

## ■ Staying Informed on Patent Reform

In research conducted for the National Academies of Science, two professors hope to provide information that will aid in U.S. patent law reform. Stuart Graham, assistant professor of strategic management at the Georgia Institute of Technology's College of Management in Atlanta, Georgia, and Dietmar Harhoff, professor of management at the University of Munich, Germany, closely compared U.S. and European patent systems. Their research has become especially important now that U.S. policy makers have passed the Patent Reform Act in 2005, which calls for the U.S. to adopt features of the European patent system.

In their paper, "Can Post-Grant Reviews Improve Patent System Design?," the researchers explain their "twin study" that compared U.S. patents, both litigated and nonlitigated, to equivalent patents granted in Europe.

In the U.S., Graham explains, patents are granted on a "first-to-invent" basis. Even if someone holds a patent on an invention, that patent can be challenged or revoked if another person can prove he or she invented it first. Such challenges often involve complex and expensive litigation—such lawsuits cost \$4 million, on average.

In Europe, however, patents are granted on a "first-to-file" basis. Under this system, the first to obtain a patent for an innovation owns that patent, even if it is later



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found that someone else invented it. To oppose a patent, petitioners ask for a post-grant review through the patent office, a process that costs much less than U.S. litigation—about €15,000 (or US\$19,000) on average.

Not surprisingly, researchers found that Europe's post-grant review process would drastically reduce the cost of patent challenges if adopted in the U.S. In addition, in their twin study of international sister patents, Graham and Harhoff found that six percent of patents that weren't challenged in the U.S. *were* challenged in Europe. Many of those patents were eventually deemed invalid and revoked.

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Stuart Graham

manufacture, and stifle innovation," says Graham. "Under a less expensive system, many of these unused patents would be eliminated."

Graham says that the next step in this research is to study how firms are using the international patent system to protect their innovations. "Policy makers should have accurate information when making policy decisions," Graham says. "Advocates on both sides of the issue need better information so that they can help the system."

## ■ Redefining 'Elite'

The emergence of the Internet has had a profound impact on industries from marketing to shipping, but its influence is also being felt in unexpected places—including elite, research-oriented institutions of higher education. Technological advances have drastically simplified communication across long distances, making it easy for faculty who are conducting research to work with colleagues across the country or around the globe.

Because collaboration is no longer dependent on co-location, elite universities might be losing the edge when it comes to research, believes E. Han Kim, a professor of finance at the University of Michigan's Ross School of Business in Ann Arbor. Working with collaborators Adair Morse of the Ross School and Luigi Zingales of the University of Chicago, Kim studied the research productivity of economics and finance faculty at 25 top U.S. schools from 1970 to 2001. They found that, while individual universities may be losing ground in the research race, academic research as a whole has received a boost as a

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—Monica Worline, Emory’s Goizueta Business School

result of technological facilitation.

In the 1970s, according to Kim, faculty were more productive when surrounded by other top-notch faculty at an elite university. He notes that this effect weakened in the 1980s and disappeared in the 1990s, as technology changed the way professors could communicate. “As a result,” Kim says, “there has been a substantial increase in co-authorship between scholars at elite and other universities.”

Another result of this trend, according to Kim, is that an increase in campus-to-campus co-authorship reduces the importance of personal interaction with colleagues on site. Thus, he says, “one traditional advantage of elite universities—to act as a focal point attracting the smartest faculty—is at risk.”

## ■ Courage at Work

**Everyone loves a hero, the one who displays tremendous courage in the face of incredible odds to accomplish unbelievable feats,** says Monica Worline, an assistant professor of organization and management at Emory University’s Goizueta Business School in Atlanta, Georgia. But in the workplace, she argues, actions don’t have to be grand to be courageous. She asserts that employees who display small acts of courage—from refusing to commit an unethical act to admitting to a mistake—can be among a company’s greatest assets.

Worline’s study of courage in the workplace began with her doctoral research at the University of Michi-



gan. For her dissertation, Worline interviewed 650 people who worked in the tech industry, asking each if they had ever seen an instance of courage in their workplaces. Her dissertation took an unex-

pected turn on September 11, 2001. “There was a huge demonstration of physical and moral courage as a result of the attacks on 9/11, which inspired people in so many ways,” says Worline. “It renewed my sense of the importance of studying courage in the workplace.”

She and fellow doctoral student Ryan Quinn became especially interested in United Flight 93, the only one of four hijacked flights where passengers organized to fight their attackers. Worline and Quinn studied all information in the public domain regarding the crash, including media coverage, books, data from the flight recorder, the 9/11 Commission Report, documents from the trial of Zacarias Moussaoui, and studies from the crash site. Their findings are outlined in the paper, “Capabilities for Courage: The Story of United Airlines Flight 93.”

The authors found that several factors had to be in place to inspire the passengers to act. Passengers needed to be able to gather information, via cell phone calls, about their situation; they needed to contact loved ones for support; many passengers drew on their religious faiths for strength; they needed to gain permission from other passengers to act; they needed to find weapons, such as food carts and pots of boiling water; finally, and perhaps most important, they needed time to achieve the first five objectives.

Worline admits that Flight 93

## UPCOMING & ONGOING

### ■ STEP UP FOR FAMILY BIZ

The Successful Transgenerational Entrepreneurship Practices (STEP) Project for Family Enterprising, based at Babson College in Wellesley, Massachusetts, has launched the STEP Project in Latin America. The STEP Project is a research partnership that explores how fami-

lies grow and create wealth across generations. Recent STEP studies, for example, show that families control between 60 percent and 90 percent of business in nearly every nation. The Latin America STEP Project joins similar efforts in Europe, North America, and the Pacific Rim.

### ■ NEW JOURNAL ON CUBA

The Center for Cuban Studies at Ohio Northern University has created the *Journal of Cuban Business Studies*. Designed to represent wide-ranging views on Cuba and Cuban-American relations, the biannual electronic journal invites articles on economic, political, and social issues in contemporary Cuba. The publication is currently accepting submissions for its first issue, to be published in June 2007.



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represents an extreme example of courage under duress. But she sees lessons for business in its example. She notes that many successful businesses work to create "cultures of courage" that provide employees with the time, information, and resources they need to take action when necessary, says Worline. These workplaces allow employees to disagree respectfully with management when they feel it's in the best interest of the company. Moreover, they recognize acts of courage that their employees display and share these stories to inspire others.

"Managers need to recognize and reward the people who are truly acting on behalf of the organization," says Worline. "Such recognition would help build even more courage into the entire fabric of the organization."

## Global Trade and Children's Health

**David Levine, professor at the University of California at Berkeley's Haas School of Business, and co-author Dov Rothman, assistant professor at Columbia University's Mailman School of Public Health in New York, New York, aim to quantify trade's effect on children's health in their study, "Does Trade Affect Child Health?"** Recently published in the *Journal of Health Economics*, the study found that globalization does indeed present a slight benefit to children.

To measure trade's effects, Levine and Rothman used a model that was first developed by researchers Jeffrey Frankel and David Romer

in 1999. With this model, Levine and Rothman predicted a country's openness to trade based on its geographic features, such as whether it has a coastline. They adapted the model to measure the relationship between a nation's openness to trade and three measures of children's health: mortality rates for infants and children under 5 years old; stunting, or low height for a child's weight; and wasting, or low weight for a child's height.

According to their study, an increase of 15 percentage points in predicted trade, as a share of gross domestic product, corresponds to approximately four fewer infant deaths per 1,000 births. Levine and Rothman also found that an increase of 20 percentage points in predicted trade as a share of GDP reduces stunting by approximately 7 percent, while an increase of 20 percentage points raises life expectancy by roughly six months. Their model also predicts that increased trade often leads to higher immunization rates for measles and larger expenditures on public health as a share of GDP.



David Levine

Such positive findings were not a given, Levine explains. While economic theories have shown that improved trade often leads to improved nutrition, water quality, and health care, history also shows that the effects of globalization aren't always positive. "Most recently, globalization led to the spread of HIV/AIDS," says Levine. "We had reasons to fear that the disruptions that often accompany globalization could be costly."

The findings of this study may

be reassuring for global business, but Levine warns that business still must be aware of the impact of its actions. "Our results were less scary than some critics had predicted; but business still must work collectively to avoid the worst excesses that can afflict newly industrialized countries, from pollution to sweat shop labor," says Levine. "We hope to show that engagement in the global economy isn't just about extracting wealth, but also about building wealth for future generations."

## Can 'Lean' Work for the Public Sector?

**What works for Toyota may also work for firms in the public sector, according to two professors at the Warwick Business School in the United Kingdom.** Research by Zoe Radnor and Paul Walley, senior lecturer and lecturer, respectively, in operations management at WBS, indicates that the lean manufacturing methods employed by the Toyota Motor Corporation can also be applied to public sector services to improve employee morale, customer satisfaction, and process efficiency. The project was funded by the Scottish government.

Radnor and Walley began their research in the summer of 2005, investigating eight case studies and three pilot studies of the implementation of lean manufacturing philosophies in public sector organizations, including some in health and government. They also surveyed a number of other organizations. By the time they had finished their research, they had discovered that the use of lean practices in health services organizations, for instance, generated several positive outcomes:

# Delivering Innovation

The Washington State University College of Business is developing *globally competitive* business leaders with the skills to deliver *transformational innovations*.



Through the College's nationally recognized **Center for Entrepreneurial Studies**, student entrepreneurs traveled to Malawi, Africa, in 2006 with an improved treadle pump to help local farmers achieve sustainable economic growth.

- They reduced the time required for adapting disabled people to housing from more than 200 days to 12 days.

- They reduced backlogs in lost and found departments by 80 percent.

- They increased the number of patients being seen within 62 days of contact to around 80 percent, up from 40 percent.

- They reduced the time patients spent in treatment by 48 percent.

The researchers found similar results when lean practices were implemented in the government sector. For instance, the implementation of lean manufacturing techniques reduced the time legal departments took to prepare reports to six days, down from 77 days.

Although their research shows very positive results for public service organizations, in terms of improved service, customer waiting times, processing times, productivity, and staff morale, Radnor and Walley are quick to point out that these changes were made over a long period of time. They aren't to be seen as "quick fixes."

"Implementation cannot be forced," says Walley. "The research recommends a steady process of implementation over a long period of time."

More important, says Radnor, the lean manufacturing approach must be customized to the private sector before it is applied to any organization. "Many organizations are not ready to adopt 'lean' immediately," she says. "They don't possess the change management experience or the right leadership style to make the transition right away."

To read the full report, visit [www.scotland.gov.uk/Publications/2006/06/13162106/0](http://www.scotland.gov.uk/Publications/2006/06/13162106/0).

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