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Kasra Ferdows

POMS President

McDonough School of Business

Georgetown University

ferdowsk@georgetown.edu

"Production" in not a Blackbox

I hope you'll forgive me for using this column to share something that has bothered me in recent years. It's really just a minor irritation but it might have bothered some of you as well. Like many others, I have followed the discussions about offshoring, outsourcing, "core" and "non-core" activities, and knowledge management. What bothers me is seeing the simplistic treatment of "production" in much of these discussions: determine production inputs (labor cost, material cost, capital intensity, and so on), and you'll know what to expect as outputs. In other words, in the grand scheme of things, it doesn't really matter very much what you do inside the blackbox called "production."

Really? We—teachers, scholars, and practitioners in production and operations management—know that how "production" is managed can make a big difference. But this crucial nuance is often lost in these debates because we are seldom active participants in framing the issues, and unwittingly let this simplistic view of production persist.

Take offshoring. Moving production abroad has been a hot issue for many years. In the business literature, the central circle in this debate has been occupied by scholars in economics, public policy, strategy, and international business. These groups are notorious in treating production like a blackbox. For them, once you determine a few key external factors like wages, tax benefits, subsidies, cost of capital, and political risks, you have determined the wisdom of the move. Make a few assumptions about "transaction costs" and you have figured out how these dispersed operations affect the firm's global production network and supply chain.

No one denies the importance of these factors. But how companies run their factories (both at home and abroad) and manage their global supply chains can also make a huge difference. It is not unusual to

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Upcoming Conferences

Seventeenth Annual Conference of POMS

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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**

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

Nicole DeHoratius, University of Chicago (ndehorat@gsb.uchicago.edu): **Retail Operations**

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

Vidyaranya Gargeya, The University of North Carolina at Greensboro (vbargey@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**

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

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

Ashley Livingston, University of Utah (alb9@utah.edu): **Assistant Editor**

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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

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the Editor.**

Rohit Verma

rohit.verma@business.utah.edu

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FROM THE EDITOR

Dear POMS Members,

I am writing this editorial message with mixed feelings: Believe it or not, it has been three years since I started my term as the Editor of POMS Chronicle. It has been a great privilege to serve the operations management community in this capacity. It was a busy, sometimes bumpy, but mostly fun and exciting ride!

I would like to thank POMS Board and officers of various POMS colleges for their continual support and encouragement throughout the last three years. As editor of a news magazine, it has been my job to bug them (several times every year) — asking for information and requesting them to write articles for POMS Chronicle (so far no one has thrown a bucket of water on my head — so I guess I have not bugged them enough!).

I would also like to thank the members of POMS Chronicle editorial board. They have been a constant source of inspiration and feedback. They routinely provide ideas for improvement in addition to participating in the editorial process. Thanks team — I would not have been able to do it without your help!

Finally I must thank Jack Brittain, Dean of David Eccles School of Business, University of Utah for providing necessary support structure for the production of POMS Chronicle for the last three years.

But it is time to move on: I am honored to be elected as the Vice President for Education for POMS and my term starts in a few days (after upcoming Annual meeting in Boston). So we need someone else to lead editorial team of POMS Chronicle and to guide this magazine thru next stages of achievement.

I am VERY pleased to report that we have identified someone extremely qualified and well suited for the job: **Professor Glen Schmidt.**

Glen is currently an Associate Professor of Operations Management at the David Eccles School of Business, University of Utah. Prior to his current appointment, Glen was employed at Georgetown University. Glen has a Ph.D. from Stanford University and has published a number of articles in a variety of journals including *Production and Operations Management*.

Glen's tenure as the editor of POMS Chronicle will begin in May 2006. I trust that you will provide all your support to Glen and his new editorial team. In return, I offer you a well respected scholar as a highly motivated editor of POMS Chronicle.

Best Wishes,

Rohit



GLEN SCHMIDT

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

find cases that surprise the “experts” in these fields. When you treat production as a blackbox, it is difficult to explain why Lego (the Danish toymaker) produces toys in Denmark, Zara (the Spanish clothier) produces garments in Spain, or BMW produces cars for the US market in its plant in South Africa. But if you delve into the nitty-gritty of how design, production, and supply chain functions in these companies are managed, explanation becomes a lot easier. We, in POM, ought to get into these debates and open these blackboxes for our colleagues in other fields.

The recent debates about outsourcing and, its corollary, what are core and non-core activities in a company, are particularly disconcerting. Somehow in the last few years it has become fashionable to regard production as a non-core activity—a function that you can supposedly unbundle surgically from the rest of the company and outsource. Ask why and the typical answer you get is something like: “We want to focus on core activities—things like design, customer relations, brands—production is no longer a core activity for us.” You hear this even from some of the OEMs known for their manufacturing prowess! Many consultants and academics seem eager to concur.

I'm not questioning whether they are right or wrong, but wonder about some of the arguments behind their decision. Here is a typical argument: Investment in production is risky and running factories, especially if you have to move them to far away countries, is not easy. Outsource your production and you will not only avoid these investment risks and managerial headaches, but you will also reduce your capital employed and show a higher return on investment and improve other performance measures like sales per employee. Why bother with all the mess of running your own production if someone else can produce the stuff for you at the right cost, quality and delivery service?

This assumption misses two important points: First, “production” does a lot more than converting materials and components into finished products. It can help marketing and sales to serve customers better (for example, by fulfilling their rush orders and providing more customized products), help designers design better products (products that are easier and cheaper to manufacture), help distribution function improve delivery service levels while reducing inventories, and get suppliers closer to the company. Most important, it can be a source of competitive advantage for the company.

Second, it is usually not as easy or costless to unbundle production from the rest of operations of the company as most of these arguments imply. Outsourcing production accelerates loss of proprietary knowledge and usually pushes products faster towards the commodity

end. Outsourcing production, once it reaches a threshold, becomes practically irreversible. Furthermore, it can put the firm on a slippery slope of outsourcing more functions like engineering, design, and distribution. Just look at how contract manufacturers are turning themselves into “original design manufacturers” (ODMs) that not only produce but also design and engineer the products.

Any discussion of offshoring and outsourcing that views production only from the outside, therefore, runs the risk of missing these subtle but important points. This is a crucial oversight since offshoring and outsourcing are ultimately about what to do with production.

Even in the expansive field of knowledge management, we are not in our rightful place. In recent years many companies have initiated “knowledge management projects,” with much fanfare. Usually someone from IT, HRM, or central staff is in charge—you'll seldom find an operations manager in that role. Yet companies collect, develop, share and transfer knowledge essentially to produce and deliver better products and services. They are not in the business of producing knowledge; the entire effort is to help people in operations become more effective and productive. POM managers are the ultimate customers and arguably in the best position to be in the driver seat in these projects. Instead, they are often relegated to the back seat.

Our scholars are not much better off. Examine a typical article on knowledge management and you'll find most of its literature review consists of articles by scholars in strategy, human resource management, IT, economics and other fields—very few, if any, by POM scholars.

It is not that we have ignored this field. The late Jai Jaikumar was one of the pioneers; since then, Roger Bohn, Dorothy Leonard, Michael Lapré and Luk Van Wassenhove, Aleda Roth, to name just a few, have made significant contributions. But despite their good works, POM issues still are not receiving the attention they deserve in this literature. There are all kinds of excellent discussions—tacit versus codified knowledge, stickiness of knowledge, organizational issues in capturing and sharing knowledge, and many others—but they often don't delve into the boxes of “production,” “service delivery system,” “design,” “distribution,” or “procurement.” You'll have to read POM scholars (which include many more than the few I have mentioned above) to find detailed discussions of how the abstract notion of “knowledge” is turned into specific “production know-how” needed to perform the tasks in these boxes.

I realize all this sounds partisan, and even if you agree with me, it is not clear what we can do about it. But if there is a solution, it would certainly require combined efforts of many of us. Perhaps POMS can provide the platform to mobilize these efforts.

Kasra Ferdows

AN INTERVIEW WITH JAMES P. WOMACK: FUTURE OF PROCESS MANAGEMENT AND IMPLICATIONS FOR MANAGEMENT STUDENTS



James P. Womack is the founder and President of the Lean Enterprise Institute, a non-profit educational and research organization chartered in 1997 to advance lean production and lean thinking. Dr. Womack received a B.A. in political science from the University of Chicago in 1970, a master's degree in transportation systems analysis from Harvard in 1975, and a Ph.D. in political science from MIT in 1982. Dr. Womack was a research scientist with the International Motor Vehicle Program at MIT from 1975 to 1992. He is the co-author of *The Machine That Changed the World* (Macmillan/Rawson, 1990), *Lean Thinking* (Simon & Schuster, 1996), and *Seeing the Whole: Mapping the Extended Value Stream* (Lean Enterprise Institute 2002) and has also published a number of articles in *Harvard Business Review*.



Rachna Shah
Carlson School of Management
University of Minnesota
rshah@csom.umn.edu

Rachna Shah (RS): Can you provide a backdrop to The Machine for our readers?

James Womack (JW): We at MIT started to think about competition in manufacturing industries globally at the end of the seventies. And that was not because American or European companies had gotten worse; it was because certain Japanese companies had gotten better. So, at MIT we were trying to understand why the companies that had been quite dominant no longer seemed to be dominant. At the time (end of seventies, beginning of the eighties), the predominant explanations were that the Japanese didn't have legacy costs, that it was purely a factor of applied technology, and of course, the most common sort of explanation, that it was purely cultural. That Japan was just a unique, weird, different place where people actually liked to sing the company song. So, we decided that we should take a look.

The car industry was picked because cars were the issue of the moment; it was the most conflicted competition, car companies are big and it is very hard for governments to allow them to fail. So we at MIT formed a global network of university research teams, one for each country that had a significant car industry. At the time, it was the U.S., Britain, France, Germany, Sweden, Italy, and Japan. We did some careful analytic work on what the basis of competitive success might be and then how these different national industries compared.

In 1984, we produced a book called The Future of the Automobile, which found practically no readership. The book is very interesting; we found enormous productivity differences between the Japanese car companies and the American and European. But because the data was aggregated, it wasn't enough to counter the cultural arguments. It was a good project but it was too early and that is why I say every idea has its time.

RS: How did you go from The Future of the Automobile in 1984 to The Machine That Changed the World in 1990?

JW: We were very fortunate. At the end of that project, one of the IMVP advisory board members suggested that in order to make sense, we needed to go to the company and plant level and get much more specific about what is causing competitive advantage. So we said why don't we go out and look at all the assembly plants in the world. We hired John Krafcik, an amazing kid with perfect grades from Sloan School, to visit every motor vehicle factory on the planet and conduct a comparative assessment of why some are good and some aren't.

In essence, what we did was very sophisticated benchmarking for the time, in which we standardized what was being made. So we had a standard car that doesn't exist; it has x number of wells, it has y number of parts, it has z number of cups of paint, and so forth. And then the question was, for this plant to make the standard car, how many hours of human effort? How much capital investment? How much inventory? How much throughput time? How many mistakes, defects? One of my rules for John was that we would never include a plant in the database that he had not personally visited and verified the data. In addition to production, we did the same thing for product development, purchasing, customer relationship and management policies.

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RS: In my mind, The Machine generated a lot of excitement when it came out in 1990. Why do you think it created that kind of response and what factors do you attribute to that response?

JW: People liked The Machine because it had lots and lots of data, it described a total business system and it came out at the right time. Academics were impressed with The Machine because it has enormous amounts of data. Academics love data; they love to regress, progress, address and do most anything you can think of to do with data. Because they think that data analysis is a definitive science, and maybe it is but nevertheless, they love the data part of it. It went on B-school reading lists like crazy.

RS: Why did you choose only the five subsystems (production, product development, purchasing, customer relation, and policy management)? Why not others? Were those the only subsystems that you wanted to study?

JW: The two basic things that a business does are go from customer to concept to launch, and go from order to delivery. There might be a third cycle, which is from delivery through the life cycle to recycling in a service type business. In any case, we needed to talk about product development because that's the customer to concept to launch, production because that's how you make things, and supplier management because in the car industry, particularly in Japan, 80% or more of the work is subcontracted.

The lesson we learned early on in our examination was that Toyota was far superior to any other manufacturer in the world, but we couldn't quite say that because contractually we couldn't use company names. Many people still don't know that in Japan, Toyota has contract manufacturers assemble half of its products because Toyota does not consider assembly a necessary core activity. Thus, Toyota management's signature attribute is the very brilliant way they manage suppliers, so it needed to be discussed.

Finally, the business of how you deal with the customer is one part that had never been explored. Toyota's customer management abroad is terrible; their dealers around the world are at best mediocre. This is totally different from the Japanese experience because Toyota wants to do long-term planning with the customer because they want to build a car to spec. But the reality of the car business is that it is difficult to do it in three days, therefore you have to plan ahead. How can you plan ahead while still giving people exactly what they want? Toyota's answer is that you have a continuous relationship with your customers. Once you buy a Toyota, it is very hard not to buy another

Toyota because they take care of you, they call you, come to see you and talk about your needs, and they remember your kids' birthdays and all that. Toyota's customer management is very different and very important.

RS: What personal and professional experience helped in writing The Machine?

JW: Look, I am the classic case: If you want to talk about something new, it is better not to know about something old. My great advantage in doing The Machine is that I didn't know very much about traditional mass production. I had gone to Kennedy School (Harvard University) to study industrial policy. In 1973, the Kennedy School was full of micro economists discussing externalities and marginal cost pricing, which was interesting for about 5 minutes.

So, I went to MIT because I decided to study transport systems, which was cars, airplanes, trucks, boats. But I was still doing it from an industrial policy point of view. For example, why are the Japanese government and Japanese industry able to work so effectively but not the American government/industry. I actually completed the PhD., which was a comparative policy study on Japan, Germany and the U.S. with regard to how companies and ministries work together to try to figure out how to win.

When the car industry suddenly got in trouble they were looking around for somebody who knew a little about the car industry and I just happened to be at the right place and the right time. And the fact that I didn't know anything was actually an advantage. If I had an industrial or manufacturing engineering degree, I wouldn't have seen anything because it would be studied and normal, and I would conclude that the preference must be government policy of why GM is losing and Toyota is winning. The next stop was to go to Japan; Dan (Jones) and I spent a lot of time just walking around asking dumb questions. And it didn't take us long to figure out that Toyota was up here and most of the other guys were down here.

RS: Who do you think most influenced your thinking -- it could be an academic or practitioner?

JW: Obviously, we went off to read the classics but there was not that much available in English. The first writing about the Toyota system in English was in 1975. Until then, there had been nothing and Toyota had been working on this thing fulltime for 30 years. So, where were we influenced? By watching actual practitioners who were out there. I think the fact that I work in a language that I don't understand (Japanese) increases my visual ability; because I can't understand what the guy is saying so I just have to look. In many ways, I am self-educated.

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RS: The Machine illustrated that Toyota has superior results and Lean Thinking, your follow up book, illustrated how it achieves those results. Then why is it that the Toyota Production System has not taken hold here in the U.S.? Is it cultural?

JW: No. You could say that it is a cultural problem [phenomenon?] but I think that hypothesis gets rejected fairly quickly when you compare what a Nissan manager thought management was with a Toyota manager; you either had to conclude that Nissan managers aren't actually Japanese or this is not culturally bound. I think the real fundamental problem is what managers think management is and what it is that managers think they do. There is a deeply set idea that managers think and there is a lower order creature that does; that managers don't need to understand details because details are for small minds that get you confused and bogged down – there is this notion of managers as theoreticians.

The Toyota world is a very different world: your first day on the job as a university graduate, they take you out to show you a situation and ask you to observe for awhile and tell them what you think is wrong. The observation period might extend to 6 or more hours. Then they put you into an actual job and have you still observe and figure out what is wrong. You assemble some cars, work in an engineering office, in purchasing and meeting customers to sell some cars; Toyota rotates people around for that first year. At the end of the year you get a project; the project involves a problem and your job is to specify the problem. Specifically, they want you to outline what in the process is causing the problem, how should the process look to solve the problem and who should do what and when to make that happen.

In Toyota's view, management is just that simple and managers do standard work. Most managers think that almost by definition there is no standard work for managers because management is about dealing with anomalies, exceptions, weird situations, and thinking about the future in a high level sort of way. Therefore the real problem is why is Toyota in Japan able to take young people as managers and teach them how to be managers when the truth is they struggle very hard in the rest of the world. A little secret that you are welcome to write down is that none of the Toyota plants in the world are as good as the Toyota plants in Japan. Period.

RS: So some of it is cultural?

JW: I would call it a company-specific culture. If you are going to say it is Japanese culture then how come NEC and Nissan went bankrupt? Name some successful Japanese companies in the last ten years; you don't need a long sheet of paper to do it. Tell me why is it that Toyota

has been going from victory to victory? This is the same culture as the other guys. We think that Toyota has a really brilliant way of thinking of what management is and that is the secret ingredient, a different notion of what managers do.

RS: What makes Toyota's management style unique?

JW: Toyota takes as a given that basically nothing ever works right, even though they have the world's most stable and reliable processes. Ohno recognized that early on and said that an MRP type system would never work because it depends on feedback loops that are perfect signals with no noise, which is impossible. And the minute you get noise in the system, it starts to amplify. Ohno's solution was to build systems that have feedback loops just one step to the next and they carry this thinking into every process. In essence, they define problems at the very micro level and everyone is doing the same thing: the work team is trying to make their work area better and the area leader, the entire work area.

From Toyota's management standpoint, nobody can do that from an office because offices are worthless and what you really ought to be doing is being continuously going out, up and down and just looking. The biggest complaint that you hear from the Japanese about Americans is not about workers it is about managers who want to sit in their office and do abstract analysis of data instead of watching the actual value creation process.

In terms of organizations, there are charismatic organizations based on charismatic leadership and bureaucratic or rule-bound organizations. The Toyota system is a third deal; it is a responsibility system. Somehow they are able to teach people that the job of a manager is to continuously look for problems to solve rather than wait to be handed areas to manage.

What is the implication for management students? Here is the good news: the magic is in management; it is really important. What kind of management? Is it rule-bound management with lots of attention to authority or is it problem-solving management with a lot of attention to responsibility?

RS: In your mind, why has it taken the academic world so long to buy on to the idea? Is it because we are theory driven and need to provide evidence?

JW: Something I was thinking about today, most academics don't have much management experience. Most academics have never actually done most of these things or have done it the old fashioned way. Therefore, part of the problem is personal familiarity with the Toyota system.

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Historically, Toyota has not had connections with the academic world except on very hard technology or in hiring a few University of Tokyo graduates with the very highest IQs to work on cutting edge projects. The guiding principle in hiring them is not technical skill but their ability to survive a demanding, incredible grind. They hire few MBAs, most of the senior management in Japan have a basic engineering degree. Once hired, Toyota educates the employees in their system anyway. Lean management is equivalent to learning management; the system is designed as its own teaching system through recursive, iterative, continuing hypothesis-test-adjust, hypothesis-test-adjust iterations.

Therefore in a funny way, Toyota doesn't need the academic world, and academics sense this. It is not contempt; they ignore them because there is a disconnect between what Toyota needs from the education system and what the education system contributes. Part of the reason we did the five principles in the ([Lean Thinking](#)) book is because no Toyota person could ever tell you these; they say here is reality. They let employees figure them out from the way they teach until it becomes hard wired in their brain. The whole notion of formal education is that you start with principles and work it down to applications; Toyota starts with applications, principles are intuitive; they are never consciously stated. It is a totally different way to think.

RS: How do we get to that next stage of learning and dissemination through academic research?

JW: I am not sure about the dissemination through the academic world. There are a few isolated cases. I know you are doing some good work and there is Peter (Ward). But the real activity is in the practitioner world and there, things are not quite so dire. What I see is that once young people are exposed to the fact that management is really about continuous problem solving, an awful lot of people are able to remember it. They leave the company where they learned this and go to other companies where it is hard at first; many of them get discouraged and move on to the next thing. But I think over time real practitioners out in the field are changing, and that's good. It's just slow.

RS: You work with a lot of companies, who in your mind is close to or approaching Toyota.

JW: First off, there are different dimensions to evaluate: a company good at operations is not necessarily good at product development, and one good at product development is not necessarily good at purchasing.

So when you say, "Show me a company that's better off..." there may not be one company. But a very interesting company is Danaher, a

\$10 billion company that you never heard of perhaps by design, it is privately held and publicly traded. Owned and built by Mitch and Steve Rales, it is a staggeringly successful company. To my knowledge, it is the first American company that really got serious about Toyota that wasn't in cars and they have the complete system – production, product development system, and the purchasing system.

One of my personal projects for the moment is Walmart. Walmart thinks they are brutally efficient and that's why everyone hates them. My view is they are preposterously inefficient, in particular in what they do with human labor, which is why they are going to be in big trouble. Another one is Dell. (Michael) Dell has done one thing right: he got out of retail to sell direct at the right time. Everybody thinks Dell is wonderful and brilliantly efficient. Not actually. Dell claims it builds to order; but they do that with an eight-day order bank, and with a tremendous amount of customer steering through their call centers, which are designed to steer you to stuff they can actually make. It is an interesting system and it works very well, but is it efficient and does it actually speak to customers needs? I don't think so, but because they are making a lot of money they must be efficient.

RS: Coming back to Toyota, or the principles behind it. Is there something else after it?

JW: Looking back at history, human beings have been struggling for a real long time to try to move to the perfect process. We just didn't know that's what we were trying to do. And that's what operational managers are trying to do, trying to create perfect processes, they just didn't know it. There have been all kind of breakthroughs that typically lead to fallbacks. Some people claim that there was the craft age, then the mass production age, and now there is the lean age. That is very interesting, but it is not quite correct.

In fifteen hundred the Venetians were building galleys using continuous flow. They were incredibly sophisticated process thinkers, but nobody copied it. The French were the next people to get interested because they actually needed to do it in metal. Continuous flow in metal is more difficult because file and fit isn't going to do it, you really have to make parts that fit. It took people a hundred years to make parts that consistently fit. Ford was the first guy in history who actually had suppliers who delivered parts that actually fit. That was only in 1914.

So there has been this long trajectory of process thinking of how to move in a different direction. So when people say, "Well what comes after Toyota?" I say, "Toyota is just the current day best example of brilliant process management. This is best world-class process management, but surely there will be additional breakthroughs in process management. Toyota could fail and then we might actually have a

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pause in the action because we are deeply dependent on those guys to keep moving ahead on this process development trajectory.”

Nobody pays a lot of attention to process-focused companies unless they are making a lot of money because that is all people can see. Toyota is in the news a lot these days because they make a lot of money, the moment they stop doing it, I've got a lot of trouble. But I am hoping at some point that some other company will step forward, and the baton will be passed on. I don't know who that is, maybe it will be some Chinese guy....

RS: Is it all process management? How about other concepts like change management, reengineering?

JW: The reengineers were entirely about process management but the problem was the absence of a management model to go with process management. So, what you had was a bunch of SWAT team consultants, who could come in and rearrange things. But in absence of management to actually manage, it quickly reverted to its natural form.

Behind every sustainable process is management. A process is a highly organized thing, which is very unnatural in the world; so the natural tendency of any process is to quickly, not slowly, but quickly deteriorate to chaos. The only thing that stands between process and chaos is management. Most trends that have sustained, such as TQM, are about process management.

Let's talk about Six-Sigma. Part of Six-Sigma that is about process-capability is fantastic. The other part about how you identify projects to target and how you count the results, is total malarkey. More importantly, you've got the same problem: there is no management system in place. It is done not by managers but by independent improvement teams that show up, fix it, and go away to the next thing after reporting tremendous results. This is true for the first five minutes and then it just falls apart.

The common feature with the waves of initiatives is that they are done by an outside group that is able to tell a different group how to behave, who sort of behave that way as long as the other group is standing guard, but you can't afford that and so it goes away.

RS: Do you think that the competition American industries are facing from Indian and Chinese manufacturers is different from what we faced from Japanese manufacturers earlier? Do you think there are more serious underlying issues this time around? Can we survive?

JW: Let me tell you, what this country needs to worry about is the non-tradable part of the economy, the service industry. Everything we do

on the service side, in my humble judgment, is horrible. No Chinese guy is going to come and run our healthcare system or our airlines or our universities. All this untradable stuff is way behind manufacturing.

I believe that in manufacturing, the made-to-order customized, unique stuff will always be made here for customers here. But anything that is reasonably standardized and can be made-to-stock will be manufactured elsewhere. My recommendation is for companies to go to Mexico instead of China because it's easier to do overnight replenishments using trucks rather than boats or planes.

We see manufacturing will continue to drift south as it has been for last fifty to seventy years. Massachusetts used to make textiles, from there it went to North Carolina, then to South Carolina and then it went offshore. I think everything that is standardized routine stuff will drift to Mexico. There will still be lots of manufacturing here, but it will be the customized stuff. For this country and for operations people, the gold mine is airline, retail, healthcare and office. At LEI, we are spending all of our energy working on services, including everything from retail to logistics companies

RS: Finally, what would you like your legacy to be?

JW: Let's be philosophical or spiritual for a moment: what I see about human life is that we have this incredible miraculous thing called consciousness, that you and I are aware of things that this bottle is not aware of. The objective of human life is trying to continually raise the level of consciousness both along a spiritual and a tangible dimension. As managers in economic lives, we are also trying to raise consciousness of key processes and how to improve them. We know that working in a brilliant dynamic process makes people feel good and working in a broken process makes people feel bad.

Here is my view of life: I hope that everybody can be involved in a good process. Most people work in a broken process. Interestingly, the natural human default option of broken process is simply to blame each other. But you can never get anywhere with blame analysis. That is not the problem, the problem is at a different level. What am I trying to do, what would I like for a legacy? I would love to say that I was able to raise process consciousness to a higher level in everyday life; I really got people to think on a different plane, raise their consciousness, and move to a better process at a higher level. Will I ever achieve that? Perhaps not, but I am doing my little part. I recognize the obstacles but to get people to pause, think about what is going on here and how we could get on a different track that could take us to a higher level will be a big achievement.

CLARIFYING SERVICES OPERATIONS MANAGEMENT WITH A UNIFIED SERVICES THEORY



Craig Froehle

College of Business
University of Cincinnati
craig.froehle@uc.edu



Scott Sampson

Marriott School of Management
Brigham Young University
ses3+ust05@sm.byu.edu

"The notion of 'services' is often considered at best ambiguous, at worst misleading (Gershuny and Miles 1983; Daniels 1993). In employment, it has been used as a residual notion embracing all that is not agriculture, mining, construction, utilities, or manufacturing. Thus, the category of services includes activities of all kinds, with roots in various social structures and productive systems. The only feature common to these service activities is what they are not (Castells 1976; Stanback 1979; Cohen and Zysman 1987; Katz 1988; Daniels 1993)." - (Castells and Aoyama 1994, citations in original)

The position of services within the field of operations management has not been clearly defined nor universally understood over the years. Even though there have been many tremendous contributions to the research literature involving services and service issues, misinformation and muddiness continues to permeate teaching materials, including many operations management textbooks.

This problem is not unique to operations management, but prevails in the marketing discipline as well. Lovelock and Gummesson recently reviewed a number of marketing and services marketing textbooks, concluding that the conceptualization of what services are is inconsistent, often unqualified, and becoming more diffuse over time (2004).

A prime example of services muddiness is the common depiction of services as being intangible. Lovelock and Gummesson, as part of a larger movement discrediting intangibility as a distinguishing characteristic of services, present evidence that service intangibility is an "ambiguous and surprisingly limited concept." Their findings are cons-

-istent with observations of Laroche, Bergeron, and Goutaland that "some goods appear to be less tangible than many services" (2001, p. 26). Vargo and Lusch summarize the sentiment: "The primary distinguishing characteristic of services in relation to goods is normally considered to be intangibility. Despite the appealing nature of such a clear-cut line of demarcation, at worst it does not hold up, and at best it has little or no relevance."

Other commonly-cited distinguishing characteristics of services have likewise been discredited in recent literature, including heterogeneity, inseparability, and perishability. The services "identity crisis" has shaken the very foundations of services as a discipline or sub-discipline. Some question the distinctiveness of services. Edvardsson, et al, surveyed eleven services experts, most from marketing but some from operations, and conclude that "...on a lower abstraction level a general service definition does not exist. It has to be determined at a specific time, in a specific company, for a specific service, from a specific perspective" (2005, p. 119). Grove, et al, surveyed ten service marketing experts and report a "call to eliminate the goods versus services distinction altogether" (2003, p. 113).

The recent calls for clarifying the position of services within the marketing discipline were preceded by a call to clarify services within operations management. In 1999, Nie and Kellogg published findings from a survey of 167 operations management professors which concluded that "Service OM researchers must develop a new paradigm. This should be built on, and clearly articulate, the fundamental differences between managing service operations and manage manufacturing operations" (1999, p. 351). In a forthcoming *Production and Operations Management* article, we propose one answer to this charge. The following summarizes the main points from that article.

A foundation for service operations

Admittedly, much of the foundation of services research comes from the marketing discipline. In fact, the so-called field of "services marketing" spans many traditional operations management topics, such as process design, quality management, job design, and capacity management. There are some areas of services research that are distinctly inhabited by those from service operations, such as yield management (Kimes 1989) and queuing theory (Fitzsimmons and Fitzsimmons 2006).

Arguably the greatest *foundational* contribution to services coming from operations management was Chase's discussion of "customer contact" and how customer contact distinguishes between front-office

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Figure 1: Non-Service I/O Model (e.g., make-to-stock manufacturing)

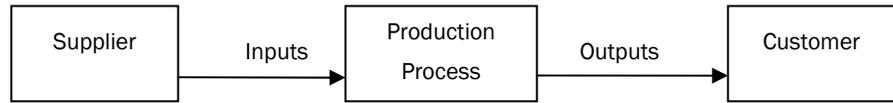
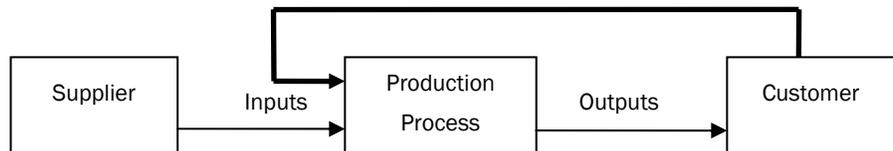


Figure 2: Service I/O Model



operations (involving customer contact) and back-office operations (devoid of customer contact) (Chase 1978; Chase 1981; Chase and Tansik 1983). This perspective is frequently cited, even by those from services marketing. The paradigm is not only effective at demarcating “pure service” operations from “quasi-manufacturing” (and pure manufacturing), but also comes with numerous managerial insights.

Customer contact theory specifies that an/the important distinguishing characteristic of service operations is the physical presence of customers within a production system and the need for interaction between employees and customers. Kellogg and Chase (1995) precisely define customer contact as a construct with three elements: a) total time customers spend communicating in the production system, b) the richness of the information exchanged, and c) the amount of mutual confiding and trust.

This characterization of customer contact is effective when studying brick-and-mortar or face-to-face services, yet we question its appropriateness for services not involving physical co-location. For example, it does not seem to consider services situations involving technology, where customers are not corporeally present in the company’s production facility, but still have an intense service encounter (Froehle and Roth 2004; Mersha 1990). Examples include telephone support and web-based services.

The Unified Services Theory

We propose a revised paradigm for services that we refer to as the “Unified Services Theory.” It is as follows:

“With service processes, the customer provides significant inputs into the production process. With manufacturing processes, groups of customers may contribute ideas to the design of the product, but individual customers’ only participation is to select and/or consume the output. All managerial concerns unique to service operations are founded in this customer-input distinction.”

The Unified Services Theory is relatively simple in concept, yet powerful in application. The simplicity is seen in the basic I/O diagram. Figure 1 shows the traditional I/O diagram as covered in introductory operations management textbooks. Inputs come from suppliers, the production process transforms inputs into outputs, and the outputs go to customers.

Figure 2 shows the I/O diagram for service processes. The fundamental difference from Figure 1 is that customers are suppliers of inputs to the production process. Lovelock (1983) classifies customer inputs to service process into four categories: customers’ bodies (input to health care and recreation), customers’ minds (input to theater and education), customers’ belongings (input to auto repair and landscaping), and customers’ information (input to tax accounting and management consulting).

Besides inputs, other key elements of the Unified Services Theory are customers and processes, which we precisely define in (Sampson and Froehle 2006). It is important to understand that the Unified Services Theory is a process perspective, which is to say that it classifies specific processes as services according to the amount and types of customer inputs. The common practice of classifying companies, or even entire industries, as “services” is ill-considered. While every company is, in some respects, a service company (customer inputs are required at some point), not every process is, nor should be managed like, a service process.

We present the concept of customers as suppliers of inputs to all service processes as both defining services and leading to numerous managerial conclusions. The broad implication of the Unified Services Theory is summarized in the following corollaries:

- Service processes are distinguished from non-service processes only by the presence of customer inputs, and implications thereof.

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- For those familiar with business management in general, understanding those additional issues unique to managing services requires only understanding the implications of customer inputs.
- Customer inputs are the root cause of the unique issues and challenges of services management.

The value of these powerful assertions can be seen in application of the theory to practical service issues. We will conclude by summarizing some key insights.

Insights coming from the Unified Services Theory

Space does not allow expounding the managerial conclusions; the reader is referred to (Sampson 2001) for an extensive recitation. Herein we will simply mention a few of the conclusions coming from the Unified Services Theory.

1) Services are bidirectional supply chains.

Supply chains are typically conceived as having production flow in only one direction, from suppliers to customers. Although payments and feedback flow upstream, production only flows downstream. With services, customers are suppliers of essential inputs to the production process, as well as being consumers of the outputs. The dual role of customers as consumers and suppliers can sometimes be challenging to manage. Most manufacturers treat their suppliers one way and customers another way. Suppliers who are unreliable or who supply shoddy inputs are subject to being cut off, which may not be a practical option for customer suppliers who provide unreliable inputs.

2) Customer inputs explain the illusion of intangibility.

As mentioned, services are often as tangible, or more tangible, than manufacturing outputs (Laroche, et al. 2001, p. 27). Why, then, are services commonly misconstrued as being intangible? The Unified Services Theory suggests that perhaps the reason is that customers provide tangible inputs which are modified in the output. A car is certainly tangible, although the auto painting process may be considered intangible. Is a painted car any less tangible if the car was provided by a customer than if the car was provided by upstream processes of the supply chain? Probably not. Auto painting service customers perceive added value in the painting process, not in the tangible car which they previously owned.

3) Services involve "inadvertent JIT."

Simultaneity, or inseparability, suggests that the production and consumption of services occurs in close temporal proximity, as opposed to make-to-stock manufacturing where production can occur well in

advance of consumption. With service processes, significant elements of production cannot begin until customer inputs have been provided, resulting in overlapping production and consumption. This "inadvertent JIT (just-in-time)" in services is a necessity, not a choice (Karmarkar 1996; Sampson 2001, p. 310).

4) The most relevant service "inventories" are customer queues.

Since make-to-stock manufacturing allows production to occur well in advance of consumption, filling the gap with inventory is an alternative. Services can keep inventories of non-customer inputs. But, the greater concern is usually keeping inventories of customer provided inputs. Keeping inventories of customer-provided inputs is usually necessary when demand (and the provision of customer inputs) exceeds the production capacity of the service. The resulting "inventory" is commonly called a queue or waiting line. Note that customer inventories usually have much higher holding costs than non-customer inventories, although the costs can be mitigated by psychological means (Maister 1985).

5) Production smoothing is usually not an option for services.

Managing capacity and demand is especially challenging for service providers for several reasons, all stemming from customer inputs. First, the arrival of customer inputs may be difficult to forecast, causing error in both capacity and demand plans. Second, customer inputs may vary greatly in quality or consistency. This results in the service provider having to either permit much greater variability in its production process or overstaff to correct the deviations so that the inputs fall within process tolerance. Third, when the customer themselves are inputs into the process, they are much more sensitive to even short delays in production. All these issues tend to increase service providers' fixed costs, thus putting pressure on profitability.

6) Customization and labor intensity are outcomes of customer inputs.

Schmenner's popular Service Process Matrix (1986) categorizes services according to two dimensions: a) customer interaction and customization, and b) labor intensity, and was proposed to help classify services in order to provide operational insights and guide management decisions. It is justifiable to split the first dimension into conceptually separate "customization" and "customer interaction" dimensions (there are certainly operations with low customization and high interaction, and vice versa), and "labor intensity" stands as a third.

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Each of these three dimensions is fundamentally rooted in, or related to, customer inputs. Customer interaction occurs because the customer may provide himself as an input into the production process. Customization occurs because the outcome of the production process includes, or is dependent upon, inputs specific to the customer consuming the service. Finally, labor intensity is often determined by the amount of co-production (customer-provided labor inputs) involved.

Interestingly, the Service Process Matrix has often been used to classify service industries and firms (rather than processes). For example, the "service shop" category/quadrant includes both hospitals and auto repair shops. But not all firms in an industry may be similarly located in the Service Process Matrix, so generalizing across an industry might lead to misleading conclusions (Verma and Young 2000). Because the process is the more appropriate unit of analysis, comparing industries with similar processes involving similar customer inputs is more likely to result in meaningful managerial learning and effective transfer of best practices.

Summary

In summary, the Unified Services Theory states that customer inputs are both the defining characteristic of service processes and the root of all managerial issues unique to service operations. While it is both parsimonious and simple, the theory is not simplistic – its ramifications are significant and far-reaching. We hope it serves to further stimulate research, teaching, and practice in the ongoing evolution of service operations management. Those interested in reading more may contact the authors or read the extended article forthcoming in *Production and Operations Management*.

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Dear Colleagues

I am happy to announce that we will have two more department editors for Production and Operations Management.

Michael Pinedo, Professor in the Stern School of Business at New York University, will serve as a departmental editor for the Service Operations Management area. He will join Aleda Roth who is the current departmental editor. His primary responsibility will be to process papers that deal with mathematical models and their applications.

Vinod Singhal, Professor in the College of Management at the Georgia Institute of Technology, will serve as a departmental editor for the Supply Chain Management area of Production and Operations Management. He will join Eric Johnson and Jayashankar Swaminathan who are the current departmental editors. He will concentrate on handling papers that deal with empirical studies and case-based analyses.

Their addresses are given at the end of this message.

Kalyan Singhal

Founder & Editor-In-Chief, POM

Professor Michael Pinedo
Stern School of Business
New York University
40 West Fourth Street
New York, New York 10012, USA
mpinedo@stern.nyu.edu
Phone: 212-998-287

Professor Vinod Singhal
College of Management
Georgia Institute of Technology
800 West Peachtree Street NW
Atlanta, Georgia 30332, USA
vinod.singhal@mgt.gatech.edu
404-894-4908

Dear Colleagues:

Three operations management (OM) journals – Manufacturing and Service Operations Management (**M&SOM**), Production and Operations Management (**POM**), and the Journal of Operations Management (**JOM**) – are now in the list of 24 premier business journals that the University of Texas at Dallas [<http://citm.utdallas.edu/utdrankings/>] uses to rank business schools. These journals have been judged to be the 24 most influential management journals by the faculty of the top business schools whose views were sought in setting up the University of Texas ranking system.

The University of Texas maintains a fabulous public database of publications in the 24 journals since 1990. The database includes ranking of business schools and the listing of faculty research contributions in the 24 journals. One can find business school rankings based on publications during a specified period in a specified set of journals. One can also search publications by an author's or a university's name for a specified set of journals during a specified period.

The three OM journals published a total of 1,580 pages during the year 2005. In comparison, the three finance journals in the same list – the Journal of Finance, the Journal of Financial Economics, and the Review of Financial Studies – published more than 7,300 pages. It appears that the difference could be explained by the fact that the OM community is smaller than the finance community and the OM discipline has a larger share of coverage in multidisciplinary journals like Management Science and Operations Research.

You may like to share this website with your dean and colleagues in other areas in your school. All of them are likely to find the website interesting and useful.

Kalyan Singhal

Founder & Editor-In-Chief, POM

HAVE WE TAUGHT OUR STUDENTS THE RIGHT STUFF?

**Jaydeep Balakrishnan**

Haskayne School of Business
University of Calgary
Jaydeep.Balakrishnan@haskayne.ucalgary.ca

**Kum Khiong Yang**

Lee Kong Chian School of Business
Singapore Management University
kkyang@smu.edu.sg

Operations Management involves managing the resources that are required to convert inputs to outputs. These resources include materials, capital and people which requires decision making within the operations function to be cross functional (Schroeder, 2000). The resulting impact is that whenever an operations manager makes a decision, he or she should be cognizant of its impact on other areas within the firm, such as finance, marketing and human resources, as well as the external partners such as suppliers and customers.

Our question is whether Production and Operations Management (POM) educators are training students adequately to make the necessary cross functional decisions. Recently Bennis and O'Toole (2005) critiqued the whole focus of business education in the *Harvard Business Review*. They pointed out that the general business school model currently in use dates back to the 1950's and is probably too academic and functionally oriented to serve the current needs of businesses. While this issue is not unique to the POM field, in this article our goal is to initiate a dialogue regarding this issue.

In our opinion, we can all do better if we consciously spend more time discussing the cross-functional impact on the organization. An examination of some syllabi on the POMS website and recent POM textbooks indicates that at least in some cases a cross-functional approach to teaching POM is gaining momentum. We see this as a positive development that ties in with Porter's Value Chain (Porter 1982), which suggests that the operations value chain does not exist in a vacuum, but rather in a cross functional universe integrated with human resources management, marketing and other activities.

Traditionally, most POM syllabi are taught by topics and each topic is developed to optimize or near optimize a selected performance

measure. From our experience, a discussion beyond a single measure of performance may occur in the classrooms but the extent is dependent on the situation in which the course is being taught – engineering versus business faculties, case based versus lecture type pedagogy, training of the instructor (operations research versus operations management focus), number of contact hours in the course, and other factors. For example, when we teach inventory management, many of us spend a great deal of time teaching models such as the Economic Order Quantity (EOQ) where students are shown how to determine the least cost order quantity. Often we do not have time to discuss the impacts of EOQ and inventory decisions on other functional groups and resources such as capital and people. Also we often fail to discuss how other functional groups and resources may affect our ability to implement the POM decisions.

In this paper we emphasize the cross functional imperative in teaching POM and suggest ten issues that POM educators should consider in their curriculum. It is not our intention to list all issues or suggest a complete solution to each issue. Some of the issues, for instance, relate to skill sets that are typically not taught in a university-level curriculum; nevertheless they are important skills that POM students should have in order to succeed in their future careers. Our discussion is thus intended to make us, as POM educators, think about how these issues should be handled and taught within POM. Indeed, some of these issues are taught in courses other than POM, such as Marketing and Human Resource Management, but often the issues are not linked back to POM. We as POM educators should not assume that our students can automatically make these links. We should proactively make our students recognize the links explicitly.

Know what our non-POM colleagues do: There are recent articles in leading Operations Management, Management Science and Industrial Engineering journals (for examples see Boudreau et al. (2003), Boudreau (2004), special issues of *Management Science* (Volume 49, Number 4, April 2003) and *IIE Transactions* (Volume 36, Number 10, October 2004)) that have discussed the need for more research on managing people in operations. For example, a recent article by Cook et al. (2002), discussed recognizing human issues in service design. While most POM professors do recognize the importance of managing people well in operations, we typically have left the people issues to the Organizational Behavior (OB) faculty.

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Most of us either do not have the expertise to discuss the people issues or simply ignore the issues at our students' peril. As POM faculty we need to understand what our POM students are learning in their OB courses taught by our OB faculty. After taking these OB courses, do our students really know how to manage people better in operations or specifically, set up a better incentive scheme that aligns the workers' goals and aspiration to the business/operations objectives? How many and what type of OB courses should we require our POM students to take? We need to understand if these courses adequately prepare students to consider the people issues when designing and operating business systems.

Similarly, there is also a need to know what our marketing colleagues teach, especially in the area of service management. Review of recent textbooks and syllabi on Service Marketing and Service Operations (which are typically taught by Marketing and POM faculty respectively) shows an increasing overlap in the topics covered. Clearly, POM and Marketing faculty have gradually realized the need to teach services as an integrated subject.

It would also be beneficial for most POM educators to understand the content taught by the finance and accounting faculty and integrate the financial matter into their POM teaching. For example, in a global business environment, POM students must understand how factors like the exchange rate fluctuation, product costing, overhead costing, transfer costing and other financial and accounting matters will influence their POM decisions.

Process Implementation Issues: In POM, we have traditionally focused on teaching students how to analyze processes and suggest solutions. What we often ignore is that even the best plan or solution is of little value if it is not implemented well with the cooperation of various members including our information systems colleagues. Consequently, stopping at the analysis of processes, we risk graduating students who may know what to do, but lack the ability or acumen to know how to get the solution implemented. For example, they may choose the wrong time to propose and discuss the process improvement solution with their management. They may also choose the wrong time to announce the planned changes to the people affected. They may lack the skills to convince and persuade management, and affected peers and subordinates to accept the ideas and implement the solution success-

on the internal and external forces to get a solution implemented well. It is often not the students' fault because we, the educators, have often failed to discuss with our students the 'when, who and how' of solution implementation.

The Barilla case from the Harvard Business School (Hammond, 1994), shows that to have a well-planned implementation of a Just in Time Distribution (JITD) program it is important to address the resistance of a variety of stakeholders. The company must address the concerns from the customers and sales-team that they could become redundant or suffer financial losses from the stoppage of bulk-order discount and sales commission. The case also suggests that Barilla should be more astute in "selling" the JITD program to its distributors by first implementing it at its own distribution centers and demonstrating its success. As educators, have we impressed on our students the importance of paying sufficient attention to such issues? Most likely, we have not.

Using the right person for the right job: Given a team of people with diverse skills, decision makers often fumble by appointing the wrong managers/leaders or delegating the tasks to the wrong people. Have we taught our students how to recognize the difference in people's ability, interest, motivation, ability to lead, and other skills to get the job done well? Do we teach our students to consider the subordinates' personal goals and whether they are in line with the business goal when appointing and delegating people to different tasks? Consider our own academic environment. In some business schools, there are two groups of faculty – teaching and research. Appointing one versus the other in an administrative position would mean a bias toward teaching or research. In addition most business schools have clerical staff whose career objective may be to supplement their family income. For many their aspiration is to leave the office by five in the afternoon, even though there are some who are looking for greater challenges. Should we teach our students how to identify and hire only those with greater aspirations? Have we taught our students to recognize the differences and deploy them accordingly?

Silo mentality: POM professors as well as professors from other areas, have assumed that if we teach students our functional issues, at the end of their degree program, whether an undergraduate or graduate student, they will have integrated all their knowledge and be able to make decisions in an integrative manner. For example, we assume

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that if we teach the Economic Order Quantity (EOQ) model, the Accounting professors teach costing, and the OB professors teach worker motivation and training, our students will be able to implement in the workplace an inventory management process that uses the correct costs. However, in reality this is often not the case. Costing numbers are often hard to obtain, yet in our classes, costing numbers for the EOQ model are almost always provided which may lead to a false sense of security. Similarly, rarely is there a discussion on how one can ensure that employees are qualified and motivated to operate an inventory management system on a sustainable basis.

A classic example is illustrated in the Blanchard Importing case from Harvard Business School (Marshall and Drinan, 1972) which highlights the need to break away from functional silos. This case discusses the implementation of an inventory system where the costing numbers to be used in the inventory model are suspect, the assumptions of the proposed model are not satisfied, and the employees are not trained in inventory management. Thus implementing a solution involves more than simply plugging numbers into the inventory model to arrive at an order quantity. Rather it involves implementing an appropriate system given the actual environment in the facility.

The need to break away from the silo mentality also suggests that a more integrative view in teaching the impact of POM decisions is needed. We should illustrate the positive impact and importance of good operations on other functions such as marketing or even finance. For example the French insurance provider AXA clearly recognizes the importance of operations in financial services by using manufacturing approaches modified for their environment including Six Sigma, cost modeling and benchmarking (Monnoyer and Spang, 2005). The company is convinced that operations can give it the profitability edge in the current business environment where equity markets cannot guarantee a healthy return. Many of our students do not major in Operations but rather in Finance or Marketing, good operations examples from a purely financial or marketing business facilitate a healthy appreciation of the role of operations management in any organization.

Basic Skills: We often teach our students materials that are relevant only if they are middle and higher level managers. Today's education system graduates students in large numbers and many of our students will be starting their careers as lower level managers. At this level,

what they need most are skills on how to serve and interact with customers. A trade school often teaches its students such skills as how to answer telephone calls, how to handle an unhappy customer or how to set up a filing system. But we, as university professors, simply assume that our students know how to handle such situations. Since our graduates are not trained to handle such situations, can they really do better than the trade school graduates in similar starting positions? If they cannot perform better in such positions, why should their supervisors promote them rather than trade school graduates? So what confidence do we have that our graduates will eventually rise up to the higher level and be given opportunities to use the knowledge that we have taught. In our opinion, few university professors would agree to teach such basic skills at the university level even though these skills are important to the students.

Empowered Employees: While we teach process improvement, do we attempt to convince our graduates to have pride in their work - serving others, especially in the early part of their career? The joy of seeing a happy customer should come first and the reward of big fat paycheck should come later. Second, as managers they should be creating the passion for work in their subordinates. Many people or workers whom they will be managing are doing tasks that are mundane, boring and unchallenging. For example, as a chambermaid, how can one find joy or interest in cleaning the same rooms every day? Have we taught our students how to challenge such workers to excel, day after day, in their jobs? For example the Ritz Carlton case from the Harvard Business School uses the slogan of "Ladies and Gentlemen Serving Ladies and Gentlemen" to increase the self esteem of such workers (Sucher and McManus, 2001). However, do our students really know how to motivate workers on the importance of their tasks to the success of the company and their future advancement? Personally, do we know what and how to teach our POM students to inspire their workers to excel daily in 'mundane' tasks?

Teamwork: As we all know, the success of operations often depends on a collegial team working together as one. Conflict within an organization may damage and destroy long-term working relationships and cooperation. It is vital that we teach our students how to work with people at all levels throughout an organization.. How much do we know or teach our students on ways to reduce and handle these workplace issues? Having our students work on projects is one way in which we can let them learn about teamwork and experience firsthand the potential conflict of working in teams. It is our responsibility as

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educators to act as advisors to educate and prepare our students to handle these types of challenges in their future workplaces. However, we need to know enough to teach our students structures, processes, and policies that can help reduce and handle inter-personal issues that occur in workplaces. Honestly, some of us may choose academic careers to avoid the pain of working with people.

Recognition and Reward: We all know the value of people in process improvement. We need to instill in our students the importance of being recognized individually for a job well done without having a detrimental effect on somebody else's contribution. Ultimately, every individual wants to be recognized for his or her contribution. Take a situation where Worker A has some suggestions that may improve the effectiveness of a process managed by Worker B. It is understandable that Worker A may want to be noted for her contribution, for example, by forwarding her suggestions to both Worker B and their common supervisor instead of sending her ideas directly to just Worker B. Naturally, Worker B may respond by attacking the suggestions if she is wary of being seen as not doing her job well. While we understand Worker A's desire to be recognized for her thoughts, the relationship between the two workers may be tested. How should the supervisor handle this type of situation? How should Worker B respond? What can Worker A, Worker B and the supervisor do to defuse the situation and evaluate the suggestions objectively? To avoid this type of scenario, is there a better means for soliciting and rewarding constructive suggestions? Have we taught our students how to handle such a situation or have we left it to our OB colleagues?

Managing in a multicultural and global environment. Nobody will argue that students regardless of which part of the world they live in will have to manage in a global and multicultural environment. As previously mentioned, in POM we tend to focus on processes and sometimes we do not pay attention to some of the other issues. We need to impress upon our students that in order to manage processes effectively, they must consider the culture differences which may affect the management of their process. When we transfer a successful process from one country to another, we need to consider the cultural practices that may affect the process. This is not to say that it cannot be implemented, the issue is that students have to recognize that cultural differences have to be addressed in order for a successful implementation. For example, in certain countries it may be more acceptable for a

high value customer to jump a queue in a bank. Thus when setting up in these countries, this issue would have to be specifically recognized and dealt with. Thus students need to be aware of the need to understand and adapt to local customs when dealing with and designing processes for foreign customers and workers.

Ethics. Processes have to be managed within an ethical context. While many of the ethical issues in recent years have revolved around financial improprieties, ethics are also important in POM. For example, consider locating a facility in a country that has different standards regarding product labeling, fair trade purchasing practices, and working conditions. An organization may realize significant financial savings by locating in countries that are less stringent but the real question is the ethical dilemma which arises in this scenario. Another possible ethical issue is a situation where a worker or manager makes himself or herself irreplaceable by customizing or teaching no one the nature of his or her job. How should companies deal, handle or allay the fear of such employees? How do we identify such employees to ensure that they are not hired? Do we as instructors have an answer to such a situation? Ultimately we need to raise our students' awareness to the ethical implications of POMS decisions and students must learn to consider the ethical ramifications of their decisions.

The ten issues presented are not new, but they have become even more important in the globally competitive environment. Thus it is crucial that we start paying more attention to these issues. How might one address these issues? One possible way is to select teaching cases that bring out the issues mentioned above. For example, one can use a case like the Barilla case to illustrate the pitfalls of ignoring stakeholders in the implementation process or the Blanchard case to illustrate the need to break away from the silo mentality. However, there are not many examples of such cases. Faculty should contribute cases that are more integrative and bring out the characters of people involved to enrich the learning experience of case discussion. It is also important to examine material from outside POM. For example the concepts discussed in Thomas et al. (2002) on project management are useful for emphasizing the second of the ten points – the need to sell process improvement.

Some MBA programs have attempted to provide an education format that is integrative rather than functional to address the above issues. Thus, instead of offering courses in the traditional functional format, class sessions are focused towards integrated problem solving with

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faculty members from different functional areas teaching together as a team. For example, the teaching team could address motivation, process management, reward and ethical issues in an integrated manner rather than independent courses.

Others have combined practicums with classroom lectures so that students could apply what they are learning in classrooms to real life situations. Yet other business schools have cooperative education (Co-op) opportunities where the degree program has alternate work and study terms. This allows students to take classroom theory into a real life setting. During a Co-op term they may often have to work in front line situations where they have to interact directly with customers, thus giving them an appreciation of issues that they would need to deal with when they start their career. Further, many universities have programs where the students spend a designated amount of time abroad to give them an appreciation of different cultures.

Another method of getting students, especially undergraduates, to appreciate the real life aspects of POM, is to get them to do projects where they are involved in the actual implementation. Often when POM students participate in industry projects, they stop after analyzing the existing process and suggesting improvements. This does not give them an opportunity to test whether the suggestions they made are realistic. As a result they miss the learning opportunity which could occur through actual implementation of their suggestions. In addition, if the projects are completed by teams, the students would have an opportunity to experience firsthand the team dynamics involved in working on projects.

Experts generally agree that students retain more by participating in active learning pedagogies such as experiential exercises. Experiential exercises like the Beer Game (Sternan, 2000) are effective in getting students to understand the dynamics of real life issues in organizations. We could also use the television programs like The Apprentice as teaching tools. While some may debate the "reality" element in a show such as The Apprentice or in featured films with fictitious plots, they undoubtedly can still hold vital managerial lessons. We can ask our students to watch and discuss the people issues involved in the successful completion of a task or job. Through this experience they may be more likely to use this learning in their workplace to make more integrated decisions. There are many strategies exist for us to help students obtain a better business education and become better

managers. Ultimately it is up to us, as educators to use them and in the long run our students will thank us for it.

Acknowledgement

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DO WE PRACTICE WHAT WE TEACH? AUTHORS' ASSESSMENTS OF OM JOURNAL EDITORIAL PROCESSES



Jack Meredith
Babcock Graduate School of Management
Wake Forest University
jack.meredith@mba.wfu.edu



Christopher W. Craighead
College of Business
Auburn University
craigcw@auburn.edu

Last fall, we were talking about the frustrations authors frequently experience in dealing with the editorial processes for journals in our field. We thought how ironic it was that the field that teaches the management and control of operations, whose foremost concerns are efficiency, quality, and speed of response, are subjected to the whim of journal editors who have major impacts on our lives but with no chance to exercise the management and control that we teach. We decided to explore this issue further and see what our colleagues thought about this.

Thus, in October we created a quick survey that simply asked about the experiences of our colleagues with the uncontrollable editorial processes we are slaves to. Upon further consideration however, we were afraid we would only get complaints and the responses would prove difficult to generate useful guidance for either authors or editors. We therefore changed the survey to ask for both one good experience and one poor experience, and lastly, any general comments. We realized that by asking for one of each, we would not, however, be able to ascertain the preponderance of experiences with our journal's editorial processes. (That is, just because every response included a good experience and a bad one does not imply that these experiences all balance out and the reviewing processes are just fine.) The final version was then sent to 66 of our colleagues (who we knew were active in research), asking them to respond to the following three questions:

- Please describe the content (e.g., quality of the feedback, appropriateness of the criticisms) and/or process (e.g., responsiveness, timeliness, guidance for a revision) of a recent good experience you have had with the peer-reviewing/editorial process of a journal.
- Please do the same for a recent bad experience you have had.

- Please include any other experiences, thoughts, or observations that you would like to offer to improve the peer reviewing/editorial process of our journals.

We received 23 responses (35% response rate, for those statistically inclined) that were quite interesting, and not always what we expected. In what follows, we summarize the responses in four categories: Response/Review Times, Review Quality and Length, Editorial Guidance/Responsiveness, and Miscellaneous Comments. It should be noted that our discussion here is not about a specific journal or editor, but rather our OM peer reviewing process overall.

Response/Review Times

As might be expected, review times for journals and response times from the editor are a major area of concern to authors. The few positive comments we received fell into two categories. The first was that the reviews came back within a reasonable time (2-3 months). The second concerned the editor stepping into the process early to communicate directly with the author, often by email, that the paper was either inappropriate for that journal or that the authors needed to do something else to make the paper acceptable for sending out for review.

There were more negative responses to this issue than to any other aspect of the review process. An understandable concern of the authors is that the research can quickly become dated, or others can publish a similar paper while theirs is still in the review process. In one case, a journal took 18 months to review the paper and then rejected it as being too dated. The complaints on long reviews were typically combination complaints such as 12 or more months with only minimal feedback, or 18 or more months (30 in one case) and then the paper was rejected. Many of the experiences concerned the "one review" syndrome, where the editor is holding one review but can't get the other reviewer(s) to send them feedback, in which case they ask the authors to give them another 2-3 months to get the other review(s), which stretches into 6 months but still never arrive! The authors' dilemma, of course, is that withdrawing the paper and sending it to another journal sets the entire process back to the beginning. One seasoned researcher indicated that review times are, in general, getting longer.

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Review Quality and Length

The positive comments about review quality typically related to thoroughly reading and understanding the paper and making appropriate, substantive, and insightful criticisms. Authors were particularly pleased if the comments included some help regarding an appropriate way to respond to the criticisms. Interestingly, most of the positive comments here concerned papers that were rejected!

Most negative comments, as noted earlier, related to long review times with minimal feedback, or a rejection with minimal feedback, especially from the editor or associate editor. Most irritating were long review times and rejections indicating the paper was not a good fit for the journal, which clearly should have been decided before the paper was put into process.

Editorial Guidance and Responsiveness

Positive comments concerned editors who worked with the authors to develop a publishable paper, particularly when reviewer comments were divergent, or difficult to respond to. Most appreciated was editorial guidance in terms of what criticisms/changes were important and which were not. A few authors commented positively on the new web-based submission and tracking systems that editors are now using.

Unfortunately, the type of editorial help noted above was clearly in the minority. The majority of complaints about editors was their unwillingness to spend the time to understand the paper and the reviewers' criticisms, often "outsourcing" the work to the AE or reviewers and then counting the votes. There were also a few cases of editors looking for any reason to reject a paper, including reviews that had easily fixable criticisms and new editors rejecting a paper the previous editor had indicated needed only final minor revisions.

Extremely irritating to authors was lack of editorial responsiveness to their timid inquiries. It is always perceived by authors (especially new, unknown assistant professors) as a risky act to inquire about the progress of their paper for fear of irritating or alienating the editor, thereby resulting in an immediate rejection. For some reason, it seems that a particularly common habit among editors is to not bother to acknowledge receiving a manuscript but just put it into the review process, where it might take a year or more to finish the reviewing cycle; in the meantime, the authors don't even know if it arrived at the journal and are afraid to ask. And if they do, the editor seems to ignore the query since the paper has already been put into process. More than one author stated that they had to withdraw the paper (in one case a revised paper) when the editor wouldn't respond to their queries.

Miscellaneous Comments

We received considerable miscellaneous comments, many with common themes. Two areas, more so than the others, received a significant amount of discussion (and emotion!) from our respondents: Editorial Responsibilities and Special Issues.

Editorial responsibilities—Quite a few respondents commented on the responsibilities of the editor in that if someone takes on the job, that person should devote their time to doing it well. A few people pointed out that good researchers do not necessarily translate into good editors, or even good reviewers. In general, many thought that editors were not exercising sufficient oversight of their editorial processes and were overly reliant on their AEs and reviewers. One pointed out that the instructions to authors in the journal often were outdated or inconsistent with those on the journal editor's website and also the publisher's website. Lack of commitment or even apathy by the editor percolates all the way down to the reviewers. One person believed that our field does a poorer job of monitoring editors and offering feedback than our sister disciplines.

Special issues—A common theme concerned the multiple problems of Special Issues. Many respondents observed that inadequate oversight is exercised for Special Issues, which often have their own editor who is authorized to make accept/reject decisions. The reviewing times can be inconsistent, quality control poor, editorial processes confusing, and other such problems. Some respondents indicated that the final published Special Issue often looks nothing like the advertised call for papers.

Time for Discussion and Action!

In summary, even though the feedback from our survey was based on a small sample (<30), we believe from the multiple comments on the same topics, it has substantial validity, and considerable utility for our OM publishing community. Our overall impressions reflect the comment by one respondent that we aren't practicing in our editorial processes what we teach in our classes—lean processes, quick response, quality service—and we are considerably worse in that regard than other disciplines. One more-seasoned respondent felt that review times were getting longer and reviewer comments of lower quality, perhaps due to fewer newcomers entering the field, increasing retirements, more journals in the field, and more submissions per researcher. We have substantial variability across journals, and often within the journals as well.

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As a community, we need to put in place mechanisms to do a better job of monitoring the editorial processes of our journals and providing feedback to our editors so that everyone benefits from superior journal processes. Although some of our journals/editors are practicing what we teach, others do not.

We often chat among ourselves and share "war stories" of experiences with journals. However, we hope that this paper generates open and public discussion of our OM journal processes and, hopefully, actions for improvement. Research creates theory, concepts, tools, and knowledge for our OM field. However, it is critical for our research to be critiqued, refined, and then disseminated in our journals to allow our field to evolve. This leads to a question that we might ask ourselves: Is the state of our journal editorial processes slowing the evolution of our field? Simply put, it is time for us to practice what we teach and improve one of the most important activities in our field—the peer reviewing/editorial processes of our OM journals.

CONGRATULATIONS!!!

The "Zara Case" (winner of the 2003 POMS and Indiana CIBER Best Case International Award) written by **Kasra Ferdows** (University of Georgetown, USA), **José A.D. Machuca** (University of Sevilla, Spain) and **Mike Lewis** (University of Bath, UK) and distributed by ECCH (European Case Clearing House) has been the winner of the Production and Operations Management category in the 2005 Business Week/ECCH European Case Award.

POMS COLLEGE OF SUPPLY CHAIN COLLEGE ACTIVITIES

**Marshall Fisher**

The Wharton School
University of Pennsylvania
fisher@wharton.upenn.edu

**Ananth Raman**

Harvard Business School
Harvard University
araman@hbs.edu

First POMS Supply Chain College Conference

On May 3, 2005 about 130 members of the POMS Supply Chain college gathered at the University of Chicago Gleacher Center in downtown Chicago for a one day conference on Improving Supply Chain Synchronization and Strategy through Industry-Academia Collaboration. The conference brought together academics teaching and conducting research on supply chain management with senior supply chain executives, who focused together on the goal of identifying current important issues in supply chain management. For the academic participants, this was an opportunity to access real world input that could guide choice of research topics and course design. The program included a keynote address by Gene Long, President, Consulting Services, UPS Supply Chain Solutions on Linking Supply Chain Strategy to Business Strategy, and two panel discussions.

The first panel, on Global Supply Chain Synchronization, was moderated by M. Eric Johnson, Tuck School of Business, Dartmouth and the panelists were J.P. Brackman, Global Retail Presence, Procter & Gamble; Shail Godambe, Vice President, Supply Chain Strategy, Motorola and James Schwarz, Director Operations Strategy, Shure Inc.

The second panel, on Formulating and Executing a Supply Chain Strategy, was moderated by Nicole DeHoratius, Graduate School of Business, University of Chicago and the panelists were Robert Marshall, US VP of Operations, McDonald's Corporation; Dr. Rafael Menda, Director, Operations Strategic Planning, McNeil Consumer & Specialty Pharmaceuticals and Gregory Schlegel, Industry Executive, e-Business/Supply Chain Solutions, IBM.

After each panel discussion, the participants divided into several breakout groups to formulate and report on suggested academic research that was responsive to the issues raised by the executive panelists.

There is not space here to list the many issues and new research questions that were identified, but here is a small sample.

- How to model supply chain structures based on product characteristics? What attributes define a supply chain, what product attributes affect supply chain performance, and how can we choose optimal supply chain attributes for a give set of product attributes.
- How do product levers (merchandising, seasonality, globalization, information gathering ease, environmental and green issues, sustainability and tradeoffs, etc.) affect synchronization of supply chains?
- Forecasting promotional demand is difficult for retailers and this creates synchronization problems across the supply chain. sc in terms of where actual demand might arise, logistics costs, etc. What information must be shared to better synchronize the supply of promoted products, especially in a capacity-constrained environment?
- RFID provides greater frequency of information and thus enhances sense and respond capabilities. How can we overcome cultural issues and norms that work against RFID? What type of information and organizational structure is needed to support RFID?
- Given that there is an inherent tradeoff between efficiency and flexibility in supply chains, what is the right balance point in a given situation between these two desirable attributes?

The conference was organized by a committee comprised of

Marshall Fisher, Wharton, POMS Supply Chain College Co-president

Ananth Raman, Harvard, POMS Supply Chain College Co-president

Daniel Corsten, University of St. Gallen, Switzerland

Nicole DeHoratius, Graduate School of Business, University of Chicago

Karen Donohue, University of Minnesota

Don Eisenstein, Graduate School of Business, University of Chicago

Ram Ganeshan, School of Business, the College of William & Mary

Wally Hopp, Northwestern University

M. Eric Johnson, Dartmouth College

Katariina Kemppainen, Helsinki School of Economics

Michael Magazine, University of Cincinnati

Aleda Roth, UNC Chapel Hill

Jayashankar Swaminathan, UNC Chapel Hill

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The Supply Chain College plans to hold similar events periodically after POMS national conferences.

First Officer Election

A nominating committee comprised of Marshall Fisher, Ananth Raman, Kasra Ferdows and Paul Kleindorfer has chosen the following slate of individuals to stand for election as officers of the Supply Chain College.

President: Eric Johnson

President-elect: Jay Swaminathan

VP-POM Conference: Ram Ganeshan.

VP-Special Events: Karen Donohue

Treasurer: Ricardo Ernst

Secretary: Katariina Kempainen

Marshall Fisher and Ananth Raman: Past-Presidents, Ex officio.

Conference Announcement Production and Operations Management Society: College of Service Operations

Carmel Mission Inn, Carmel, California: June 2nd and 3rd, 2006

Services in the High-Tech Era

POM-CSO 2006 is the second conference of the College of Service Operations. The theme of the conference is *Services in the High-Tech Era*. This theme reflects the location of the conference, given the prevalence of the high-tech service sector in Northern California. The activities on June 2 are planned to focus on practitioner presentations, with academic talks on June 3. Our invited speakers are Chip Conley (Joie de Vivre Hospitality), Mark Scott (Starizon Health Care Experiences), Harrah's Casino Revenue Management Group, and others. Our activities will include a Taste of Monterey wine and appetizer social event, Monterey Aquarium, and many other alternative outings on the Peninsula.

Additional details about the conference can be found at www.poms.org

POMS COLLEGE OF PRODUCT INNOVATION AND TECHNOLOGY MANAGEMENT INTERVIEW WITH CHERYL GAIMON AND VISH KRISHNAN

On November 30, 2005, I was fortunate enough to be present at an interview by Rohit Verma (editor POMS Chronicle), with Cheryl Gaimon (Regents' Professor at the Georgia Institute of Technology, POMS Vice President of Membership and Colleges, and POMS – Management of Technology department editor) and Vish Krishnan (White Endowed Chair Professor at the University of California, San Diego and POMS - NPD, R&D, and Project management department co-editor).



Cheryl and Vish have helped establish and develop the new POMS college of Product Innovation and Technology Management.

For the official site of the new college, please visit: www.poms.org/POMSWebsite/POMSColleges/PITM.html

Our conversation touched on a number of topics including the reason for creation of the college, key activities, and how to get involved. Here are the excerpts.

Bo van der Rhee (Ph.D. Candidate, David Eccles School of Business, University of Utah)

Rohit: Thank you for agreeing to this interview. Can you tell us why the college was created in the first place and what is your vision for the college?

Vish: As manufacturing and assembly operations become more mature and migrate overseas, a key value added step and source of growth for firms is new product and service innovation. Knowledge intensive industries of the future such as electronics and life sciences also invest a significant portion of their revenues in R&D. Compare for example the pharmaceutical industry with the car manufacturing industry. Pharma companies spend an order of magnitude more on R&D (approximately 20 – 25% of revenues), compared with car companies (typically 2% – 3% of revenues). However, pharmaceuticals face a revenue growth crisis and are looking for ways to boost their R&D productivity. Over the last century we saw major improvements in manufacturing productivity, and the next frontier is going to be in the areas of innovation (technological and product innovation).

Cheryl: When we put together the website, we thought long and hard about how to characterize what our college will provide to members, or in other words, what we perceive as important to our members. One key sentence that captures a lot of what we are talking about appears on our web page and reads:

“As the global economy shifts to one driven by technology, innovation, and information, companies are confronted with new operational questions and issues.”

You also asked about the purpose of the college. A key purpose is bringing together researchers, educators, and practitioners with interest in the realm of product innovation and technology management.

To that end and under Nitin Joglekar’s leadership, at the next POMS conference in Boston, we are planning a one day focused conference where educators and researchers can interact with practitioners to better understand the particular needs or interests of industry. This is one of the key values the college would like to offer: to facilitate more linkage between academics and industry as well as between the PITM members whose backgrounds are somewhat diverse.

Under the leadership of Michael Lapre, the PITM college has taken responsibility for all PITM sessions at the POMS conference in Boston. Michael is inviting a lot of very interesting people and organizing panels not only to respond to current research interests, but also to facilitate our thinking about the direction for future research. Ed Anderson has also agreed to help and is taking charge of awards and honors that PITM will give at the conference.

These are a few of things we are offering members of our college. Naturally, we will solicit input from our members to learn if they have other needs we can fulfill.

Rohit: when will this one day workshop be?

Cheryl: Based on the experience of other colleges, we will probably have the one-day PITM conference on the day after the annual POMS conference.

Rohit: One of the unique aspects of this college is that it encompasses two departments in the Journal, maybe we should talk about that for a bit?

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Vish: Absolutely. That is one of the unique aspects of this college, as most other colleges mirror a department and we try to move across two departments (see figure) and hopefully this will be a positive trend in other groups such as INFORMS, to avoid fragmentation.

Cheryl: This is especially important since, a lot of the time the really important problems are interdisciplinary. By putting the college together in this way, we facilitate interdisciplinary discussion, particularly at conferences, since the PITM track will consist of presentations and panels in the areas including NPD, R&D, project management, and the management of technology. Vish, Christoph and I feel that there is a synergy between the two departments. For example, when you talk about new product development, chances are you are touching on management of technology issues including technology transfer, technology implementation, etc. So we feel that we can do much better job of serving the POMS members through a college defined across related boundaries.

Rohit: talking about overlap and synergy, do you assume services to be a part of your college as well, or will you leave that to the college of services? In other words: were do we draw the boundaries in the field of operations?

Vish: Innovation is a key word, so if we are talking about a service innovation, new service development, then yes, we would like to discuss that within our college. And the line between services and products is blurring anyway.

Cheryl: Discussion or focus on innovation in services, technology selection in services, etc. could fit this college or the services college, depending on the positioning and framework addressed. Of course, it is ultimately up to POMS members to decide which college best fits their interest, maybe they want to join both. And at our end it is critical to be open to these various topics since the PITM college is so new. Also, I can easily imagine colleges joining together to form panels, focused conferences, etc.

Rohit: that sounds good, so how can people get involved, other than becoming a member of the college?

Vish: We are expecting that the one day conference/workshop in Boston that Cheryl mentioned would focus a lot of attention on this topic and create momentum.

Cheryl: That is definitely a part of the one day conference that Nitin Joglekar is putting together. He is not only brining in practitioners, but also academics with a lot of industry experience. I expect that this sort of interaction will build over time since more and more conferences will add to the set of practitioners we have contact with.

Rohit: one final thought: how about teaching? What can we do about encouraging teaching in this area? Do you envision publishing teaching articles in this area, or teaching sessions at the conference?

Cheryl: Having conference sessions devoted to teaching topics in the PITM areas is a great idea.

Vish: Christian Terwiesch, who is nominated for the role of president of the college in the upcoming elections, has expressed an interest in trying to create a better network. That is one of the reasons Cheryl's idea of putting these areas together is so great: traditionally these areas have not been as big as say for instance Supply Chain Management, but by putting them together we can create a critical mass.

Rohit: so currently there are a lot of initiatives underway that we will focus on in future editions of the POMS Chronicle.

Vish: I would be more than happy to be interviewed again at that time!

As Co-Presidents of the POMS

COLLEGE OF PRODUCT INNOVATION AND TECHNOLOGY MANAGEMENT

we would like to congratulate the newly elected officers.

- **President:** **Christian Terwiesch**, University of Pennsylvania, Wharton School, Philadelphia, PA
- **Vice-President-Meetings:** **Michael Lapre**, Vanderbilt University, Owen Graduate School of Management, Nashville, TN.
- **Vice President-Special Events:** **Nitin Joglekar**, Boston University, School of Management, Boston, MA.
- **Vice President-Honors & Awards:** **Edward Anderson**, University of Texas-Austin, McCombs School of Business, Austin, TX.
- **Treasurer:** **Janice Carrillo**, University of Florida, Warrington College of Business, Gainesville, FL.
- **Secretary:** **Kamalini Ramdas**, University of Virginia, Darden School of Business Administration, Charlottesville, VA.

We would also like to acknowledge that **Michael Lapre**, **Nitin Joglekar**, and **Edward Anderson** have already been serving in the above positions as special appointments in order to plan for events at the spring 2006 POMS conference. We will step down as Co-Presidents following the spring 2006 meeting.

Sincerely,

Cheryl Gaimon and Vish Krishnan

**POMS ANNUAL CONFERENCE:
OM IN THE NEW WORLD UNCERTAINTIES
BOSTON
APRIL 28-MAY 1, 2006**

It's time to start getting ready for the 17th Annual Conference of the Production and Operations Management Society, which will be held April 28 through May 1, 2006. The theme of this year's conference is OM in the New World Uncertainties. Given the current state of significant changes and issues in the geopolitical and economic landscape, it is the right time to start addressing the role of operations management in this new environment. Unprecedented changes have occurred relative to globalization and offshoring, the use of technologies ranging from e-business to RFID, management of global and cross-cultural supply chains and the focus on corporate and homeland security. Inter-organizational dependence of supply chains has made organizations increasingly vulnerable to natural and man-made disasters, such as the 9/11 attacks, the SARS epidemic and hurricane Katrina.

To remain relevant in the new world economy, operations management must move beyond functional boundaries and work collaboratively with other functions, demanding a bridging of theory and empirical research, in order to equip operations management with currency and corporate relevance. We are in the process of lining up exciting industry and academic leaders to speak on the theme of global uncertainty and the role of OM in this new environment.

The conference will be held at the beautiful Hyatt Regency Boston, which is located in the heart of Boston, one block from Boston Common and adjacent to the Lafayette Corporate center. It should be a wonderful location and time of year for experiencing all that the city of Boston has to offer, as well as for networking with new and old colleagues.

In addition to paper presentations and plenary speakers on a variety of interesting topics, and conference will again feature the Doctoral Student Consortium for career development and networking of doctoral students. The Emerging Scholars Program, which was a huge success in its inaugural year last year, will be offered again for junior faculty. It focuses on academic career building. Awards to be given include the Wickham Skinner Award for excellence in contributions to the POM field, the CIBER International Case Writing Award and the Excellence in POM Practice Award.

The POM-2006 planning team is working very hard to put together an exciting program that will appeal to those who are interested in improving their research productivity, bringing the latest materials to their classroom or using the latest OM techniques/software in solving OM problems. We hope to see you all in Boston!

For further information about the conference, please see the POMS website at <http://www.poms.org>.



Program Chair, POMS-2006 Boston
Professor, Wright State University



General Chair, POMS-2006 Boston
Professor, Wake Forest University

**POMS INTERNATIONAL CONFERENCE
CHINA EUROPE INTERNATIONAL BUSINESS SCHOOL SHANGHAI, CHINA
19–23 JUNE 2006**



POMS and CEIBS are pleased to announce the International Conference in Shanghai, The People's Republic of China, June 19-23, 2006. The venue for this conference is the Pudong Campus of CEIBS. The campus was designed by I.M. Pei, and is a spectacular setting for our conference. The architecture artfully combines Chinese and European themes, resulting in a handsome and functional site for graduate management education. The Call for Papers at www.poms.org includes all information for paper submissions. One unusual aspect for this conference is that research-in-progress is encouraged. Papers on all topics related to teaching, research, and practice of OM are invited. This conference offers an opportunity for in-depth feedback on research-in-process. If you are interested in organizing a track or an invited session, please contact the Co-General Chair Jim Gilbert at jgilbert@rollins.edu.

The primary conference hotel is the Ramada Plaza Pudong Hotel. Pudong is the newly developed area of Shanghai, across the Huangpu River from Puxi, the location of "old Shanghai". This four-star western hotel offers deluxe standard business rooms with IDD/DDD telephone, internet socket, swimming pool and fitness center, satellite TV and 24-hour room service. Rooms are available with a queen-sized bed or two twin beds. There is central air-conditioning. There are Western and Chinese restaurants in the hotel. Additional room capacity is also available at **Ying Biao Garden Serviced Apartments** which is located half-way between the China Europe International Business School (CEIBS) campus and the Ramada Plaza Hotel (.5 km from campus).

Anticipated Shanghai Conference Plans

We anticipate starting each morning with a Plenary Session on China. As CEIBS is a Joint Venture between the European Union and the People's Republic of China we may look forward to hearing from high-level managers and CEIBS faculty on the current and future business conditions within China. On Monday evening will be the kick-off with a Welcome Reception and introduction to the Exhibition of Contemporary Chinese Art which will be mounted for the entire Conference. We would start early each day with sessions continuing 1:30 or 2:00 p.m. when lunch will be available on campus. This will permit tourism late each afternoon: a shuttle bus to downtown can be made available.

The City of Shanghai

Shanghai is one of the world's great cities, with a colorful past, a frenetic present, and a future that will see it eventually back on top of the world as a major international financial and trading center. Shanghai is China's largest city, its largest port and its largest industrial base. It is called the "Dragon Head" of East China – the leading force driving the economy forward.



Associated Events

An Exhibition of Contemporary Chinese Art will run throughout the Conference. This Exhibition will be introduced during the Welcome Reception on Monday evening 19 June. Consuls General from countries with Conference registrants will be invited to attend the Welcome Reception. The Shanghai Traditional Instruments Orchestra will play during the Welcome Reception. There will be a Final Banquet at the Ramada Plaza Pudong Hotel on Thursday evening 29 June.

POMS International Conference Committee

Co-General Chairs: Linda Sprague (lgsprague@ceibs.edu) and James P. Gilbert (jgilbert@rollins.edu)

Associate Chair: Tom Callarman (tcallarman@ceibs.edu)

International Chair: Sushil Gupta (poms@fiu.edu)

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Dear Colleagues:

I am pleased to inform you that based on the POMS' elections held the following people have been elected for various positions. Their terms begin at the POMS' Board meeting to be held in Boston, USA on April 28, 2006 and will end at the POMS Board meeting in the year indicated in parenthesis. President-Elect becomes president in the year indicated against his name.

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Sushil Gupta

Executive Director - POMS