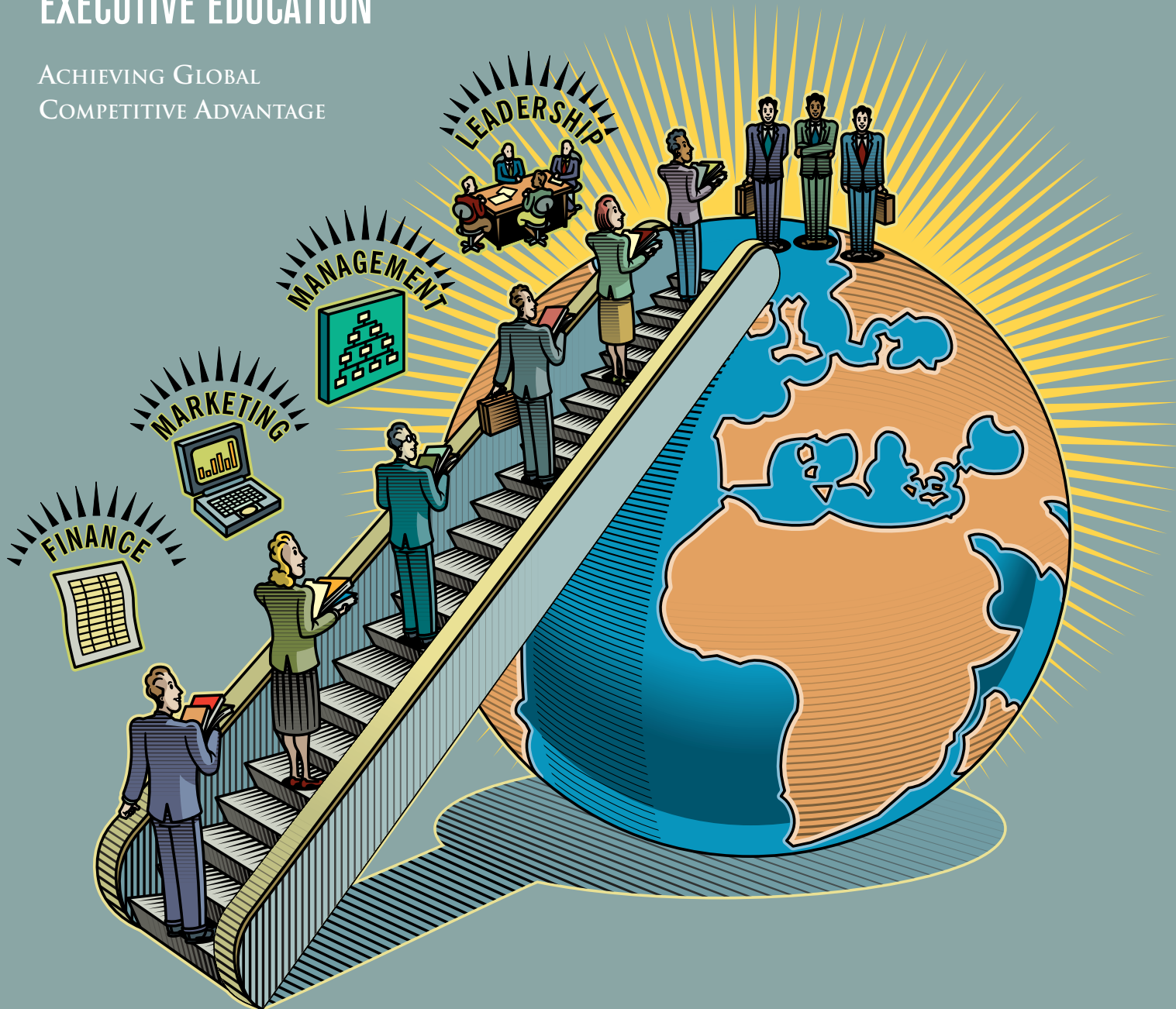


Wharton

A L U M N I M A G A Z I N E

WHARTON EXECUTIVE EDUCATION

ACHIEVING GLOBAL
COMPETITIVE ADVANTAGE



COVER ARTICLE

Of the 230 executive education courses offered this year by Wharton, 120 are customized for specific companies or industries. That's called a "market-focused competitive advantage."



Illustration by
Peter Hoey

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SNIDER SUPPORTS ENTREPRENEURIAL RESEARCH CENTER

Ed Snider, chairman of Comcast Spectacor, has donated \$2 million to support the work of the Sol C. Snider Entrepreneurial Center, the world's first and largest research center dedicated to studying entrepreneurship and business venturing.

Snider founded and endowed The Sol C. Snider Entrepreneurial Center in 1985 to honor his father, a Russian immigrant, who created a chain of supermarkets in Washington, D.C. The new gift will enable the Center to significantly expand its research agenda while enhancing its business outreach in the region.

Snider has been Philadelphia's leader in sports and entertainment for more than 30 years. He founded the Philadelphia Flyers, developed the city's two major arenas and created PRISM, a regional premium cable television channel. He also established Spectacor Management Group, the world's largest manager of public assembly facilities. Comcast Spectacor was formed in 1996 by a merger of the Philadelphia Flyers and 76ers and the arenas with Comcast Corp.



SNIDER

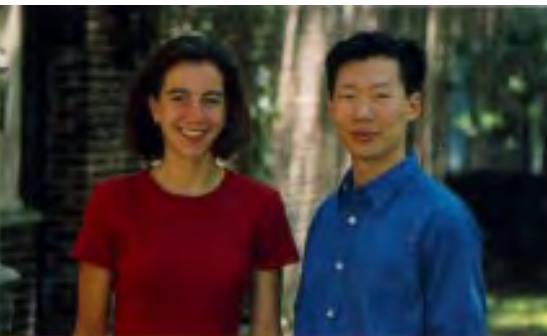
"Entrepreneurship is truly the engine that drives economic growth," says Snider. "Through the Sol C. Snider Center, Wharton can continue the important work of advancing knowledge and practice in this field around the world."

The gift supports the School's strategic plan to sustain its long-term leadership position in several key areas and is part of the University of Pennsylvania's Agenda for Excellence — a five-year initiative that proposes a series of critical priorities and objectives for Penn.

"The Center studies and encourages entrepreneurial ventures that contribute to society at large — those which enable large-scale job creation and productivity and which enhance the quality of life on a global scale," notes Ian MacMillan, George W. Taylor Professor of Management and director of the Center. "We are delighted that Ed Snider has provided the resources needed to understand the entrepreneurial enterprises that make these significant contributions to society." ▼

THOURON SCHOLARS HEAD FOR THE UK

Two of this year's five Thouron awards — prestigious fellowships that allow Penn students to study and travel in



DOMOTORFFY AND KUNG

the United Kingdom, and British students to study and travel in the U.S. — went to Wharton seniors.

Katinka Domotorffy, from Lakewood, Oh., and Billy Kung, from

McLean, Va., both W'97, were chosen on the basis of their academic and personal qualifications, a meeting with members of the Thouron family and a presentation before the selection committee on a current events topic.

The Thouron fellowship was established in 1960 by Sir John Thouron and Lady Thouron to enhance awareness and understanding between the people of the U.S. and Great Britain. Recipients of the award work towards earning the equivalent of a master's degree at a U.S. university. In addition to covering tuition, room and board for two years, the Thouron award grants the students sufficient funds to travel and experience British culture firsthand.

Domotorffy, who will participate in a one-year masters of science in finance program at the London School

of Economics, graduated in May with a concentration in finance and a minor in math and English. This summer she is working as a math teacher at Choate-Rosemary Hall in Connecticut and traveling across Europe.

While at Wharton, Domotorffy worked in the finance department as a teaching assistant for speculative markets. She spent a summer as a programmer for NASA and also has worked as a market researcher in the School's Huntsman Center for Global Competition and Innovation.

Kung, who graduated from the Jerome Fisher Program in Management & Technology, has been accepted into a one-year master's program in computer science at Oxford. Kung originally attended Boston University, where he was a member of the fencing team. His interests include

Continued on page 6

Campus NEWS

■ Laurence A. Tisch, WG'43, co-chairman of the board and co-CEO of Loews Corp. and former chairman and CEO of CBS, spoke at Wharton's MBA graduation on May 18.

Bill Cosby, a Philadelphia native and star of the 1984-92 series *The Cosby Show*, delivered this year's Penn commencement address on May 19 to the class of 1997.

Loews Corp. today is a leader in five industries: hotel operations; property, casualty and life insurance; distribution and sale of watches and clocks; cigarette sales and production, and the operation of gas drilling rigs. Tisch served as chairman and CEO of CBS from 1986 to 1995, at which time the broadcasting company was sold to Westinghouse.



TISCH

■ As a result of a fundraising effort spearheaded by Wharton's European Advisory Board, scholarships are now available to European students applying to the MBA program. A total of \$60,000 was recently allocated to four second-year students and three first-year students.

The scholarships are part of an overall European fundraising effort led by Frederic Dubois, WG'73, in cooperation with Wharton's Annual Fund. To date, more than \$250,000 has been raised.

■ Wharton's Financial Institutions Center and The Brookings Institution are jointly launching an annual forum and journal on policy issues aimed at attracting key public and private sector participants.

"The collaboration is designed to bridge the gap between domestic and international policy makers, industry leaders and academics," says Anthony M. Santomero, director of the Wharton Financial Institutions Center. "This is particularly important today with the merging of different components in what was once a highly segmented industry."

The forum and the journal will examine issues in all relevant sectors of finance including banking, securities, insurance and mutual funds.

The first Wharton-Brookings conference will be held in Washington, D.C. on October 29-30.

■ New York-based Kohn Pedersen Fox Associates PC has been selected as the architects for Wharton's new management education facility, a 300,000 square-foot building that will incorporate graduate and undergraduate classrooms, study areas, an auditorium, student lounges, a café and student services.

The building, scheduled to be completed in 2000, will occupy a gateway site to the Penn campus at Walnut and 38th Streets.

■ The Social Security system and the capital markets were the focus of two conferences this spring:

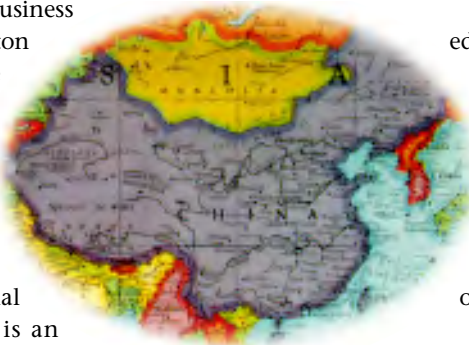
"Prospects for Social Security Reform" on May 12-13 discussed the need for reform of the U.S. social security system and outlined specific options for action. The conference was sponsored by the Wharton Pension Research Council.

The "Performance of Financial Institutions" on May 9-10 brought together scholars from around the world to explore the efficiency of institutions that operate in the capital markets. The conference was sponsored by Wharton's Financial Institutions Center. ▼

NEW INITIATIVE LAUNCHED TO STUDY CHINESE BUSINESS

As part of its efforts to better understand business practices in the Asia Pacific region, Wharton has established a new program called the Chinese Business and Entrepreneurship Initiative (CBEI).

CBEI will be directed by Ming-Jer Chen, who was a faculty member at the Columbia Business School for nine years and spent last year at Wharton as the Harry W. Reynolds Visiting International Professor. A native of Taiwan, Chen is an internationally recognized scholar in the field of strategic management.



CBEI will conduct studies and sponsor educational activities that address Chinese business on a global scale. Specific areas of interest include the inner workings of Chinese family businesses, managerial issues of multinational firms dealing with Chinese companies and the operations of multinationals within the People's Republic of China and throughout Greater China.

The program, the first of its kind at a major U.S. institution, will operate under the auspices of Wharton's Sol C. Snider Entrepreneurial Center. ▼

GOGGLES, ROBOTS AND SNOW-MAKING EQUIPMENT: HELPING ISRAELI COMPANIES ENTER U.S. MARKETS

Brandon Watson, WG'97, worked this spring with an Israeli company that manufactures civil defense products, including goggles used by Israeli tank commanders. The company, \$11 million Shalon Industries, is currently seeking to convert its product line for use in civilian markets. Watson and four teammates looked specifically at joint venture opportunities for selling modified goggles to a number of markets in the U.S., including extreme sports, skiing and snow boarding.

Chad Dick, WG'97, and his team linked up with the Slavin Division of Israel Military Industries, a leading manufacturer of sophisticated robotic equipment which intends to create a line of robots for fire fighting. "At the moment, the fire fighting market doesn't exist," says Dick. "So we talked to and surveyed municipal fire departments as well as commercial and industrial companies that handle hazardous materials (such as chemical plants and coal mines) in order to assess the market potential for robots."

For Kate Bednarz, WG'97, the challenge was to find new applications for a technology developed by I.D.E. Technologies, a \$50 million desalinization company that recently developed improved refrigeration systems. "We looked at potential uses in the snow and ice making business," says Bed-

narz. "The current equipment works only at temperatures of 32 degrees or below. I.D.E.'s equipment can create snow in temperatures up to 80 degrees. That could mean extending ski seasons at winter resorts and/or establishing ski facilities in more moderate climates."

The project teams are part of the Dosberg Wharton-Recanati Partnership located within Wharton's Multinational Marketing and Management Program. The initiative, a joint venture between Wharton and Tel Aviv's Recanati School of Business, links up selected Wharton students with Israeli companies that are seeking to enter the U.S. market. In 1992, York University of Toronto joined the program as a resource for those companies interested in the Canadian as well as U.S. markets. The partnership is celebrating its 20th anniversary this year.

After meeting with their assigned companies in Israel, Wharton students spend the spring semester conducting market research; interviewing potential product users, market intermediaries and partners, and then creating both strategic and tactical

marketing plans to launch their company's products in the U.S.

"It gives the students an opportunity not only to apply what they have learned in marketing but also to apply what they have learned in other areas of management, including finance, entrepreneurship, manufacturing and so forth," says

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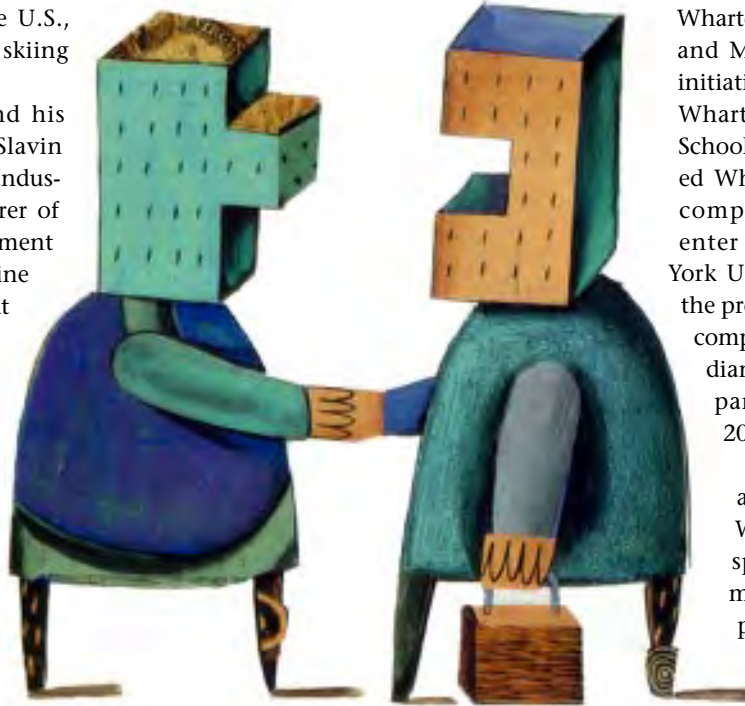


ILLUSTRATION / BRIAN REA

ASIAN CONFERENCE SET FOR OCTOBER

"The Changing Role of the Asian Financial Industry" is the theme of the third annual Wharton Asian Finance Conference scheduled for Friday, October 31, 1997.

The conference brings together leading industry professionals, faculty, alumni and students for a discussion of

the role of Asian economies in the global financial marketplace. Conference topics will include investment banking, financial service consulting, commercial banking, fixed income capital markets and real estate finance, among others.

For information and/or to partic-

ipate, e-mail conference chair Vanesah Ng at kalin43@wharton.upenn.edu or contact the Asian Finance Conference, c/o Wharton Graduate Association, 216 Vance Hall, 3733 Spruce St., Philadelphia, PA 19104-6362. Telephone: 215-573-4343; fax: 215-573-8999. ▼



GRADE A TEACHING

Each spring, both undergraduate and graduate students at Wharton formally express their appreciation for excellent teaching by giving out awards to those professors with the highest teaching ratings.

On the undergraduate level, the 8th annual David W. Hauck Award for Outstanding Teaching, the most prestigious in the undergraduate division, is given to recipients for their ability to lead, simulate and challenge students, knowledge of the latest research in their field and a commitment to educational leadership.

The 1997 recipients are William S. Laufer, associate professor of legal studies, and Suleyman Basak, assistant professor of finance.

The Excellence in Teaching Awards are given in recognition of outstanding teaching and exceptional commitment to undergraduate students. The awards are based on student nominations and teaching evaluations.

Winners this year include Suleyman Basak (Finance), Gordon M. Bodnar (Finance), Neil A. Doherty (Insurance and Risk Management), William F. Hamilton (Management), Larry W. Hunter (Management), Aron Katsenelinboigen (Operations and Information Management), Olivia S. Mitchell (Insurance and Risk Management), Philip M. Nichols (Legal Studies) and Arnold J. Rosoff (Legal Studies).

The Marc and Sheri Rapaport Undergraduate Core Teaching Award is presented to a professor for teaching excellence in a core course. This year's recipient is Georgette Poindexter, assistant professor of real estate, legal studies and law.

GRADUATE DIVISION

In the graduate division, the Helen Kardon Moss Anvil Award, created in 1969, recognizes exceptional teaching effort and ability, both inside and outside the classroom.

The 1997 recipient is Richard P. Waterman, assistant professor of statistics.

The Excellence in Teaching Awards

are given to the eight professors with the highest ratings from the MBA student course evaluation forms.

The professor with the highest rating is also awarded the Class of 1984 Award. This year the recipient is Franklin Allen, professor of finance and economics.

The other Excellence in Teaching Award recipients include: Stuart Diamond (Legal Studies), Robert Inman (Finance), David Reibstein (Marketing), Jeremy J. Siegel (Finance), William C. Tyson (Legal Studies) and Karl Ulrich (Operations and Information Management).

The Miller-Sherrerd MBA Core Curriculum Teaching Awards are presented to eight professors with the highest overall ratings in core courses.

This year's recipients include: Franklin Allen (Finance), Thomas Donaldson (Legal Studies), Ronald Goodstein (Marketing), G. Richard Shell (Legal Studies), Jeremy J. Siegel (Finance), Karl Ulrich (Operations and Information Management), Michael Useem (Management) and Richard P. Waterman (Statistics). ▼

A BANNER YEAR: The MBA class of 1997, led by class gift drive co-chairs Liz Connelly and Richard Nagy, raised \$136,383.80 for their class gift. That is almost twice the amount raised last year, and doesn't include a \$35,000 challenge gift from the Graduate Executive Board. Total: \$171,383.80.

More impressive figures: 536 students, 71 percent of the class, contributed to the gift; 120 of them qualified for the Young Franklin Society (gifts of \$500-\$999) and 18 qualified for the Benjamin Franklin Society (gifts of \$1,000+).

The \$171,383 will help fund an alumni web page called the Wharton Alumni Virtual Community. The project — which its supporters envision as a way to strengthen the Wharton community throughout the world — will include such features as job postings, career counseling, virtual reunions, a Dean's Forum, regional club activities and announcements of interesting campus events. ▼



CONNELLY AND NAGY

PHOTOGRAPH / PETER OLSON



HUANG

POLITICS ON THE SIDE

It's hard sometimes to remember that Eugene Huang, W'99, EAS'99, is a student. He took off the spring and fall semesters last year to work full-time for Mark Warner, a candidate for the U.S. Senate from the state of Virginia.

During the fall of 1995 he was a part-time student and full-time paid volunteer for Philadelphia Mayor Ed Rendell's mayoral campaign. And during his senior year at Beverly Hills High School, as a way to "get involved in the political process," he worked on candidate Mike Woo's bid to be mayor of Los Angeles.

(For the record, Rendell won, Woo and Warner lost.)

Obviously, connections help. Huang met Rendell while he was doing a freshman year internship in the mayor's constituent services department, a job he landed through a Penn student/former Woo campaigner. That led to his part-time work as a volunteer for Rendell's reelection campaign. Mark Warner happened to come to a fundraiser for

Rendell in Philadelphia, mentioned that his campaign needed a technology point person, interviewed Huang for 15 minutes and offered him the job. Three months later, Huang was a paid campaign staffer living in an apartment in Richmond, Va.

His title was director of technology. "I handled everything from setting up a corporate network to creating a campaign web page to strategizing about our media image to helping with the design of campaign publications. We were woefully understaffed," notes Huang, who says if he ever ran for political office himself, it wouldn't be for "20 to 30 years."

He continues to do a few projects for Warner, who is head of a venture capital company that invests primarily in telecommunications and more recently in technology companies.

But for now, he is enjoying the idea of being a full-time student again. "Most people, when they leave school, talk about how much they miss it," says Huang, who is in the Jerome Fisher Program in Management & Technology (M&T). "I've been out there and I truly did miss it. Now, for the first time in a long while, I don't have a job while I'm in school. It's a new sense of freedom. I'm really looking forward to doing schoolwork." ▼

PHOTOGRAPH / JERRY MILLEVOI

THOURON SCHOLARS

Continued from page 2

creating virtual environments, fencing and theater.

Kung worked for one summer as a White House intern and as a consultant for Fuji Xerox. This summer he is in Guangzhou, China, in the U.S. Foreign Service's political economic section. *Julia Feldman* ▼

BOOKS FOR THE BEACH ... AND BEYOND

Last spring, six Wharton professors were asked by members of WG'97 to give their views on management challenges over the next few years. They discussed, for example, the role of technology in a global marketplace; skills needed today that weren't required a decade ago; "hot spots" for marketing and financial investing, and opportunities for international expansion.



The professors were also asked to recommend books they felt would offer valuable perspectives to students as they set out on new careers. Here are their suggestions:

Jeremy Siegel, finance: *A Random Walk Down Wall Street*, by Burton Malkiel; *The General Theory of Employment, Interest & Money*, by John Maynard Keynes; and *Capitalism & Freedom*, by Milton Friedman.

Michael Useem, management: *Annapurna, A Woman's Place*, by Arlene

Blum; *Leading Minds: An Anatomy of Leadership*, by Howard Gardner; *Lost Moon: The Perilous Voyage of Apollo 13*, by Jim Lovell and Jeffrey Kluger; and *Young Men and Fire*, by Norman Maclean.

Richard Shell, legal studies: *Influence: The Psychology of Persuasion*, by Robert Cialdini; *The Mind of the Strategist*, by Kenichi Ohmae; and *The Tempest*, by William Shakespeare.

David Reibstein, marketing: *The Road Less Traveled*, by Scott Peck, and *Everything I Learned about Business I Learned at Microsoft*, by Julie Bick.

Eric Clemons, operations and information management: *Snow Crash*, by Neil Stephenson; *The Armchair Economist*, by Steven Landsburg; and *Voltaire's Bastards*, by John Ralston Saul.

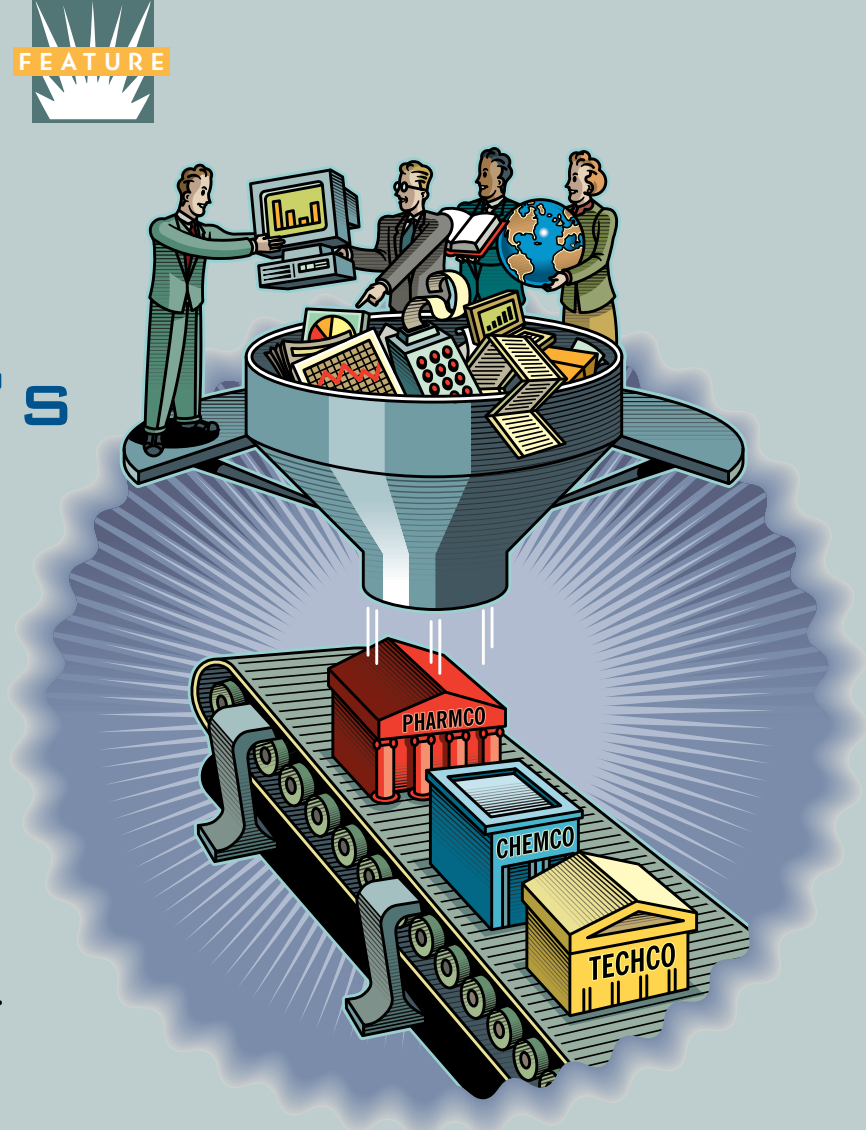
Stuart Diamond, legal studies: *Zen and the Art of Motorcycle Maintenance*, by Robert Pirsig, and *The Prince*, by Machiavelli. ▼

SAVE THE DATE!

The 18th annual
**Wharton Women in
 Business Conference**
 will be held this year
 on October 31.
 All alumni are invited.

EXECUTIVE EDUCATION'S GLOBAL REACH

IT'S A GOOD BET THAT THE 10,000 MANAGERS AND EXECUTIVES WHO ARE TAKING A COURSE WITH WHARTON THIS YEAR KNOW SOMETHING OTHERS DON'T.



Executive education, says Robert E. Mittelstaedt, vice dean and director of Wharton's Aresty Institute of Executive Education, "isn't what it used to be."

Consider the following:

- The government of Jiangsu province in northeastern China has asked Wharton and Penn's Graduate School of Education to create a management course for senior government officials and company executives this fall. Shanghai's municipal government and Beijing's national government are pursuing similar programs.
- ScottishPower, a \$1.4 billion multi-utility company in Glasgow, recently partnered with Wharton to design a year-long management development program effort for the company's top executives. Participants attend courses at Wharton, ScottishPower and other executive education programs in the U.S. and abroad.
- Growing interest in research issues related to electronic commerce led last year to the creation of the Wharton Forum on Electronic Commerce spearheaded by Wharton faculty and executive education staff. Seven companies, including British Airways and State Farm Insurance, have signed on as learning partners and are actively collaborating on the Forum's research agenda.

- A joint venture between Wharton and the Liechtenstein Global Trust (LGT), a \$42 billion asset management and private banking company, is part of what LGT Chairman H.S.H. Prince Philipp describes as a "truly innovative and unconventional program." The 10-week course for 60 senior managers takes place over a three-year period and includes — in addition to courses in marketing, international finance and leadership development — sculpture classes and rowing on the Schuykill River.
- A major consulting firm recently hired Wharton to teach a 12-week customized course on business fundamentals to the company's non-business employees, including engineers, lawyers and health care professionals.
- The Director's Institute, a "living case" that puts directors on the board of a (fictitious) multinational company, is now entering its fourth year and has expanded to include a Director's Forum offered every eight months in London. Each year the program presents a *Board of the Year Award* to (real) companies that excel in meeting the needs of shareholders, employees and society. In 1995 and 1996, the winners respectively were Mallinckrodt Group, Inc. and Campbell Soup Company.
- Caracas-based Petreleos de Venezuela SA (PDVSA), one of the world's largest oil companies, asked Wharton this spring

to create a customized three-day course for its chief information officers in connection with a major outsourcing and restructuring effort. PDVSA has already enrolled employees in both open enrollment and customized courses in strategy and finance (including a week-long customized program that Wharton faculty taught to senior management last May in Caracas) and this summer has accepted several Wharton MBA students for internships.



This year alone, more than 10,000 men and women will attend a Wharton executive education program. The School offers 230 courses (compared to 111 five years ago) grouped under the general headings of developing leadership, gain-

ing financial advantage, managing the enterprise, strategies for growth, healthcare management and senior management.

The curriculum includes, for example: three 5-week advanced management programs for senior executives; four 2-week executive development programs for managers moving from functional to general management responsibilities, and an International Forum for 35 senior executives interested in exploring global strategic issues during sessions in Philadelphia, Bruges, Kyoto, Prague and Shanghai.

Of the 230 courses offered, 120 are customized for specific companies or industries. Each course is assigned to an executive education staff member who works closely with a faculty program director and other participating professors as well as representatives of the client company or association. "It ends up broadening the set of faculty involved and



also makes sure that the client's needs are met," says Mittelstaedt. "We see it as a unique cross between consulting and education."

It's the custom business, Mittelstaedt adds, that sets Wharton's executive education program apart from others. "A lot of what are called custom programs at other places are open enrollment courses which have been pulled off the shelf and tweaked a little to make them seem designed for a particular company. In most of our custom business, the programs are developed very explicitly and specifically for our clients. No one else in the business does it this way."

Recent clients include Asea Brown Bovari, Ltd., AT&T School of Business, Bell Atlantic Corp., Cigna Corp., Dean Witter Reynolds, Inc., Unum Life Insurance Co., Merrill Lynch & Co., Pfizer, Inc., Samsung Group, Sharp Electronics Corp., Siam Cement Co. Ltd., the Young Presidents Organization, the Securities Industry Association, the Association of Investment Management Sales Executives, the Association of Professors of Gynecology and Obstetrics, the American Institute for Chartered Property Casualty Underwriters, the Insurance Institute of America, the International Foundation of Employee Benefit Plans and the Society of Actuaries, to name a few.

A common thread underlying interest in all these programs is the need to operate in an international marketplace. "Globalization is no longer a theory," says Mittelstaedt. "People don't want to know how you globalize your business; they are already doing it. They need to understand what happens when time goes down to zero, when their organization has to respond to developments not just rapidly, but instantaneously."

"We have shifted from an era when people thought about management development as an orderly process stretched out over one's career to a point where you have to look at it as just-in-time development for people, similar to just-in-time inventory systems."

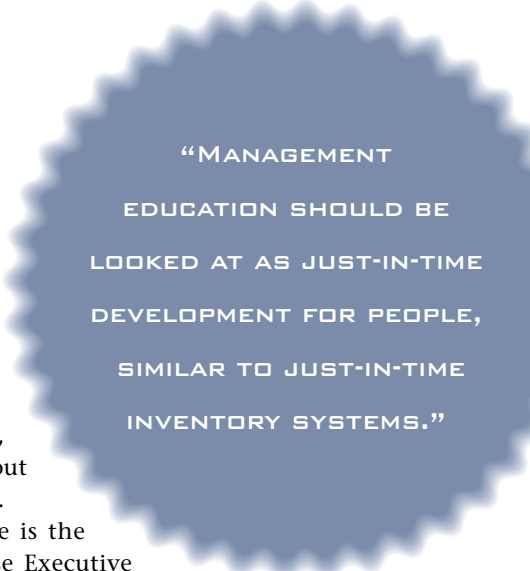
Not to mention just-in-time decision making which may be one way to view the pressures on managers these days to come up with global solutions quickly and efficiently. Four of Wharton's most recent course additions address this need:

- *Discovery Driven Planning*, geared toward managers in the process of launching a new product initiative or business development project. Participants learn how to identify and test assumptions, make mid-course corrections or pull the plug on doomed projects, and convert assumptions into knowledge before committing to expensive investments.
- *Critical Thinking: Real-World, Real-Time Decisions*, designed for managers who are faced with too much data, too little time and no framework in which to make decisions.
- *Capitalizing On Brand Assets*, aimed at defining, measuring and building brand equity.
- *Prospering in a Newly Deregulated Environment*, designed for managers with responsibility for marketing and strategy in newly deregulated industries.

In the midst of its on-site course expansion, executive education itself has gone global. This year, the School is offering programs in England, France, China, Japan, India, Singapore, Thailand, Taiwan and throughout most of Latin America.

The latest example is the Wharton/GSE Chinese Executive Business Competency Program referred to in the introduction. Although still in discussion stages, the program is envisioned as a year-long management development program for 50 senior government officials from Jiangsu province. The first six months will take place in a Chinese university learning English and computer science, followed by six months in the U.S. where the focus will be on business education and cultural enrichment.

"In China, the government runs 80 percent of the businesses," says Mittelstaedt. "So it is extraordinarily concerned with competition, marketing and market orientation ... The challenge for Chinese managers is to move from a planned economy — where people were used to following orders — to a market economy in which people have to be creative."



"MANAGEMENT EDUCATION SHOULD BE LOOKED AT AS JUST-IN-TIME DEVELOPMENT FOR PEOPLE, SIMILAR TO JUST-IN-TIME INVENTORY SYSTEMS."

A UTILITY COMPANY ON THE MOVE

Three years ago ScottishPower, Scotland's largest industrial company, asked Wharton to help them design a year-long development program for senior managers that would better prepare the utility company to handle the challenges of deregulation. "ScottishPower was originally an electricity generation supply company," notes Oonagh Gaff, ScottishPower's management development manager. "But since we were privatized in 1991 we have pursued a multi-utility strategy that involves leveraging the customer base to sell a range of utility products," including gas, telecommunications and water.

The business climate is about to change even more, Gaff adds, with deregulation of the domestic market in 1998. "Up until now we have been competing only for large industrial customers. But the domestic market in the United Kingdom and Scotland goes free next year. That will be of major importance to our organization. We will no longer have a captive audience of customers.

"Where we need to compete is on customer knowledge and understanding, and also on the uniqueness of our multi-utility products. We are the only multi-utility in the UK and internationally. It's a huge advantage if we can capitalize on it."

Which is where Wharton fits in. "ScottishPower recognized that the future of the business would be very different from the past," notes Jane Hiller Farran, director, corporate programs at Aresty. "They knew they needed to get their tier of senior managers ready to deal with that future. So we put together a year-long program that runs for three successive years and targets such areas as marketing and finance, but also leadership, strategy and long-range planning."

Robin MacLaren, chief engineer, power systems, was one of 15 senior managers at ScottishPower who recently completed the program. "It gave us time and space to reflect on strategic issues relating to the competitive market for energy supply and the development of the UK utility sector," says MacLaren, who supervises a staff of 190 and oversees all central engineering issues. "For example, we are now able to better assess risk in the commercial market and have become more aggressive in dealing with major contracts."

MacLaren also noted increased networking among senior managers. "In tackling certain market sectors for large customers, businesses which were not talking closely enough are now operating more as a team," he notes. "There are more synergies within groups and the sense of people working together towards a common purpose."

MacLaren found particularly useful the program's discussions of managing technology and innovation, the creation of virtual teams and the "interaction between tops, middles and bottoms" — i.e., the dynamics among organizational levels.

The program begins with a two-week workshop that focuses on the critical issues facing ScottishPower and uses

these issues as a basis for managers to form their own personal learning agendas. Participants then attend an executive education program at one of four schools: Wharton, INSEAD, the Kellogg School or the London Business School. "We recommend programs in addition to our own because we feel that our courses are not for everyone, nor could we accommodate everybody in the space of a year," says Farran. "There are probably five to six top-notch advanced management programs

around and each one has a totally different character. A company should attend one that meets its learning needs and philosophy."

Senior managers from ScottishPower also convene four times during the year in Scotland for team reviews with Wharton faculty and three times during the year for special issue workshops. "These are designed around what the group and the executives identify as critical needs," says Farran. "For example, last year they chose to focus on core competencies, mergers and acquisitions and leveraging value out of a mature business."

One of the key insights that the first group of 15 senior managers brought back to the company last year was "an in-depth understanding of where ScottishPower fits in industrial and organizational terms," says Gaff. "As an engineering-based organization, we tend to think in a linear way about how an organization operates. But a multi-utility must work to take a systems approach to the company ... That has led to new insights in how we go forward with our core competencies."

Over the past year, adds Farran, the executive education division has received several requests from companies like ScottishPower "that want help, not designing a course, but a whole development effort for a section of senior management. That's different from saying 'we have these people in place and want training for them as they are.'"

CHARGING INTO CYBERSPACE

"We believe in our hearts that electronic commerce is going to become very important," says Nicholas Doran, general manager, distribution, for British Airways, the world's largest international carrier. "Air travel for most people is not a frequent purchase, so on its own, it will not compel consumers to start using the Internet, interactive television or other media. There will be other drivers of Internet usage. That requires us to take a broad view of this issue outside our own industry ..."

"We are interested in exploring how we can use the new media to reach customers directly or in different ways than we do today."

British Airways is one of seven member companies of The Forum on Electronic Commerce, a research-oriented initiative organized by several Wharton professors in conjunction with executive education. The companies — AT&T Universal Card, Fannie Mae, Johnson & Johnson, Rosenbluth International, Safeguard Scientifics, State Farm Insurance and British Airways — have each provided substantial financial support for the Forum and are already setting the agenda for research and discussion. At the Forum's second meeting in June, for example, reports were presented on three topics: advertising effectiveness, channel conflicts and analysis of click stream data.

"Companies today realize that in many cases their businesses will either be changed or eliminated if they don't understand what is happening in electronic commerce,"

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notes Eric Johnson, professor of marketing and operations and information management, and an organizer of the Forum.

“The beauty of this whole initiative,” he adds, “is that what is new and interesting to faculty is also new and interesting to industry. The difference between research and the real world is smaller here than in almost any other area I know of.”

Research projects already launched by Wharton faculty involved in the Forum include:

- Studying how people acquire information from electronic shopping services on the World Wide Web. Using eye tracking equipment and computerized process tracking tools, Gerald Lohse, assistant professor of operations and information management, is developing models that can help in designing future information products, retail kiosks and multimedia information services. Initial applications include work on Internet yellow page directories and personalized online retail catalogs that dynamically adapt to user preferences.
- Examining the development of broadband networks to reach every home and business in the United States. The study, by Gerald R. Faulhaber, professor of public policy and management, is analyzing the nature and speed of development of these networks and their impact on business.
- Assessing the effectiveness of on-line advertisements that link a potential customer from one site to another. David Reibstein, William Stewart Woodside Professor of Marketing, is looking in particular at how the “relatedness” of the linked sites affects the impact of on-line links.
- Analyzing the issues raised by e-cash and electronic commerce for national and international economic and political governance. The study is being done by Stephen J. Kobrin, William H. Wurster Professor of Multinational Management.

- Studying the impact of color web design on consumer behavior and choice. Johnson and doctoral student Naomi Mandel propose that color can prime certain attributes and cause certain reactions in consumers. Johnson is also analyzing click stream data to help companies better understand the needs and usage patterns of their customers.

“Wharton offers a great resource for companies like ours that have the potential for being significantly affected by electronic commerce,” notes Danamichelle O’Brien, WG’92, director of marketing at Rosenbluth International. “The Forum is a resource not just for business strategy but also in the areas of public policy and technological innovation.” Rosenbluth is especially interested in “how electronic commerce will affect differential pricing in the travel products arena, including airline pricing, package pricing, and pricing behavior among consumers and suppliers.”

Many other research initiatives on electronic commerce, says Alison McGrath Peirce, director of senior programs, tend to focus on engineering and technical aspects, such as payment security and data base interfaces. The Forum on Electronic Commerce has been positioned instead “to tackle the strategic, marketing and customer interface issues that we feel will be the major factors in the success of electronic commerce. Basically it encourages companies to look at the information they have as a critical asset and then transform that asset into an advantage.”

BALANCE SHEETS AND OTHER BUSINESS FUNDAMENTALS

“We have a group of businesses that function under a fibers division, and that division is always interested in new

opportunities, whether it is buying or selling,” says Miguel A. Desdin, WG’94, business controller, textile nylon, AlliedSignal in Richmond, Va. “The mergers & acquisition course offered a very good grounding in how deals function and in the mechanics of how deals get approved. It also offered an understanding of why some deals fail.”

“Like most physicians who get into management,” says Dr. Henry Dirk Sostman, chief of radiology at New York Hospital, “I was chosen for my current position because I am a good doctor and a good scientist. Yet this job has virtually nothing to do with either of these things. It is all about management and finance. I have a \$30 million budget, about 200 employees and no formal training whatsoever in how to read a balance sheet or evaluate a capital project.

“The finance and accounting course I took this year was an opportunity to speak to people from completely different areas faced with the same kinds of problems ... I have been able to use the course in discussions with our finance people, in managing my department and in carrying out my role in our physician organization.”

Executive education’s “nuts and bolts” courses — on subjects like sales force management, pension funds, industrial marketing strategy, negotiation, new product development and strategic alliances — remain an anchor of the program and a major contributor to its growth.

Two of the biggest and most popular courses are finance and accounting for the non-financial manager (F&A), and mergers and acquisitions (M&A), says Peirce. A sixth F&A session was added this year “partly because of an increasing need across the board these days for people to understand issues of cash flow, capital budgeting and reading and interpreting financial statements. In many organizations, the P&L responsibility is being pushed lower and lower.”

With mergers and acquisitions activity at an all-time high in the U.S. and accelerating in Europe, the M&A class has been revised to add more people as well as to allow them to customize course content based on their individual needs. Participants can opt for 21 electives, including advanced financial topics, integration/HR considerations, valuing brand equity and deal structure/risk analysis.

J. William Busch, district manager, international business development for AT&T, customized the M&A course he took last fall to give it more of a financial focus. “The course was very good in offering a broad overview of the mergers and acquisitions area as well as providing information about such topics as valuations and due diligence,” notes Busch, whose job involves analyzing new ventures and negotiating agreements.

For David A. Longfellow, WG’81, strategic programs manager for Lucent Technologies in Allentown, Pa., the M&A course “helped me view all the areas that need attention, from establishing a general framework for analyzing acquisitions in general to knowing what to look for in a financial model.”

The finance and accounting course looks at accounting terminology, valuation concepts, the role of different financial statements, the quality of earnings, how to distinguish income from cash flow, the accounting process and how to analyze financial reports.

James White, vice president/managing director at Ralston Purina in St. Louis, cited the “practical night study work” of the F&A course he attended in March. “We took a somewhat academic view of a subject during the day but then each evening we talked about the practical application of the day’s topic, such as how to value a business. It really closed the loop on applying what we had learned to our responsibilities as managers/leaders.”

Course participant Dr. Silvia Nora Bonaccorso, a physician who is vice president, marketing and medical communications, at Merck & Co., has “a multimillion dollar budget that I administer and a finance group of five people that reports to me. I thought that I should be able to grasp more fully the principles of accounting and finance rather than having to depend on my financial group ... I have learned not only how to read a balance sheet but also an income statement and an annual report, and to read between the lines, see things that are there and know what they mean.”



In the midst of so much activity, is Wharton’s executive education division removed from what goes on in other parts of the School? Hardly. “Much of the leadership work that has been an important part of both the MBA and undergraduate curricula at Wharton was experimented with first in our Advanced Management Program before it ended up in the MBA and undergraduate programs,” says Mittelstaedt. “Additionally, some things we have developed in the Director’s Institute have found their way into MBA course material on corporate governance.

“It works the other way as well. A negotiation course that is taught to both the MBA students and the undergraduates has become a highly successful executive education workshop that we now offer to senior managers three times a year.

“The ties between executive education and the rest of the School continue to be significant,” adds Mittelstaedt. “They can only add to the strengths of all our programs.” ▼

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The Inside Story of Product Design

IF YOU HAVE EVER EXAMINED THE INNER WORKINGS OF A CAMERA OR COFFEE MAKER, CAR OR MOUNTAIN BIKE, YOU AND PROFESSOR KARL ULRICH WILL HAVE A LOT TO TALK ABOUT. HIS BOTTOM LINE: DESIGN MATTERS.

Karl Ulrich is taking apart a Rowenta coffee maker. Once he is finished, he will move on to a Sony Walkman. Then a Polaroid instant camera.

He has done the same with automobile dashboard assemblies — or at least watched others take them apart — and most recently, mountain bikes.

Like the engineer that he is, Ulrich, associate professor of operations and information management, enjoys looking at how products are designed. But it's more than just admiration of the intricate bits and pieces that give a product its unique — or, alternatively, its mass-produced — functionality and aesthetics. Ulrich is convinced that the process of designing products — from the nitty gritty details to larger, system-level decisions — affects how companies ultimately fare in the marketplace. Successful companies, he would say, are those that view the process as a collaborative effort between design, manufacturing and marketing. “The artifact is really the embodiment of a set of hard disciplinary decisions that trade off technical feasibility, consumer preferences, an analysis of the competition and cost,” he notes. “It’s a complex problem, and unless you get people working together on it, you don’t find solutions that are superior.”

Ulrich himself is an example of the collaborative process. Although product design typically has its home in an organization’s R&D department, no such department exists at Wharton. The situation has inspired Ulrich to go out and make his own connections, or “links”, to colleagues in operations and manufacturing, marketing and management. As a result, much of his research is interdisciplinary, including a current study of product variety and brand equity in the mountain bike industry.

Ulrich earned a doctorate in mechanical engineering from MIT, where he taught for five years before coming full-time to Wharton in 1995. One of the courses he offers here is “Product Design and Development,” in

which he asks students to present ideas for new products and then work in teams to develop them. “It’s an integrative course that brings together marketing, design and manufacturing issues,” notes Ulrich. This year, among the products students came up with were: a portable water filter that screws onto plastic bottles filled with tap water; an indicator that attaches to dairy packaging and measures the freshness of milk; and a kayak seat that can be retrofitted for sea kayaking.

Ulrich has also consulted with established companies such as Hewlett-Packard and Polaroid, as well as start-ups, including Projectavision, a manufacturer of projection televisions that shipped its first product in April.

Ulrich created the term “product archeology” to describe his method of measuring manufacturing content — the attributes of the design that drive cost — through analysis of the physical products themselves. He then estimates how variation in manufacturing content relates to variation in cost.

“It’s an extremely objective approach,” he notes. “Most of the research in this area has relied on subjective expert evaluation. For example, a survey might ask managers in the auto industry to rate Toyota’s performance with respect to manufacturing cost. The problem with this approach is that a manager’s judgment is clouded by all kinds of other factors, such as Toyota’s reputation for quality. When you do the product archeology, however, you can physically observe the product in a highly reliable way.”

Variations in manufacturing content, Ulrich says, are a clear indication of the importance of design in the life cycle of a product. And in many ways they reflect variations in the way an organization operates. “In the worst organizations, there is neither coordination nor teamwork,” says Ulrich. “What you see is that marketing writes a memo saying they have done some market research — which usually means they have talked to their sales force — and here’s what the product has to do. They give that to R&D. The engineers, none of whom has gone out and looked at competitive products or talked to real consumers, try to interpret what marketing

has done. Then R&D tells manufacturing to build the product. Manufacturing focuses on cost reduction, which means they outsource the product to China or some other low-wage economic environment.

“And what you end up with is a product that doesn’t meet customer needs, isn’t attractive and isn’t necessarily low-cost. It fails on all dimensions.”

Coffee Makers: The Good, the Bad and the Ugly

Back to those nitty gritty design details. Ulrich recently completed a study using his concept of product archeology in which he compared the design of 18 automatic drip coffee makers. His goal was to assess the importance of design in determining product costs, and by implication, profitability. Along the way, what he found was significant variation in manufacturing content, not to mention aesthetics.

“Many of the early Mr. Coffees are ugly, while the Rowenta product on the market today is attractive,” says Ulrich, citing two of the brands that he studied. “Yet when you compare the different design details you find that the Rowenta is the product with the least manufacturing content in the data set.

“What’s striking is that among all of the 18 brands I analyzed I couldn’t find any correlation between my estimate of manufacturing cost and the sale price. The Rowenta sells for \$49 and has an estimated manufacturing cost of \$6. Some of the others sell for about \$20 but have estimated costs of more than \$9.

“The variation in manufacturing content suggests that the design capabilities of the organization have a significant impact on manufacturing costs. The product with the least manufacturing content has an estimated cost of \$6, while the product with the most content has an estimated cost of more than \$10. So it’s almost a factor of two, for a product whose basic function is the same — making coffee.”

The second interesting observation Ulrich notes is the absence of trade-offs. “The Rowenta is a more attractive and higher quality product and is also the lowest in terms of manufacturing cost,” he says.

The variation in design and cost arises from several factors. One has to do with very basic design decisions, such as the type of plastic used in different parts. “The tank in the Braun coffee maker, for example, is made from a very low-cost plastic called polypropylene. While it’s cheap, the plastic also tends to show what are called sink marks, best described as little lines where different parts intersect. To hide those unattractive sink marks, Braun’s designers chose a ribbed pattern for the plastic — a solution that lets the company offer a feature that consumers think is classy but that uses a polymer which is half as expensive as other alternatives. The decision has a huge profit impact. More

importantly, it's related to the basic design capabilities of the organization. It's an example of the kind of details that are involved in getting things right."

The coffee maker study assumes a given basic product technology, Ulrich adds. "You can imagine what the impact would be if you were also considering variations in the basic technology."

Based on his data, Ulrich suggests three general hypotheses about product design which he feels are applicable whether one is talking about coffee makers, consumer electronics, heavy equipment or most other products:

First, differences in design practices correspond to significant differences in manufacturing content, and therefore manufacturing costs. In other words, design matters.

Second, for a given set of product requirements, low-cost designs can be achieved to a great extent without compromising product quality. In other words, design is free.

Third, different firms exhibit competitively significant differences in design capability. In other words, design is hard. "Design is like most other human pursuits in that a collection of teams will exhibit different performance capabilities," says Ulrich.

Corporate culture obviously plays a large role in the design process. Braun, for example, "has a very rich design tradition, with almost no turnover and strong corporate leadership," says Ulrich. "At the other end of the spectrum are the appliance divisions of companies like Sunbeam and Proctor Silex that suffered from high turnover and low morale during a series of acquisitions."

Ulrich started out his research focusing on the auto industry. "I gave it up when I realized I couldn't buy all the products on the market nor could I take them all apart." But he did get to visit the GM vehicle assessment center outside of Detroit, where he could observe disassembling on a major scale.

"There were huge differences in manufacturing costs for different systems," he says. "Some instrument panels and dashboard assemblies used two to three times the parts of others. The VW Passat, for example, had an amazingly low cost instrument panel, while the Mazda 626 used twice as many parts leading to significantly more manufacturing content.

"In the bumper system, the Taurus had about half the parts of the Thunderbird. So you have two very similar sedans in terms of size and functionality, developed by the same organization. One team got it right and the other didn't."

Theoretically, one might expect a trade-off between quality and cost in the manufacturing arena, says Ulrich. But when you look at the data, "the higher quality organizations often also have lower costs. This idea that companies are operating on what economists call 'the efficient frontier' — i.e., they are all making equally efficient decisions trading off different dimensions of performance, such as high-quality, high-cost versus low-quality, low-cost — turns out to be false. Many firms are way off the efficient frontier. They are bad at everything. The firms that are good are often good at everything.

"At the same time, the system is very dynamic. Firms are not necessarily consistently good. But a firm like Toyota has been good for a long time. It continues to get better and it dramatically outperforms the competition. I don't think this situation is unique to design. The basic insight is that there are differences in capabilities and they are real. How you explain them and how you manage them is a whole other topic."

200 Varieties of Walkmen

The second half of the design story addresses what Ulrich calls "product architecture" — the scheme by which the functions of a product are allocated to its components.

Take — or take apart — the Sony Walkman, as Ulrich has. Functions include the radio tuner, user interface, enclosure, tape transport, power supply and signal processing.

A manufacturer, says Ulrich, has to decide how to assign these functions to the different physical components of the product.

In Sony's case, the company designed the product around three basic systems or sets of components: The tape transport mechanism, the electronics/circuit board and the enclosure/user interface. "The company made an architectural decision to think about the product in terms of three basic physical chunks. That decision allows them to do some interesting things, such as produce more than 200 different models of the Walkman," says Ulrich.

They do that by relying on only three tape transport mechanisms — a small and expensive one, a rugged one for sports and a cheap one. "The tape transport function is thereby allocated to a single component in a modular fashion so it can be interchanged in many different products."

A different firm might choose to adopt a different architectural strategy — for example, one that integrates the enclosure and tape transport so that every time the enclosure is changed, the tape transport has to be changed as well.

"But then you couldn't offer 200 different varieties without going out of business," Ulrich says. "That company might choose to follow a low-cost low-variety strategy. Sony, on the other hand, has chosen to follow a high-variety strategy which is *enabled* by these architectural choices. This strategy is also enabled by Sony's production system choices. The company has invested in a very flexible assembly technology, including their own robotic assembly system. It's a good example of the joint decision making that has to come together in order to produce a product strategy."

Architectural decisions on how to allocate the functions of the product have a huge impact on product variety, on the ability to upgrade and change these products and on the efficiency of product development, says Ulrich.

A company that handled the product architecture question differently is Polaroid. In the 1970s, the company devised a design strategy in which it created a complex in-

jection molded structure for its flagship product, the Spectra camera. “The main structural parts are amazing; they physically integrate dozens of features and functions of the camera,” notes Ulrich.

“The molds cost hundreds of thousands of dollars to make, but once Polaroid got the design and tooling right, the camera could be produced at very low cost. Using this integrated architecture, the company prospered on a low-variety, low-cost strategy for 20 years.”

But in the 1980s and 1990s, customer requirements in instant photography began to change and Polaroid entered several new electronic imaging markets, Ulrich says. “The company faced competitors who were very good at developing a wide variety of new products quickly — a strategy enabled by modular architectures. In response, Polaroid has been forced to change its development processes and product architectures so that its products are more modular, consisting of standardized components and systems which can be shared across existing products and carried over to new ones.”

In some industries, variety is important and in others it’s not, says Ulrich. He has been working with a division of Hewlett-Packard to evaluate whether the computer manufacturer is at the point where it needs to go high variety. “In other words, is the company’s product starting to be perceived as a commodity with respect to its basic functionality? Does it now have to start adding differentiation on other dimensions to continue to grow? I don’t have a good answer for when that point is, but it does seem to happen once the technology matures.”

As an example, look at the Walkman, says Ulrich. “In 1980, consumers were thrilled to get high fidelity sound out of something about the size of a paperback book. Steadily there were improvements in size, cost and battery life. The basic technology of the product kept getting better. Pretty soon, everyone could buy a personal stereo for \$50 from about four different competitors. At that point, the “sports” category emerged. The need for ruggedness in the product was suddenly important, which in turn led to increased product variety.

“Looking at that situation, another company could say that their product too is at the point where there are diminishing returns in terms of making improvements to the basic technology. Consumers are starting to look to secondary properties of the product. It might in fact be time to start developing products that are more focused on subsegments of the market. Variety is about to emerge as important.”

Exactly when that happens, however, is hard to predict, says Ulrich. It’s an area of research he plans to pursue further.

Biker Heaven

When Ulrich was looking for a “domain” in which to study variety decisions — in particular the benefits and costs associated with a particular variety strategy — he and three colleagues from Wharton — Marshall Fisher, Stephen J. Heyman Professor of Operations and Information Management; David Reibstein, William Stewart Woodside Professor of Marketing; and PhD candidate Taylor Randall, settled on the mountain bike industry.

They chose mountain bikes because of the availability of data on different companies, the numerous competitors and bike models within the industry and their own sheer enjoyment of the sport.

“In our study we examine the types of products, production systems and supply chains that companies are using to provide product variety to consumers,” says Ulrich. “We investigate the impact that choices in each of three areas have on different aspects of firm performance.”

The researchers focused on the “over \$200” category of mountain bikes, primarily on 1995 bike models offered for sale in the U.S. Among other things, they noticed that manufacturers pursue very different strategies with respect to the breadth of models offered. For example, Giant offers bikes from \$270 to \$3,700 while Ritchey offers bikes from \$1,675 to \$3,000 and Raleigh from \$200 to \$1,100. Conejo’s brands start at \$2,000 and go up to \$6,000 while Cannondale’s start at about \$500 and go up to about \$4,000.

“We got interested in what motivates these different strategic choices about where your product line is. If you look at a brand like Marin, you see they have 85 models. Cannondale has about 15. They are in the same breadth of the market but with very different variety strategies.

“As researchers, we are looking at decisions made by a company’s top strategists that relate to product variety. Specifically we want to know what guides those decisions. On what dimensions is a company going to offer high variety: Color choice? Materials? Frame Type?”

Another key decision area Ulrich and his colleagues are looking at is how the company operates its production system: in a make-to-forecast mode or a make-to-order mode. Also, what level of flexibility exists in the production process in terms of the ease with which production can switch between different types of products such as mountain bikes

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Electronic Cash and the End of National Markets

By Professor Stephen J. Koblin

The physical transfer of large amounts of currency across national borders is an anachronism; drug smugglers provide one of the last surviving examples. Virtually all of the trillions of dollars, marks and yen that make their way around the world each day are electronic — chains of zeros and ones. Only at the very end of its journey is money transformed into something tangible: credit cards, checks, cash or coins.

Although many new forms of “electronic money” are under development, it is useful to look at three general categories: electronic debit and credit systems; various forms of smart cards; and true digital money, which has many of the properties of cash.

Electronic debit and credit systems already exist. When a consumer uses an ATM card to pay for merchandise, funds are transferred from his or her account to the merchant’s. Computer software such as Intuit provides electronic bill payment, and it is but a short step to true electronic checks — authenticated by a digital signature — that can be transmitted to the payee, endorsed and deposited over the Internet. Electronic debit and credit systems represent new, more convenient means of payment, but not new payment systems.



Smart cards and digital money do represent new payment systems with potentially revolutionary implications. Smart cards are plastic “credit” cards with an embedded microchip. Many are now used as telephone or transit payment devices. Mondex, a smart card or electronic purse currently being tested, can be “loaded” with money from an automatic teller machine (ATM) or by telephone or personal computer. Money is spent either by swiping the card through a retailer’s terminal or over the Internet by using a card reader and a personal computer. At this most basic level, a smart card is simply a debit card that does not

require bank approval for each transaction. There is no reason, however, that smart cards have to be so limited.

Banks or other institutions could provide value on smart cards through loans, payments for services or products. The immediate transfer of funds between bank accounts is not necessary; value can circulate from user to user without debiting or crediting third-party accounts. The Mondex card, for example, allows anonymous peer-to-peer transfers through an electronic wallet. Assuming confidence in the creating institution, “money” could be created on smart cards and circulate almost indefinitely before redemption.

Finally, electronic money can take true digital form, existing as units of value in the form of bytes stored in the memory of personal computers that may or may not be backed by reserve accounts of real money. The money could be downloaded from an account, supplied as a loan or as payment, or bought with a credit card over the Internet. As long as digital cash can be authenticated and there is confidence in its continued acceptance, it could circulate indefinitely, allowing peer-to-peer payments at will. These are big “ifs,” but they are well within the realm of the possible.

Imagine a world where true e-cash is an everyday reality. The year is 2005. You have a number of brands of e-cash on your computer’s hard drive: some withdrawn from a bank in Antigua, some borrowed from Microsoft, and some earned as payment for your services. You can use the digital value units (DVUs) to purchase information from a web site, pay bills, or send money to your daughter in graduate school. Peer-to-peer payments are easy: you can transfer DVUs to any computer, anyplace in the world, with a few keystrokes.

Your e-cash is secure and can be authenticated easily. It is also anonymous; governments have not been able to mandate a technology that leaves a clear audit trail. Public-key encryption technology and digital signatures allow blind transactions; the receiving computer knows that the DVUs are authentic without knowing the identity of the payer. Your e-cash can be exchanged any number of times without leaving a trace of where it has been. It is virtually impossible to alter the value of your e-cash at either end of the transaction (by adding a few more zeros to it, for example).

DVUs are almost infinitely divisible. Given the virtually negligible transaction cost, it is efficient for you to pay a dollar or two to see a financial report over the Internet or for your teenager to rent a popular song for the few minutes during which it is in vogue. Microtransactions have become the norm.

E-cash is issued — actually created — by a large number of institutions, bank and nonbank. Electronic currencies (e-currencies) have begun to exist on their own; many are no longer backed by hard currency and have developed value separately from currencies issued by central banks. DVUs circulate for long periods of time without being redeemed or deposited. Consumer confidence in the issuer is crucial; as with electronic commerce (e-commerce) in general, brand names have become critical.

The early 21st century is described as a world of competing e-currencies, a throwback to the 19th century world of

private currencies. The better known brands of e-cash are highly liquid and universally accepted.

Governance in the Digital World

In a world where true e-cash is an everyday reality, the basic role of government in a liberal market economy and the relevance of borders and geography will be drastically redefined. While this appears to reflect a traditional break between domestic and international economic issues, in fact the advent of e-cash raises serious questions about the very idea of “domestic” and “international” as meaningful and distinct concepts. The new digital world presents a number of governance issues:

- *Can central banks control the rate of growth and the size of monetary supply?* Private e-currencies will make it difficult for central bankers to control — or even measure or define — monetary aggregates.
- *Will there still be official foreign exchange transactions?* If you have \$200 worth of DVUs on your computer and buy a program from a German vendor, you will probably have to agree on a mark-to-dollar price. However, transferring the DVUs to Germany is not an “official” foreign exchange transaction; the DVUs are simply revalued as marks. Without severe restrictions on individual privacy — which are not out of the question — governments will be hard-pressed to track, account for, and control the flow of money across borders.
- *Who will regulate or control financial institutions?* The U.S. Treasury is not sure whether existing reserve or reporting requirements would apply to all who issue (and create) e-cash. What about consumer



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protection in the event of the insolvency of an issuer of e-cash, a system breakdown, or the loss of a smart card?

- *Will national income data still be meaningful?* It will be almost impossible to track transactions when e-cash becomes a widely used means of payment, online deals across borders become much easier, and many of the intermediaries that now serve as checkpoints for recording transactions are eliminated by direct, peer-to-peer payments.
- *How will taxes be collected?* Tax evasion will be a serious problem in an economy where e-cash transactions are the norm and it is easy to transfer large sums of money across borders anonymously. More fundamentally, the question of jurisdiction — who gets to tax what — will become increasingly problematic. Say you are in Philadelphia and you decide to download music from a computer located outside Dublin that is run by a firm in Frankfurt. You pay with e-cash deposited in a Cayman Islands account. In which jurisdiction does the transaction take place?

- Will e-cash and e-commerce widen the gap between the haves and the have-nots? Will e-cash and e-commerce further marginalize poorer population groups and even entire poor countries?
- Will fraud and criminal activity increase in an e-cash economy? At the extreme — and the issue of privacy versus the needs of law enforcement is unresolved — transfers of large sums of cash across borders would be untraceable. Digital counterfeiters could work from anywhere in the world and spend currency in any and all places. New financial crimes and forms of fraud could arise that would be hard to detect, and it would be extremely difficult to locate the perpetrators. The task of financing illegal and criminal activity would be easier by orders of magnitude.

Geographic Space vs. Cyberspace

A recent U.S. Treasury paper raises a fundamental question: Will electronic commerce “dissolve the link between an income-producing activity and a specific location?” The source of an income stream, which plays a major role in determining tax liability, for example, is defined geographically in terms of where the economic activity that produces the income is located. Therein lies the rub: “Electronic commerce doesn’t seem to occur in any physical location but instead takes place in the nebulous world of ‘cyberspace.’”

Territorial sovereignty, borders and a clear distinction between domestic and international spheres are modern concepts associated with the rise of the nation-state. Territorial sovereignty implies a world divided into clearly demarcated and mutually exclusive geographic jurisdictions. It implies a world where economic and political control arise from control over territory. The obvious disconnect between systems of economic and political governance rooted in geography and e-cash and markets that exist in cyberspace will only worsen over time.

The international financial system — which consists of hundreds of thousands of computer screens around the globe — is the first international electronic marketplace. It will not be the last. E-cash is one manifestation of a global economy that is constructed in cyberspace rather than geographic space. The fundamental problems that e-cash poses for governance results from this disconnect between electronic markets and political geography.

The term “disintermediation” was first used to describe the replacement of banks as financial intermediaries by direct lending in money markets when interest rates rose. It is often used in the world of e-commerce to describe the elimination of intermediaries by direct seller-to-buyer transactions over the Internet. Many observers argue that e-cash is likely to disintermediate banks. Of more fundamental importance is the possibility that e-cash and e-commerce will disintermediate the territorial state.

To be clear, I argue that we face not the end of the state, but rather the diminished efficacy of political and econom-

ic governance that is rooted in geographic sovereignty and in mutually exclusive territorial jurisdiction. Questions such as, “Where did the transaction take place?” “Where did the income stream arise?” “Where is the financial institution located?” and “Whose law applies?” will lose meaning.

E-cash and e-commerce are symptoms, albeit important ones, of an increasing asymmetry between economics and politics, between an electronically integrated world economy and territorial nation-states, and between cyberspace and geographic space. How this asymmetry will be resolved and how economic and political relations will be reconstructed are two of the critical questions of our time.

What is to be Done?

The question asked here is not “What is feasible?” but “What are the limits of the possible?” Whether the picture presented here is correct in all — or even some — of its details is unimportant. A digital world economy is emerging. Imagining possible scenarios is necessary if we are to come to grips with the consequences of this revolution.

A digital world economy will demand increasing international cooperation, harmonizing national regulations and legislation, and strengthening the authority of international institutions. The harmonization of national regulation will help to prevent institutions, such as those issuing e-cash, from slipping between national jurisdictions or shopping for the nation with the least onerous regulations. However, it will not address the basic problem of the disconnect between geographic jurisdiction and an electronically integrated global economy.

If it is impossible to locate transactions geographically — if the flows of e-cash are outside of the jurisdictional reach of every country — then the harmonization of national regulations will accomplish little. The basic problem is not one of overlapping or conflicting jurisdictions; it stems from the lack of meaning of the very concept of “jurisdiction” in a digitalized global economy. The erosion of the viability of territorial jurisdiction calls for strengthened international institutions. It calls for giving international institutions real authority to measure, to control, and, perhaps, to tax.

That does not mean a world government; it does mean a markedly increased level of international cooperation. It means we must ask whether territorial sovereignty will continue to be viable as the *primary* basis for economic and political governance as we enter the 21st century. ▼

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 Stephen Kobrin, the William Wurster Professor of Multinational Management, is director of the Joseph H. Lauder Institute of Management and International Studies.

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1997

# REUNIONS

A small white-haired woman clasped the arm of her newly-graduated grandson as they left Wharton's MBA commencement ceremonies on Sunday, May 18. "Let me know when you get your e-mail address," she said. "I want to be sure to keep in touch."

Graduation was the culmination of Wharton's 1997 Reunion Weekend — a three-day series of events on May 16, 17 and 18 that reinforced Wharton's sense of community and offered participants many opportunities to "keep in touch."

Executive education sessions focused on "Stocks or Bonds — Where Do We Stand Now?" and "Developing Your Leadership." An alumni/faculty exchange discussed "Managed Care: Coping with the Counterrevolution." Seminars brought alumni up to date on "Learning Technologies of the '90s" and "Career Transition — Utilizing Wharton's Resources." And MBA students from this year's graduating class presented plans for start-up companies in "The Wharton Laboratory — Seeds of Entrepreneurship."

Woven throughout the weekend were receptions, picnics, brunches and dinners as more than 500 members and guests from the Reunion Year classes of 1967, '72, '77, '82, '87 and '92 networked, socialized and marched in the Penn parade.

On these pages we highlight some of the events of Reunion Weekend and profile six Reunion year graduates.



Richard D. Fain



WG '72  
Chairman and CEO,  
Royal Caribbean Cruises, Ltd.

Richard Fain's biggest challenge over the next few years is "communicating to the 93 percent of Americans who have never been on a cruise just what they are missing and why they can afford it."

It's a message that Fain and Miami-based Royal Caribbean Cruises, Ltd. are taking giant steps to deliver. In April, the \$1.4 billion company launched its 11th ship, the 2,000-passenger *Rhap-*

*sody of the Seas*, bringing its total number of berths to 16,000. Approximately \$3 billion has been set aside for four more ships over the next three years.

That kind of mega-investment suggests a certain optimism on Fain's part, not to mention enthusiasm for the value of his product. "A lot of people are still under the misconception that cruises are for older, wealthier people," Fain says. "In fact, the average age of our passenger is less than 45 and the target annual family income is \$35,000."

Since he was named chairman and CEO in 1988, Fain's strategy for Royal Caribbean has indeed been "mega-brand." The word, he says, refers not only to the company's presence within the travel industry but also to the global nature of its itineraries — 154 destinations around the world — and the size and scope of its ships.

Smaller Caribbean-based cruise ships have been shouldered aside over the past few years by larger world wide-based ships that come with

seven-deck atriums, cabins with verandas, state-of-the-art theaters, casinos, piano bars, children's areas, two-deck dining rooms, small cafes, outdoor pools, libraries, conference centers, spas and shopping malls.

Offshore, the amenities continue. Royal Caribbean, which went public in 1993, currently operates two private islands in the Bahamas and off the north coast of Haiti for its cruise ship passengers.

As part of its expansion strategy, Royal Caribbean has chosen to run on-board operations that previously were contracted out, including casinos, gift shops and, most recently, wedding parties. "We typically have conducted about one wedding service per cruise, but now we are prepared to organize the whole event," Fain says. The idea apparently appeals to the matrimonially-inclined. "Even before we could announce this initiative publicly," Fain notes, "we received 40 inquiries."

*Continued on page 28*

sharon fordham

WG'77



President, LifeSavers Co.

Anyone who thinks that launching a new product is an intuitive, relatively effortless and usually successful process should think again. By most industry estimates, says Sharon Fordham, president of LifeSavers, only 10 to 15 percent of new products succeed.

"I believe that figure is accurate because in many companies the whole process tends to be random," she notes. "People often sit around and brain-

storm ideas and then follow whichever one sounds best."

Fordham does it differently — and with the kind of success that has earned her awards, promotions and media attention, not to mention very satisfied consumers. At Nabisco, which she joined in 1981, her best sellers include Ritz Bits™ and Teddy Grahams™, Mr. Phipps™ pretzel chips and SnackWell's™ reduced fat and fat-free cookies and crackers. Now as president of LifeSavers, a Nabisco subsidiary, she has to her credit the breath-freshening hit gum Ice Breakers™ and a line of popular low-fat SnackWell's chocolates.

Ice Breakers, Fordham is quick to add, was already in the pipeline when she arrived at LifeSavers two years ago. "What I did was contribute the resources to it and also the understanding that it was a much bigger idea than the company thought. Championing the right new product is every bit as important as developing new ideas."

Back to new products. "Our process starts with a view of what our business is," Fordham says. "We look at similar products, at how consumers use these products and at the products' physical attributes."

Fordham's approach also analyzes current trends in the food industry, successful vs. unsuccessful products, neighboring food categories and, perhaps most importantly, gaps in consumer usage.

At some point the group begins to agree on strategic thrusts for the new product which then kicks off a series of brainstorming sessions to come up with specific ideas. And yes, there is some magic to the whole operation, although "I don't think that new product development is as magical or as intuitive as most industry observers would believe," says Fordham. "It's a structured process that relies on teamwork, strategic direction and a thorough understanding of your indus-

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PHOTOGRAPHS / JERRY MILLEVOI

deborah bennett braxton  
alan braxton

WG'87



Product Manager, Ameritech  
Principal, LaSalle Partners

Deborah Bennett Braxton remembers sitting in macroeconomics class during her second year at Wharton becoming increasingly irritated at a noisy student behind her. She turned around and told him to be quiet.

"He kept on talking," Bennett says, but the connection was made. Deborah and Alan Braxton both took jobs

with Quaker Oats after graduation. In 1989, Deborah moved to Los Angeles to work for Kal Kan Industries. Alan followed and landed a job at LaSalle Partners. The two were married in 1990. Last September, when Deborah was working at Kentucky Fried Chicken, Alan was transferred from LaSalle Partners' L.A. office to its headquarters in Chicago. For Deborah it meant finding a new job.

She chose telecommunications, because "it's a hot industry, it's growing and there are lots of opportunities," she says. As a product manager for Chicago-based Ameritech, a \$15 billion former Regional Bell Operating Company (RBOC), Braxton is responsible for identifying new telephone technology for a five-state region. "Ameritech offers services like call waiting, caller ID and three-way calling — i.e., network services. But they aren't appealing if you don't have equipment to access them. In the residential area I manage the process of identifying suppliers for

equipment such as corded, cordless and the new-tech 900 megahertz models (a subset of cordless). That includes negotiating the cost of goods, setting purchase terms, forecasting availability, identifying new products and overseeing quality assurance and testing processes.

"Right now, I'm evaluating screen phone technology that allows consumers to access e-mail and the Internet and eventually will allow them to conduct transactions, such as retail purchases, home banking and smart-cards. The possibilities are endless."

Braxton grew up in Hempstead, Long Island, and graduated from Dartmouth. She spent four years at Mobil Chemical Corp. in Michigan before coming to Wharton. The Braxtons live in Oak Park with their two children, ages 4 and 1.

Alan Braxton is a principal at LaSalle Advisors, the real estate investment management arm of LaSalle Part-

*Continued on page 28*



The Union League hosted Saturday night's dinner for graduates from the classes of WG'67, '72, '77, '82 and '87. The group photo below showcases the Wharton Annual Fund's Reunion class gift volunteers and Benjamin Franklin Society donors who were honored during a cocktail reception.



**jeffrey miller**  
**Laurie magid**

W '82



**Founder/President,  
Jeffrey Miller Catering**

**Associate Professor,  
Widener University  
School of Law**

Jeffrey Miller began his catering career when he was a sophomore at Wharton by offering "brunch in bed" to students in the high rise dormitories. "It was part of an independent study project for a

class in entrepreneurial management," Miller says, "but then I kept doing it junior and senior year as well. Pretty soon I was being asked to cater fraternity brunches, then cocktail parties and then faculty lunches. When [former Penn President Sheldon] Hackney came to campus, I sent him a chocolate cake. A few days later his wife asked me to cater a dinner they were having for Art Buchwald."

Miller now employs 30 full-time people, works out of an office in downtown Philadelphia, manages a 7,000-ft warehouse/kitchen in the suburbs and expects to do \$1.6 million in sales this year.

More importantly, he still likes to cook — a skill he learned during short internships in restaurants like New York's Le Cirque, Paris's Le Moulin de Mougins and London's Simpsons in the Strand. His favorite dish to make is one he invented himself: steamed salmon with black bean burre blanc.

"When I was an undergrad I sent a letter to William Fishman, the founder of ARA, and asked if I could meet with him," says Miller. "We talked for about an hour, and at one point I asked him the secret of his success. His response was: 'I try to find the best people I can and then I try to keep them happy.' 'Is that it?' I asked him. It sounded so simple. Since then, I have found out that it's actually the hardest part of running a business ..."

An important part of Miller's undergraduate experience turned out to be a course that he taught on pastry making. A 19-year-old classmate named Laurie Magid signed up. "I learned how to make Napoleons," says Magid, but more importantly, she introduced herself to the chef and invited him to a party. Magid went on to law school at Columbia and returned to Philadelphia in 1985 to clerk for one year on the Third Circuit Court of Appeals. She and

*Continued on page 28*





The Academy of Natural Sciences welcomed the Class of '92 for a reception and dinner against a backdrop of dinosaurs, bears, moose, caribou and other museum residents.



barry wilson



**President, Medtronic Europe, Middle East and Africa**

One way to look at Barry Wilson's decision early last year to move Medtronic's European headquarters from Brussels, Belgium to Lausanne, Switzerland would be to ask yourself the question: If you had to wear a pacemaker, where would you want this tiny (25 gram) device to be manufactured?

Wilson's answer had a lot to do not just with Switzerland's highly sophisti-

cated micro machining industry (as in watches and clocks) but also with the country's infrastructure of renowned technical institutes, world-class medical facilities and cutting-edge health care equipment.

Minneapolis-based Medtronic, with revenues of \$2.5 billion, is the number one medical device company in the world. It manufactures everything from pacemakers and implantable defibrillators (small devices half the size of a cigarette box that return a rapidly beating heart to a normal rhythm) to tiny stents that prop open diseased arteries and neurostimulators that lessen the involuntary trembling associated with Parkinson's Disease. As Wilson says, "our potential is limited only by health care budgets and our ability to get the products out."

Wilson heads up Medtronic's European, Middle Eastern and African markets which together bring in annual revenues of \$750 million.

The relocation to Lausanne was prompted in part by the Clinton administration's decision to repeal Section 936 of the U.S. tax code which granted special tax breaks to companies with manufacturing operations in Puerto Rico. The repeal meant that Medtronic, which had two manufacturing operations in southwest and south central Puerto Rico, was facing the prospect of significantly higher taxes.

Wilson looked at countries around the world, including China and Ireland, before settling on Switzerland. He is relocating not only much of Medtronic Europe's manufacturing operations, but also its headquarters and research staff and is establishing a second education center. "Costs are higher, but so is productivity, and social costs are low," says Wilson. For example, whereas benefits cost Dutch companies an additional 50 percent of an employee's base salary, that figure is

*Continued on page 29*

carlos alicea



**Regional Director for Latin America, BMG Classics**

During his childhood in Puerto Rico, Carlos Alicea was glued to the television set whenever the Casals music festival was in town. He went on to attend a local high school for the performing arts — half of each day’s curriculum was devoted to music studies — and then Indiana University School of Music in Bloomington.

After graduating he toured the U.S. and abroad playing trombone with a

chamber music group before moving back to Puerto Rico where he spent five years as general manager of Puerto Rico’s symphony orchestra. Two years later he earned his MBA from Wharton.

All of which prepared Alicea well for his current position as head of marketing for Latin America for BMG Classics, a division of BMG Entertainment that is geared towards the adult consumer. Over the past four years, BMG Classics has diversified into repertoires that include classical, jazz, New Age, crossover, world music, Broadway scores and movie soundtracks.

Although Alicea works in BMG Classics’ New York headquarters, he is on the road 50 percent of the time. “We focus mainly on Argentina, Brazil, Chile and Mexico but we are also in Colombia and Venezuela,” says Alicea, who worked for Procter & Gamble before joining BMG in 1993. In addition, Alicea is in charge of several U.S. projects,

including recent recordings of Michael Tilson Thomas and the San Francisco Symphony Orchestra.

In Latin America, Alicea’s initiatives involve: managing, marketing and selling jazz artists such as Dizzie Gillespie and Tommy Dorsey; recording classical pianist David Helfgott, who is the subject of the movie *Shine*, playing Rachmaninoff’s Third Concerto; marketing soundtracks from Broadway shows like “Chicago” and movies like *Independence Day*; and offering a recording of the Grammy award-winning Irish group “The Chieftains”.

The most popular U.S. export to Latin America? The soundtrack from *Star Wars*. Says Alicea: “It shows how cultural barriers can be transcended.”

BMG Classics’ main avenue of distribution is through the retail chains. The company recently launched a campaign in Spanish and Portuguese to sell the “Greatest Hits” line of more than 20 classical and jazz recordings

*Continued on page 29*

Dean Thomas P. Gerrity (below left) and Penn president Judith Rodin (below right) reported on School developments. A number of alumni returned to the classroom to hear professors discuss current business topics.



# RESEARCH WIRE

BELOW IS A SUMMARY OF SEVERAL RESEARCH PROJECTS RECENTLY COMPLETED BY WHARTON FACULTY.

## DOES DOWNSIZING IMPROVE PERFORMANCE?

Corporate restructuring has become a staple of management life. But when is it most likely to improve a company's financial performance?

A recent Wharton study categorized restructuring into three types: financial restructuring (changing the capital structure of the firm including leveraged buyouts, leveraged recapitalizations and debt for equity swaps); portfolio restructuring (significant changes in the mix of assets); and organizational restructuring (employee layoffs). Financial restructuring, the study concluded, has the most positive impact on performance, followed by business portfolio restructuring. Organizational restructuring such as downsizing, has little, if any, impact. The research, conducted by a team of management professors, was based on an analysis of 52 studies of corporate restructuring and its financial performance implications.

*Edward H. Bowman, Harbir Singh, Michael Useem and Raja Bhadury; When Does Restructuring Work?*

## INEFFECTIVE CORPORATE GOVERNANCE LINKED TO HIGH CEO PAY AND POOR PERFORMANCE

There is a growing debate in business and academia over whether U.S. boards of directors are effective, and in particular, whether they structure CEO pay packages that maximize shareholder value. A new Wharton study examines whether variations in the effectiveness of corporate governance structures lead to variations in CEO pay levels.

The authors find that certain board and ownership structures appear to enable CEOs to exercise their influence over the board in order to obtain compensation in excess of the level implied by firm size, performance and industry membership. And, that the excess compensation earned by these CEOs is a sign of other weaknesses in the firm's governance mechanisms that lead to worse subsequent accounting and stock market performance. The authors find that corporate governance is weaker when the CEO is also the chairman, the board is larger, the outside directors are less independent (as measured by the number of outside directors who were appointed by the CEO), directors receive fees in excess of their board pay, or directors are interlocked. In addition, corporate governance is weaker when outside directors are less able to attend to their duties (as measured by the number of outside directors who are over age 69 or who serve on three or more other boards).

Corporate governance is stronger when the CEO owns more stock and when there is another insider or outsider who owns 5 percent of the firm.

The authors do not find evidence to support the common contentions that there should be more outside directors on the board and that outside directors should own more stock.

*John E. Core, Robert W. Holthausen and David F. Larcker; Corporate Governance, CEO Compensation and Firm Performance*

## ON THE VERGE OF RETIREMENT: FINANCIAL POSITION MAY BE BETTER THAN EXPECTED

As a debate rages around social security reform, many have worried that current generations of workers are in for tough financial times during retirement. But according to a new study from Wharton's Pension Research Council, Americans on the verge of retirement today may, in fact, be better off than commonly believed. A team of researchers analyzed data from the Health and Retirement Study (HRS), a new nationally representative survey that measured income and wealth for Americans age 51 to 61 in 1992. They valued expected pension and social security benefits and computed expected retirement wealth relative to pre-retirement income. They found that pensions, social security, and retiree health insurance together account for 60 percent of the wealth anticipated by the median HRS household, and for 48 percent of wealth for the wealthiest group of Americans.

"To be sure, we recognize that many people enter retirement with inadequate assets," the authors write. "And of course, many people are heavily dependent on social security ... But on the whole, the population entering retirement may not be in as bad shape as some have led us to believe." On the other hand, warns Olivia Mitchell, a Wharton professor and an author of the study, "having more wealth than the abysmally low levels reported by the media is probably not enough for a comfortable lifestyle during the golden years."

*Olivia Mitchell, Alan Gustman, Andrew Samwick and Thomas Steinmeier; Pension and Social Security Wealth in the Health and Retirement Study*

## HOW TO REFORM THE JAPANESE FINANCIAL SYSTEM

During the 1980s the Japanese financial system was widely regarded as a model to be emulated around the world. The strength of Japanese firms in international markets was at least partially attributed to its financial system.

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## THE BOOK ON COMPETITIVE STRATEGY



REIBSTEIN (LEFT)  
AND DAY

This spring, a team of 17 Wharton faculty members and distinguished colleagues around the world published a book for managers on competitive strategy in dynamic environments. *Wharton on Dynamic Competitive Strategy* (Wiley & Sons, 1997) presents key insights from diverse fields on the challenges of the fast-paced competitive interactions of today's markets. The volume, organized and edited by Marketing Professors George Day and David Reibstein, draws together research and insights on game theory, competitive simulations, scenario planning, signaling, conjoint analysis, information technology, and other areas. It focuses these perspectives on the current challenges facing managers in building and sustaining competitive advantage in rapidly shifting environments. We interviewed Professors Day and Reibstein shortly after the book's release in April.

### Q ► WHY DID YOU WRITE THIS BOOK?

**REIBSTEIN:** Strategy is so complex today, you can't rely on just one viewpoint. It is so dynamic — with shifts by competitors and in the competitive environment — that the new watchwords are anticipation and preparation. Every move of a competitor is met with a rapid countermove. Thus any advantage is merely temporary. These are the challenges facing the executives and companies we have worked with. We wanted to create a book that would provide deep perspectives on addressing these challenges.

### Q ► WHY WHARTON? HOW DOES THE BOOK DRAW ON WHARTON'S STRENGTHS?

**DAY:** Many people don't know this but Wharton has one of the largest and most diverse groups of faculty studying strategy anywhere in the world. This project grew out of a series of roundtable discussions we organized with Wharton faculty. We found we were all examining our own piece of the challenges facing managers. So, we decided to develop a book that would draw together these perspectives and put them in the hands of managers. Wharton is one of the few places in the world where you could find this kind of depth and breadth. We were also fortunate to have funding support from the Huntsman Center for Global Competition and Innovation. Jon Huntsman, W'59, who faces intense competition in the global chemical market, strongly encouraged us in this project.

### Q ► WHAT IS THE BOOK'S POINT OF VIEW?

**REIBSTEIN:** The distinctive point of view is that competitive strategy today must be *dynamic* and *cross-functional*. What does dynamic strategy mean? It means that

today's competitive environments are changing rapidly as a result of deregulation, globalization, technology shifts and many other forces. That's a truism, of course, but think about the implications for formulating strategy. If you think of competitive strategy as a chess match, you have to think ahead multiple moves instead of playing the game linearly. Now, imagine that at the same time you are playing this chess match, other players are entering and leaving the game, maybe from different sides of the board. Maybe they have some superior new technology like IBM's Deep Blue that totally undermines your current advantages. Then imagine that the actual size and shape of the board is being reconfigured as you are making your move. Maybe a regulator suddenly declares all the white spaces off limits and you have to move your pieces off those areas. You can see how complex and malleable this situation becomes. This is an environment in which traditional strategic theories and approaches are no longer completely adequate. And the complexity of this environment requires diverse perspectives on strategy — an interdisciplinary view — which is the approach we take in the book.

### Q ► HOW DO YOU ADDRESS THIS DYNAMIC ENVIRONMENT?

**DAY:** The book is organized around the key issues managers need to consider in formulating strategy. Questions like: What are your advantages? Who are your competitors? How will they react? First, we look at ways to understand the competitive environment, including examining advantages and defining the competitive arena. We also look at the impact of regulations, technology and other forces. We next examine a variety of approaches for anticipating the actions and reactions of competitors. Then, given the environment and competitive moves, we examine ways to formulate your own competitive strategy — including planning reactions, preemption, using signaling and commitment, and consid-

*Continued on page 30*

## ISRAELI COMPANIES *Continued from page 4*

Leonard Lodish, Samuel R. Harrell Professor of Marketing and co-founder/director of the program.

This spring 35 Wharton students, divided into seven teams of five students each, were matched up with Israeli firms that, in addition to the three mentioned earlier, included: a producer of irrigation products looking to expand into the consumer irrigation market; a company seeking to convert military products, such as rugged laptop computers, for use in civilian industrial markets; the developer of a computerized valve for soft drink dispensing; and a dairy and cheese manufacturer.

In preparation for the spring match-ups, Israeli students from Recanati in Tel Aviv have already spent the previous fall semester compiling information on member companies' objectives, management goals, strengths and weaknesses and the types of products that have potential for export to the U.S.

In May, Israeli executives, Wharton faculty and Recanati, Wharton and York students meet on campus for a final week of management and marketing meetings, including presentation of the students' reports. Student teams frequently bring in consultants, distributors, industry contacts and/or potential product users to build support for their recommendations.

As an example of the program's effectiveness, Lodish cites a recent \$70 million contract secured by Tadiran's Elisra Division to sell its communications terminals to Qualcomm, a provider of commercial wireless. The deal is based in part on the recommendations of a 1992 team of Wharton, Recanati and York University students.

More than 100 companies have participated in the Dosberg Wharton-Recanati Partnership since its beginning in 1978.

"We can point to at least \$300 million in revenues generated for Israeli companies by this program over the past 20 years," says Lodish. ▼

## FAIN *Continued from page 20*

Royal Caribbean's biggest competition, he adds, comes from land-based vacations, "even though a cruise offers more variety and choice of activities than other comparable vacations and it's less expensive when you consider that the cost includes all travel, food and entertainment."

And for those worried about every lurch and roll of the seven decks: "Ships these days are so huge that getting seasick is no longer an issue," Fain says. "If you were in New York harbor, as I recently was with our newest ship, sitting on the observation lounge of the top deck, you could look the Statue of Liberty in the eye. That is how large and stable today's cruise ships are."

Fain was born in Boston, brought up in Providence, R.I., and graduated from the University of California-Berkeley. He worked at Wells Fargo Bank, attended Wharton and then took a job with I.U. International Corp.

In 1975, he went to work for an I.U. subsidiary in London called Gotaas-Larsen Shipping Corp., first as treasurer and later as joint managing director. Gotaas-Larsen was a minority shareholder in Royal Caribbean. In 1988 the majority stockholders of Royal Caribbean offered Fain the job of chairman and CEO.

Fain estimates he has probably gone on about 20 "complete" cruises in his life, not counting the many times he has flown to port of call and spent two days with the ship's passengers and officers. His favorite cruise destination? "My favorite destination," he says, "is always the ship." ▼

## MAGID & MILLER

*Continued from page 23*

Miller were married in 1986.

Magid spent the next eight years in the Philadelphia District Attorney's office doing primarily appellate work. "Although the DA's office is mostly criminal work, the first case I was assigned was a civil case — prison overcrowding. The suit was filed in 1982 and it's still going strong," she says.

She left the DA's office in 1995 for a full-time position at Widener Law School in Chester, Pa., where she teaches classes on criminal procedure and legal research and is co-director of the legal writing program. That same year she was appointed by Governor Thomas Ridge to the Pennsylvania Commission on Sentencing.

"I don't cook much," Magid adds. "But I cook well ... I tend to make 'homier' things than Jeffrey. My spaghetti sauce is better than his, and so are my chocolate chip cookies. But he can do things that require technique — like croissants." ▼

## BRAXTON *Continued from page 22*

ners, and is responsible for marketing the company in the Midwest and Southeast regions.

His clients include public and corporate pension plans, endowments and foundations. "Real estate as an asset class is in a high growth period because of strong supply and demand fundamentals and increasing capital flows," says Braxton, who spends about 60 percent of his time on the road. "The market has picked up significantly since the early '90s, and that growth is expected to continue over the next five years."

LaSalle Partners has corporate offices in 17 U.S. cities and London, Paris, Mexico City and Beijing. LaSalle Advisors is one of the largest real estate investment companies in the U.S., with approximately \$15 billion under management.

"One of the biggest challenges of this job is the number of new products being offered and the increasing amount of information that I need to be on top of, including information on real estate investment trusts (REITs) and private placements," says Braxton, noting that LaSalle Advisors manages more than \$2 billion in its REIT portfolio alone. "REITs are currently the highest-growth area in the industry." ▼

**FORDHAM** *Continued from page 21*  
try, your consumers and your competitors.”

An appreciation of the end result helps. “It’s a great honor to manage a product like Life Savers™ which are really a national icon,” says Fordham, noting that the first Life Savers candy was rolled out in 1912. At the same time, Fordham hasn’t hesitated to make changes. One of her first moves after coming to company headquarters in Parsippany, N.J., was to add three extra Life Savers to the package, without raising the price.

The strategy worked. “We did take a minor margin hit in order to extend the length of the roll, but the extra sales volume has made it more than pay off,” she notes. Sales of the LifeSavers division itself are expected to hit \$600 million this year, 10 percent higher than 1996.

Fordham’s big challenge now is to zero in on the gum business, which means taking a fresh look at Care\*Free™, aimed at adult women, and Bubble Yum™, targeted to teens. “We have identified some opportunities for repositioning Care\*Free, including using the slogan ‘Care\*Free gum will shine your smile,’” says Fordham. “That’s a very compelling promise. To go along with this we will have new packaging, new advertising and major promotions.”

Fordham grew up in Somerset, N.J., where her ambition throughout high school was to someday play the clarinet for a worldclass orchestra. Instead, after graduating from Rutgers and rethinking the life of a professional musician, she attended Wharton, majored in marketing, and worked at Bristol-Meyers and Borden before joining Nabisco. While at Nabisco, she held several positions, including group product manager, cookies; director of marketing, crackers; senior director, new products, and vice president, new business.

Eight years ago, she discovered yet another talent. “I had signed up for a tennis tournament at a sales outing in California, but the weather was too hot to play. One of my friends persuaded me to join a golf foursome even though I had never held a golf club. Our team won the tournament and I won the ladies’ prize for longest drive. Three months later I hit my first hole in one. I knew this was the game for me...”

It isn’t just the sheer enjoyment of hitting the ball that delights Fordham. “I have been amazed at the relationships I have been able to build and the contacts I have made, especially among older executives. It’s been tremendously powerful in building my career... My goal now is to play the top 10 golf courses in the world.” ▼

**WILSON** *Continued from page 24*  
only 25 percent in Switzerland.

Europe’s upcoming move to a single currency (the ecu) has both “good and worrisome aspects,” Wilson adds. “It’s good in that it will make trading a lot easier and more attractive ... A number of health care companies are moving towards centralized distribution in Europe as transportation continues to

improve. We already have a centralized distribution system, but we will be moving towards centralized billing as well. All charges will be in ecus and there will be a single collection point. Foreign exchange transaction costs will no longer exist.”

On the worrisome side, “there is no common pricing in Europe. If you convert products in many industries to a common currency you will find huge variation in the finished price once you include the valued added tax, the retail markup and the social charges — which vary according to the area. Such price differences have been largely masked by different currencies, but they won’t be once the ecu is adopted. Companies then could have to justify these differences in order to avoid ‘price adjustments.’”

Before joining Medtronic, Wilson was with the American Cyanamid Co. as president of the Lederle International Division in Wayne, N.J. Prior to that he was president of Bristol-Myers Squibb, Europe.

“All of the new technologies start in Europe, where the clinical trials can be done much more quickly than in the U.S.,” says Wilson. “At the same time, we have proven that medical devices tend to be better alternatives than drugs for treatment of many medical conditions. The defibrillator, for example, is safer and less expensive over the long term than drugs, and it has no side effects. For heart patients, it’s like having a lifeboat with you at all times.” ▼

**ALICEA** *Continued from page 25*  
made in the past five years in the U.S.

“The purpose is to develop a future audience, to educate consumers about music and make it accessible to them,” says Alicea. “We include a free booklet with purchase that is a guide to both the classical and jazz side. It gives consumers basic ideas on how to start building up a music library of their own.” ▼

**ULRICH** *Continued from page 16*

to road bikes or aluminum bikes to steel bikes.

Ulrich gives an example by looking at four competitors — Specialized, Cannondale, National and Voodoo. In the mountain bike category, Specialized has 173 stock-keeping units (SKUs, or unique variants of the product), Cannondale has 110, and Voodoo and National are both make-to-order producers, which means their SKUs number in the tens of thousands.

“On the face of it, you would say Voodoo and National are the high-variety producers. But when you look below the surface, what you discover is that the dimensions on which they compete are quite different. Cannondale has 12 unique frame configurations, while Specialized has six different frames, four of which are basically the same with slight differences in angles while the other two have different rear suspension designs. Voodoo has only two frame

geometries and National has three. Then you look at materials and Specialized offers three different materials, Cannondale has one, Voodoo offers three and National offers two. Colors are interesting. Most manufacturers offer one or two per model. National offers 104.

“So what dimensions of variety are they competing on? Specialized is competing on frame material. Cannondale is competing on frame configuration. Voodoo is competing on frame material and also on the different component choices they have, and National is competing on color. The decision of which dimensions of variety to offer is one of the key elements of a firm’s variety strategy.”

There are other decisions as well. Make-to-order vs. make-to-forecast. Make-to-order is the obvious choice if a company is going to offer 104 colors. There is also process flexibility, which takes into account the way frames are put together. The conventional approach involves a fixture consisting of a large steel plate with clamps that hold a frame in a precise configuration. One fixture for every different shape of frame is needed. The alternative is Cannondale’s approach, a “slot and tab” assembly in which a computer-controlled laser cuts little tabs and little slots in the frame tubes. The frame can then be put together and essentially fixtures itself for welding.

“It’s all consistent,” says Ulrich. “And it’s a joint decision between design, manufacturing and marketing. Marketing decides the company is going to compete on frame configuration. The design decision is to use this slot and tab approach. The production decision is to use a computer controlled laser. It wouldn’t work to do any one of these things alone”.

R.W.S. ▼

## RESEARCH WIRE *Continued from page 26*

Japan had one of the highest savings rates in the world and ultimately these funds were transformed into effective investments by Japanese firms. Banks tended to invest for the long term and they developed close relationships with the companies in which they invested. As recent history has all too clearly demonstrated, however, this system has developed some cracks. In a recent paper assessing the strengths and weaknesses of the Japanese financial system, Finance Professor Franklin Allen suggests several reforms including:

- ◆ Limit the amount of debt that can be used in financing investment in real estate and limit implicit and explicit government guarantees of real estate investments.
- ◆ Encourage the development of a competitive mutual fund industry to more widely disperse and reduce the fragility of the banking system.
- ◆ Do not allow a market for corporate control, but try to strengthen internal governance mechanisms. One possibility is to increase limitations on the proportions of equity that banks and insurance companies can hold in a single company.

- ◆ Reform the postal savings system by reducing tax and other advantages.
- ◆ Encourage the development of a significant venture capital sector by creating tax advantages.



Franklin Allen; *The Future of the Japanese Financial System* ▼

## WHARTON IMPACT *Continued from page 27*

ering antitrust implications of strategic moves. Finally, we look at ways to choose among alternative competitive strategies. These include conjoint analysis, scenario planning and competitive simulations. These approaches help you examine how these strategies will play out over time, given the likely reactions of customers and competitors.



### ▶ WHAT KIND OF MISTAKES DO MANAGERS MAKE BY IGNORING THE DYNAMIC ASPECT OF STRATEGY?

**REIBSTEIN:** Failure to see the dynamic implications of strategic moves can lead to price wars, missed opportunities, customer defections and many strategic mistakes. One of the common errors, as we note in the introduction, is failure to see how the moves of competitors can undermine your brilliant strategic moves. For example, when a British bank began offering Saturday hours, it initially experienced an increase in business. But then competitors imitated the move, and the bank found it merely had stretched five days of banking across six days. This is easy to see in retrospect, but it is surprising how often we fail to systematically think through the impact of moves by rivals. This book gives you ways to do this.



### ▶ HOW IS THIS BOOK DIFFERENT FROM OTHERS ON THE SAME TOPIC?

**DAY:** In contrast to some of the current popular literature in strategy, this book does not offer a simple recipe for strategic success. Instead, it provides deeper insights from decades of research in strategy and work with leading companies. In today’s world, you may not need a guru as much as a cabinet — a team of advisors with different perspectives. That’s what this book offers. It brings together a diverse and highly talented group of leaders in strategy research and sits them at the same table. The book is designed for thinking managers who want to get their hands around the competitive situation and want the best tools and perspectives available to make their strategy more effective in the current environment. We took great pains to make it accessible for managers, but it does not offer simplistic answers to the complex challenges facing us today. ▼

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