



REUNION WEEKEND



PHILADELPHIA

Wharton Alumni Weekend

Friday, May 14; Saturday, May 15; Sunday, May 16, 1999

- Alumni Receptions
- Executive Education Programs
- Dean Thomas P. Gerrity's Town Meeting
- Alumni Workshops
- Picnic Lunch
- MBA Reunion Class Dinners WG '94, '89, '84, '79, '74, '69, '64, '59, '54 and '49
- Farewell Brunches

If you have not received any reunion information, please contact the Alumni Affairs office at 215-898-8478, or e-mail us at alumni.affairs@wharton.upenn.edu Check out our website at http://www.wharton.upenn.edu



SEOUL, KOREA

June 4-5, 1999

6th Asian Regional Alumni Meeting

For more information, please call:

Wharton Executive Education Course Consultant

Tel: 215.898.1776 Fax: 215.898.2064



LONDON

June 24-25, 1999

Wharton European Forum

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Wharton Executive Education

Course Consultant Tel: 215.898.1776

Fax: 215.898.2064



COVER ARTICLE

"I feel an incredible peace of mind and sense of accomplishment by sharing wealth with another individual or an institution. That's what life is all about. It's as simple as that."



Photograph by

Grover Photography

Jon Huntsman

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WHARTON ALUMNI MAGAZINE



FROM ONE GENERATION TO ANOTHER

Wharton's tremendous strength and leadership over time has been built on each generation standing on the shoulders of the ones that came before.

In this respect I want to express our deepest appreciation to Jon Huntsman for his extraordinary gift to the School. As you will read in our cover story, Jon is truly a unique individual. His values, ideals, accomplish-

WITH HELP FROM
FACULTY AROUND
THE SCHOOL,
THE ELECTRONIC
COMMERCE FORUM
IS STUDYING ISSUES
RANGING FROM
PROFITABILITY
ON THE INTERNET
TO QUESTIONS OF
WEB DESIGN AND
THE IMPACT
OF GOVERNMENT
REGULATION.

ments, public service and philanthropy make him a shining example for all of the thousands of Wharton students that we send out each year into leadership positions around the world. His tremendous commitment will enable us to take a significant step forward in sustaining Wharton's strength well into the future.

Another aspect of Wharton's longstanding leadership is our outstanding Marketing faculty. Several studies have shown that Wharton's Marketing Department is the most published and the most cited, and has more faculty on editorial boards of the leading journals in the field than any other school. Historically, the department has been an innovator and leader — dating as far back as the 1920s.

At that time, Herbert Hess, who chaired the School's marketing — then called "merchandising" — department was among the first to explore the psychological aspects of marketing. Hess studied such issues as crowd psychology, attention spans and memory — and their implications for companies that want to sell products. He was among the earliest marketing experts to advocate that companies should adapt products to customer needs.

Wroe Alderson built on these foundations during the 1940s and 1950s. A former consultant who entered academia and became the leading marketing theoretician of his time, Alderson was assisted by his colleague, Reavis Cox, and in 1948 wrote a pathbreaking essay titled "Towards a Theory of Marketing." Alderson recognized that mathematical models and quantitative techniques could be used to research such issues

as analyzing consumer taste, the size of advertising budgets and sales forces, and the distribution of marketing messages across media. These innovative techniques helped create the field of market research.

Alderson's collaborator, Paul E. Green, now the Sebastian E. Kresge Professor of Marketing at Wharton, continued this tradition. He created the method of "conjoint analysis" in marketing research, a technique that requires survey respondents to make tradeoffs between various product features. During the 1960s and 1970s, as conjoint analysis became a powerful research tool used throughout the industry, Green became one of the most widely cited authors in marketing. He has won several industry honors, including the Lifetime Achievement Award in Marketing Research from the American Marketing Association.

As we stand on the cusp of a new millennium, we continue to live up to this tradition. The emergence of the Internet is transforming market research, and technology makes it possible to study consumer behavior

in unprecedented detail. The Wharton Electronic Commerce Forum, directed by Eric Johnson, David W. Hauck Professor of Marketing, is conducting leading-edge research in this area (see article on page 18). With help from faculty around the school, the Electronic Commerce Forum is studying issues ranging from profitability on the Internet to questions of web design and the impact of government regulation. The forum also studies consumer behavior on the Internet through the Wharton Virtual Test Market, a study that covers some 10,000 web-users in more than 70 countries.

Herbert Hess and Wroe Alderson would be proud to see their commitment to marketing and to Wharton being carried on by a new generation.



Thomas P. Gerrity

Trum. Com



GLOBAL FORUMS IN ASIA AND EUROPE





ALUMNI AT THE WHARTON EUROPEAN FORUM IN MUNICH LAST JUNE LISTEN TO SIR PAUL R. JUDGE, WG'73, ANALYZE EUROPE'S ABILITY TO COMPETE IN FOREIGN MARKETS.

For those alumni who attended conferences in Taiwan and Germany last summer, it was an opportunity to hear fresh perspectives on business conditions in Asia and Europe.

The 1998 Wharton Asia Forum in Taipei, held June 11-13 in conjunction with the 5th Asian regional alumni meeting, addressed the theme "Innovation and Evolution: Asia's Economic Emergence."

Guest speakers included Paul Shih-Chun Hsu, chairman, Bank of Kaohsiung, who spoke on how "SMEs in Taiwan Have Evolved out of the Traditional Family Business Model;" Morris Chang, chair and CEO of Taiwan Semiconductor Manufacturing Co., Ltd., who offered his views on 21st century Asian technology industries, and Samuel C. Shieh, chairman, Board of Trustees, Chung-Hua Institution for Economic Research, whose topic was "Technological Innovation, Productivity and Economic Growth — A Challenge to the Profession of MBA."

Harvey H.W. Chang, WG'77, president of the Wharton Club of Taipei and senior vice president and CFO of Taiwan Semiconductor Manufacturing, welcomed alumni to the event, held in the Far Eastern Plaza Hotel.

In addition, Wharton faculty led discussions that addressed specific aspects of the current Asian crisis, including marketing opportunities, investment strategies, and the role of technology and innovation.

Discussion at The Wharton European Forum in Munich on June 25-26 focused on the topic, "Labour at a Crossroads: Can Europe Rise to the Challenge of Global Markets?"

Henning Schulte-Noelle, WG'73, chairman of the board, Allianz AG, and Sir Paul R. Judge, WG'73, chairman, Isoworth Ltd. and ex-ministerial adviser, U.K. Cabinet Office, were keynote speakers.

A panel on global competitiveness included alumni Gerard Thulliez, WG'71, vice chairman Europe, SpencerStuart; Jacob Wallenberg, W'80, WG'81, chairman of the board,

Skandinaviska Enskilda Banken, and Klaus Zumwinkel, WG'71, CEO, Deutsche Post AG, among other participants.

Alumni Jean-Pierre Rosso, WG'67, chairman and CEO, Case Corp., and Barry W. Wilson, WG'67, president, Europe, Middle East and Africa, Medtronic Europe SA, took part in a discussion panel on labour regulations and issues.

"Entrepreneurship, Venture Capital and New Initiatives for a Competitive Europe" included panelists Jean-Philippe Larramendy, WG'67, managing partner, Tocqueville International, France, and Richard Winckles, WG'71, partner, Schroder Ventures, U.K., among others.

Dean Thomas P. Gerrity attended both the Taipei and Munich forums. ♥

News Flash!

For the third time in a row, Wharton has been named the number one business school in the U.S. by *Business Week* magazine in its biennial ranking of MBA programs.

The poll, published in *Business Week's* October 19 issue, places Wharton ahead of Northwestern's Kellogg School (#2), the University of Chicago Graduate School of Business (#3), the University of Michigan Business School (#4) and Harvard Business School (#5).

The magazine asked students to rate their school on such issues as teaching quality, program content and career placement. Corporate recruiters assessed the skills of the students and ranked the schools on their overall quality and the success rate of graduates in the recruiters' organizations.

Wharton was ranked number one in the last two *Business Week* polls conducted in 1996 and 1994. \(\neg \)



WHARTON HONORS CHAIR OF INDIA'S RELIANCE INDUSTRIES



GERRITY (LEFT) AND AMBANI

Dhirubhai H. Ambani, founder and chairman of India's Reliance Industries, Ltd., was awarded the Dean's Medal at a ceremony in Mumbai, India, on June 15.

Established in 1983, the Dean's Medal is the school's highest tribute for extraordinary achievement or service by individuals throughout the world.

The medal recognizes Ambani's leadership in founding and building Reliance Industries into India's largest, most widely traded and most profitable company. The citation specifically refers to the founder's success in "revolutionizing the very concept of equity investing in India by creating wealth and value for millions of shareholders."

Reliance Industries began in a one-room Bombay office and went public in 1977. Today the petrochemical and textile conglomerate has annual sales of \$3.4 billion. Last year Reliance completed an expansion that has made the company one of the top ten petrochemical producers in the world.

Dhirubhai Ambani's son, Anil D. Ambani, WG'83, is managing director of Reliance Industries and a member of Wharton's Asian Advisory Board.

Among the previous 23 recipients of the Dean's Medal are Shimon Peres, former Prime Minister of Israel, Reginald Jones, chairman emeritus of General Electric Co., C.F. Koo,

chairman of Taiwan Cement Corp., Laurence Za Yu Moh, chairman emeritus of Universal Furniture Ltd. and Peter D. Sutherland, chairman, Goldman Sachs International and former Director General of GATT. V



CLASS OF WG'98 SCORES HIGH ON JOB OFFERS



The high-tech/telecommunications

industry strengthened its position as the third largest employer of MBAs, with 5.9 percent of the class of 1998 accepting jobs in that sector as opposed to 5.6 percent in 1997.

Overall, 97.4 percent of the 1998 MBA graduates reported at least one job offer as of July 15. Almost that many — 97 percent — reported accepting jobs in 49 different industries.

Consulting continued to be the industry of choice for more than a third of the class — 35.5 percent, compared to 29.7 percent last year. Investment banking/brokerage attracted the second highest number — 28 percent, compared to 24.5 percent last year. Diversified financial services was the fourth highest, with 4.9 percent, and commercial banking the fifth highest, with 2.9 percent.

As might be expected given the strong trend in technology, the West coast — led by San Francisco — attracted a record number of graduates.

Of the 16.8 percent of graduates taking positions abroad, 7.3 percent were in Asia, 5.7 percent in Europe, 2.7 percent in Latin America and 0.3 percent in both Canada and Australia.

Positions with international responsibility were reported by 35.7 percent of the class. \(\nabla\)

FELLOWSHIP ESTABLISHED

The family of Houston A. Baker, Sr., WG'37, one of the first African Americans to earn an MBA from Wharton, has established a fellowship in his honor.

Baker, who also earned a master's degree in hospital administration from Northwestern University, spent much of his career working for hospitals, primarily in the areas of budgeting and development. During the 1940s and early '50s he played a major role in establishing and directing a Red Cross Hospital in Louisville, Ky., (his birthplace) to provide health care services to African Americans.

Over the next two decades, he played a similar role in helping to assure quality health care for African Americans at the former Freedman's Hospital in Washington, D.C., and at Howard University Hospital, which replaced Freedman's.

Baker served on a number of hospital, church and civic boards until his death in 1983.

The fellowship will be funded with gifts from the Baker family — including Houston A. Baker, Jr., Albert M. Greenfield Professor of English at Penn — and friends. ♥



MBA APPLICATIONS SET RECORD

Driven by a significant increase in the number of international students, a record 8,313 people applied to the MBA class of WG'00, 11.4 percent more than last year.

The growth in international applications was most apparent in mainland China, India and other parts of Asia, as well as in Latin America. "We recruited in 19 countries this year, including first-time trips to Saudi Arabia, Peru, India and Egypt," notes MBA admissions director Robert Alig, WG'87. "Our mission is to set the standard for global outreach."

Of this year's applicants, 45.7 percent are international, compared to 43.1 percent last year.

The average GMAT for applicants was 658, compared to 644 last year, while the average GPA was 3.38 compared to 3.36 in 1997.

The total number of admitted students was 1,087 compared to 1,085 last year. This year 33.1 percent of that total is comprised of international students, compared to 31.2 percent last year, and 31.3 percent were women, compared to 28.8 percent last year. The average GMAT for admitted students was 691, compared to 678 last year, while the average GPA was 3.5 compared to 3.46 in 1997.

This year's yield — the number of students who accept Wharton — is 70.4 percent, compared to 73 percent last year. That translates into 765 students on campus this fall, of whom 32.0 percent are international (30.4 percent last year), 30.2 percent are women (27.4 percent last year), 5.6 percent are African American (5.1 percent), 9 percent are Asian American (8.3 percent), 3.5 percent are Hispanic American (3.8 percent) and 0.1 percent are Native American (no change).

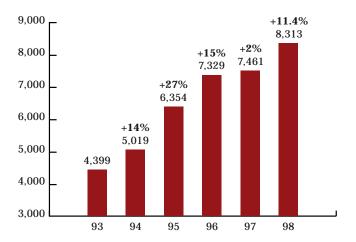
"The minority student percentage overall is 18.3 percent this year, up from 17.4 percent last year," notes Alig. "The number of women is also higher, due in large part to targeted outreach supported by a group of current students."

The strength of the applicant pool "clearly shows how competitive getting into Wharton has become," Alig states.



LEAD STUDENTS GETTING DOWN TO BUSINESS

MBA Applications 1993-1998



"In 1994 we had 5,019 applications. This year it was more than 8,300. Our admit rate is at 13 percent. Looking at virtually any index, our applicants have to realize they are competing not only against more people but against stronger people."

In terms of the school's active international recruiting program, "Wharton's mission is to be an international MBA program that happens to be located in America," he adds. "We are preparing students for a global economy. That includes being surrounded by people with a global perspective."

UNDERGRAD APPLICATIONS: ON THE LEADING EDGE

Applicants to Wharton's undergraduate class of 2002 totaled 3,855, an 11.3 percent increase over last year's 3,464.

Of the total applicant pool, 17.6 percent were admitted, compared to 20.8 percent last year. "It was a very competitive year and we were more selective," notes Sue Kauffman DePuyt, director of student services and administration in the undergraduate division.

The size of the incoming class is 459 students, compared to 506 last year. This year's yield is 67.7 percent, compared to 70.2 percent in 1997.

For the single degree program, applications totaled 3,063, 12 percent higher than last year. The number of matriculants is 378, down from 417 last year, a decrease that reflects in part the fewer number of students admitted -527 compared to 560 in 1997.

Applicants to the joint-degree Huntsman Program in International Studies & Business (IS&B) totaled 439 com-

Continued on page 6



NEW FACES ON FACULTY

The 14 new faculty at Wharton this year bring with them a variety of research interests ranging from financial accounting, game theory and international non-market strategy to consumer shopping behavior and privatization.

Joining Wharton as an associate professor in the marketing department is David R. Bell (PhD'95: Stanford), formerly an assistant professor at UCLA. Other new faculty, all assistant professors, include:

- Accounting: James J. Chang (ABD, Harvard)
- Finance: Bilge Yilmaz (ABD, Princeton)
- Insurance and Risk Management: Kent Smutters (PhD '95: Harvard), formerly principal analyst, Congressional Budget Office
- Management: Beth A. Bechky (ABD, Stanford); Witold J. Henisz (PhD'98: Berkeley); Nicolaj Siggelkow (PhD'98: Harvard); Julie Wulf (ABD, Columbia)
- Marketing: Gavan Fitzsimmons (PhD'95: Columbia), formerly assistant professor at UCLA
- Operations & Information Management: Balaji Padmanabhan (ABD, New York University); Christian Terwiesch (PhD'97: INSEAD), formerly project scientist at the University of San Diego
- **Public Policy & Management:** Felix Oberholzer-Gee (PhD'96: University of Zurich)
- **Statistics:** Abraham J. Wyner (PhD'93: Stanford), formerly visiting professor at Berkeley, Elaine L. Zanutto (PhD'98: Harvard) ♥

Book Report:

NATURAL HAZARDS AND THE INSURANCE INDUSTRY

The effectiveness of insurance coverage for natural disasters like earthquakes and hurricanes — and how insurance programs can be used with other policy tools to encourage better loss reduction measures — is the subject of a new book co-edited by a Wharton professor.

Paying the Price: The Status and Role of Insurance Against Natural Disasters in the United States (Joseph Henry Press) — by Howard Kunreuther, the Cecelia Yen Koo Professor of Decision Sciences and Public Policy, and co-director of the Wharton Risk Management and Decision Processes Center, and Richard Roth, Sr., a retired insurance executive and property/casualty actuary — discusses the dramatic increase in insured losses from natural disasters since 1989. The book also addresses the concern that insurers have about their ability to provide coverage against more such events in the future, and the role of reinsurance and private/public sector initiatives at the state and federal levels, among other topics. ♥

ADMISSIONS Continued from page 5

pared to 399 last year, and 37 students are matriculating, the same as last year. In the joint-degree Jerome Fisher Program in Management & Technology, applicants totaled 336, compared to 306 last year, and 40 students accepted compared to 46 last year.

In the joint-degree nursing and health care management program, 17 students applied compared to 23 last year, and four accepted (six last year).

The average SAT score for all undergraduate matriculants was 1426 compared to 1404 last year. Scores for the single degree program totaled 1409, compared to 1386 in 1997.

Matriculants in the IS&B program and M&T programs had average SAT scores of 1501 and 1515, respectively, compared to 1517 and 1483 in 1997. Average SAT scores for the nursing/health care program came in at 1399 compared to 1374 last year.

Women make up 38 percent of this year's class, compared to 32 percent last year.

Among the members of the class of W'02 are four students from the Leadership, Education and Development Program (LEAD) at Wharton, and an additional 11 students from 10 other LEAD programs in the U.S. "It's a very strong showing," states Harold J. Haskins, director of Wharton's LEAD program and head of student development support planning at Penn, "and an indication of the significant number of high quality students in the LEAD program itself."

The LEAD program provides talented minority high-school juniors with an intensive, month-long introduction to the world of business. \bigvee

How can Wharton continue to lead... Wharton is highly ranked in more areas by more publications than any ...when we follow? other business school in the world. Yet as the graph illustrates, we lag behind our peers in alumni fund participation. Support the Annual Fund so we can continue to lead. MBA Alumni Fund Wharton Annual Fund Percent Participation 344 Vance Hall 3733 Spruce Street Philadelphia, PA 19104-6360 215.898.7868 phone 215.898.2695 fax waf@wharton.upenn.edu Kellogg Personal checks should be made payable to Wharton Annual Fund. Credit card gifts can be taken over the



GIFT FROM THE HEART

There is a sign on the wall behind Jon Huntsman's desk in the executive offices of \$5.2 billion Huntsman Corp. in Salt Lake City, Utah. It reads:

"The greatest exercise of the human heart is to reach down and lift another up."

"Right after we were married and Jon was earning about \$225 a month, I noticed that \$50 was missing from every paycheck," recalls Karen Huntsman. "I realized he was giving \$50, anonymously, to one of the families in our neighborhood who Jon

thought needed extra help. It taught me early on that if you don't learn to have a charitable heart when you have nothing, you will never learn it when you have a lot. Jon has always wanted to make a difference in people's lives."

Most members of the Wharton community now know about Jon Huntsman's latest gift to the Wharton School — \$40 million, donated in May 1998, in unrestricted funds. It is the largest gift ever made by an individual to a business school.

And many in the business community know of Huntsman's extraordinary success in founding the largest privately-held chemical company in the U.S. and building it into a \$5.2 billion global enterprise with 10,000 employees and multiple locations worldwide. His rise

A \$40 Million Donation
From Jon Huntsman, W'59,
and his Family
Reflects Their Firm Belief
that Sharing Wealth
Is an Opportunity to
Change People's Lives

from a manufacturer of plastic egg containers to head of a company with billion-pound world class petrochemical, plastics, rubber, textiles and packaging facilities has been chronicled in publications ranging from Forbes and the Financial Times to the Wall Street Journal and New York Times.

But few know about the man and the family behind the \$40 million donation. Indeed, this is just the way the Huntsman family likes to give: with little fanfare, with great generosity and with a sincere feeling of grat-

itude to the people and the institutions who have made a difference in their lives.

In fact, the biggest long-term benefit to Wharton may not be financial; rather it may be an infusion of the spirit that animated this donation. What is the path that leads to, and the philosophy behind, a gift of this sort?

"Sweet Are the Uses of Adversity"

Jon Huntsman's childhood offers few hints of the distance he would travel on his way to becoming one of the country's most successful entrepreneurs. His early years were, in Huntsman's own words, "a time of difficulty





and of struggle." His father, A. Blaine Huntsman, started out as a rural schoolteacher in Blackfoot, Idaho. "We lived in subpar housing with no inside plumbing for almost four years of my life," Huntsman says. When Jon was six, his father became an officer in the U.S. Navy and moved the family to a naval air station in Pensacola, Fla.

After World War II ended, Blaine Huntsman returned to teaching school in Idaho. The years at the naval air station, however, had changed both his ambition and his expectations. "He was never again satisfied with life in rural Idaho," Huntsman says. At age 42, the elder Huntsman made another move, this time to pursue a doctorate in education at Stanford University in Palo Alto, Calif. He would eventually become superintendent of schools in the neighboring community of Los Altos.

While Blaine Huntsman spent three years getting his doctorate, the Huntsman family — including Jon's mother Kathleen, his older brother Blaine, Jr., WG'68, and his younger brother Clayton — lived in cramped Stanford student housing on \$120 a month from the GI Bill. Jon, at age 14, worked after school and on weekends to pay the family's medical bills and car maintenance. "It was a very, very tough battle for a family of five," Huntsman recalls.

Yet these hard beginnings forged something that a life of privilege sometimes misses, he notes. "Those early years developed the framework for tough competitiveness. My childhood exposed me to the hardships and heartaches of life. It was good for me. And I didn't know I was poor. I was happy and grateful for what I had, and always appreciated what people did for me."

Huntsman remembers his father as a stern disciplinarian, but also as someone who was "trying to get himself ahead in life." Years after the elder Huntsman's death, Jon Huntsman can look back at his childhood with "a sense of gratitude and thanksgiving because I knew how far I had come in my life. Except for the grace of God and my father's efforts to get ahead, I might be back in a humble rural setting struggling to make ends meet."

In her own way, Huntsman's mother had as much of an influence on her mid-

dle son's character as his father. Before her marriage, Kathleen Robison Huntsman had been a missionary for the Mormon church in the backwoods of Virginia and North Carolina. The early years of her marriage and motherhood were "an economic struggle that made everyday life difficult," Huntsman says. "But she always had immense love

for her three sons. I never heard her say an unkind word about anyone." On her tombstone in a cemetery in Fillmore, Utah, are etched words that show how clearly the Huntsman family has always sought to take hardship and transform it into opportunity: "Sweet Are the Uses of Adversity."

That phrase, Huntsman says, "epitomizes everything I think about my life because the tougher and more difficult life's journey, the more rewarding and fulfilling it can be when you achieve something you were not expected to achieve."

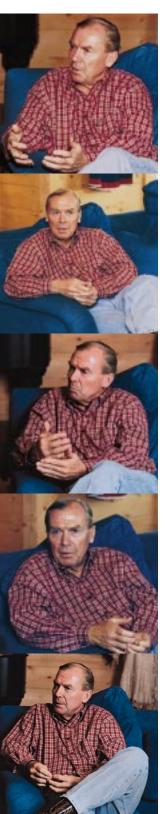
Huntsman has great respect for those who, like his parents, moved across the country in search of better lives for themselves and their families. His ancestors on both his mother's and his father's side were part of a pioneer group that had followed Mormon leader Brigham Young out West in the mid 1800s, eventually settling down and starting farming communities in Utah. Huntsman's greatgreat-grandfather was Parley P. Pratt, one of the first Mormon apostles under Joseph Smith in 1835.

"These were people of great determination, great grit, and firm belief in their God and religion, and in the things that bring integrity and honor to their lives," says Huntsman. "My heritage gives me a deep sense of pride and gratefulness."



When Huntsman was a high school senior in Palo Alto, he was asked by the school principal to attend a recruiting session for Wharton, a place Huntsman had never heard of. Harold Zellerbach, W'17, then executive vice president of Crown Zellerbach Corp., was the recruiter; Dr. Ray Saalbach, Penn undergraduate admissions officer, was also at the meeting.







"It was a milestone in my life," Huntsman remembers. "I had never heard of Wharton or Penn. but both Zellerbach and Saalbach were very gracious. Zellerbach said, 'Jon, you would be a wonderful businessman. You meet people well and you interact well with strangers.' I told him I had never been East in my life."

Huntsman accepted the scholarship offer: \$1,500 a year from Zellerbach and another \$1,000 from



JON AND KAREN HUNTSMAN

the Northern California alumni club, arranged for with Zellerbach's help. Between waiting on tables in sorority houses and delivering flowers in West Philadelphia, Huntsman made his way through Wharton.

That \$10,000 investment by Wharton alumni in the 1950s proved to be money well spent. Huntsman was senior class president in 1959, president of Sigma Chi fraternity and the Kite and Key Club, and recipient of the 1959 General Alumni Society Award of Merit for leadership in undergraduate activities as well as the prestigious "spoon" award for the class of '59. Huntsman also won Sigma Chi's highest award that year — the International Balfour Award, among other honors.

"I was the product of rural public schools, yet I was always very much accepted at Wharton. I was always treated with respect and dignity," Huntsman says. "I loved the interaction with people of different backgrounds. It's a complete education, the best undergraduate and graduate education available, and it offers such a remarkable network afterwards in the business and financial world."

When he announced his gift to Wharton last May, Huntsman credited the school with being "the place that got many of us started, the place that provided a balanced education to make us into what we are today. We can never forget those roots and the critical and meaningful role they have played in our lives."

Petrochemicals and Beanie Babies

At Huntsman Corp. headquarters, the office of the chairman on the third floor presents visitors two striking images.

One is a panoramic view of Salt Lake City; the other is a bronze Remington statue of cowboys running at full gallop. The statue is blanketed with what may qualify as the world's largest collection of beanie babies, arranged and rearranged depending on which grand-child visited last.

The office is vintage Huntsman: a place where business gets done but where Jon and Karen Huntsman's nine children and 37 grandchildren

are always welcome and where the founder's personal philosophy is as much a part of the corporate culture as the 20+ billion pounds of chemicals, plastics and packaging materials produced every year.

The company dates back to 1970, when Huntsman and his brother Blaine raised \$300,000 in seed money plus \$1 million in venture capital funds to start Huntsman Container Corp., the precursor to Huntsman Corp. Among the company's notable successes was the use of polystyrene to make the "clam-shell" containers used for McDonald's Big Macs.

In late 1970, Huntsman left the company to serve in the U.S. Department of Health, Education and Welfare and then as Special Assistant and Staff Secretary to the president of the United States in the White House. He returned to Huntsman Container Corp. in 1972, transferred the business to Salt Lake City, and spent the next few years overseeing the development of 80 new kinds of polystyrene packaging.

In 1982 he founded Huntsman Chemical Corp., renamed Huntsman Corp. in 1994 after the purchase of Texaco Chemical Co. Following a series of well-timed acquisitions and/or expansions, Huntsman Corp. today makes products that are found in everything from outdoor furniture, toys, clothing, medical devices, personal care supplies, detergents, textiles, batteries and carpeting to pharmaceuticals, car waxes, paints, appliances, computers, televisions, cameras and bicycle helmets, to name a few of the end uses recognizable to consumers.

Throughout nearly three decades of company growth, Huntsman says that he "has always erred on the side of my heart ... We've written our own set of rules. We don't follow bureaucratic guidelines established by someone else.





KAREN AND JON HUNTSMAN (CENTER) WITH CHILDREN AND GRANDCHILDREN

They are golden rules that we hope others would apply to us if we were in a similar position.

"It doesn't mean, however, that we are not tough-nosed businessmen. It doesn't mean we won't go in and cut the toughest deal possible."

Indeed, press accounts of Huntsman Corp.'s business dealings over the years suggest a CEO who is considered one of the industry's shrewdest and most successful negotiators. His ability to acquire undervalued assets during cyclical downturns in the chemical industry — then pare costs and run the acquired plants at full or near-full capacity — has led to a huge production base acquired at a fraction of replacement cost. Huntsman Corp.'s biggest acquisitions have come from competitors like Texaco Corp., Shell Oil Co., Hoechst A.G., Mobil Oil and Monsanto.

Along with an aggressive acquisitions strategy and an impeccable sense of timing is the Huntsman style, which includes personal attention to major clients and a sincere concern for those on the other side of the bargaining table.

"We have some of the most creative business arrangements in the history of America, the most interesting methods of acquiring companies," says Huntsman, who has been known to place top executives of an acquired company on the Huntsman Corp. board, make a donation to their favorite charity and/or carry over their existing retirement and vesting credits. "And we have an extremely high return on equity and a very high economic value

added to our businesses because of that creativity. We've acquired 31 companies since 1982, more than anyone else in the chemical industry.

"All of these deals have been done differently and they have all been home runs. The reason is that we *make* them into home runs. We are able to negotiate deals that are win-win situations for everyone — employees, customers, selling companies and the community."

"The Gift of Extraordinary People"

Jon Huntsman's business and philanthropic activities over the past decade have brought him into contact with a wide range of world leaders. Three years ago, because the Huntsman family is among the largest contributors to Catholic community services in the U.S., he was invited to meet with Pope John Paul II in Rome.

During a forum with leaders of the chemical business in Tel Aviv, Israel, he met with then Prime Minster Yitzhak Shamir. In 1989, he spent three days visiting Princess Diana and Prince Charles, with whom he served on the board of United World Colleges, at the royal family's summer home in Highgrove.

This past year, he hosted former British Prime Minister Margaret Thatcher and Robert Kocharian, President of the Republic of Armenia, at his family's 110-acre retreat in Deer Valley, 30 miles outside of Salt Lake City.



Yet for all his worldly connections, Huntsman seems most comfortable, and most passionate, when talking about his family and his employees.

Indeed, in the case of Huntsman Corp., the term "family business" has a wide application. In the early years of the company, says Karen Huntsman, "our family vacations were typically spent visiting a plant or meeting with employees ... Jon skipped the conventions attended by other industry executives in order to focus on building a business, being a father and working with the church."

Today, several of the Huntsman children are directly involved in the company. Jon Huntsman Jr., 38, C'87, is vice chairman of Huntsman Corp.; Peter, age 35, is president and COO of Huntsman Corp.; David, age 30, C'92, is vice president, Huntsman Polymers Corp.; Paul C., age 29, was product manager of the Olefins Group, Huntsman Corp., before leaving to attend Wharton this fall; son-in-law James Huffman, WG'96, is vice president, corporate strategy, Huntsman Corp., and son-in-law Richard Durham, W'87, is president and CEO, Huntsman Packaging Corp.

Employees, for their part, belong to a business whose base pay is competitive with similar companies in the petrochemical industry but whose family-oriented fringe benefits include scholarships for their children. Every employee in the company — from the president on down — receives the same holiday gift, which in the past has included family trips to the Caribbean and 35-inch television sets.

The Huntsman Corp.'s emphasis on safe working conditions has resulted in zero fatal accidents over its nearly 30-year history, despite what are often massive 5,000-acre sites dominated by heavy machinery and equipment.

"Safety for us is so critical," Huntsman states. "Employees here know that for me to lose one of them would be like losing one of my own children. I think the fact that we can focus on safety issues no matter what the cost, and not have to worry about quarterly earnings and dividends, gives us a very different sense of direction. The employee is the object of our attention, not earnings per share."

The Huntsman way has resulted in a company with very low turnover, staffed with employees "who feel a tremendous amount of loyalty," says Huntsman. But loyalty, he notes, "is a two-way street. Our employees have made me what I am today. I owe them an enormous amount because I could never have done this without them. I'm not a scientist and yet we have incredible R&D facilities. We are a very high-end scientific re-

search company in the world of petrochemicals and chemical engineering. We have more than 2,000 different products that we produce from very sophisticated chemicals. To do all this you need unique and varied talents. I have the gift of extraordinary people around me."

Making a Difference

To have built a \$5.2 billion company, to be recognized throughout the industry as a brilliant entrepreneur and a responsible corporate citizen, one would think Huntsman had business role models from whom he drew inspiration or, at the very least, strategy. He doesn't. "I've admired many men and women but I can't think of anyone who is a role model," he says. "A lot of business people get caught up in bureaucracy. They don't make much of a difference ... They aren't attempting to change the world or help the needy. You don't see much creativity at the executive level ..."

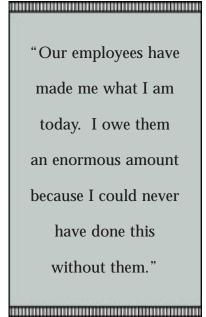
For role models, Huntsman turns elsewhere. High on his list is his wife, whom he first met when she was 12 and he was 13. "We have gone through serious health problems and other struggles in our life, but we have taken each opportunity to turn these problems into learning experiences," Huntsman says. "Throughout it all, Karen has always been articulate and disciplined. She has been a great cheerleader for me, and she has always looked for my best qualities."

The medical community is another place that Huntsman turns to for role models. "The astronauts of the 1970s and 1980s were heroes then," he notes. "Today my heroes are the people who are working on finding a cure for cancer."

In 1995, Jon and Karen Huntsman donated \$100

million to the University of Utah to establish the Huntsman Cancer Institute, with a focus on discovering the genetic factors that lead to cancer. Both of Huntsman's parents died of cancer and Huntsman himself has been treated for prostate and mouth cancer.

Indeed, in many ways, the secret of the Huntsmans' generosity seems to lie in relationships to others. From the porch on the West side of their home in Salt Lake City, one can look out and see the family's impact on a city to which it feels such close ties: the Huntsman Cancer Institute, the battered women's shelter funded by the family and named after Huntsman's mother, the University of Utah Jon M. Huntsman Center basketball arena and a major children's hospital. Not visible in that broad sweep are two homeless shelters and a food





bank that the Huntsmans have helped fund in downtown Salt Lake, and the law library at Brigham Young University to which the family contributed \$5.5 million in honor of a friend and former Mormon church president.

In a wooded area off to the side, one can just barely see the ongoing restoration of the old Huntsman Hotel, a pioneer establishment built by ancestor Gabriel Huntsman in 1872 — a reminder to the present-day Huntsman family of their deep roots in Utah and the Mormon Church.

These vistas don't take into account the many hundreds of smaller donations Huntsman has given to people who are facing a particular crisis in their or a family member's life. This year alone, the Huntsman family will donate approximately \$60 to \$70 million to charities and individuals (exclusive of the gift to Wharton).

Nor do they take into account places like Armenia, where since 1988, the family has spent close to \$18 million to

rebuild whole towns after a major earthquake left nearly one-third of the country homeless. The effort is ongoing, buttressed by a Huntsman Corp. factory one of the largest in the former Soviet Union — that makes reinforced concrete. The family has also contributed to flood relief in Thailand and India.

"We have facilities in most of the countries of the world, especially throughout Asia," Huntsman says. "If I know that a particular area needs help, and I know that it's a really unusual situation where chances are nobody else will be there to assist, then we get involved ... We are our brother's keeper. The Bible is a wonderful resource to always remind us of our obligation to others."

Huntsman today is described as one of the country's most noted philanthropists, a recognition which, like other accolades, leaves him slightly embarrassed. He donates money to individuals and to institutions, he says, not for acclaim, but for the joy it gives him to help others.

"I feel an incredible peace of mind and sense of accomplishment by sharing wealth with another individual or an institution. That's what life is all about. It's as simple as that."

The Legacy for Wharton

Jon Huntsman has been a member of Wharton's Board of Overseers since 1985. In 1997 he and his family donated \$10 million to endow the Huntsman Program in International Studies & Business, the leading international management program of its kind. His son, Jon M. Huntsman, Jr., is a trustee of Penn.

Given his close ties with the school over the years, what does Huntsman see as Wharton's mission for the next generation of business leaders?

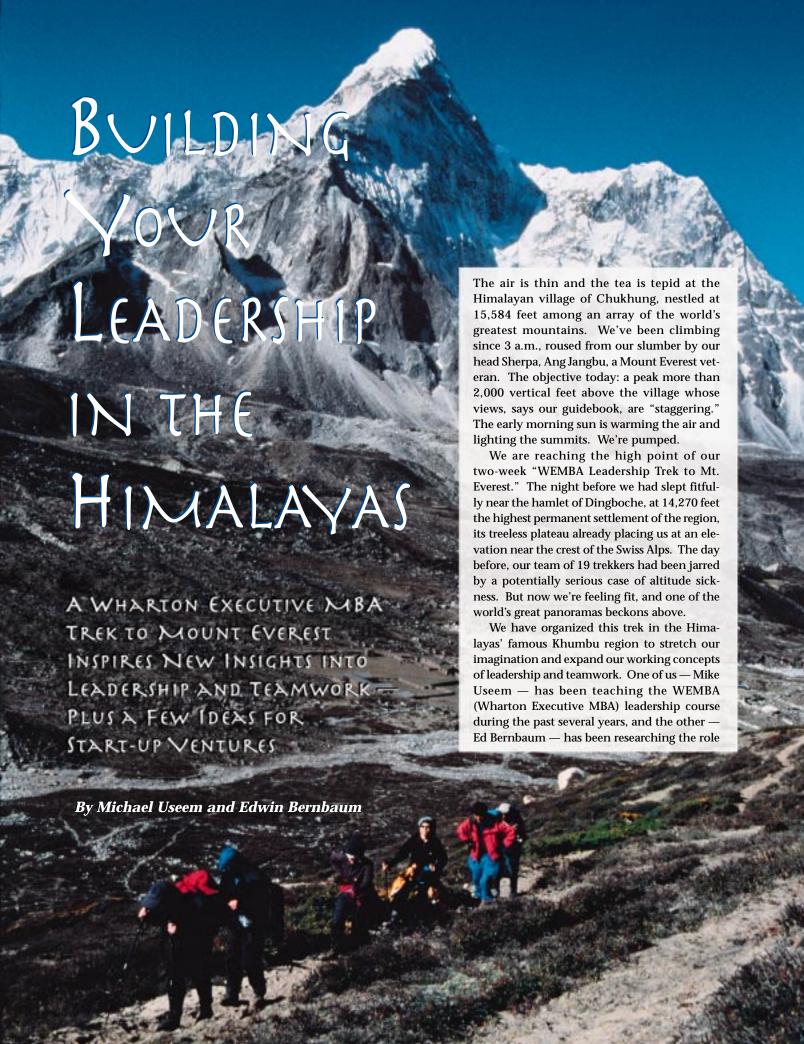
Unlike other educational institutions, he says, Wharton "focuses on the individual. I've always been proud of the fact that to get into Wharton, there is not one overriding condition that determines a person's entry or success path. What is most important seems to be the completeness of the individual, not how he or she scored on a test.

"Wharton has spawned some of the great young entrepreneurs in the world today, and offered a balanced education to thousands of men and women. When they leave Wharton, they need to remember what they gained here in terms of education and social development, all the skills and abilities that were learned both in and out of the classroom. Our students who go forth to serve the world must recall the time and place that shaped their destiny and helped them attain their highest objectives ..."

For the school's part, Huntsman says, "I would hope that Wharton never forgets that the individual personality, the individual sense of purpose and integrity, are far more important than one's computer skills or grade point average.

"I hope that many of my grand-children will go to Wharton," he adds. And when they do, "I am sure they will find that Wharton has continued to maintain its high academic standards and its ability to attract people from all around the world who have the potential for greatness or goodness, either one. Hopefully, the two will coincide." \textstyle{\mathbb{V}}

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of mountain metaphors in leadership and organizing treks through India, Nepal and Tibet for many years. Together, we've sought to create a unique learning experience for WEMBA graduates who are looking to deepen their mastery of personal and team leadership.

The Himalayas offer a unique environment for continuing personal development. Mountain climbers, like the mountains they climb, hold a central place in our culture's mythology, a paradigm for how individuals striving to reach a goal can achieve what others label impossible. But reaching a summit is usually far more than personal achievement, for it almost always depends on collective effort, with the contribution of each required for the success of all.

TREK READINGS

We converge on Nepal's capital, Kathmandu, a few days after Penn's 1998 commencement ceremonies. Arriving by air from destinations as diverse as San Francisco and Santiago, we each complete a landing card whose choices for arriving must be unique in the world: "holiday pleasure," "trekking," or "mountaineering." The next morning we're back at the airport for a 7 a.m. flight to Lukla, a tiny tilted runway built by Sir Edmund Hillary on a high plateau as a gateway to the Mount Everest region. The choice of domestic airlines leaves no doubt where we are: Mountain Air, Buddha Airways and Everest Air.

The pilot aims his aircraft at the Lukla runway and his angle seems better for dive-bombing than safe-landing. At the last second, however, he pulls up, we drop onto the gravel surface, and a minute later we find ourselves at 9,320 feet among a swirling multitude of trekkers and Sherpas.

Before setting forth up the trail to Mount Everest, we assemble for a "before" photograph featuring 11 recent graduates of the WEMBA program: Mun Fenton, Jan Hartmann, Anne Libby, Leontina Marcotulli, Randy Ment, Evelyn Nagel, Daniel Neal, Anita Orellana, Sara Suther-

land, Tim Urekew, and Chris Witt. Besides the two of us, they are accompanied by two brothers, Eugene Nagel and Pedro Orellana; a sister, Marialidia Marcotulli; a former WEMBA student employee, Sabrina Lowe; a faculty member, Peter Dean; and a daughter, Andrea Useem.

Disparate motives have brought us together. One participant intends to conquer the high anxieties of his workplace by mastering the high altitude challenges of the trek. Another seeks the opportunity to explore management issues in an environment totally different from the daily routine back home. A third is looking for a "once in a lifetime experience," and a fourth says she wants to learn more about leadership. A fifth person confesses that he's come in part as a reconnaissance for a possible climb of Mount Everest.

To make the most of our itinerary, we have prepared a 16-page trek "syllabus," a detailed outline of our daily destinations and trailside seminars. Each day of the trek, two of the participants assume leadership responsibilities, explaining our destination, assigning trail tasks and organizing special events. We've already steeped ourselves in mountaineering narratives and studies of Eastern cultures, digesting a list of trek readings and even a "bulkpack" with excerpts on cross-cultural leadership, Tibetan Buddhism and Sherpa society.

Trekking and climbing provide evocative metaphors for transcending challenges and attaining goals. During mid-day and evening seminars for the next 10 days, we use a range of topics to reflect on our personal and team leadership. From "Responsibility Under Extreme Stress" and "Divergent Concepts of Leadership and Teamwork" to "The Buddhist Path to Awakening" and "Alternative Paths to the Top," we ask ourselves a number of questions:

• Can the mysterious hidden valleys of Tibetan lore, some resembling the fictional Shangri-La of James Hilton's novel, *Lost Horizon*, offer fresh insights into the meaning of leadership and teamwork?



- Sherpas traditionally elect people to serve as village heads only if they do not aggressively seek the position. Anybody who wants the job for personal benefit is viewed as unfit to serve the community. How do non-Western ways of approaching authority reveal different possibilities of leading and working together as a team?
- In the first American expedition to Mt. Everest, one group chose the unclimbed but riskier West Ridge, a second group the previously climbed but more certain South Col route. What motivated the teams to take such different approaches, and, in turn, what distinctive forms of leadership and teamwork did each require?
- What went right and what went wrong on the fateful day of May 10, 1996, when three climbing expeditions, all nearing the summit of Mt. Everest, were hit by a violent storm?
- What does it mean to attain a summit? How can we incorporate the experience into the rest of our lives? What should be next?

TRAILSIDE CLASSROOM

Our day begins around 5 a.m. with Sherpas and Sherpanis serving tea and coffee through the front flap of each of our tents, followed by basins of hot water for washing. Breakfast ranges from bacon and eggs to oatmeal and pancakes. Other meals are equally lavish, if sometimes heavy on rice and noodles. We also sample the local staples: small boiled potatoes dipped in salt and tsampa — roasted barley flour mixed with butter tea into a thick paste.

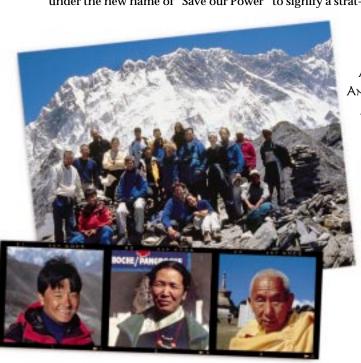
On the fifth day our leaders propose organizing us into three groups dubbed "power walkers," "photo freaks" and "conversationalists." The breakfast discussion, however, reveals that almost everybody is opting for the third. Our leaders revise the scheme, and soon a first group sets off under the new name of "Save our Power" to signify a strategy of moving fast but efficiently. They are followed by "Contemplation with Stimulation," whose charge is to talk about what they see, and at the back is the "Funeral Procession," whose ironic motto — "Arrive Alive" — questions the others' strategies for the day.

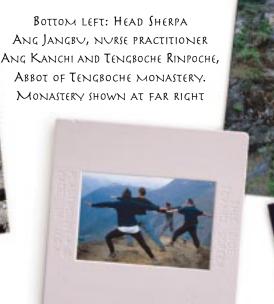
The power savers report at our lunch seminar that they experienced a "religious" problem on the trail. Sacred mani stones carved with prayers frequently appear trailside, and Buddhist tradition requires that passers-by keep them to the right. Occasionally the rugged terrain necessitates circuitous paths to abide by the custom. One of the power savers refuses to take the long way around, asserting he was doing so in the name of the group's goal of saving energy. His companions decide to penalize him for his cultural infraction: he will have to cede each a chocolate bar.

As we wend our way higher, bamboo and pine give way to rhododendron and juniper, followed by no forests at all. We cross deep gorges on footbridges, some solid, others rickety or swaying over seething torrents. Often we share the narrow crossings with heavily laden yaks, and when they are coming toward us, their sharp horns stretching from handrail to handrail, they always win.

On our way to Dingboche, our highest campsite of the trip, one trekker becomes nauseous and dizzy following the sudden onset of a splitting headache — classic symptoms of life-threatening altitude sickness. After several hours of further ascent, we decide that immediate descent is essential, and he returns with a Sherpa to a trailside clinic specializing in mountain sickness. We lament the loss of a team member — the camaraderie already matches that of a summer camp — but he fully recovers in the thicker air at 12,369 feet and goes on to have experiences as rich and rewarding as ours. The Sherpas draw him into their culture and reveal an artifact from the Himalayas' X-files: the scalp of a yeti, the abominable snowman.

Each night our trek physician runs a standup clinic for aches and pains. Sore muscles are few, for we have all









conditioned hard before the trek. Several hired professional trainers, and one even spent hours on a treadmill with climbing boots and loaded backpack. Sore or not, we are all tired from the day's trek, and most of us will be fast asleep by 9 p.m. Save the occasional roar of an avalanche off a nearby peak, the only sound is the tinkling of bells from pack yaks.

SODA AND PRAYER WHEELS

The warden of Sagarmatha National Park, Nyima Wangchu Sherpa, joins us for dinner in Namche Bazaar, the crossroads of the region. His park encompasses Mount Everest and its environs, and he notes the rapid growth of foreign visitors, from 4,000 in 1982 to 17,000 last year. The abbot of Khumbu's best known monastery at Tengboche, however, is unfazed by the rising tide. When we ask if his monks are sometimes distracted by the backpacker wealth passing their prayer wheels, he responds that if so, they do not understand Buddhism.

Start-up possibilities in our desolate terrain are not so evident to the unaided eye, but through the prisms of newly minted MBA graduates, we can see that they abound. What better way to promote a local soda than to name it after the roaring glacier-fed river along which we've been walking for days, the Imja Khola. Another possibility: Spinning a Buddhist prayer wheel clockwise says a silent mantra — *Om Mani Padme Hum*, hail to the jewel in the lotus — and we have seen stream-spun wheels along our trail. For the many prayer wheels without stream power, however, why not introduce high-tech solar cells to spin them, generating blessings throughout the region?

A third possibility: Few of the region's peaks are presently named. Adjacent to Mount Everest, for instance, are peaks 7708, 7804, and 7143, identified only by their height

in meters. Surely we can raise millions of rupees for Khumbu Sherpas by offering to name the mountains after particularly generous donors. But we learn that among Sherpas, summits are reserved for deities, and gracing peaks with the names of mere mortals would demean them. Even Mount Everest, honoring the British surveyor, Sir George Everest, is known by the Sherpas as Chomolungma or Jomolangma, the name of a Tibetan goddess of long life and prosperity. We are reminded of the pitfalls of selling across cultures we do not yet fully understand.

LEADERSHIP LESSONS

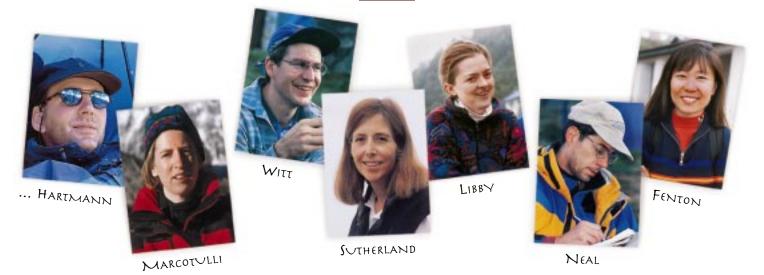
Leadership involves developing a vision, articulating a direction, and inspiring others to achieve it. We have designed the trek to explore how mountain metaphors, Eastern as well as Western, can be used to build both personal and team leadership. As our discussions and experiences intensify in the rarefied atmosphere and stunning scenery, enduring lessons emerge.

Build your leadership: Arlene Blum organized an expedition of premier women climbers to climb Annapurna in 1978, but she found her decisions on the slopes frequently questioned by her team members. A formal position invests you with little real authority, we conclude. You must earn the confidence of those you expect to lead, and it is best acquired well before you're on the mountainside. Explaining your purpose, demonstrating your capacities, and obtaining buy-in are among the steps required, and our two daily leaders seek to display all when initiating their agenda for the trail.

Challenge your leaders: We meet one of the lucky survivors of the May 10, 1996 disaster on Mount Everest, Sandy Hill. She reports that one of her great regrets was not having questioned the condition of her climbing leader, Scott Fischer, whose impaired health stranded him on the summit ridge when the violent storm hit. Although







members of his expedition had reached the summit, he insisted on continuing up — and he never returned.

Stay centered: A noontime discussion of Buddhist ideals and practices at the foot of a ridge leading up to the Tengboche Monastery points to the practical value of cultivating a sense of inner serenity, of deflecting distractions. One participant recalls a boss who was decisive and calm even at moments of "total chaos," and others confirm the point with their own accounts of managers whose confidence in the face of conflict kept the organization on course.

Distribute your leadership: Near the end we share examples of leadership we've witnessed along our 80-mile trek. Many single out Ang Jangbu, our head Sherpa, who has flawlessly delivered us to the slopes of Everest with a large team of Sherpas arranged through our outfitters, Geographic Expeditions and Great Escapes. The Sherpas always seemed to know what to do. Jangbu "handled everything very quietly and efficiently," recalled one participant, "managing our Sherpa staff without a fuss." He also infused our mobile multitude with an implicit but ever present leadership: "You never saw him actually leading," said the observer, "but whenever you needed him, he was always there."

Incorporate divergent intents: On leaving the village of Chukhung, many choose to go for the summit above, others to admire the view from a hill on its slopes. Both objectives fit the trek's agenda of achieving each member's goals. "I had come for the view and the sights," said one of the participants, "and even on that hill I got it. I relaxed, I was enjoying myself, it was a beautiful day, and feeling good sounds like a good finish to me."

Persistence pays: After several hours of arduous climbing above the village of Chukhung, those who chose to go to the summit finally achieve the trek's intended high point, Chukhung Ri at 17,772 feet. Personal and collective determination have made the difference:

Sara Sutherland: "I hit a major wall 2,000 feet ago. I looked up and couldn't do it, but Dorje [one of our

Sherpas] said, 'Take small steps and you can do it.' So I dumped my pack, ate an Ironman bar and started up."

Anita Orellana: "I wanted it so much that I didn't stop to think that I wouldn't be able to do it. What helped me was to keep a regular pace and to stick together. We were all pushing together."

Daniel Neal: "I noticed on the way up that every single step counted, every one. It's amazing how all these little steps, every little muddy gritty step, resulted in this marvelous vista."

The view is as spectacular as the guidebook has promised. We look across at Ama Dablam ("Mother's Charmbox"), a 22,493-foot Matterhorn-like spire, and at Makalu, the world's fifth highest mountain at 27,790 feet; behind us rises Lhotse, the fourth highest at 27,890 feet with a two-mile vertical face, capped by the highest overhang in the world. The 360-degree panorama is mesmerizing, but the gaze of Tim Urekew is riveted on just one point of the compass: a still higher pinnacle rising behind us. Given the thin air and exhausting ascent, the rest of us are more than content with our present perch. But within minutes, we're stirring again, and an hour later, we're standing at 18,238 feet above sea level, lost in wonder at the magnificent panorama and the path that placed us there.

Michael Useem is William and Jacalyn Egan Professor of Management and Director of the Center for Leadership and Change Management at Wharton; he is author of *The Leadership Moment: Nine True Stories of Triumph and Disaster and Their Lessons for Us All* (1998). Edwin Bernbaum is Senior Fellow at The Mountain Institute and Research Associate at the University of California at Berkeley; he is author of *Sacred Mountains of the World* (1998) and a frequent lecturer on mountains, creativity and leadership.



Boom times for electronic commerce

entrepreneurs and academics alike rind that dealing on the internet is uncharted, unregulated and, in many cases, potentially profitable

Earlier this summer Bruce Brownstein, W'80, paid \$59 for a new video game for his children. After watching it once and deciding that it was too violent, he tried to sell the barely used game to a dealer. The dealer's best offer: \$10.

Unwilling to take that loss, Brownstein's wife Suzanne decided to try another option: selling it through eBay, the fast-growing online auction company in San Jose, Calif., where Brownstein is director of sales. Brownstein listed the game on the company's website and invited potential buyers to bid. Seven days later, he had 21 bids — and clinched the deal at \$53. "That was the first time we used eBay's auction system to sell something," he says. "It surprised me how much fun it was."

Thousands of people apparently agree. In the two-and-a-half years since eBay was founded, it has emerged as one of the Internet's hottest sites. Media Metrix, a New York firm that measures web traffic, has just named it the world's biggest personal trading site. Each day buyers and sellers conduct some 40,000 online auctions over eBay's website, trading everything from Barbie dolls to rare coins. As the deals multiply, eBay — which takes a small cut on each

transaction — has seen gross merchandise sales climb to \$250 million in the first half of this year, earning gross profits of \$13 million. Because eBay simply matches buyers and sellers, it has neither inventory nor shipping costs. The company is now on its way to Wall Street for an initial public offering.

eBay is hardly alone. It is one of thousands of new businesses springing up to create the global digital bazaar that is driving the explosion in electronic commerce. Jupiter Communications, a New York City consulting firm, estimates that the number of online shoppers increased from 10 million last year to 16 million this year and will swell to 61 million by 2002. The Gartner Group, a consulting firm in Stamford, Ct., predicts that online consumer sales will jump from \$6 billion this year to \$20 billion by 2000. The growth in business-to-business deals, in the same period, will go from \$15 billion to \$175 billion.

So far, compared with the economy as a whole, these numbers are minuscule. Online consumer sales, for example, amount to just 0.2 percent of U.S. retail sales. Yet the reason for the breakneck growth of web commerce is that



once people buy books from Amazon.com or music from CDNow, they tend to get hooked on the speed, ease and convenience of the experience. According to a U.S. Department of Commerce report, "The [World Wide Web's] pace of adoption eclipses all other technologies that preceded it. Radio was in existence 38 years before 50 million people tuned in; TV took 13 years to reach that benchmark. Sixteen years after the first PC kit came out, 50 million people were using one. Once it was opened to the general public, the [World Wide Web] crossed that line in four years."

This electronic commerce explosion has provided opportunities and challenges to both Wharton faculty and alumni. The Wharton Electronic Commerce Forum brings faculty together to work on these issues. Its director, Eric Johnson, the David W. Hauck Professor of Marketing, Operations and Information Management and Psychology, is studying consumer behavior on the Internet. In addition, he has looked into whether declining prices on the Internet will depress profits for companies doing business on the web as well as their real-world rivals. Gerald Lohse, a research fellow at the Forum, is examining factors that make websites effective. Gerald Faulhaber, professor of public policy and management, is researching the development of broadband infrastructure for the web.

Stephen J. Kobrin, William H. Wurster Professor of Multinational Management and director of The Joseph H. Lauder Institute of Management and International Studies, is doing research on taxation and regulation of electronic commerce. Alan Montgomery, assistant professor of marketing, is studying web usage patterns among Internet users.

Among alumni, the boom in electronic commerce has launched a number of entrepreneurial endeavors. In addition to Brownstein, who is helping drive eBay's growth, there is Richard Thompson, WG'96, chairman of San Francisco's Flycast Communications, a fast-growing agency for web-based advertising; Jeffrey Hyman, W'90, CEO of Career Central in Palo Alto, which matches MBAs and software professionals with jobs; and Farhad Mohit, WG'96, CEO of Binary Compass, a Los Angeles firm that measures customer satisfaction on the Internet. Many of these alumni are research associates with the Wharton Electronic Commerce Forum.

Lower prices and more value

While electronic commerce has created opportunities, it has also unleashed new uncertainties. Among the most paralyzing of these for businesses is whether the Internet will drive prices down so much that profits will disappear. Consider these scenarios: As more consumers use so-called price robots to surf the web to locate the lowest air fares, won't airlines be forced to keep dropping prices in order to fill the seats? And as growing numbers of book-lovers buy books online

from Amazon.com, which can sell them less expensively because it has no stores or inventory to maintain, won't that force rivals like Barnes & Noble and Borders to keep lowering prices in order to remain competitive? And if prices keep falling, how can anyone make profits off the web?

Johnson's research indicates, however, that several factors determine companies' profitability. For starters, price is hardly the only issue that motivates consumers. "Our studies show that people care about many more things than price," he says. Recognizing this reality, most successful online merchants don't just offer prices that are lower than those found in a real-world store; they also add value in other ways. For example, the online wine retailer Virtual Vineyards provides more information about wines than customers might get in most wine stores. Virtual businesses also learn their customers' preferences and offer them choices that actual stores cannot. Amazon.com, for example, records buyers' purchases and follows up with recommendations of other books. Peapod, the Skokie, Illinois-based online grocer, keeps shoppers' last three grocery orders so that they do not have to create a new shopping list each time. Peapod also allows customers to sort products on its site by such features as fat, sodium or cholesterol content.

Another key factor, Johnson argues, is that while the web may hammer down prices, it also dramatically slashes costs. And when prices decline, the volume of business generally increases. So as long as prices are higher than costs, an increase in volume should lead to profits. A case in point:

online stock trading. As online brokerages like E*Trade have emerged, stockbrokers have witnessed a sharp decline in costs per trade from \$400 to \$40 to \$7.99. But because orders over the Internet are placed electronically, that industry has also seen transaction costs plummet. "If trading volume increases, the stockbrokers can maintain their profitability," Johnson says. Declining



eBAY'S BROWNSTEIN: MATCHING BUYERS AND SELLERS

trading costs generally lead to an increase in trading volume for two reasons. First, existing customers place more orders since each transaction costs less; and second, new customers who were unwilling to trade at higher costs are drawn into the market.

Thompson, chairman of ad agency Flycast Communications, would probably agree with the theory that profitability can be sustained so long as volume continues



to increase. One of his major clients is a Palo Alto firm named Speedlane, which sells software that speeds up the movement of data through modems. Customers download the software off the company's website for \$19.95, so its cost of selling each additional copy is negligible. As long as Speedlane spends less than \$20 to acquire each new customer, it keeps making money.

The desire to work with such clients was one of the reasons Thompson launched Flycast Communications. In 1995, with the rapid increase in web-based publishing, the hot issue was how companies could advertise their products on the web. During the fall of 1995, Thompson, then a second-year MBA student, mulled over various options, chatting with friends over pizza and beer in Vance Hall. They went through four or five business plans; each time they thought of an idea, someone else was already doing it. Finally, Thompson came up with a vision.

The idea was simple: the company would create a platform where ad-space on the web could be bought and sold, much as stocks are traded on the Nasdaq. Companies that wanted to buy ad space on the web could do so using Flycast's software, which would also monitor how effectively different ads were working. Flycast's model has clearly worked for clients like Speedlane, which Thompson estimates now spends about \$100,000 a month to buy 33 million advertising banners, or digital blocks of text and images.

кеер it simple

Part of Speedlane's success, Thompson says, stems from one factor: mousing around its website is easy. That conclusion is at the heart of Lohse's research on what makes some web-based retailers click, while others are lost in obscurity. Lohse along with Peter Spiller, a consultant at McKinsey & Co., analyzed the websites of the most effective Internet retailers in the hope that this might offer pointers to others.

The core of their message is that nothing succeeds like simplicity. "Each additional mouse click that a buyer has to make reduces the possibility of an online sale," says Lohse. He compares the situation to a customer who might go into a convenience store to buy coffee, but walks away if he sees 20 people in line before him. Most effective online retailers shorten the process of getting price and product information as well as buying the product. A case in point: Amazon.com's "one-click" shopping system, which allows potential buyers to instantly purchase books of their choice.

Lohse says that florists, too, have figured out how to sell effectively on the Internet. For example, 800 Flowers' website has a Quick Shop feature. Clients see photographs of popular selections, such as a bouquet of a dozen red roses that cost \$60, which they can buy by clicking on a button. The website also lets buyers search for flowers by price or by occasion. Says Lohse: "Whom do you buy from? From those who make it easiest for you to shop."

Lohse and Spiller found that presenting price and product information in a simple format makes a tremendous impact on an online store's performance. "At least 60 percent of the variation in the monthly sales data of online retailers can be explained in terms of how price lists are presented," Lohse says. Another factor is the number of store "entrances," or Internet sites from which potential buyers









NIK SCOTT

DOGGED QUEST

When Alan Montgomery, assistant professor of marketing, talks about his research into consumer behavior on the Internet, he sometimes begins by showing two cartoons. In the first, a dog is seated before a computer screen. Another dog, next to him, remarks, "On the Internet nobody knows you're a dog." The second cartoon begins where the first leaves off. A dog, seated before a computer screen, thinks: "On the Internet nobody knows you're a dog." It then proceeds to click through to websites about butchers and juicy bones, until the computer asks, "You're a dog, aren't you?"

Concealed within this humor is an insight more and more researchers are starting to acknowledge — that the way

people use the Internet provides glimpses into their behavior as consumers. As such, studying how Internet users click through from website to website — a process that marketers call clickstream data analysis — often yields interesting conclusions. Eric Johnson, David W. Hauck Professor of Marketing, Operations and Information Management and Psychology, says that analyzing this data provides consumerbehavior scholars with detailed information about the way people buy products off the web.

Montgomery has been studying clickstream data in association with Media Metrix, a company in Port Washington, N.Y., which collects clickstream data from some 10.000 households around the Unit-



can access the site. Each link that a store establishes with other websites increases its ability to attract online traffic. In addition, just as in the physical world, stores with a wider selection draw more shoppers. Features such as a Feedback section or Frequently Asked Questions also help increase online sales.

If Lohse has a message for retailers who are spending hundreds of thousands of dollars on jazzing up their websites, it is this: Keep it simple. "No amount of 'sparkle' in the presentation of products can compensate for poor design features," he says.

customer satisfaction

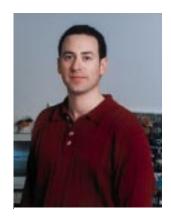
A well-designed site can attract large volumes of customer traffic. But how satisfied are those buyers, and how would they compare one web-based retailer to its rivals?

The drive to answer these questions inspired the June 1996 launch of Binary Compass Enterprises, a company that wants to be "the Internet leader in monitoring customer satisfaction." Headed by Farhad Mohit, the company publishes the *BizRate Guide*, a report that ranks the best merchants in terms of customer satisfaction, based on more than 12,000 buyer surveys. In July, for example, Crutchfield, a Virginia-based retailer of consumer electronics products, topped that list.

Mohit, an entrepreneurial management major who had earlier worked for Andersen Consulting, says he "saw the web crawl up" while he was at Wharton and decided that he wanted to work in this field. By September 1995, he had joined a group of fellow students and faculty members to start an Internet research firm. Their original idea was that Binary Compass could do e-commerce research and give that away, while collecting ad revenues for *BizRate*. As often

happens with Internet-inspired ideas, exactly the opposite has occurred. "Our business model has been reversed on its head," Mohit says. "We don't take any advertising for *BizRate*, and we sell research to the merchants."

While Mohit caters to merchants, Jeffrey Hyman works with corporate recruiters as CEO of Career Central, an online recruitment firm. While he was at Wharton, he realized that corporate recruiting — making connections between candidates and companies — was a highly inefficient process. Companies spent more than \$5 billion on executive search firms and \$5



CAREER CENTRAL'S HYMAN: A MORE EFFICIENT MARKET

billion more on newspaper classifieds to hire people. "Ten years ago I didn't know how to make the market efficient," he says.

After a stint with Black & Decker, Hyman earned his MBA at Kellogg, eager, when he graduated, to hook up with a high-tech company. Unfortunately, few such companies came to Northwestern to recruit. After flying frequently to the West Coast at his own

ed States. Media Metrix installs a software program called PC Meter, which runs in the background of PCs and records data about web usage. When combined with demographic data in Media Metrix's sample the clickstream analysis leads to information about the reach and frequency of usage for various websites among different sections of the population. Increasingly, this data is as valuable for the Internet as Nielsen ratings are for television programs.

So what sort of conclusions have emerged so far? For one thing, according to Montgomery, the analysis confirms statistics from other sources that electronic commerce is on the increase. In October 1996, e-commerce sites reached 25 percent of Media Metrix's sample, but this

increased to 35 percent a year later. Other findings: The typical web user downloads 180 pages a month; adult men tend to be the heaviest web users; and sites hosting personal home pages are increasing. Montgomery has also found that current events and links are important drivers of web usage.

The Wharton Forum on Electronic Commerce, which operates the Wharton Virtual Test Market under Johnson's direction, has been conducting similar studies tracking the web clickstreams of more than 9,800 Internet users from this country and 77 other nations. Johnson points out that respondents to Test Market surveys, too, confirm the growth of electronic commerce. For example, some 60 percent of

respondents say they have bought products online. The median expenditure is about \$100 for buyers.

Why are people buying more products off the web? A key reason, claims Johnson, is that they are starved for time. "Household working hours influence people's decision to buy or not buy online," he says. Another important determinant is whether people have what Johnson calls a "wired lifestyle." This depends on such factors as the number of years they have been on the Internet, the number of e-mails they get each day and the speed of their web connections.

All these are just initial findings. Over the years, more sophisticated conclusions will emerge. \bigvee



expense, Hyman landed a job at Intuit, the Mountain View, Calif., company that makes Quicken software.

During that time, Hyman saw that the Internet offered him a way to overcome the inefficiency of the recruiting market. Research showed that he was not alone in the predicament he had been through; dozens of MBAs had experienced trouble finding jobs they liked. In June 1996, Hyman formed MBA Central, a firm that used the Internet to connect MBAs with prospective employers. During the last few months, the company expanded its recruiting to include software professionals, and changed its name to Career Central to reflect that addition.

When a job opens up, the company's database makes it easy to identify appropriate candidates, who are notified by e-mail. Using this system, Career Central has placed "hundreds of MBAs" in new jobs at firms ranging from giants like Booz Allen to five-person start-ups. "We often work with small companies that cannot afford to spend the \$25,000 to \$30,000 that a traditional headhunter charges," notes Hyman, adding that Career Central charges roughly \$3,000 and works 10 times faster.

getting on the gandwidth gandwagon

Companies like Career Central are using the Internet to reinvent the business of corporate recruiting. In its own way, each company engaged in electronic commerce is trying to do just that in its own field. The hurdle faced by many of them is that at today's level of technology, while zapping text data back and forth over the web is hardly a problem, large files of video and audio material are tougher to move around. The phone network, which carries most Internet traffic, does not have enough bandwidth — or large enough pipes — to smoothly carry massive, multimedia files. But as electronic commerce evolves, more and more broadband networks, whose capacity is large enough to transmit multimedia content, will become necessary. How will that happen?

Faulhaber has worked on the question of broadband infrastructure with PhD student Christiaan Hogendorn. Faulhaber points out that for the Internet — and for electronic commerce — "broadband networks may be as significant as the deployment of telephone networks in the early part of the 20th century or of cable systems in the 1970s and 1980s." Real estate brokerages that want potential homebuyers to do virtual walk-throughs of homes, for example, will need networks that can transmit data-heavy video files. The phone system is fast becoming a chokepoint because it is narrowband, Faulhaber notes.

So how will high-bandwidth networks evolve? Faulhaber explains that traditionally,

infrastructure networks have usually been so-called natural monopolies that governments have closely regulated. Will broadband networks also emerge as "natural monopolies?" According to Faulhaber and Hogendorn, who have developed a model using engineering data, that need not necessarily be the case. Some form of imperfect competition could emerge if the government does not use regulation to suppress it.

These seemingly arcane issues suddenly burst into the news in July when AT&T announced its \$48 billion merger with cable giant TCI, declaring that a major goal was to

offer a "whole house" service, including telephony, high-speed Internet access and television. Faulhaber, however, has doubts about whether AT&T will use the deal with TCI to enter the broadband networks market. "TCI's network is pretty old and its cable systems are probably not up to snuff in terms of Internet servers," he says. AT&T's real interest in TCI may lie in the fact that the company and its affiliates have 21 million subscribers in the U.S. and their network passes in front of 33 million homes. "That gives AT&T actual contact with the customer in terms of a physical connection," Faulhaber says. "That is very important for AT&T because the company lost that at the time of the Bell system divestiture. This puts AT&T back in business."

Despite the
U.S. government's
Laissez-faire
stance towards
the Internet,
Kobrin says he
doesn't believe
that electronic
commerce will
remain tax-free
for long.

While Faulhaber explores how regulation might affect the Internet's physical infrastructure, Stephen Kobrin has been asking similar questions regarding the regulation of electronic commerce. Specifically, he has been studying how electronic commerce will be taxed. "A tax-free Internet seems reasonable right now, when the volume of e-commerce (in relation to total trading) does not amount to much," he says. Governments, however, have a sharp nose for potential sources of revenue. As more business moves onto the web, governments will not forego the revenues they could earn from millions of electronic commerce transactions around the world.

Taxing electronic commerce, however, poses complex problems. "In the past, tax jurisdictions have been geographic," Kobrin explains. "We ask where the transaction takes place and where an income stream is produced, and that is how tax jurisdictions are decided. Sometimes there are conflicts, but we work them out. But when transactions take place in cyberspace, where they take place is not clear."

Continued on page 26



RESEARCH WIRE

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

A LIVE BABY OR YOUR MONEY BACK

arenting is among the strongest and most basic of human instincts. Clinics that market in-vitro fertilization procedures to childless couples know this well. Several fertility clinics around the country these days aggressively tout such procedures, frequently offering couples two options. The first is an a la carte program in which couples pay \$7,500 per attempt at having a so-called test-tube baby. Alternatively, clinics offer a money-back guarantee. Couples pay \$15,000 up front for three attempts — and if these fail, they get a full refund.

Which of these options represents the better choice? A study by David C. Schmittlein, Ira A. Lipman Professor of Marketing and chairperson of the Marketing Department at Wharton, and his associate Donald G. Morrison of the University of California at Los Angeles, provides an answer as it examines this controversial issue.

The study shows, expectedly, that from the patients' perspective, the choice is usually a no-brainer: couples who have traditionally been considering in-vitro fertilization attempts would clearly be better off choosing the moneyback option. From the clinics' point of view, however, the decision to offer these money-back guarantees is harder to explain. Chances of an in-vitro fertilization attempt resulting in a live birth are roughly one in five. In addition, the cost to the clinic per attempt is fairly high. Why, then, would clinics offer patients a money-back guarantee, when this is almost certain to result in the clinics' losing money?

Schmittlein explains that aggressive marketing of money-back guarantees in the media has brought about a shift in the behavior of infertile couples. In the past, childless couples tended to view in-vitro fertilization — a procedure usually not covered by health insurance — as their last resort. But now, for couples reassured by moneyback guarantees, "in-vitro procedures are becoming the first choice," Schmittlein says. As a result, younger and relatively less infertile couples have been choosing in-vitro fertilization. As they do this fairly early in their attempts to have a child, clinics receive a steady stream of business from couples likely to get a child on their first or second attempt.

Schmittlein points out that while neither clinics — which profit from these procedures — nor patients — who get a baby or a refund — are likely to complain about this situation, it has serious public policy ramifications. Patients should be made aware of the risks of in-vitro fertilization procedures, such as the possibility of multiple births. Some

researchers also are concerned about a possible link between in-vitro fertilization and ovarian cancer. If couples were more fully informed, he adds, they might choose less invasive procedures than in-vitro fertilization, especially in their early attempts at parenthood.

David C. Schmittlein and Donald G. Morrison; A Live Baby or Your Money Back: The Marketing of In-vitro Fertilization Procedures

WHY SHAREHOLDERS LIKE TO INVEST AT HOME

t a time when stock markets around the world are getting hammered by the Asian flu and the ruble's collapse, U.S. investors may need little persuasion to stay away from investing in foreign stocks. Interestingly, though, even when international stock markets are less troubled than they are now, investors still prefer to buy more stocks at home than abroad. In the process, they sacrifice potential gains they might have received by having an internationally diversified portfolio. Researchers call this phenomenon the "equity home bias."

What is the effect of this trend on investors' stock portfolios? Finance professor Karen Lewis, who has conducted substantial research on these issues, notes in a recent study that investors do not do a good job of hedging their investment risks across countries. Domestic and foreign stock markets do not move perfectly together, she says, which means that there is diversification potential for investing in foreign stocks. "Risk can be reduced, in the long term, by adding foreign stocks to your portfolio," Lewis states. "For investors who hold no foreign stocks, increasing their holdings of foreign stocks somewhat can reduce their overall risk."

Karen K. Lewis: Explaining Home Bias in Equities and Consumption

FILING FOR BANKRUPTCY? BIG DEAL!

ast year 1.35 million Americans — more than 1 per cent of households in the U.S. — declared bankruptcy. If that figure is not stunning enough, consider this: These numbers represented an increase of 73 per cent over 1994. Delinquency rates on credit cards are also rising fast. At a time when the U.S. economy is so strong, why should that be happening? The issue is an important one given that the U.S. Congress is currently debating major changes in *Continued on page 28*

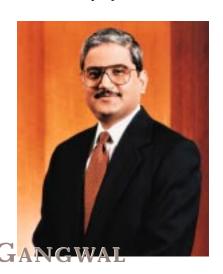


RAKESH GANGWAL, WG'79: FLYING HIGH AT US AIRWAYS

n those few occasions when Rakesh Gangwal actually has some free time, he always chooses to spend it with his wife and nine-year-old daughter. In July, for example, the family flew to France to attend both the World Cup soccer finals and the victory parade on the Champs Elysee.

It's an appropriate perk for a man who is credited with helping to take an ailing airline — US Airways — and make it one of the highest flyers in the industry.

In his two and one half years at US Airways, Gangwal, who was named CEO in May, has helped increase market capitalization from \$800 million to \$8 billion. The company's stock has risen from \$14 a share to \$77 this summer. And the company now ranks in the top three airlines in



terms of on-time performance, baggage handling and the fewest consumer complaints.

A number of new initiatives at US Airways bear Gangwal's direct imprint. He has, for example, just launched US Airway's MetroJet service, a no-frills, low-cost operation that concentrates primarily on East

Coast leisure destinations like Florida and New England. "The MetroJet service involves quick turnarounds of aircraft that drive up asset utilization. Moreover, there are no meals and you get seat assignments only at the gate," says Gangwal, who worked on a similar program on the West Coast for former employer United Airlines. "It brings down both costs and fares ... MetroJet started in June and has already been spectacularly successful."

US Airways, based in Arlington, Va., is not only adding more planes but also bigger ones. The company recently ordered a fleet of widebody A330 aircraft that will fly 275 passengers in a three-class cabin compared to the current 203-seat, two-class cabin design. The new planes, Gangwal says, "will be more spacious and will have more cargo carrying capacity, which means greater revenues."

Primarily an East Coast airline, US Airways recently expanded its routes in Europe, which Gangwal describes as a "fundamental and natural market for the company." Passengers who previously were limited to Paris and Frankfurt can now fly US Airways direct to Madrid, Munich, Amsterdam, London and Rome.

Gangwal was born in Calcutta and earned a master's degree in mechanical engineering from the Indian Institute of Technology. He and his family were strong supporters of Mother Teresa before her death last year, and continue to be benefactors of her Calcutta-based Missionaries of Charity.

Gangwal's swift ascent in the airlines industry started in 1980 when consultant Booz Allen & Hamilton assigned him to work with client United Airlines. In 1984, United hired him as a manager for strategic planning. After 11 years, he left United as senior vice president, planning, to become executive vice president for planning and development at Air France.

Gangwal spent 18 months in Paris reviving the French airline by creating a new route network, frequent flyer program and fleet plan, among other initiatives.

In 1996 US Airways appointed him president and COO. "When I came here, it was a very troubled company," says Gangwal. "People had given up hope of US Airways ever being a force in the marketplace." He set to work improving product quality and operating performance, hiring new managers and making them more accountable, establishing a strategic plan, buying airplanes and negotiating new labor contracts. "We were fortunate that we were implementing strategic changes at a time when the economy was booming ... It allowed us to stay focused on our plan and to keep funneling money back into operations."

Gangwal's management style didn't hurt. In an industry known for confrontational labor relations and dictatorial executives, he has always preferred a more collaborative approach. "Anytime we do big projects, we have task forces," says Gangwal. For the MetroJet project, the 25-member group included union leaders, line employees, pilots, mechanics, managers and company officers. "They came up with an operating plan, a marketing plan and a launch schedule, all within a specified framework," Gangwal notes. "I have found that this kind of cooperation pays off handsomely for everyone involved." \textstyle \textsty

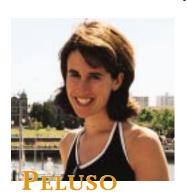
alumni profiles

GOVERNMENT SERVICE:

... IN THE WHITE HOUSE MICHELLE PELUSO, W'93

ichelle Peluso, W'93, distinctly remembers the first question she was asked during her three days of interviews in June for a White House Fellowship: In light of Judge Rehnquist's decision on judicial independence, how do you think that should relate to the Indian nation state?

She's not quite sure how she answered it, but clearly the session — which also included questions on literature, the



arts, history and current events — went well. In late June Peluso was chosen as one of 17 White House Fellows, a program that, according to its official description, "provides gifted and highly motivated young Americans firsthand experience in the

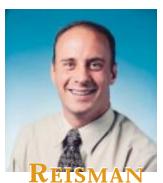
Continued on page 26

... IN SPACE GARRETT REISMAN, W'91

graduate of the Jerome Fisher Program in Management & Technology has a shot at being the first Wharton alumnus in space.

In June, Reisman was chosen by the National Aeronautics and Space Administration to be a member of this year's astronaut candidate class. The 25-member class is selected from a field of 2,600 applicants after a rigorous screening process that culminates in a weeklong interview process at NASA headquarters in Houston.

"We had a series of medical and psychological exams and then we were interviewed by 15 senior astronauts and NASA officials," Reisman says. "The head of the committee is John Young, who was Neil Armstrong's crewmate in the Gemini pro
Continued on page 27



VICTORIA FORMICONI, WG'85: HEAVY LIFTING IN VENEZUELA

unning a business in Venezuela these days can't be easy. "Infrastructures are inefficient or non-existent, the bolivar is overvalued, interest rates are at 70 percent, oil prices are lower than they have been in 20 years and the political outlook is extremely uncertain," says Victoria Formiconi, president of the Formiconi Group, a \$50 million familyowned enterprise made up of seven companies including Formiconi, C.A. (construction) and Acero Fabricantes, C.A. (process equipment manufacturing). Both are based in Caracas and service primarily the oil industry.

"Any type of long-range planning is impossible."

Yet despite an overwhelmingly difficult business environment, the Formiconi Group is thriving. This



year it received an ISO 9000 certification award given out to a select number of companies on the basis of superior quality control and management. In addition, the group has been establishing strategic alliances with foreign companies that have sophisticated technologies in such related areas as process equipment design and heavy lifting.

The Formiconi Group was founded 40 years ago by Victoria's Italian-born father, Aldo, who is still involved in the business, dividing his time between homes in Rome, Caracas and Boston. Victoria was born in Caracas but grew up in Italy and graduated from the University of Rome *Continued on page 27*

HOLD THAT DATE!

25th annual Whitney M. Young, Jr. Memorial Conference January 14-17, 1999 Pennsylvania Convention Center

Theme: Building on the Vision —

Linking Our Community to the Global Economy

Contact: Veronica Woods Veroni22@wharton.upenn.edu http://wmy.wharton.upenn.edu/wmy/

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ELECTRONIC COMMERCE

Continued from page 22

For example, Kobrin says, consider a teenager in Germany who buys an album from a French virtual music store by downloading it from a website maintained in India. Where did that transaction occur? "Physical location has no relation to virtual location," Kobrin says. "So the question is, how do you tax such transactions?"

Despite the U.S. government's laissez-faire stance towards the Internet, Kobrin says he doesn't believe that electronic commerce will remain tax-free for long. "The assumption right now is that there are two opposite poles," he explains. "First, that everyone will tax every transaction to death, and second, that electronic commerce should be left alone." Kobrin argues that neither of these positions is reasonable — or, ultimately, realistic.

One solution might be to set up an international agency and find some equitable means to distribute tax revenues among different countries. That, however, would be tough to implement. "It's difficult to believe that the U.S. government is going to give up its taxing power over income from electronic commerce transactions to some international agency," Kobrin says. "The U.S. doesn't even want to support the IMF. So I don't know how this story is going to work out."

Regulating electronic commerce presents an even more formidable challenge than taxation. Each market, Kobrin observes, is embedded in a social system. "Somebody has to set the rules, provide for adjudication of contracts and set up a framework of laws," he says. "Every market has to have some social controls over the economy and economic actors. It's ridiculous to think that electronic commerce will be free of social controls." The key issue, he says, is how to embed a market that exists in cyberspace within a social

system, so that firms are regulated and customers are protected against fraud. "What's a void contract in cyberspace?" he asks.

Time will probably answer that question and others. Fast as it is growing, electronic commerce is still an infant. As it develops, practical solutions will emerge — some from governments, others from markets. eBay's Brownstein notes that his company has set up a system to establish trust among strangers who trade on the web: they assign ratings to their experience with different traders. That system makes it hard for someone who accumulates negative points to trade on the system. Mohit's <code>BizRate</code> service offers a similar solution by letting customers rank retailers.

Even as these mechanisms evolve, one fact remains clear: electronic commerce has arrived — and nothing will turn the clock back. "We'd like our company to be swept up in the success of electronic commerce," Brownstein states. "Some people say there's a lot of hype around it, but if a rising tide lifts all ships, we'd like to rise, too." *Mukul Pandya* \forall

PELUSO Continued from page 25

process of governing the nation and a sense of personal involvement in the leadership of society."

Peluso, selected out of a field of approximately 1,000 applicants, is working directly with the U.S. Department of Labor, which recently received a billion dollar grant to study the issue of youth unemployment in inner cities.

"I'm interested over the long term in bringing my business skills to the non-profit world," says Peluso, whose goal is to run a non-profit government organization like UNICEF or the Children's Defense Fund. "This fellowship will provide the opportunity to see how business, government and the community intersect."

While at Wharton, Peluso was chosen as a Thouron Scholar, a prestigious fellowship that enabled her to spend two years at Pembroke College, Oxford, where she earned a degree in philosophy, politics and economics. During the intervening summer she worked as a financial analyst for Citibank in Senegal.

In 1995 she joined Boston Consulting Group's New York office. A senior case leader assigned to health care and consumer goods companies, Peluso spent part of her time looking at recent changes in the healthcare field and then analyzing business opportunities for pharmaceuticals and healthcare companies over the coming decade.

She also ran the New York office's community involvement initiative, coordinating both pro bono work and volunteer activities with community groups.

The Fellowship, she says, "is a great chance to reflect on what I have done and think hard about what I want to do, and how to get there from here."

REISMAN Continued from page 25

gram and walked on the moon as an Apollo astronaut. He asked me what I had done starting from high school, and it went on from there."

Reisman will complete 18 months of training and evaluation, then undergo a series of ground assignments. "Maybe in about four years I will actually be up in space as a mission specialist," he says. (Astronauts are divided into two groups: pilot astronauts who fly the shuttle and usually come from a branch of the military; and mission specialists who come from scientific, engineering or medical backgrounds and conduct the actual space walks.) A mission specialist's assignment can involve such activities as assembling a manned space station, repairing the Hubble space telescope or fixing a malfunctioning satellite.

After Reisman graduated from Wharton he earned a master's and PhD in mechanical engineering from the California Institute of Technology. Before moving to Houston in August, he worked for two years at TRW in Redondo Beach, Calif., helping to design the control loops for a NASA satellite called EOS (Earth Observing System) PM1. The satellite will be launched in December 2000 to take measurements of energy transfer systems in the earth's atmosphere. "The idea is to get a better understanding of climactic phenomena like El Nino and global warming," he says.

"I have been interested in space and astronauts ever since I was a kid putting together model airplanes and rockets," adds Reisman, who spends his free time flying (he has a pilot's license), scuba-diving, hiking and mountainclimbing. "By the time I was 11, I had just about worn out a Super 8 film version of the Apollo 11 lunar landing."

And yes, he understands the hazards of his chosen profession. "They [NASA officials] were pretty up front with us during that weeklong interview as to the risks involved. We know that flying in space and launching in these rockets is not the safest activity. But I have confidence that NASA does everything it can to minimize the danger. For me, the reward of being able to go up there and look out the window and see planet Earth will make it all worthwhile." \(\negainsquare

FORMICONI Continued from page 25

with a degree in economics before attending Wharton.

After almost two years with Manufacturers and Traders Trust Co. in Buffalo, N.Y., she left for Caracas, planning to spend no more than two years at the family company before returning to the U.S. It didn't work out that way. When the Formiconi Group's president left in 1989, her father insisted that she take over the job. "I was concerned because so many people had been working in the company for so many years and they might have rejected my appointment," she says. "But I have been very much accepted and we have been highly successful as an organization. In the last 10 years the Group's capacity quadrupled and today it has close to 1,000 permanent employees and between 2,000 and 3,000 full-time workers contracted on a project basis."

Formiconi is married to a Greek-Romanian industrial engineer who was general manager of the company when she first joined in 1987. Today Anton Apostolatos is executive vice president of the Formiconi Group. The couple has four children, ages 6, 4, 2 and four months.

Despite what must be a lack of women executives in her particular industry, Formiconi is very positive about employment opportunities for women in Venezuela. "Yes, Venezuela has a Latin macho-oriented culture, but women are well respected by men and are, in fact, preferred over men in certain professions," says Formiconi, who has two brothers, neither of them currently active in the company.

"For example, a great majority of judges here are women, a large number of financial executives are women, and women are hired in highly skilled and technical areas like quality control. And to do all this, women don't have to be aggressive or act in a manly manner. They can be themselves because there is no discrimination and they share the same opportunities that men have. I don't think this is necessarily true in more developed countries."

While the company has always been run conservatively — carrying no debt load, reinvesting its profits and operating with a very hands-on type of management — one of Formiconi's major responsibilities is to constantly reevaluate current strategy.

"Our goal has always been to be the first in quality, first in compliance with the client's requirements and first in fulfillment of the delivery schedule. We have achieved it, but it is very hard and costly to maintain this standard in a developing country such as Venezuela where so much is unpredictable," she says.

With the recent opening of the Venezuelan oil industry to the global markets, a very large number of new players, both customers and competitors, are dramatically changing the rules of the game, Formiconi adds. "Some competitors are quoting prices that have no relationship to cost, just to get into the market ... We have to find new ways to adapt to this environment and still be successful." \forall

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Wharton Alumni Magazine 215.898.7967

RESEARCH WIRE Continued from page 23 the bankruptcy law.

Economists offer two major explanations. Some blame the so-called risk effect, in which less creditworthy borrowers receive more credit than they can handle. Others point to a so-called stigma effect. This suggests that the social stigma associated with declaring bankruptcy or defaulting on credit cards has declined. As a result, borrowers are more willing to stiff lenders than they were in the past.

Which of these two theories better explains the rising bankruptcy and default rates? So far that question has been difficult to answer. In a new study, however, finance professor Nicholas S. Souleles and his colleague, David B. Gross of the University of Chicago, draw upon detailed data about several hundred thousand credit-card users provided by several credit-card companies. The two researchers attempt to unravel the issue by studying the users' behavior for eight quarters between 1995 and 1997.

Their conclusion: even if the behavior of users with similar risk profiles was tracked, the propensity to default went up between 1995 and 1997. That implies that the social stigma attached to filing bankruptcy and defaulting on credit card debt had declined. In other words, the stigma effect primarily drove the increase in bankruptcy filings and delinquencies. "We no longer put scarlet letters on people if they go bankrupt," says Souleles. He adds that factors like increased advertising by bankruptcy lawyers might have also made borrowers more likely to declare bankruptcy.

This research has important implications for credit issuers, because even a small decline in stigma could spur large increases in bankruptcies and delinquencies. If that happens, creditors' losses could significantly increase, which in turn could increase the cost of credit for borrowers in general.

Nicholas S. Souleles and David B. Gross: Explaining the Increase in Bankruptcy and Delinquency: Stigma Versus Risk Composition

ANATOMY OF A LOW-COST MUTUAL FUND

n recent years index mutual funds, which mirror the movements of indices like the S&P 500, have become very popular. The cost of investing in such funds can be quite high, however, if they are pegged to indices of so-called small-cap stocks. Generally defined as stocks with a market capitalization of \$750 million or less, small-cap stocks are often illiquid. As a result, trading stocks contained in small-cap index funds can be pricey: one-way costs of trading are typically as high as 2 per cent of the value of the transaction for these illiquid stocks.

One small-cap mutual fund, however, is an exception. The 9-10 Fund designed by Dimensional Fund Advisors, a money manager in Santa Monica, Calif., has trading costs that are not just low — they are sometimes negative. The fund gets its name from the fact that it is based on an index

composed of small-cap stocks in the ninth and tenth (smallest) deciles of New York Stock Exchange market capitalization. Another factor that makes Dimensional Fund Advisors unusual is that its strategies are based on academic research. The firm's board includes Nobel laureates like Myron Scholes of Stanford University and Merton Miller of the University of Chicago, as well as potential Nobel prizewinner Eugene Fama of Chicago.

So how does the 9-10 Fund achieve its contrarian success? In a fascinating case study, Donald B. Keim, professor of finance, explains that the fund's performance is the result of its unusual design. "The DFA fund does not exactly mirror the performance of the small-cap universe," he says. "It just tries to approximate it." The approximation is due to an innovative trading strategy. In addition to trading patiently by waiting for favorable prices, fund managers also effectively act as market-makers for illiquid stocks. This allows them to buy stocks at discounted rather than at premium prices. Says Keim: "DFA simply aims for a high correlation between the 9-10 Fund and its performance benchmark. Thus, the 9-10 Fund does not precisely mirror the underlying index, but the tradeoff is that it saves investors money on transaction costs, improving the fund's performance."

Donald B. Keim; An Analysis of Mutual Fund Design: The Case of Investing in Small-Cap Stocks ♥

CLASS UPDATE Continued from page 50

Julie Mussafer is finally going to do it – start her own firm. Julie will be leaving LIDS Corp. to build and complete a new business model for selling contemporary art. Way to go, Julie! She will continue to be in Boston.

Cohort L Ann Leonard 4542@bupers.navy.mil Vincent Toolan reports that he is still with Booz-Allen, working on a long-term project in Holland. Ezequiel Huergo is still with McKinsey, and is very glad to be back in Buenos Aires. His next project involves the editorial industry. Ezequiel reports that son Marcos turns 2 in September.

Rob Mann left England in July and returned to work in AT Kearney's New York office for at least 6 – 9 months. Rob tells of a pending engagement to girlfriend Ilysa. Deepa Kapoor has moved to California with Lucent as an international marketing manager.

And finally: I got to see Joe and Lisa Smith's new daughter, Claire, last month. She's beautiful! Joe and Lisa are living in the Philadelphia area and doing very well.

CLASS CORRESPONDENT WG'97

Jason Wells
2929 Pioneer Park Drive
Flower Mount, TX 75028
Michael Carrel and Renee Lynch are engaged.
Michael Kisilevitz is an associate at McKinsey & 6

Michal Kisilevitz is an associate at McKinsey & Co. in Washington, D.C. She lives in Washington. ♥

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For information on undergraduate alumni career resources, call 898-3208. Web: www.upenn.edu/cpps

Clubs

Network with alumni in your area and take advantage of opportunities to attend speaker events, seminars and club programs. A complete listing of clubs appears in the *Wharton Alumni Magazine*. Contacts and a calendar of events can be found on our alumni home page at www.wharton.upenn.edu/alumni

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