-7214

Email: [rohit.verma@business.utah.edu](mailto:rohit.verma@business.utah.edu)

## LETTERS TO THE EDITOR

Professor Gary Thompson's (Cornell University) article in POMS Chronicle 4th Quarter, 2003 issue contained much useful advice for operations management researchers. He recognized the pressures doctoral students face in improving their competence in doing research, their dilemma created by limited time and funds, combined with the need for "proving" their hypotheses beyond doubt. Therefore they design their research to be narrow, simple, provable, and thereby often irrelevant or of little use. The same phenomena guide faculty researcher caught in the tenure process and Professor Thompson points out the powerful dominance of our institutional performance and reward process that drive this behavior.

*My own view is that business schools that develop great reputations for useful, relevant research have in fact developed promotion systems that reward research which indeed influence and assist managers, give negative weight to tight irrefutable and unimportant research projects.*

While probably the institutional processes, structures and leadership are key influencers, the individual researcher can (and many do) break out of the box by setting their own standards for doing research. They start with real important, BIG problems. They analyze why the problem is a problem and hasn't been solved. This leads them to more fundamental and deeply lodged premises held by managers, which are wrong and create the problem. This can be so important and so exciting that the researcher breaks out of the box which confines the ordinary researcher to mediocrity which most inevitably recognize late in their career.

### Wickham Skinner

James E. Robinson Professor

of Business Administration, Emeritus

Harvard Business School

[wskinner@saturn.caps.maine.edu](mailto:wskinner@saturn.caps.maine.edu)

*President's Message ... from page 1*

Second, I am very excited about increasing diversity of thought in our profession. As I described in the last issue of the *POM Chronicle*, there is no single paradigm of POM. In a business economy marked by ceaseless and self-generated change, describing and analyzing complex POM-related problems through multiple lenses contributes to our intellectual base. It also fosters systems thinking and the continuous learning. Thus, our profession is constantly being redefined and shaped by the problems and needs of business practice. Because POMS membership represents a diverse and international group, we are most fortunate in that we can draw from a broad spectrum of ideas and methodological approaches. To that end, POM knowledge is enhanced and strengthened by triangulating the results of rigorous research drawn from three core methodologies: analytical modeling, empirical science and in-depth case studies. Like a three-legged stool, I believe that each is necessary and none alone is sufficient for building a rigorous and relevant POM knowledge base and pedagogy. Together, these approaches act to cultivate our collective ability to envision several scenarios rather than bet the farm on one view of the POM future.

Third, since operations management is now recognized as an important cornerstone to business education and global business practice, the criticality of building a worldwide community of scholars has increased dramatically over the past decade. Attesting to this are the strong ties that we have formed with the European Operations Management Association (**EurOMA**) and The Japan Society for Production Management (**JSPM**). The value-added for building professional networks is captured in the 2004 POM-Cancun meeting call for papers:

*"The expanding constellation of operations management has grown along several dimensions. It is no longer just about manufacturing, no longer just about control, and no longer just about internal operations. Modern operations managers deal at the strategic, tactical, and operational levels in the world networks of products and services."*

The above quote is profound and in my opinion, requires that POMS continually search for new venues to engage members in discussion and debate. One major benefit of POMS is this: POMS' singular focus is to represent the profession of operations management worldwide. In doing so, POMS has the flexibility to forge relationships with other organizations to strengthen our discipline and the responsibility to put the proverbial stake in the ground as the advocate for the role and practice of operations management. Our annual meetings offer academics and practitioners the opportunity to engage in meaningful face-to-face dialogue on new and emerging research and teaching topics important to POM. The 2<sup>nd</sup> World Conference on POM – Cancun represents our international membership base and enjoys the largest participation ever. The mix of program and social events at Cancun illustrates how POMS creates a wonderful backdrop for member interaction. Beyond the conferences, however, POMS members can communicate with each other through the active participation in the POMS Colleges, *Journal*, *Chronicle* and the *POMS Online*. I encourage you to use any of these venues as appropriate, to share with us any ideas that you may have on improving member communications and enhancing our POM community. Rohit Verma, Editor *POMS Chronicle* and Raju Balakrishnan, POMS' webmaster want to hear your news, various items of academic interest, information about jobs/upcoming events, book reviews, and other items that you might wish to share with our community. I also encourage you to submit high quality academic research to *POM Journal*. The new *POM Journal* organizational structure has been put into place to strengthen the journal's quality and visibility.

I conclude my message by sharing with you the some of following new POM developments and initiatives:

- First, I am pleased to welcome Dr. Chelliah Sriskandrajah, Professor, University of Texas, Dallas, Texas as the Associate Executive Director of Production and Operations Management Society (POMS). Chelliah will assist Sushil Gupta, Executive Director, in the running of POMS day-to-day operations. As you can imagine, with the expansion of POMS membership and the increasing number of new initiatives, POMS needed additional home office support and backup. Gabe Bitran and his team investigated a number of options for adding capacity to POMS home office and recommended Chelliah to the Board.
- Second, Chelliah Sriskandrajah, Roger Schmenner, John Buzacott, and Tomislav Mandakovic are working with Sushil Gupta to review the POMS constitution and bylaws for currency and make recommendations to the Board. Of course, any changes to the POMS constitution require a majority vote by the membership. We are returning to a one-year term for the Presidency.
- Third, I have asked Janice Carrillo to form an ad hoc committee of the Board to propose a 'POMS Code of Professional Conduct.' Working with Janice are Board members Sven Axsater, Uday Apte, and Ed Anderson. One important role of a professional society is to establish standards and roles of professional conduct. Other professional societies, such as the Academy of Management, have such written statements. If you would like to provide input, please contact Janice directly.
- Fourth, POMS is establishing a Fellows initiative to recognize outstanding contributors to operations management. I requested that Marty Starr form a Fellows Committee and develop criteria and a process for bestowing honors on our exemplar colleagues. The first POMS Fellows will be announced at POMS-Cancun along with the Wickham Skinner Award and Ciber Award winners.
- Fifth, Marshall Fisher and Ananth Raman, POMS Supply Chain Management College Co-Presidents, will host the first SCM College Invited Sessions as well as the business meeting at Cancun. Service College Co-Presidents also have the first SC Invited Sessions, a business meeting, and other activities at Cancun. The POMS Colleges are planning a number of future activities, so be sure that you sign up formally to be included. You can now join POMS College online ([poms.org](http://poms.org)) or by contacting Sushil Gupta, POMS Executive Director. We are also investigating the possibility of establishing a third POMS College on Innovation and New Product/Service Development.
- Finally, mark your calendars for April 2005 when the 16<sup>th</sup> Annual POMS Meeting will be held in Chicago. Please contact Jim Gilbert, VP Meetings if you would like to volunteer and support the Chicago program team.

As I pass the baton of my professional stewardship to incoming POMS President Gabe Bitran, I know that our organizational legacy will remain in great hands. As I sign off now, I thank you personally for your support and enthusiasm. It was an honor and privilege to represent you these past two years.

**Aleda Roth**

## WHAT IS THE TRUE MEANING OF POM EDUCATION: ONE PERSPECTIVE

**The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires. — W. A. Ward**

**Education is what remains after one has forgotten everything he learned in school — A. Einstein**

**To teach is to learn twice — J. Joubert**



**Lori Cook**

POMS Chronicle, Associate Editor  
Assistant Professor  
Department of Management  
DePaul University  
Email: lcook@depaul.edu  
Phone: (312) 362-5203



**Vidyaranya Gargeya**

POMS Chronicle, Associate Editor  
Associate Professor  
The University of North Carolina at Greensboro  
Email: vbgargey@uncg.edu  
Phone: (336) 334-4990

Imagine you, an educator in production and operations management (POM), are at a gathering of colleagues from non-business departments across your university, social friends from your neighborhood, or any such group, and this is your first opportunity to meet the individuals in the group. As the circle goes around and people are introducing themselves through the usual, name & occupation, it suddenly is your turn. You say, “My name is insert your name” and “I teach Production and Operations Management at insert location.” Upon completion of your introduction you immediately encounter a moment of silence and the proverbially blank stares. Has this ever happened to you? Based on our experience, we are pretty sure that many of us teaching/researching in the POM area have gone through this routine.

Next, you proceed to tell the circle of newfound friends what it means to be a POM educator. After a lengthy description of the “the class starts with strategy moves onto product design & process selection, supply chain management and then of course we must plan and control the supply chain.” By the time you are finished with the various descriptions the group has dwindled down to a few or at least the group’s interest has been reduced to a few yawns.

You ask yourself why does it often seem so difficult to explain what is involved in POM education. After all, doesn’t everyone already know about the transformation process? As you reflect, even you grow weary as you start discussing the intricacies of the POM course. Next, you start to wonder how it is possible to cover so much “crucial” information in just one quarter or semester. Finally, it occurs to you that maybe this is why the students often appear frightened on the first day of class.

Take another situation. You may have been asked by an industry executive how many operations degrees and/or programs at the undergraduate and graduate level are in existence? On the surface this seems to be an easy question. However, as you start to investigate this simple question you will find that it is not so simple after all. Where do you even go to find this information?

There are many additional complicating factors that have to be considered. This may be due to the fact that the subject matter of Production and Operations Management may be taught in business schools and engineering schools. Also, POM could be taught in and as several sub disciplines, namely, production management, manufacturing management, production control, operations management, operations research, management science, industrial engineering, etc. So why is it so difficult to explain what we teach in the POM discipline? There may be several plausible explanations to this conundrum.

- Is it because of the sheer magnitude of topics that may be discussed in an operations course? For example, consider The OM Encyclopedia on the POMS website (This excellent resource is a fifty-five page encyclopedia of OM terms from Arthur V. Hill). Trends come and go, but the core operations material never changes.
- Is it because you have various disciplines teaching the operations course? For example do you have an Industrial Engineering (IE) or Operations Research (OR) faculty member teaching operations at your institution? Depending on the discipline some may place a heavier emphasis on the theoretical concepts.
- Is it because so many of us are domain experts and have not been formally trained to educate others? Many outside the university setting are unaware of this little known fact.
- Is it because many schools are not preparing PhDs to teach? This is an essential fact when you consider that most new PhDs will go to non-PhD granting institutions where the focus is on teaching. As an educator is it your obligation to educate yourself on the adult learning process?

Where do we go from here? The Production Operations Management Teaching Initiative will develop a vision for the role that the Production Operations Management Society can play in improving teaching in the operations management profession.

*POM Education ... from page 5*

This mission will be led by the POMS Education Committee and accomplished through sharing of best teaching practices and dissemination of materials through the POMS journal, website, and conferences.

We trust that this column, thus far, has raised more questions than it has provided answers. This was not an accident. It has been done by design. We started off this discussion with the question: What is the true meaning of POM Education?

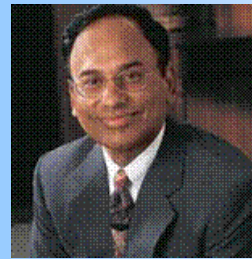
The intent of this column is to initiate a discussion forum and create an open dialogue about POM education. We encourage you to share your experiences and best practices that can be applied across the spectrum. You may share your thoughts and ideas through submission of an article.

Consider some of the following questions/issues:

- What is the gap between what we are teaching and what industry thinks we should be teaching?
- How do we link to current industry practices?
- Should we jump on the latest industry trends or bandwagons (Supply Chain Management, ERP, Six Sigma, etc...)?
- What are the challenges in teaching POM to undergraduate and graduate students?
- What is the impact of the diverse student populations?
- How do you incorporate the demographics into your course?
- Are there some techniques and tips that ensure success in teaching POM?
- What are some of the classroom dilemmas and how can they be resolved? (We expect our contributors to propose an issue/problem-oriented classroom scenario and discuss how the issue/problem can be resolved).
- What are current academic integrity issues related to a POM course (with or without the usage of computer based in-class and out-of-class examinations/assignments)?
- What are the best practices in testing (in-class and out-of-class, with or without the use of technology)?
- How should POM educators link teaching (at undergraduate and graduate levels) to research?
- How should the POM educator integrate service discussions with manufacturing content material when teaching an introductory course in POM?
- Can the subject matter of POM be the "link language" between Marketing, Finance, Accounting, Human Resources Management, etc.?
- How does a POM educator "walk the tight rope" of being a researcher, teacher, and practitioner (including university service)?

**As with any good question, you will likely end up raising more questions. Well, now it is your turn. We want to hear from you.**

## POMS MEMBERS IN NEWS



**POMS congratulates  
Dr. Yash Gupta for being named as  
the new dean of  
Marshall School of Business,  
University of Southern California.**

Professor Gupta's service to POM Society includes:

- VP for publications for three years
- Program Chair for the 1993 POMS meeting in Boston
- Plenary speaker at the 1992 POMS meeting in Orlando
- Author of four papers in the POM journal

For the past five years, Dr. Gupta has been dean of the University of Washington Business School, where he revamped the undergraduate and graduate curricula and boosted fundraising by 400 percent. He also was instrumental in starting a number of new degree and certificate programs, including the country's first Ph.D. in technology entrepreneurship.

From 1992 to 1999, before joining the University of Washington, Dr. Gupta was dean and professor of management in the College of Business Administration of the University of Colorado at Denver. He is credited with helping that business school to become one of the fastest growing in the state and cites among his successes: faculty externships, mentorship for students, and the integration of technology, international business and entrepreneurship programs. In recognition of his contributions, he was given the distinguished service award by the Regents of the University of Colorado.

Dr. Gupta has received numerous honors and awards. In 1996, he was ranked the No. 1 production and operations management scholar in the country (according to an article published in *Journal of Operations Management*).

He is a distinguished member of "Who's Who Worldwide" and is listed in the "Who's Who Registry of Business Leaders." He is the author of more than 100 articles published in refereed journals.

Dr. Gupta earned a bachelor of science in engineering from Panjab University (India) in 1973, a master's degree in production management from Brunel University of West London in 1974 and a doctorate in management sciences from the University of Bradford (England) in 1976.

INVESTIGATING OPERATIONAL FAILURES IN HEALTHCARE



**Anita Tucker**  
 Assistant Professor  
 Wharton School of Business  
 University of Pennsylvania  
 Email: tuckera@wharton.upenn.edu  
 Phone: (215) 898-5872

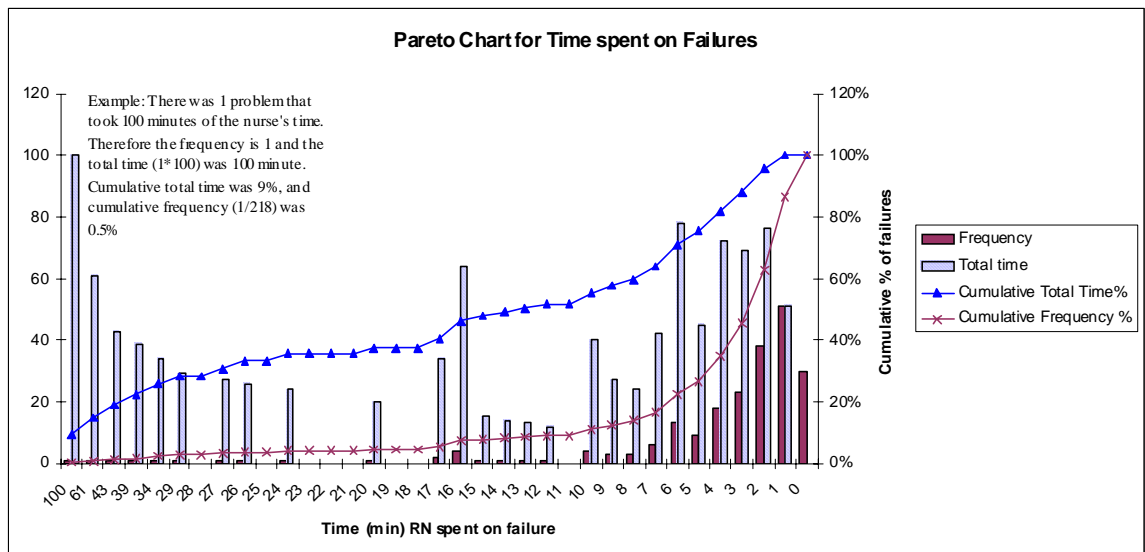
Mrs. Jarvis, the patient in bed #1 room 411 at Mountain View Hospital, was left unattended for over two hours while recovering from an invasive surgery the previous day. A difficult mix of patients prevented a straightforward assignment of nurses to patients by blocks of rooms. Consequently the assignment board, which showed which one of the seven nurses was designated to care for each of the 40 patients on the floor, was complicated and hard to read. As a result, the assigned nurse misread the board and mistakenly thought another nurse was caring for Mrs. Jarvis. This misinterpretation was cleared up only by chance when the nurse commented to the charge nurse about her light load. Although the patient suffered no harm as a result of being ignored for several hours, the situation could have had more serious consequences if the patient had taken an unobserved turn for the worse.

Poor work systems, rather than incompetent or negligent care providers, are often cited as the cause of medical error or low quality of care. With a similar focus on systems, we studied hospital nurses to understand how front line employees respond when failures in work systems disrupt patient care (Tucker, Edmondson, & Spear, 2002). Our goal is to understand how organizations can learn from these small, daily failures and improve their work systems—before faulty systems result in more harmful events.

We spent 239 hours shadowing 26 different nurses at nine hospitals and recording detailed information about their work activities. These data were coded using an iterative, grounded theory approach to develop a database of 194 operational failures and nurse response to these. Inter-rater reliability between the author and an independent rater for failures (0.81) and response type (0.88) indicated substantial agreement (Landis and Koch, 1977). The hectic pace of nursing work and concern about influencing

the nurses' behaviors precluded asking questions while observing a nurse. Therefore, after the observation period we conducted 60-minute interviews with thirteen nurses to help clarify our observations.

What we found sheds insight into how organizations can leverage their front line employees' experiences with operating failures to improve work systems. First, nurses encountered a large number of small problems that they worked around. Cumulatively, these obstacles accounted for an average of 41 minutes of nursing time per 8-hour shift (Tucker, forthcoming). As shown in the Figure, 35% of the failures accounted for 82% of the cumulative time nurses working around failures. This contradicted the commonly accepted Pareto Principle, which states that a relatively small number of problems—usually 20%—cause the bulk of the damage. Thus, our data suggested that to improve work systems, managers and employees must address a wide range of smaller problems rather than limiting problem solving attention to only a few high impact situations.



Second, 61% of the problems we observed crossed departmental boundaries, which made it more difficult for nurses to individually remove underlying causes. The need to negotiate with other functional groups, such as physicians and central supply, highlighted the importance of managers being directly involved with daily activities. This finding underscores the importance of focusing on the overall system, rather than on individual functions within the organization. For example, Deming recognized that many problems occur at functional interfaces and consequently recommended that boundary spanners be identified on all process maps and cross-functional teams be used to solve problems (Deming, 1986). Unfortunately, many nurses we interviewed stated that their managers did not want to hear about small problems, perhaps because the notion of empowerment combined with a wide span of managerial control resulted in nurse managers who were stretched thin attending to other matters such as hiring, scheduling, or large scale projects.

.. healthcare ... from page 7

Third, nurses quickly worked around failures, which had the unintended negative consequence of hiding the impact of failures from people essential for solution, such as managers, doctors, and employees from problem-originating departments. Nurses typically did not recognize these incidents as opportunities for improvement and therefore "incident reporting databases" designed to gather information regarding frequency and impact of failures will not capture these seemingly small, but frequent events. This inability to discern which failures warrant further investigation underscores the value of clear guidelines for raising awareness about such issues. For example, the PLAN-DO-STUDY-ACT (PDSA) cycle, as well as control charts and other quality management tools, are designed to identify problems, uncover causes, and eliminate them.

What can managers and employees do to break this cycle of non-improvement? We have several recommendations.

First, employees must recognize that although their efficient work-around behavior enables them to meet the daily hassles, it contributes to the stream of problems that they face.

Second, managers must demonstrate a commitment to resolving work system failures, which will help create confidence in employees that it is worth their time to raise awareness about improvement opportunities.

Third, employees must feel safe discussing errors and problems, not only ones commit themselves but also those made by powerful others—especially when they work in another department. It requires constant attention to remove myriad sources of operational failures, but doing so can create a unit where everyone pulls together to improve their work systems, which can increase patient safety as well as create a more productive and satisfying work environment.

These lessons are especially true in healthcare, where many different medical specialties interact to provide patient care, highlighting the importance of developing problem solving methods that strive to find global, rather than local, optimum and provide employees tools for resolving cross boundary failures.

Deming, W. E. (1986). *Out of the Crisis*. Cambridge, Mass: MIT, Center for Advanced Engineering Study.

Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 33(1), 159-174.

Tucker, A. L. (forthcoming). The Impact of Operational Failures on Hospital Nurses and Their Patients. *Journal of Operations Management*.

Tucker, A. L., Edmondson, A. C., & Spear, S. (2002). When problem solving prevents organizational learning. *Journal of Organizational Change Management*, 15(2), 122-137.

## POMS: ELECTION RESULTS

March 24, 2004

Dear Colleagues:

I am pleased to announce the results of POMS elections. The terms of officers and board members begin at the POMS Board meeting to be held in Cancun, Mexico, and will end at the POMS Board meeting in the year indicated in parenthesis.

- **President Elect (2005): Kasra Ferdows**  
Georgetown University, Washington, DC
- **Vice-President Finance (2007): Joe Blackburn**  
Vanderbilt University, Nashville, TN.
- **Vice-President Member Activities (2007): Cheryl Gaimon**  
Georgia Institute of Technology, Atlanta, GA.
- **Vice-President Australasia (2007): Hirofumi Matsuo**  
Kobe University, Kobe, Japan
- **Secretary (2006): Charles Corbett**  
University of California, Los Angeles, CA
- **Board Member (2006): Uday Apte**  
Southern Methodist University, Dallas, TX
- **Board Member (2006): Sven Axsater**  
Lund University, Lund, Sweden
- **Board Member (2006): Hau Lee, Stanford**  
University, Stanford, CA

**Sushil K. Gupta,**

*Executive Director-POMS*

*Professor*

*Decision Sciences & Information Systems*  
*Florida International University*



## INVENTORY RATIONING AND SHIPMENT FLEXIBILITY FOR DIRECT MARKET FIRMS

**Kyle Cattani**

Assistant Professor

Kenan-Flagler Business School

University of North Carolina Chapel Hill

Email: kyle\_cattani@unc.edu

Phone: (919) 962-3273

E-commerce firms have loudly proclaimed the cost advantage of the direct channel that operates without the cost of traditional “bricks and mortar” retail outlets. Less visible have been the inventory management benefits that are possible from the structure of the channel. In addition to statistical economies of scale through the pooling of demand over many geographical markets, a direct channel also allows for more subtle manufacturing and shipping flexibility with customers who are willing to wait hours or days for receipt of their product.

### Super Saver Shipping

Most e-commerce providers have found that customers can be charged for quicker delivery (e.g., air shipment). Amazon.com has determined that customers might also be provided a discount for possibly delayed delivery. Amazon provides free shipping to those customers who are willing to buy more than \$25 of eligible products and are willing to wait an additional 3-5 days for shipment. What’s in this deal for Amazon?

In a nutshell, Amazon is able to capitalize on the customer’s willingness to wait by using the extra time to consolidate shipments and/or to reserve critical inventory needed to fill orders for higher-margin customers. It is not just a loss leader.

Consolidated shipments arise when inventory for multiple items on a single order are stocked only at different warehouses or suppliers. A quick delivery would require separate (and expensive) shipments from the different suppliers to the customer while a consolidated shipment would allow the items to be consolidated (through less expensive bulk shipments) at a single location before shipment to the customer.

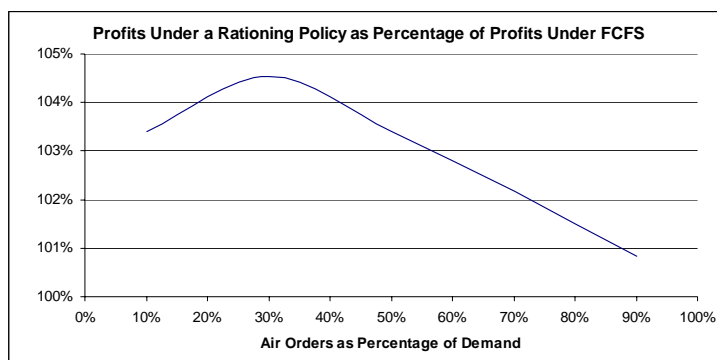
### Wait! Don’t Ship That Last Unit <sup>1</sup>

How might firms like Amazon benefit from reserving critical inventory for higher-margin customers? We developed a simple model to explore some of the inventory benefits that are possible with a distribution channel found in companies like Amazon.com or the numerous other firms that have experienced phenomenal growth in the recent past by using a direct channel. We used a relatively simple framework from queuing theory for analysis of some of the tradeoffs that arise in e-business supply chains. In the study we developed a framework to explore an answer to the question: Can expected profits increase by rationing inventory? That is, should some orders be backlogged even before inventory is depleted?

We modeled a firm whose policy is to ship orders on a first-come, first-served (FCFS) basis and to backlog orders if there is no available inventory. However, we assumed that customers who want fast (e.g., air) shipments are unwilling to be backlogged (i.e., the customers go elsewhere). A possible unintended result of such a FCFS policy is that it may lead to reduced profits if the customers who are willing to wait have lower-margin orders than the customers who are unwilling to wait. We compare the FCFS policy with a rationing policy that backlogs orders from the lower-margin customers even before inventory levels reach zero. We call this alternate policy rationing since when inventory levels are low, they are rationed to highest-margin customers. This rationing policy will increase profits compared to the FCFS policy.

### Show Me the Data

We compared the policies using an experiment with 4,000 different values of the various model parameters. Figure 1 illustrates the average performance of a rationing versus a FCFS policy as the proportion of demand from higher-margin (air) orders varied in our experiments. The greatest benefit occurs with moderately low percentages of air orders. With very low percentages, the benefit of rationing is limited to the few air orders, while with high percentages, there are few low-priority orders to act as a buffer for the high-priority orders. Overall, the results showed a clear advantage for the rationing policy compared to the FCFS policy.



We also explored scenarios where it might be appropriate to ship by air (at higher cost) an order for ground shipment in order to gain flexibility through postponement. In particular, if the cost of air shipments is not significantly greater than ground shipments, a rationing approach could backlog ground shipments in the event of low inventory and ship them when inventory was more available. By using air shipment the customer wait time is reduced; perhaps even to the extent that the customer receives the product when it was expected.

### When Will I Get My Stuff?

Most e-commerce firms currently offer their customers a spectrum of delivery choices. These choices are presented to the customer as

*Inventory rationing ... from page 9*

different delivery options, e.g., one- or two-day air, or ground. A different and more customer-oriented way to present the choices would be as a specification of the product arrival date (and perhaps time) with its corresponding price. The customer could choose to receive the product in 24 hours (at the highest price), 48 hours, or any other time frame, with prices declining for longer time frames. This presentation would provide roughly the same result to the customer as the current presentation of shipping-mode choice but in a way that encourages the e-commerce firm to take more ownership of the entire supply chain, including transportation. While this may be perceived as complicating the management of the e-commerce firm, it also can create opportunities. For example, if a customer requests a longer (and cheaper) lead time, the e-commerce firm can send the delivery via less expensive ground transportation. Or, if supply is temporarily constrained, the firm could exploit the flexibility of the lead time by waiting a few days and then ship the order by one- or two-day air. The customer then receives delivery when expected and, while the firm incurs extra expense for transportation, it may be able to achieve higher service levels for other more profitable customer orders (such as for air shipment), thereby increasing profits.

As e-commerce matures and concerns over profitability increase, these more subtle inventory flexibility opportunities will allow some e-commerce firms to operate more efficiently and provide a means for sustaining a cost advantage over their e-commerce competitors.

- 1 Cattani, K. D. and G. C. Souza. 2002. Inventory rationing and shipment flexibility alternatives for direct market firms. *Production and Operations Management*. 11 (4) 441-457.

### POMS College of Supply Chain Management

#### Board Members

- Ananth Raman, Harvard
- Marshall Fisher, Wharton
- K.K. Sinha, Minnesota
- Karen Donahue, Minnesota
- Jay Swaminathan, UNC Chapel Hill
- Eric Johnson, Dartmouth College

### POMS New Appointments

#### Associate Executive Director



**Chelliah Sriskandarajah**

Professor

Management Science and IS,  
The School of Management,  
University of Texas, Dallas

Email: poms@utdallas.edu

Phone: (972) 883-4047

Prof. Sriskandarajah's research revolves around solving various production planning and scheduling problems with the aim of making the production process more economical and efficient. Recently, his efforts have been directed towards applying theoretical results, and developing new techniques to solve problems that arise in modern manufacturing systems. His research interests lie in the general area of production planning and scheduling, machine scheduling theory, maintenance scheduling, inventory and supply chain management, group technology and performance evaluation of production systems. His articles on these topics have appeared in *Operations Research*, *Naval Research Logistics Quarterly*, *Annals of Operations Research*, *International Journal of Flexible Manufacturing Systems*, *European Journal of Operational Research*, *International Journal of Production Research*, *Journal of Operational Research Society*, and *INFOR*. He is a member of POMS, IIE and INFORMS. Additional information about his background can be found at:

<http://www.utdallas.edu/~chelliah/>

As Associate Executive Director, Chelliah will assist POMS Executive Director Sushil Gupta in running day-to-day operations of POM Society.

## WHERE DID BECKY GO???

## THOUGHTS ON THE OB/OM INTERFACE IN SERVICE OPERATIONS

**Ray Coye**

Associate Professor

Department of Management

DePaul University

Email: rcoye@depaul.edu

Phone: (312) 362-8710

Becky was a cashier at the business school food service. For many years she was a constant as various food service companies came and went. She was an organizational behaviorist's dream – she was motivated, good with customers – she remembered little details about 100's of people – she had a wonderful personality, and was extremely productive – what more could we ask? Unfortunately she worked at the interface between the forces of Organizational Behavior (OB) and forces of Operations Management (OM) and that was her downfall...we'll come back to Becky.

Service operations is a discipline that has benefited from the research and teaching efforts of individuals from such areas as traditional OM, marketing, and OB.

My degree is in OB, but early on as a graduate student I was unwillingly thrown into the OM world (you teach it or you don't pay the rent). I survived quite nicely. Based on that experience and my OB perspective, I was hired by my current institution to "humanize" the required undergraduate operations course. Shortly thereafter (1985), I started teaching service operations (SOM) and continue teaching SOM and OB regularly. Over the years, I have watched the field of service operations grow and change. In 1985, all of the articles published about service operations fit in one file folder. By 1990, it took a drawer, and now its bibliography is complex, diverse and huge.

During this journey I have watched, through my OB eyes, the progression of the field as it has matured. The following is a sense of some of the stages I have observed since my first exposure to the field in 1985. This is not a clear, simple progression, and I do not purport to be an accurate historian of the field.

At first there was a group of individuals who looked at the way operations were handled in banks, hotels, restaurants, retail establishments and other services and concluded that it was somehow different than manufacturing. This realization was supported by an era of taxonomies providing details about how services are different and why it matters. One theme emerging from this period was the notion that customer contact was problematic and should be reduced. Subsequently, we recognized that there are limits to reducing customer contact and the pendulum swung back towards a more customer-centered view. At its extreme, this consumer behavior focus – the customer can do no wrong – often relegated the employee to a subordinate position in the service encounter. More recently, however, we have seen increased attention returning to the importance of employees as integral parts of service delivery systems. Perhaps the customer even comes second.

So where does that leave us? I suggest that we are at a point where we are recognizing more clearly the importance of considering employee human factors in our work in service operations. It's not surprising that it has taken awhile – after all, the OB folks have been studying the nature and consequences of human behavior in organizations for decades. Despite this, it wasn't until 1999 that Jeff Pfeffer and John Veiga wrote their influential piece in the Academy of Management Executive - "Putting people first for organizational success" – demonstrating that paying attention to people really did matter. So how does it look in the journals to which we turn for our inspiration/source material/ and theoretical foundations? A very unscientific review of available issues during the last three years in three such journals - POM, Journal of Service Research, and International Journal of Service Industry Management - was interesting. Attempting to sort out those articles that in some way explicitly addressed employees as part of the delivery system revealed the following: of 37 articles appearing in the Journal of Service Research, 6 were clearly OB related; in the International Journal of Service Industry Management, 9 of 80 were OB related; and in POM, 1 of 96 was OB related.

Other evidence shows some increased awareness of such issues – for example, the 2002 JOM article by Cook et.al. summarizing their session on human issues in service design at the 2000 DSI meeting, and the Nov. 2002 issue of Academy of Management Executive focusing on service effectiveness. In their introduction to the special AME issue, Bowen and Hallowel point out numerous avenues for research that could help address our lack of knowledge on how employees fit in the delivery system. Recently, Colleen Barrett of Southwest Airlines, in an interview in BizEd from AACSB, strongly emphasizes the importance of putting employees first if we want to provide what she calls "positively outrageous service".

Despite these invitations to future work at the OB/ OM interface - it isn't easy to do. I've experienced a variety of challenges. I'm going to pick on our esteemed POMS Chronicle editor here because we have worked together successfully. Frankly, Rohit and I do not see the world the same way. Recently we have been working with several hundred interview reports from service providers describing customer behaviors that cause the encounter to be unpleasant for the server. While I am glorying over the richness of the descriptions in these reports, Rohit is wondering how on earth we are going to quantify and analyze this mess of words. I'm not suggesting that this kind of collaboration is easy – simply necessary. Success often depends on the individual ability to "listen as though you might be wrong especially when you know you're right" – in other words practicing the art of suspending judgment and identifying our mental models so we can understand how they limit the way we each interpret what we see.

... Continued on page 12

Where did Becky Go ... from page 11

The second challenge is to avoid getting caught in the trap of paying excessive attention to insignificant details. For some years, I worked with colleagues on a major effort to look at corporate activity around employee involvement. The first paper published contributed interesting information regarding what was really going on in the corporate environment. By the time we finished looking at the data every which way, I'm not sure what the last paper added to the field. Sure the results were significant, but I don't really know who gained from that knowledge. Sometimes we forget, at least in the OB world, that statistical significance only addresses one of many threats to validity in our research. There's a big difference between significant and meaningful.

A third challenge has to do with career progression. While working across disciplines is challenging and, I believe, extremely worthwhile, it is, nonetheless, potentially risky. The combination of fewer publication outlets, skeptical reviewers and colleagues who question one's commitment to a single field is somewhat inhibiting. The landscape is, however, improving. Journal editors have enhanced opportunities in traditional outlets by scheduling special issues and encouraging more diverse approaches to our scholarly efforts. This type of cross-discipline work, especially in services, is also seen in journals with an industry focus, e.g. medical administration, hotel/restaurant, and travel. As our colleagues become more familiar with methodologies used in other fields and their potential application in cross-discipline work, there will be fewer obviously uninformed reviews. This increased familiarity should also enhance the legitimacy of such research to those making promotion and tenure decisions. While it is always incumbent on the candidate to support the quality of his/her published work, it is clearly easier when your colleagues in, for example, both OB and OM, are comfortable with the quality of publication outlets and knowledgeable about the importance of cross-discipline work.

The fourth challenge — **where did Becky go??**

Becky was fired — primarily because line length (an OM issue!) trumped all the positive OB issues involved. People preferred to wait much longer periods of time in her line just to interact with her. Despite the fact that she worked more quickly than the other cashiers, her line was always longer and often disruptive to the flow of customers in the facility. Becky refused the manager's request to stop being so friendly with people — the disagreement escalated, and Becky was gone.

This last challenge, then, is for us to do a better job of integrating the OM and OB aspects of service management in ways that students and practicing managers see the relevance and application of what we do. Frankly, I'm not sure how to go about this. I can't count the number of times I have sat in one of our meetings at POMS/DSI/ Academy of Management — wherever — talking about the research/practice interface and walked out of the room only to observe a hotel supervisor doing something ineffective, inefficient or downright foolish. The challenge, as I see it, is strengthening the bridge between the world in which that supervisor operates and our world represented by the research we do. We know a fantastic amount about how delivery systems operate and about customer behavior in those systems and our knowledge of the employee role is expanding. Our greatest challenge is to find new and better ways to get people to use what we know.

(A version of these remarks were presented at an invited session at the 2003 POMS annual meeting — names have been changed).

**POMS College of Service Operations**

**Board Members**

- |                           |                     |
|---------------------------|---------------------|
| Mike Pinedo, NYU          | Uday Apte, SMU      |
| Dick Chase, USC           | Rich Metters, Emory |
| Nelson Fraiman, Columbia  | Rohit Verma, Utah   |
| Scott Sampson, BYU        | Noah Gans, Wharton  |
| Craig Froehle, Cincinnati | Aleda Roth, UNC     |

**Don't forget**  
**April 30 - May 3, 2004**



**2nd World Conference on POM**  
**15th Annual POM Conference**

**Cancun**  
Mexico

## DRIVERS OF INTERNET PURCHASING SUCCESS

**Ken Boyer**

Departmental Editor, POM Journal  
Associate Professor  
Eli Broad Graduate School of Management  
Michigan State University  
Email: boyerk@msu.edu  
Phone: (517) 353-6381

**John Olson**

Assistant Professor  
Department of Management  
DePaul University  
Email: jolson@depaul.edu  
Phone: (312) 362-6061

**Andrea McGee**

Ph.D. Student, Marketing & Supply Chain Mgt.  
Eli Broad Graduate School of Management  
Michigan State University  
Email: mcgee@busmsu.edu  
Phone: (517) 353-6381

The development of the Internet as a business tool over the past 5 years has been phenomenal, with e-commerce being hyped as a potential tool for streamlining the supply chain. Many of the details of how the technology can or should be employed are difficult to see, due to a focus on the larger picture. However, as the technology has matured, one of the primary factors that separate the winners from the losers is the way in which the technology is implemented and operated on a daily basis.

One of the most powerful tools for catalyzing process change throughout the supply chain has been information technology that allows organizations to track, share and analyze data quickly and comprehensively. But not all technology has realized its potential because small firms rarely have the financial or human resources to implement systems or solutions that have generally been custom tailored to individual applications. In contrast, the Internet provides a more universal and easier to implement format that streamlines inter-organization communication without the major barriers of hardware investment or software customization.

Of specific interest is the ways that purchasing agents utilize the Internet to reduce cost, improve quality, and speed up deliveries. Estimates for the exchange of goods and services on-line range from \$2.7 trillion (Segal 2000) to \$7.29 trillion in 2004 (Orenstein 2000). Leading organizations in the automotive, consumer goods, and convenience store distribution industries have recently pursued major Internet purchasing initiatives. Thus, a vital question is: what are the operational processes that most effectively utilize this technology?

**STUDY OVERVIEW**

This study examines the ways in which a successful major Internet retailer of commodity office supplies, Office Depot, has used the important relationships between web site design, employee work environments, Internet strategy, and purchasing performance in a business-to-business (B2B) setting embedded within their Business Services Group. Office Depot provides an excellent opportunity to study on-line purchasing patterns for several reasons:

- They have been selling on line for over 5 years, with annual Internet sales of \$2 billion in 2002 and growing, upon which they make a profit. In effect, the Internet portion of sales within the Business Services Group is the only growing area of Office Depot in the last couple of years.
- They sell to a broad cross-section of businesses, from Fortune 500 firms using customized applications that are representative of B2B processes to small businesses that are more characteristic of B2C transactions.
- They stock approximately 8,000 commodity type products

Data was collected from a survey of 401 Office Depot Internet customers who had placed at least one order using the Office Depot web site within the previous year. The customers selected represent relatively small companies (Office Depot already had extensive data on their larger customers) and included 18 different industries.

**Office Depot Supply Chain**

As of March 29, 2003, their supply chain for delivering customer orders consisted of: 24 domestic delivery centers, 13 regional call centers, over 1900 trucks and 2400 drivers. This network of resources first began being developed for the Business Services Group in the early 1990s when customers placed orders by mail, phone or fax. As Office Depot developed the Internet as a sales channel, this network formed the backbone to which website development and marketing were added. Fundamentally, Office Depot latched onto two key concepts regarding last mile supply chains earlier than most competitors. First, they realized that the supply chain was of critical importance – the orders were not going to pick and deliver themselves. Second, Office Depot also recognized that the Internet offered ways to streamline the sales process, but that this new ordering method had to be carefully designed in order to gain customer acceptance.

Customers adopt new technologies or processes in an effort to improve performance. We found that performance improvements for Office Depot customers associated with utilizing Internet purchasing do occur in the two key areas of reduced costs and increased accuracy. Customers generally perceived fairly small improvements in the cost of both the activities associated with purchasing and the cost of training new personnel.

... Continued on page 14

... Internet purchasing ... from Page 13

However, the responses regarding the accuracy of billing and the availability of supplies/materials were dramatically higher. The study results generally indicate that online purchasing helps companies track orders, expenditures and receipts more precisely, rather than directly lowering the cost of materials or the cost of labor to purchase supplies. In other words, online purchasing helps lend a degree of certainty regarding what has been ordered, what is in stock and what is incoming.

**MEASUREMENT SCALES**

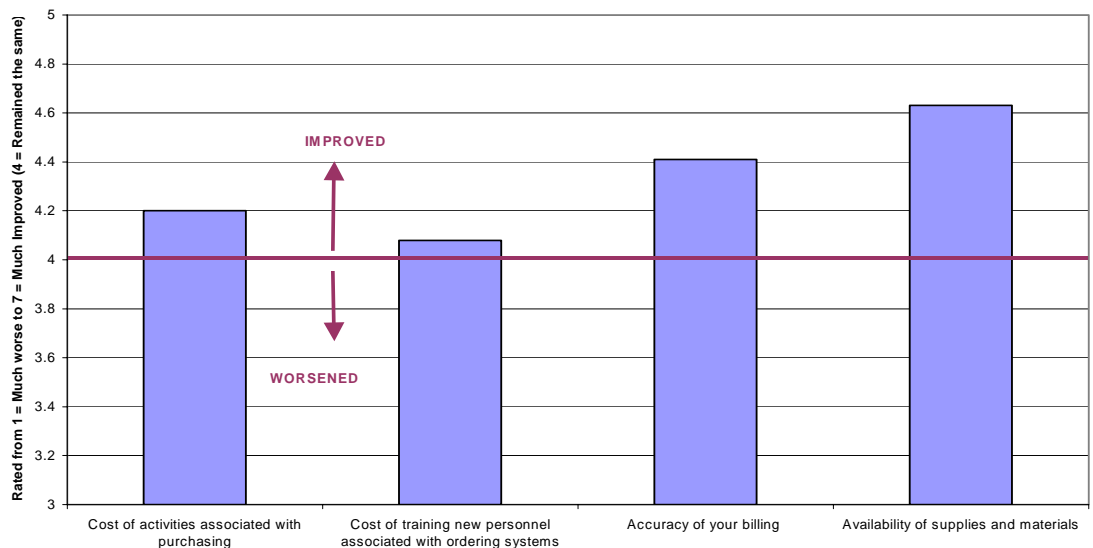
Performance improvement can be predicted by examining factors in two main areas: (1) company specific factors of strategy and environment and (2) Internet specific factors that relate to the site design and technology (see Figure). These findings are important for both sides of the procurement relationship. Organizations that hope to implement Internet purchasing for improved performance need to ensure a clear strategy and an environment that is conducive to the implementation. Managers of companies involved with Internet initiatives on the sales side can learn some lessons to improve outreach to customers to influence adoption and use of the sales web site.

**Strategy factors:** Clearly specifying strategic goals is a key first step in effectively implementing and utilizing any new technology. Specific strategies that seek to employ the Internet to reduce cost or improve delivery in terms of order accuracy or customer service are effective.

**Environmental factors:** Environmental factors, such as comfort level with computers, the existence of a technology champion, the amount of technical support, and the amount of employee computer usage positively impact performance improvements. It is important for companies to have a leader or champion who sets Internet policy and provides guidance for the ways in which the technology will be used, and for employees to gain experience with the new technology.

**Site factors:** Performance improvements are driven by a web site that is easy to use, has accurate information, and provides reliability of transactions. A successful website needs to be easy to navigate, have accurate information and load quickly. Although it is possible, and perhaps tempting, to include pictures, sounds and graphics on a site, the focus should be on basic site functionality and accuracy of data and transactions.

**Internet factors:** Organizations must work to instill a sense of confidence in their workforce for using the Internet by training employees and providing opportunities for workers to develop skills and confidence with technology. Customers will improve in their ability to use the ordering system over repeated orders, but supplying Internet companies must also work to find ways to speed up and simplify this learning process for their customers. The results of the study showed that the strategy, environmental, site and Internet factors shown above all correlated well with ability to reduce and track costs for purchasing organizations. Regressions were used to predict performance with significant results and the R<sup>2</sup> values of 0.13 and 0.21 for two different dependent variables. The measurement scales utilized in the study have been shown to be reliable and valid



measures that can be applied in other research settings. Further details on methodology, analysis and findings are available in the original POM journal article.

**CONCLUSION**

The primary factor in determining e-commerce success/failure over the next 5-10 years will be the degree to which this new tool can be seamlessly integrated into the supply chain to provide streamlined purchasing, operations, and fulfillment. Usage of the Internet for purchasing does lead to performance improvements, provided the customer has clear strategic goals, an environment that supports technology adoption and that the supplier has a web site that is ease to use and provides accurate information and transactions.

Editor's Note: Ken Boyer, with G. Tomas Hult (Michigan State University) and Mark Frohlich (Boston University), has co-authored a book on direct to consumer supply chains. This book presents strategies and data from several companies, including Office Depot. The book is titled **Extending the Supply Chain: How Cutting-Edge Companies Bridge the Critical Last Mile into Customers' Homes** (ISBN #0-8144-0836-2) and will be published by AMACOM in mid-August, 2004.

## THE MARKETING-OPERATIONS MANAGEMENT INTERFACE: PRODUCT-PROCESS INNOVATION MINI-CONFERENCE IN PARK CITY UTAH



**Leslie Morgan**

Associate Editor, POMS Chronicle  
Assistant Professor  
David Eccles School of Business  
University of Utah  
Email: mgtlm@business.utah.edu  
Phone: (801) 581-3823

Despite the fact that we emphasize to our MBA's the importance of coordination, integration, and cross-functional teams, most business schools are hanging on to their functionally silo'd structures. And the importance of cross-functional coordination in business schools is no less important on the research front than in our teaching. In fact, the POMS journal's new editorial structure includes explicit departments for cross-functional work (one for models and analysis, and another for empirical research and practice). When we consider the relationship between operations and the other traditional functional areas, the interface between POM and Marketing has surfaced as a crucial area for coordination.

During the last weekend in February, while over 20 inches of fresh powder fell from the sky to add to the already epoch snow of 2004 in the Wasatch mountains, forty researchers gathered in Park City, Utah to discuss a particular facet of the interface between operations and marketing. The First Annual Marketing-Operations Interface Mini-Conference was hosted by the Product-Process Innovation Research Group from the David Eccles School of Business at the University of Utah. The focus of this year's conference was on Product and Process Innovation. About half of the participants were from Marketing, and about half from Operations.

The format of the conference allowed for mornings spent discussing current research topics, and afternoons out skiing or snowshoeing in the fluffy white powder. The result was a stimulating experience, fostering ideas about new research directions and forging a connection with the great outdoors in the wintry mountains. One participant connected with the outdoors a bit more than the rest of us...

Taylor Randall (U of U) on Dave Reibstein's (Wharton) exhilarating encounter with the fluffy white stuff:

*"Dude,.... The fall was first class. Streaking through a powder field only to go head over heels down the fall line of the mountain. I could read the bottom of his skis. He was purple and turquoise going in and all white coming out. It took 3 hours for the snow to melt from his beard."*

On the academic side, the sessions included discussions of current research related to product, service, and process innovation, as well as broader discussion of the interface between marketing and operations. Papers were organized into sessions on Competencies, Innovation, and Product Variety and Planning. The first paper of the conference was presented on Friday morning in an outdoor tent by Glenn Schmidt (Georgetown) with Karl Ulrich as discussant. Despite being able to see the speaker's breath in the chilly venue, a lively discussion ensued and Karl Ulrich shared some insights into his approach to

evaluating manuscripts as he evaluated the contribution along 5 dimensions (phrased according to this author's recollection):

- 1) is the question/topic relevant,
- 2) is the focus reasonable,
- 3) are the salient variables identified – i.e., are these the variables we really care about,
- 4) is the problem well modeled and analyzed, and
- 5) are the predictions consistent with practice and/or are the insights of value.



**Bill Moore took several participants into the Uintah Mountains for an afternoon of snowshoeing. Several were found soaking in the hot tub at the conference hotel afterwards!**

After relocating to the great indoors, the conference resumed with many equally interesting papers and energetic speakers, frequently followed by discussants who had adopted Karl Ulrich's framework for evaluating the work.

The papers presented included both modeling/analytic work, and empirical research. Furthermore, the broad scope of current work being undertaken in the area of innovation was obviated by the diverse foci of the papers presented, which included product-oriented work, process-oriented work, and services-oriented work. Larry Menor (Western Ontario) presented research co-authored with Aleda Roth, focused on service innovation. Larry and Aleda stimulated a great deal of discussion as they highlighted similarities between service and product innovation, opening new

... Continued on page 16

avenues of thought for participants whose research efforts previously tended to focus on one side or the other (i.e., product-focused or service-focused). As many of us find when we teach service operations to our students, this is an area where operations and marketing are often managed simultaneously.

In addition to the regular paper sessions, Candi Yano (Berkeley) organized a panel discussion on research issues at the marketing/operations interface. Barry Bayus (UNC) started the discussion off with an outline of why marketing is more important than operations – first referencing the HBR article “Marketing is Everything” as a case in point. Vish Krishnan (UT Austin) countered with arguments for the clear dominance of operations... after all, marketing is really just advertising and sales; everything else actually falls within the domain of operations management. Of course, the introductions from each side of the marketing/operations interface were all in good fun, and successfully jump-started a broader conversation of each area’s contributions, each side’s shortcomings in modeling the other side, gaps in the existing interface research, and important directions for future research at the marketing/operations interface.

A fourth panelist, D. Sudharshan (Kentucky) helped to guide the ongoing discussion and also addressed the issue of MBA curriculum. The participants discussed approaches to offering students a more integrated (and realistic) view of the business world, and current efforts being undertaken by some schools to get away from the currently dominant functionally-focused approach.

The conference was a great success, with participants taking great advantage of the opportunities to explore new issues at the marketing/operations interface, and to explore the splendid mountains of Utah. The organizers from the Product Process Innovation Research Group at the University of Utah (expertly led by Bill Moore and Rohit Verma) would like to thank this year’s participants and also encourage others to consider joining us next year for our Second Annual meeting in Park City!

Conference Website with copies of papers/presentations:

<http://www.business.utah.edu/~mgtrv/ppi2004.htm>

## 2004 POMS BOARD MEMBERS AND OFFICERS

### *President*

**Gabriel Bitran**, MIT

### *Past President*

**Aleda Roth**, University of North Carolina Chapel Hill

### *President-Elect*

**Kasra Ferdows**, Georgetown University

### *Vice-President, Finance*

**Joseph D. Blackburn**, Vanderbilt University

### *Vice-President, Education*

**Edward Davis**, University of Virginia

### *Vice-President, Meetings*

**James Gilbert**, Rollins College

### *Vice-President, Member Activities*

**Cheryl Gaimon**, Georgia Institute of Technology

### *Vice-President, Publications*

**Paul Kleindorfer**, University of Pennsylvania

### *Secretary*

**Charles Corbett**, University of California, Los Angeles

### *Regional Vice President, Americas*

**Antonio Rios-Ramirez**, Monterrey Tech.

### *Regional Vice President, Euroafrica*

**Luk Van Wassenhove**, INSEAD

### *Regional Vice-President, Australasia*

**Hirofumi Matsuo**, Kobe University

### *Board Members*

**Edward Anderson**, University of Texas, Austin

**Uday Apte**, Southern Methodist University

**Sven Axsater**, Lund University

**Janice Carrillo**, University of Florida

**Hau Lee**, Stanford University

### *Founder & Editor-In-Chief, POM*

**Kalyan Singhal**, University of Baltimore

### *Chair, Council of POMS Presidents*

**Martin Starr**, Rollins College

### *Executive Director*

**Sushil Gupta**, Florida International University



**NEW BOOK: OPERATIONS, STRATEGY, AND TECHNOLOGY: PURSUING THE COMPETITIVE EDGE (JOHN WILEY PUBLISHING)****AUTHORS: ROBERT H. HAYES, GARY P. PISANO, DAVID M. UPTON, AND STEVEN C. WHEELWRIGHT**

Twenty years ago two of these co-authors wrote *Restoring Our Competitive Edge: Competing through Manufacturing*. While drawing from many of the same concepts and philosophies of ROCE, this is a substantially different book because the world of operations management is vastly different from the world we wrote about then. The kinds of challenges facing managers are different and more complex, and new technologies have arisen to help them deal with those challenges. We think the audience for this book will be similar to that for "Restoring...", which means academics who teach about operations strategy, consultants who advise companies about it, and thoughtful practitioners.

A quick review of the environment in which ROCE was written will illustrate how much has changed since then, and why a new book was needed. In the early 1980s, U.S. manufacturing had just begun to accept that it was vulnerable to foreign competitors. A number of key industries, including Integrated Circuits—the pride of American technology, were rapidly losing share to foreign imports. The common explanation was sobering: these imported products provided, in the eyes of customers, higher quality, better reliability and lower lifetime costs, better value for the money, and greater customer responsiveness. In short, the principle weapon that foreign companies were using to attack world markets was sheer manufacturing and engineering prowess.

So that first book focused on the basic levers for improving manufacturing competitiveness, and on what could be learned from observing the management practices of America's two fiercest competitor nations: Germany and Japan. It discussed how a company could go about developing a manufacturing strategy that could provide it with a specified competitive advantage. Then it showed how such a strategy could be implemented through an interlocking and self-reinforcing set of decisions involving both structure (e.g. capacity, outsourcing, facilities, and technology) and infrastructure (e.g. policies/systems involving planning work, human resources, performance measurement, and organization).

U.S. companies embarked on a flurry of operations improvement programs that reflected many of these concepts during the 1980s, and over the next two decades their competitive situation slowly improved. Their defect levels, costs, and delivery times went down, sometimes to near-Japanese levels, and the rate of new product introductions increased. As a result, they began regaining market share in many key industries.

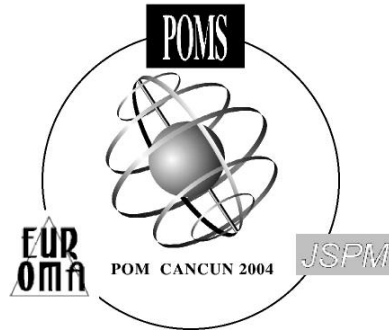
Yet, despite all these improvements, by the early 21st century America's merchandise trade deficit had risen back to over \$400 billion a year. Even more disturbing, this growing deficit increasingly reflected the increasing import/outsourcing of services—even high-tech services such as software development, design, and engineering. Clearly the new approaches to improving cost, quality, flexibility, and responsiveness had not proven sufficient. In fact, study after study indicated that only about a third of all the operating improvement programs undertaken were regarded as successful. For a time the realization that all was not well was hidden by the widespread economic boom of the 1990s, which lifted profits and asset values far above their long-term levels.

At the end of that decade, however, worldwide recession, sagging profit margins, and stock market declines undermined managers' sense that they were on the right path to sustained profitability and growth. It was time, once again, to think carefully about the foundations of competitive success, and the role that operations can play in that success.

Now, however, the "problem" no longer is confined to the U.S and a few European countries; it has become worldwide and even more complex. The increasing power of information technology, and particularly the World Wide Web, has introduced a new dynamic into world competition, allowing companies to both coordinate their internal operations more effectively and communicate directly with external customers and suppliers. This has encouraged more outsourcing as well as the redefinition of long-accepted corporate boundaries, and led to experiments with new ways of organizing internally as well as externally. Corporate networks—so-called virtual organizations—emerged that sometimes were able to restructure markets and modes of competition.

In short, corporate success in this new world economy demands a fresh look at strategies, and particularly at strategies for managing operations. As a result, this book seeks to make two major contributions. First, it updates ROCE's coverage of capacity planning and outsourcing/vertical integration, based on the latest academic research and corporate experience. Similarly, the treatment of operations strategy is expanded to include a comparison of "one best way" approaches, such as the "American System" of mass production and the Japanese ideal of "lean manufacturing," with a contingency approach that could incorporate either—or something entirely different—in different circumstances. It also expands on the earlier, more static treatment of operations strategy, based on positioning and priorities, to include a dynamic element that incorporates the impact of new capabilities (an extension of what has come to be called the "Resource-Based View of the firm") and permits consideration of alternative "improvement trajectories."

Second, reflecting the massive changes in technology and market structures that have taken place in the past two decades, it addresses a number of topics that were touched on only briefly in ROCE but which have become much more important since that book was written. Finally, it rejects simple prescriptions for "improving" operations and describes various alternative approaches through which improvement can be achieved and the different management structures and styles required for each. Our thesis is that the world of 21st century operations is different in so many ways from that of the 20th century that much of what we have been teaching about it is has less relevance for an increasing number of managers. The challenge today for operations academics and managers alike is both to understand when changes in traditional approaches are called for, and how to craft entirely new approaches—based on different assumptions and criteria—in an increasingly complex and evolving world.



## POM Cancun 2004

Operations Management 2004:  
The Expanding Constellation  
2nd World POM Conference  
and the  
15th annual POMS Conference.

**DETAILS AT: [HTTP://WWW.POMS.ORG/POMSWEBSITE/MEETING2004/POM\\_2004A.HTML](http://www.poms.org/pomswebsite/meeting2004/pom_2004a.html)**

### POMS College of Service Operations Informal Social Activities

There has been interest expressed in organized social activities in conjunction with the POMS Cancun meeting. The following are some options:

- Tour Chichen Itza before the meeting (Thursday, April 29th). Chichen Itza is the most famous Mayan ruins in Mexico. Bus tours leave Cancun in the morning and get back in the evening. One reputable tour company is Gray Line (<http://www.graylinecancun.com/>). Their "Classic Chichen Itza" tour is \$45 and includes transportation, lunch, and a tour guide.
- College of SOM dinner Friday evening (April 30). All who can join us for dinner at a local restaurant should sign up at the conference registration desk by noon that day. We will locate a good restaurant and make reservations. We will meet at about 6:00 pm for departure. Bring your credit card, and we will try to find prices in the mid-range. (Prices in Cancun seem to vary widely.)
- For those staying after the conference, Gray Line tours also offers a "Jungle Tour" that sounds like fun. It is \$45 and lasts 3 to 4 hours. See their website for more information.

For additional details contact

Scott Sampson (ses3+poms@sampson3.byu.edu)

Uday Apte (uapte@cox.smu.edu)

### EMERGING SCHOLARS PROGRAM

The Production and Operations Management Society is committed to fostering the development of young professionals pursuing academic careers in the field of OM, and has thus commissioned this special session of the conference. The program's goal is to provide junior OM professionals with career-building advice in developing excellence in their personal programs of teaching, research, and service in Operations Management. Participation in the program is by invitation only. In order to foster discussion and interaction the program is limited to 15 participants.

The program will consist of a set of guided discussions on topics relevant to academic career building in the field of Operations Management. The discussions will cover a broad range of topics such as (but not limited to): excelling in the classroom, new methodologies for research and teaching, book writing, charting and managing a winning research stream, choosing publication outlets, dealing with lazy editors, dealing with impertinent reviewers, doing research in non-PhD granting universities, funded research, professional service – getting involved with what and when, service opportunities in the POMS, consulting, juggling your activities – doing it all, setting priorities, etc.

#### Hosts/Moderators:

Jack Kanet, University of Dayton  
Geoff Parker, Tulane University

#### Discussion Leaders:

Bernhard Fleischmann University of Augsburg  
Jim Gilbert, Rollins College  
Sushil Gupta, Florida International University  
Bob Hayes, Harvard University emeritus  
Willy Herroelen, Katholieke Universiteit Leuven  
Mike Magazine, University of Cincinnati  
Marty Starr, Rollins College  
Wick Skinner, Harvard University emeritus

**Conference website contains additional details about other special programs and events**

## UPCOMING CONFERENCES AND CALL FOR PAPERS

## JOURNAL SPECIAL ISSUES

**Journal of Operations Management**

**Special Issue: Innovative Data Sources for Empirically Building and Validating Theories in OM**

**Submission Deadline:** December 1, 2004.

For additional details contact the guest editors:

Diane H. Parente (dhp3@psu.edu) and

Thomas Gattiker (gattiktf@muohio.edu).

**OR Spectrum**

**Special Issue: Revenue Management**

**Submission Deadline:** March 31, 2005.

For additional details contact the guest editors:

Alf Kimms (alf.kimms@bwl.tu-freiberg.de) and

Robert Klein (rklein@bwl.tu-darmstadt.de).

**International Journal of Integrated Supply Management**

**Special Issue: Real-Time Supply Chain Optimization & Execution**

**Submission Deadline:** June 30, 2004.

For additional details contact the guest editors:

Zhenying Zhao (zzhao@rhsmith.umd.edu) and

Chien-Yu Chen (cchen8@gmu.edu).

## CONFERENCES

**Junior Faculty Interest Group (JFIG) Paper Competition**

The goals of the paper competition are to encourage research among junior faculty and to increase the visibility of research conducted by junior faculty within the fields of operations research and management science.

**Submission Deadline:** June 1, 2004

For additional detail contact the JFIG President:

Pranab Majumder (majumder@duke.edu)

**Teaching Manufacturing Strategy Workshop**

The Center for Excellence in Manufacturing Management will hold a three day program on "Teaching Manufacturing Strategy" on July 7-9, 2004, at The Ohio State University Fisher College of Business in Columbus, Ohio. Professor Terry Hill, Oxford University and William Berry, The Ohio State University, will conduct case teaching sessions designed specifically for educators, using manufacturing strategy cases.

For additional details contact  
Jackie McClure (614) 292-3199

**First Conference of the POMS College of Service Operations****Operations Management in Services: Theory and Practice**

Columbia University

December 3-4, 2004

Service industries, such as retailing, financial services, hospitality, and transportation make up an important and growing part of developed economies. Operational problems in these industries have also led to a range of exciting new developments in both the theory and practice of operations management. New research topics that are associated with the management of service operations include revenue management, the integration of consumer behavior into process design, the control of operational risk, and the globalization of information-intensive services. In many schools, service operations and its associated problems are considered to be a core part of the operations management curriculum.

**Program**

The conference will feature presentations from a mix of academic and industry leaders. Keynote speakers from industry include Tom Cole (Vice Chair, Federated Department Stores), Mel Gunewardena, (MD, Goldman Sachs), and Raj Nigam (Senior VP, Merrill Lynch). Distinguished academic speakers include POMS President-Elect Professor Gabriel Bitran (MIT), Professor Morris Cohen (Wharton), Professor Uday Karmarkar (UCLA), and Professor Michael Pinedo (NYU). A dinner on the night of Thursday, December 2nd will precede the conference, and one and one-half days of presentations will be offered on the 3rd and the morning the 4th.

Those interested in presenting at the conference will need to send a title and a 2-page extended abstract of their paper. Further details will be announced on the College's website:

<http://64.226.112.21/pomswebsite/POMSColleges/CollegesServiceOper.html>

**DEADLINE FOR SUBMISSION:** September 10, 2004

**EARLY REGISTRATION FEE:** \$150

**ORGANIZING COMMITTEE**

**Uday Apte** (Southern Methodist): uapte@cox.smu.edu

**Nelson Fraiman** (Columbia): nmf1@columbia.edu

**Noah Gans** (Wharton): gans@wharton.upenn.edu

**Michael Pinedo**, (New York), mpinedo@stern.nyu.edu

**Arthur Swersey** (Yale): arthur.swersey@yale.edu