

STERN *business*

Creative Thinking: Entrepreneurship in the Digital Age



J. Peterman Rides Again! **Bold Corporate Venturers** **Creative**
Destruction's Creator **The Internet as Creative Destroyer** **Common**
Sense for Securities Markets **How to Think About the Spectrum**

With technology radically changing the way enterprises of all sizes operate and link up with one another, and the relentless force of globalization creating new opportunities and challenges, institutions of all types are now expected to act as entrepreneurs. *Fortune 500* corporations create venture capital funds, universities incubate biotechnology companies, governments continually seek processes of reinvention, and individuals regard themselves as free agents.

In fact, the entrepreneurial mindset is crucial for anyone hoping to survive and thrive in

a letter from the

this new era. And, for many, embracing the mind-set has proved difficult. That hasn't been the case here at Stern, where entrepreneurship is both a primary academic core competency and a guiding animating spirit.

We offered our first course in entrepreneurship in 1982, long before the Internet entered the *lingua franca*. And in the years since, we have inculcated the concepts and practices of entrepreneurship into our faculty and students – as a strategic way of thinking.

Since 1983, the Berkley Center for Entrepreneurial Studies, endowed in 1996 by William Berkley, chairman of Stern's Board of Overseers, has proved both an anchor and a motor. Led by Professor Ari Ginsberg, it has pioneered new curriculum and brought highly regarded scholars and practitioners into the Stern community. Last year, the Berkley Center launched an Entrepreneurship Scholar-in-Residence Program with the appointment of Thomas McCraw, the renowned Harvard Business School historian. We are proud to feature his article on Joseph Schumpeter, the great theorist of entrepreneurship, in this issue. We are also pleased to feature Ari Ginsberg's article on corporate venturing, which links Schumpeter's notion of "creative

destruction" to the entrepreneurial initiatives that established companies undertake to help create new businesses.

In keeping with its spirit, the Berkley Center has acted like, well, like an entrepreneur: building relationships with Stern community members active in the field, and forging alliances with other institutions. In February, it co-hosted a venture capital event with the Massachusetts Institute of Technology Entrepreneurship Center. In April, the Center sponsored the Second Annual Maximum Exposure Business Plan Competition which provides Stern

students who aspire to be entrepreneurs with exposure to new venture investors and the venture capital community, as well as academic and business leaders in the field of entrepreneurship. There's more – far more – to come. Last spring, Stern received state-wide approval to offer Entrepreneurship and Innovation as a co-major, and in the fall, we will introduce four new courses, including *Negotiation for Entrepreneurs* and *Global Economic Integration and Entrepreneurship*. And high-profile entrepreneurs, CEOs, and venture capitalists will regularly visit Stern to exchange ideas with our faculty and students.

Entrepreneurship is "hot" now in academic circles. Here at Stern, we've been studying and talking about the subject too long to regard it as a fad. Many investing and business models have come and gone in recent years. But the values, principals, and techniques of entrepreneurship endure.

I commend this issue of SternBusiness to you heartily, and invite all members of the Stern community to sample our offerings – on entrepreneurship and other vital subjects.



George Daly
Dean

dean



STERNbusiness

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Kenneth Cron

chairman and ceo **Uproar**

Kenneth Cron is a CEO with a vast range of experience in both new and traditional media. He was the president of Publishing at CMP Media. In September 1999, he joined Uproar, a leading interactive entertainment company, as CEO and was appointed Chairman of its Board of Directors in December of that year. In March 2001, Flipside, the publishing arm of the global media and communication company Vivendi Universal, acquired Uproar, and Mr. Cron joined Vivendi as Chief Executive of the combined company, known as Flipside. The combined company operates a

family of advertising supported, interactive entertainment web sites. With nearly 13 million unique users per month, Flipside ranks among the top 20 web properties and reaches 14.5 percent of the online audience in the U.S.

ML: Tell us about your interactive entertainment and games company, Uproar.

KC: I got involved in Uproar after we sold CMP Media in 1999. CMP published magazines, newspapers, produced trade shows, conferences, all about information technology. We built CMP into about a half a billion-dollar company. We sold it to United News and Media for about \$920 million. Then I retired. After a couple of months of taking my family to Europe, I realized that sitting on boards and investing in companies wasn't going to be

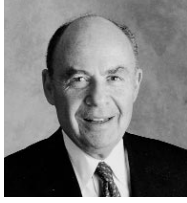
a full-time job. Operating companies is what I know how to do. So, I decided to jump back into something.

One of the investments I had made was in a company that was sold to Uproar which was a Hungarian bingo site. I flew over to Hungary to look at the company. At that point, in mid-1999, everyone thought that entertainment on the Internet was a great opportunity. The thinking was that when America and the world started getting online, the Internet, which was then an information medium, would give way to

entertainment. So, we decided to do something with the company. We redomiciled it in Delaware and took it public. We took the company public in March of 2000, and basically acquired and kept building an entertainment venue. Bingo, trivia, "Family Feud," "To Tell the Truth," and a number of very easy, mass-market, leisure-type games that people could play for 10 minutes or for two hours, and be bombarded by pop-ups and interstitials and advertising.

ML: It was advertiser supported?

KC: Yes. When the market started to crash in the Internet area, we were unique in the sense that our genre of content is very horizontal. We actually have about 15 million unique users and 23 million registered users. We're somewhere between the 15th and the 20th largest site in the world. And we're very sticky. Our users average about 30 to 35 minutes per month on the site. So, our advertising base did not erode at the same level as many of the other dot-coms.



Marshall Loeb, the former managing editor of *Money* and *Fortune*, conducts a regular series of conversations with today's leading chief executives on the Stern campus.

"I think there's a tendency for management to do the wrong things when the stock price fluctuates wildly."

Our revenues actually increased during the year. Unlike many dot-coms, our sales kept going up and our losses kept declining.

What we did see was our market cap drop from a high of \$1.4 billion to a market cap of somewhere around \$60 million. At that point, we knew that fulfilling the entertainment vision of the company would be very difficult on our own. Our ability to acquire was severely hampered. We felt that the right way to go was to find a very important strategic partner that could allow us to leverage the assets, leverage the content and the distribution to allow us to fulfill the entertainment vision for the company. So we found Vivendi Universal. We closed the transaction last week for three dollars a share, a significant premium over the trading range.

Now we're in the process of integrating the companies. They had a site called Flipside. The entire combined company is now called the Flipside Network. We anticipate that we will be profitable in Q3 this year.

ML: Tell us something about Vivendi Universal.

KC: Vivendi Universal is a \$70 to \$80 billion market cap company. It's the second largest media company in the world, behind AOL Time Warner. It owns a huge cable television business called Canal+ in Europe, telecommunications services, publishing, Universal Films, Universal Music, and theme parks. It's a huge, huge company in the entertainment field. Now our employees look at the company and see a great opportunity.

ML: What do you think this will enable Uproar to do that it otherwise could not do?

KC: Ultimately, what we want to do is have access to unique content and have access to

unique distribution. Vivendi Universal has 900 million customer contacts every year. It's a great opportunity for us if we can get at that customer base, and now we are their largest Internet activity.

ML: You've announced substantial layoffs at both Uproar and Flipside. Why do you think they're necessary?

KC: It's really tough. But, the reality is that downsizing is an important component to making companies profitable.

ML: You are one-third of the size in terms of employees of what you were at your peak?

KC: Yes. We're literally half a dozen companies now, put together to create a profitable dynamic entity. With that comes duplication in all departments. You inevitably end up with a situation where you have to make those considerations and make those changes. And it's hard.

ML: What are some of your other challenges and how do you plan to manage them?

KC: For me, a challenge is creating a dynamic business that grows. It doesn't matter what business you're in. Managing costs in a company is certainly a very valuable task and one that needs to be done. But the deciding factor in a business, the excitement that employees get, is not from cutting costs. What creates the excitement is when sales are growing significantly, when you're in areas and business models that are really hot. As a CEO, my job is to create that environment. If I don't create that environment, I've let everybody down.

ML: You mentioned that Uproar has experienced huge fluctuations in market capitalization. How have you managed to keep the company on a reasonably even keel

throughout all those wild fluctuations?

KC: It's been very challenging and very difficult. When the stock starts at 35 dollars and ends up at three, you feel terrible because you know people didn't do well. On the other hand, given where the market went subsequent to our decision to merge into another company, we certainly made the right decision. We got about a 200 percent premium over trading range. From that standpoint, it was a great decision. Yahoo! saw its price go from 240 dollars to 15 dollars. The same thing with Priceline.com and all those other companies. So when I look at the relative value of where this stock has gone, I feel pretty proud of the job that we did.

That being said, it was very difficult. I think there's a tendency for management to do the wrong things when the stock price fluctuates wildly. The idea is to keep it going in the right direction. Don't overmanage it. Keep a steady hand. Stay the course. Always keep in mind that the company's survival is number one, because if it survives, it can thrive. And don't do anything ever to put the company in peril.

I think one of the things we did right at Uproar was we never lost our focus. We never lost our direction. And we worked through the problems. And we managed to get results. So, sales went up. Losses went down. We were disciplined about it.

I think a lot of the free flow of capital that came into the market was so irrational and there weren't enough seasoned

managers to handle it. There wasn't enough discipline in place. There was too much speed and it just cycled out of control. When things really started getting out of control, people didn't know what to do. They hadn't done it before. And I'll be frank, had I not done it before myself, I wouldn't have known what to do either.

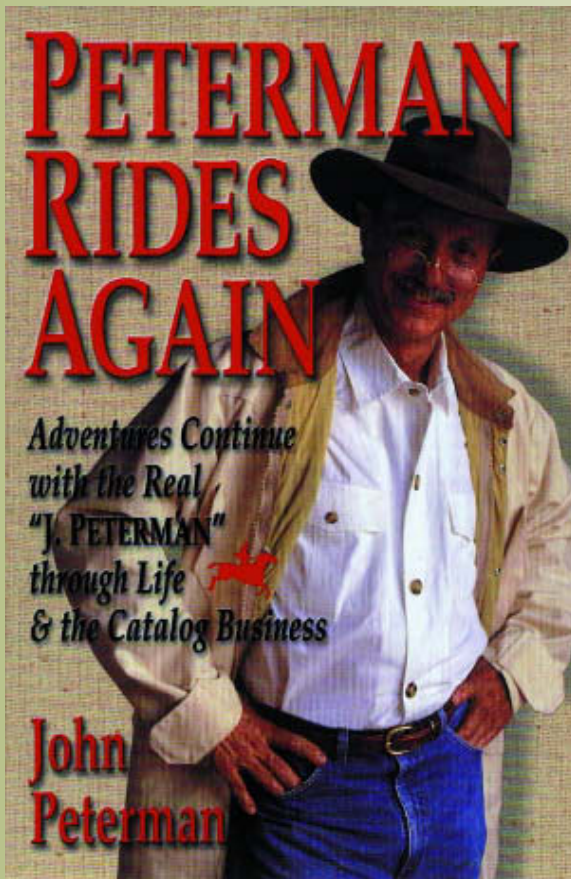
ML: Let's take you back to your days before Uproar. Tell us about your experience with CMP Media.

KC: I went to the University of Colorado. While I was in Boulder, I worked at IBM. IBM had a large computer plant out there and they were doing some programming for Grumman and some of the aerospace defense companies. That's how I got into the business. I worked there for three years and during the time that I worked there, they were talking about the coming PC revolution. I got enough of a taste for that industry that I convinced myself that it was going to be the wave of the future.

I had always liked the media business so, when I moved back to New York, I got involved with a small start-up, which was CMP. They published some capacitor and resistor newspapers in the technology field. I came to the company and started some PC-based publications. I began publishing in the computer area for the company and took the company in that direction, which turned out to be where the company needed to go.

I founded a publication

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J. Peterman

co-founder and former ceo

J. Peterman Co.

J. Peterman is the co-founder and former CEO of J. Peterman Company, a classic American start-up success story. After receiving 100 rejections from venture capitalists, Peterman finally lined up financial backing after running advertisements for his off-beat apparel products in the *New Yorker*. Starting with \$500, a \$20,000 unsecured loan, and one unique product, Mr. Peterman built his start-up into a \$75 million catalog company. A cash flow crisis in 1999 forced the company into bankruptcy. J. Peterman recently wrote and published the book *Peterman Rides Again* (Prentice Hall Press, 2000), and offered a professional and personal examination of

his business in a *Harvard Business Review* case study. Peterman is an expert speaker on entrepreneurship, brand building, corporate culture and the painful but essential art of learning from mistakes. He is currently in the process of developing a second Peterman business, J.Peterman.com.

ML: You have created a company that achieved cult status. J. Peterman was absorbed into the culture. You were even played as a character on "Seinfeld." Tell us how you happened to create the J. Peterman Company, what it did, and how it achieved some of the status that it had.

JP: First of all, we had no plan. I found this coat that became our first product just on the spur of the moment. I'm basically a romantic and the coat – a duster – had romance attached to it. Romance isn't just hugs and kisses. Romance

is hardship. It's adventure. It's all the things that you have read about in your life but that you never do. So I bought the coat. A duster is a long, canvas coat that cowboys used to wear in the 1800s to keep the dust off when they were riding horses. They were long so that they would cover your legs. Cowboys were romantic figures in my mind. They don't say a lot. They spend a lot of time by themselves. They always have an opinion on things. That's a romantic figure to me.

To me, the duster was a

way to escape from the humdrum everyday world of information overload, of all of the things that go on in our lives that contain us. I could escape by just putting on this duster. I wore it around wherever I went. People everywhere would give me looks of approval. That was my market research. So I said, "Let's see if we can sell a few."

This copywriter friend of mine and I, we wrote an ad. We placed it in the newspaper in Lexington, Kentucky. And we didn't sell any coats. We ran another ad and we sold one coat. Finally, we ran an ad in

The New Yorker and we sold 70 coats.

ML: How did you build from there?

JP: It wasn't until the fall of 1987 that we got a second product, which was the J.P. shirt. It's a colonial-period shirt. Again, it defined who we were. So, we had two products from the little space ad. Then we had the heirloom bag. Then a mail bag. We had a real fireman's coat. These were the products that we started out with, all in space ads. Then we started testing other maga-

zines like *GQ*, *Esquire*, and *Harpers*.

Next, I borrowed \$20,000 from the bank, unsecured. And then I got a \$200,000 Small Business Administration loan. I went to my banker, and he said, "You need capital. You aren't going to get any more loans unless you get some capital." I knew nothing of what venture capital was or even what capital was. I was very naive. So, I educated myself quickly and developed a business plan.

If I were to show you the business plan that got me \$1.2 million in backing, you would all die laughing. It was so rudimentary, and so weak in so many areas that it proved to me in retrospect one thing: venture capitalists want to invest in a good idea. Ultimately that business plan brought in about \$20 million in venture capital.

ML: Do you need some record of success to get venture capital?

JP: I can only speak from my own experience. The fact that I failed was not a detriment. If you haven't failed, you probably haven't tried to do anything. And failing is just part of the process of learning. Venture capitalists look at that. They actually look for some blemishes on the record of entrepreneurs they invest in.

ML: What was the next step?

JP: I could see space ads tapping out. We had 23,000 customers from the space ads so we created a small catalog – seven items, black-and-white sketches – and we mailed them to the 23,000, and then we mailed to the same 23,000 again at Christmas time, and we were off and running.

ML: Can you base a mail-order business virtually anywhere, particularly now with the Internet and the kind of com-

munications we've got?

JP: Absolutely. It has always been my contention that it doesn't matter where you start the mail-order business. You don't need a storefront. Today, I can have real-time input into the development of the page sitting in my office while the artists and the art director are working in New York and the merchants are sitting someplace else. We can all participate at one time.

ML: How did you determine what kinds of products to get?

JP: There are six things that conceptually identify a J. Peterman product. Romantic. Authentic. Unique. Wondrous. Journey. Excellence. Those six things define the product. We weren't selling products. We were selling romance. We were selling individualism. We were selling "Be Your Own Person." I want the customer to feel special, to feel smart, to be able to show people that they have good taste. Individualism. Romance. That's the definition of the concept.

The opportunities for products are fantastic. There's no shortage of new ideas. Now, there may be a shortage of people who can recognize them. But I'll guarantee you, there's no shortage of new ideas and of wonderful products.

ML: Take me to J. Peterman at its peak.

JP: At our peak, we mailed 18 million catalogs. That was six million catalogs too many. Anything done too much gets boring. If I mail you a catalog today, you think it's great, different, wonderful. I mail you another catalog next week. "Hey! that's good." I mail another one next week. "Oh!" And the week after that, you know, you get tired of it. There is an unsaid number of times that you can go to somebody.

We also at our peak were

"I found this coat that became our first product just on the spur of the moment. I'm basically a romantic and the coat had romance attached to it."

developing over 2,000 new items a year. That was about 1,000 too many. Any time you increase the quantity of something, you affect the quality. Those were some of the cancers that were creeping in at the peak.

ML: When did you fall off the cliff?

JP: In retrospect, the cliff appeared in 1995 with this additional proliferation of items. That was the cancer. We took in another round of financing. The company was at a plateau so we decided to expand into retail and we hired all these high-level people, got another \$7 million, and we opened up 10 new stores in 1997. We increased the catalog circulation from 14 million to 18 million. We added several new catalog efforts. Peterman's Notebook was a brand-new effort. We had a holiday catalog. We were just doing too much too quickly. We ran into some bumps with the bank in the summer and completed another financing in the beginning of September 1998 of \$10 million and got into a cash crisis. We were vitally aware of a cash crisis in October 1998 and identified it as a disaster in November.

ML: Right before Christmas?

JP: Right before Christmas. In my book I call it my voyage on the Titanic. It's a perfect analogy. The Titanic is going along. The band is playing. Everything is wonderful. Oops! What was that? The bump? But it is an unsinkable ship. We're going forward. Full speed ahead.

Band is still playing. Oops! We're starting to list a little here. What's going on? Well, we have a problem, and it's a pretty serious problem. But this is an unsinkable ship. So, we go on, and we go on, and then the thing begins to really list. And then there's a great flurry of activity. And all of a sudden we have bankruptcy experts in there to keep us out of bankruptcy.

So, by mid-October, we've identified that we're going to have a \$6 million hole. The bank was squeezing us. Then the ship started going down. And all the people who could jumped off. Some of us went down with the ship.

The inventory was already in. We had already paid for it, so it was just sitting there, using cash. The printer went down in a disaster in the printing factory in September so the second draft of our Fall catalog was three weeks late going out. Our Peterman's Notebook was an economic disaster. Nobody bought anything out of it. You put all of those things together and you get a cash-flow crisis. You know, not enough money.

We declared bankruptcy on January 25th, 1999. It was sold at bankruptcy auction on March 7th.

ML: How much did the creditors collect on the dollar?

JP: Nothing yet. The bankruptcy is still going on.

ML: It's not easy to get up after that kind of failure. You had 40 million people out there
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Andrew Stenzler

chairman and ceo
Xando Cosí, Inc.

After receiving his MBA from Stern in 1994, Andrew Stenzler founded Xando, Inc., a leading chain of cafés, which combine the traditional coffee house with a full liquor bar. In October 1999, Xando acquired Cosí Sandwich Bar, creating Xando Cosí Incorporated, which had 55 outlets as of April 2001. Mr. Stenzler is currently the Chairman and CEO of this successful chain of cafés.

ML: Did you work on the idea for Xando while you were at Stern?

AS: I got the idea for Xando in my second to last semester at Stern. The day after I graduated, I headed up to Hartford, which was where the first location was. I was on the cell phone in the middle of graduation, closing the real estate deal for that location.

ML: What was the idea behind Xando?

AS: Xando was the first concept to combine coffee by day with drinks at night. We were a quick service, over-the-counter coffee bar by day, much like Starbucks. The unique thing that we do is table service in the evening. We are the neighborhood gathering place that Starbucks tried to be.

Most restaurants get three usages out of their real estate, i.e. breakfast, lunch, and dinner. We get five full day parts: breakfast, lunch, afternoon, evening, and late night. When we acquired Cosí, we took the Cosí product and we put it inside the Xando format. Now lunch and dinner are our two best parts of the day, because we have Cosí sandwiches.

We had two great brand names, Xando, which came from "X" and "O", hugs and kisses. And we had Cosí. Cosí was a better name for us. It was well known here in New York. And so, slowly but surely, the Xando name is going away.

ML: Tell me about these five aspects of the day.

AS: We change our product line throughout the day. We

change our atmosphere throughout the day. It might be classical music in the morning, and more upbeat music at night. We might serve Squagels, square bagels made from Cosí bread, in the morning, but pizza at night. It's a more complicated idea, harder to operate. But as hard as it is to operate, it has made us special, and it has also been a good barrier to entry for competitors.

ML: How can you cook a full meal in this environment?

AS: Another secret to the Cosí concept is we don't do a lot of cooking. We do one thing great. And that's make bread. We make the best damn bread in New York City. And we use that bread in many different ways throughout the day. So

there's no kitchen at Cosí – it is all right in front of you.

ML: Tell us how you got the idea for the very first café that opened in 1994.

AS: The first idea for Xando came from going around to various coffee bars to discuss what business we wanted to go into. It was under my nose. I thought there should be someplace better for us to meet. We came up with the coffee and bar idea, wrote the business plan in two weeks, and raised \$400,000. I founded the company with my best friend from childhood. We've been lucky enough that our match worked.

ML: How many units do you have today?

AS: There are 55 stores today.

There are another 20 going up this year. We own them all, and lease the real estate for them. We're in seven states, from Massachusetts to Virginia. We recently entered Illinois, and we'll be opening near my other alma mater, in Ann Arbor, Michigan, in May.

ML: What are your revenues?

AS: Well, it's a private company, but we'll do north of \$100 million in revenues this year.

ML: Isn't coffee a low-profit business? How can you make money in your enterprise?

AS: God bless Starbucks. They set the prices for coffee and we followed them. They're the price leader. We set the sandwich price, because we think we're the sandwich leader. Our average ticket is eight dollars. With the combination of products that we serve, everything is high-margin. Liquor is high-margin. We bake, and make ourselves the high-margin piece of the sandwich and our pizza and coffee. So you really have three very high-margin products. Our cafés typically do three times what a coffee café would do.

ML: How do you maintain quality control?

AS: Very carefully. We started standardizing everything we did with store one. We thought this was going to be a big business the day we started it. We created training manuals. We had to make it so that it felt like the owner was at every store. We've been lucky that we've had the capital to invest in the training programs necessary to create consistency for both the product and the service. It took a lot of time. We give everybody stock options. We want our employees to talk like owners and act like owners. A typical manager at our restaurant might go through an eight-to-10-week training program. And an hourly partner

might go through seven to 10 days before he ever hits the floor of the restaurant.

One of the goals in the retail business is to become the employer of choice. We're lucky, because we've got a great concept, and people want to work for us. So as much time as we spend trying to make Cosí a better concept, we spend more time trying to make our people better.

ML: Yours is a private company. How do you have a marketplace for the stock for people who want to cash in their options?

AS: People know we are going to be a public entity soon. When we go public, that will create the liquidity that will enable us to continue to incentivize employees through stock options. You want to be a manager at Starbucks? You can have freely tradable stock options. You want to be a manager for us, you can make many more stock options, but it might be longer before you can liquefy them.

ML: How do you create the best, for example the Cosí bread, and how do you maintain it over time and from location to location?

AS: Reinventing the business every year is something we do. If you rest on your laurels, you just can't compete. So we spend as much time thinking about what's the next phase, or what are the next products, or what's the next thing that has to change. What we did when we first started was coffee and liquor together. We got lucky, nobody was doing it. Six months later there were knock-offs. We realized if you're going to be good, you have to continually reinvent the business. As tastes change and society changes, you have to change.

ML: Let's talk a bit about how you differ from Starbucks.

"Most restaurants get three usages out of their real estate, i.e. breakfast, lunch, and dinner. We get five full day parts."

AS: How do we differ? We're a bread place and a food place. Starbucks doesn't cook anything on site. And they never will. We like to go to areas where they are, because they've gotten people to pay \$3.50 for a latté already. That's very good for us. They've trained the consumer. They have a company-owned store model. We like company-owned, as opposed to franchising, because we can control it.

ML: What other lessons are there to be learned from your experience that would apply to virtually any other enterprise?

AS: There are two things. One is, you never have enough money. Whatever you started with is the wrong budget. The other one is, it's not true that you should never sign personally for anything. If you don't, you never start. You need to take risk.

I also think we set a good example with the merger. Communication was the key. People fear for their jobs. You can't give guarantees, but you can let people know what you are going to need in each department and let people know what they need to do if they want to stay in the organization. We also did a lot of research on the company we bought so that we wouldn't have a clash of cultures. I think the digging and the due diligence that we did was one of the reasons that we were successful. And the two concepts worked well together.

ML: What are some of the secrets of finding just the right location for a Cosí outlet?

AS: The secret is information. The concept was working well at our first location up in Hartford. When we went to our second location in New Haven, it was kind of a dud. What it taught us is you can't be on the wrong side of the street. And you can't be the 11th coffee bar in the neighborhood. Now, when we go to a new market, we've already mapped out every single trade area. We match them up to how our existing stores are doing. And, based on that, we make assumptions about how we're going to do in the new market. You have to have patience and wait for the locations that you've already pre-selected. With each new store you're able to put into your model how you did. So it becomes less and less theory and more and more actual statistics on how well you're going to do.

ML: What are some of the other ingredients in creating customer satisfaction?

AS: It starts with the sourcing and selection of the people that work at the company. You have to orient them. Then you have to train them. Then you've got to give them more education. You've got to promote them. It's the people each step of the way.

ML: How do you create new products?

AS: When we first started it was in the living room sitting around going, "What do you think will work?" These days you've got to be on trend and on consumer taste. We have to

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Kenneth Cron interview cont'd.

called *Computer Retail News*, which became *Computer Reseller News*, which turned out to be a \$100 million publication. We went on to publish, *Network Computing*, *Information Week*, *Communications Week*, *Internet Week*, *Windows Magazine*, *Home PC*, and it just went on and on. We started developing trade shows, conferences, and lo and behold, we built the company into a worldwide, very, very profitable media company.

In 1997, we took that company public. We raised \$100 million and about 18 months later, we decided to sell the company to United News and Media for \$920 million.

When we sold the company, my background in technology and media was the perfect set up to get involved in the Internet. And publishing was very much a business I understood. And what was the Internet but just publishing on the screen. So for me it was not as foreign as it might have been for someone else. I understood advertising, organizing audiences, selling access to audiences, and organizing and delivering those advertising messages.

Q & A with students:

Q: How did you manage to maintain one integrated company in the face of so much M&A activity?

KC: I look at M&A activity as an event that is purposeful for a desired outcome. I can use it to expand my audience, to expand my content, to change the geographical distribution of my business, to get talent in that I don't have, or a combination of all those things. I look at it from the standpoint of a kind of holistic picture of what the company needs. And you kind of look at that picture and get a sense of what the value of a

company is to you. A company doesn't have an intrinsic value. A company has an intrinsic value to a buyer.

The people who work for me in the product and technology area, their job is to actually take the game content and integrate it with the existing game content. We integrate our games with the user in mind. What the user wants is global registration, a common database. So when you are acquiring different companies it becomes a huge database issue.

Q: How are you going to be able to integrate yourselves into a company as large as Vivendi Universal?

KC: I would say over the next two to three months, my job is going to focus on getting our organizational structure right and moving us to profitability. Large companies tend to focus on two basic areas when they acquire: financial and human resources. If they control the money and they control the people, they control the company.

In other words, when we organize ourselves into Vivendi Universal, what they will take control over is human resources and the financial structures. I am the CEO of the combined company and, for the most part, we're an autonomous organization within Vivendi. They run it that way because what they bought was literally the management team, because the assets, especially in the media business, are the people. It's not as though you own a railroad or you own an office building. With the media business it's the management team you really want to keep in place.

Q: How can you manage to attract talent for a company that is so volatile in terms of its stock price?

KC: The assignment of the company is really to fulfill its mission. If you just keep moving

ahead with that mission, there will be people that stay with it and people that don't. I don't think ultimately people come for the stock options. I actually don't even think, in the end, people come for the compensation. Ultimately, if the compensation isn't right, you're going to leave. And ultimately, if the stock options aren't right, you're going to leave. But it's not the deciding factor. The deciding factor is, do you like the business you're in? Is it exciting? Is it interesting? Is it where you want to be? Does it provide growth for you as an individual? If all those things are in place, you'll probably stay with the company for a good long time.

We have had very little trouble retaining our very best people. We did have trouble finding the new talent we needed because the market was so overheated at that time.

Q: Where do you see most of the growth from Flipside coming from?

KC: I would say advertising will always be a part of our business model, the vast majority of our revenue stream. I think there will probably be a bunch of different models in the future. There will be pay for play models. There will be subscription-based models. And I think there will be hybrid models and I don't think we know what all of those will look like yet. I think we have a unique situation at Flipside in that we have a large enough revenue base to be profitable. And that's unusual, because most companies have not been able to do that. I would say that right now we are in the midst of looking for new revenue streams. Because we are on our way to becoming a profitable company, we have the time to look around and figure it out. I do think that entertainment on the net is poised to grow significantly. ■

J. Peterman interview cont'd.

watching you. Tell us how you worked through what must have been one of the most difficult periods in your life.

JP: Well, I got depressed. I had a home office and I had my computer. I sat there during the night and I walked around with nothing to do. So I said, okay, I'll start writing a book. I started writing a book, six, seven hours a day, for three months. At the end of June, 2000 I took a look at it. It was the worst piece of trash that had ever been written. I threw it away.

But it was a cathartic experience. It was the beginning. It was a step. And then I did the *Harvard Business Review* article. When I re-read that, I noticed there was still a little tint of bitterness in it, so I knew that I wasn't better yet.

Then I started in on the business plan. I thought I had the most wonderful dot-com scheme in the world and I had some venture guys interested in it. Then I stood back and I looked at that, and I said, "What are you, stupid?" It was the same thing on a bigger scale. It had no soul. So, I threw that away.

Then, when the *Harvard Business Review* article came out, some financial guys started talking and some things started happening. All of a sudden, things began to come into focus. Now I own my J. Peterman name again. So we're off and running.

It just takes time. It's like death or divorce. It just took a certain period of time before I began to get a passion for living, a passion for life.

ML: Tell us about the new business.

JP: It's the same kind of merchandise. Romance. Unique. Authentic. I don't want another 500-person company. I don't want millions of dollars of inven-

tory. I do want a focused, strong, exciting brand. So, I've created a licensing company. And I'm going to control the merchandising, and I'm going to control the creative. And then, I will license the catalog. I will license the website. I'm presented with another opportunity in life. I have a new opportunity to develop the brand further, the way it originally was conceived. I don't have venture capital in this time, I have private capital. One of the investors happens to be John O'Hurley, the guy who played me on "Seinfeld!"

ML: Do you think that your name and your reputation helped you to raise capital for this new venture?

JP: Yes. I think because of the J. Peterman brand name, because of my personal reputation, because I have a million customers, and because I have name recognition with over 40 million people in the US, I haven't had any trouble raising money. In fact, I'm oversubscribed. There is a waiting list!

Also, the business model is good for this venture. The licensing company generates cash. In the old business, if you made \$5 million, you probably didn't have any money. Just go look in your warehouse and there's your \$5 million. In this business, if you make \$5 million, there's \$5 million in cash. The company's set up as a limited liability corporation, so the profits will pull through. Will it work? Yes, I think it can work. I think we have a great leg up. I think that we've retained a very good licensing agency. It's still shepherding the brand, but now I don't have to focus on a lot of the mechanics of the business.

Q & A with students:

Q: How do you know, when choosing merchandise, what is good for your eye versus what's

going to sell to the public?

JP: It is tough. And that's the trick. What I look for is, what is romantic about that? What is unique about that? What is authentic about that? It takes the process to another level. It still comes down to your eye. It comes down to whether or not you can pick the good stuff.

Q: Would you say that one of the problems was that you lost the mission of your company, and you actually became a bit unromantic, focused perhaps on the profits more?

JP: You've got the right idea. Because there were so many products, they weren't very romantic.

Q: When you were starting the business, how did you know how much of your own money to put into it? How much did you risk?

JP: All the way. I mortgaged my house up to the hilt. I was married with four kids, three in college. But you know what? I made it. Either you believe in what you're doing, or you don't. You've got to commit. ■

Andrew Stenzler interview cont'd.

start with the consumer, understand what market trends are, and then create products that we can be best at. Then we test them. We get feedback from our focus groups. And we roll out the products. One of our new products, the Squagel, was an idea just five months ago. And it's already in two stores and about to go nationwide because we can move really fast. If you're at Starbucks these days, it's three years from the time the product is conceived to the day it hits the stores.

Q & A with students:

Q: How did the CEOs of other companies become your mentors?

AS: Fred DeLuca of Subway one day went to the New Haven location. Even though we weren't making any money there, it was always crowded. So Fred came into that store and he wanted to meet the owner. I happened to have been there that day. So that's where I met Fred DeLuca, when I had two stores. Then Subway tried to buy us. They thought they could franchise the hell out of us. Fred invited me to Subway. He started on one side of a blackboard and he outlined Subway's way of doing business to me so that a third grader could understand it. I walked out of there and I was floored because I had learned so much. So I just became friends with Fred and bounced ideas off of him. Starbucks tried to buy Xando in 1998. That's how I met Howard Schultz. Howard was my idol. Now he too is a friend. It was very tough when we decided not to sell to Starbucks, because here I was with my idol and we didn't do the deal. It strained our relationship during that period of time. But today, he's a person that I still emulate and certainly aspire to be like.

Q: Why did you decide not to sell, to go it alone?

AS: The reason we didn't sell is we really felt that we could create a greater return for investors than they were going to get inside Subway, or inside Starbucks. And we had the support of investors. We are backed by Henry Kravis and Invesco, among others. We had investors who allowed us to take the high road. We were able to always do what we thought was best for the long-term life of the company. And that is a big luxury. When we didn't sell to Starbucks, they knocked it off with two concepts, both of which really don't exist today. We feel pretty good that our concept might not be around today if we had sold it

to someone who wasn't 100 percent focused on it.

Will this be part of another company one day? It may be, if we had the right strategic partnership with someone who could create more value. It's certainly not an ego thing or me wanting to be in charge. I want to do what's best for the investors.

Q: At what stage of your business were you able to gain access to investors such as Henry Kravis and Invesco?

AS: Our original investors were just anybody, family, anybody like that, 10 grand a pop. We had to bootstrap capital together for the first three or four years. We started to meet some high net worth individuals or "angel investors." In our third or fourth year, we ran our first real private placement memorandum. You've got to go meet every venture capitalist because 99 percent turn you down. We had to find the investors who understood retail, who thought maybe we were building a big brand. We ran that first round and raised \$5 million. And then we ran a \$14 million round that was headed by Invesco, the large mutual fund company.

Q: Is there a limit to the expansion of Cosí stores?

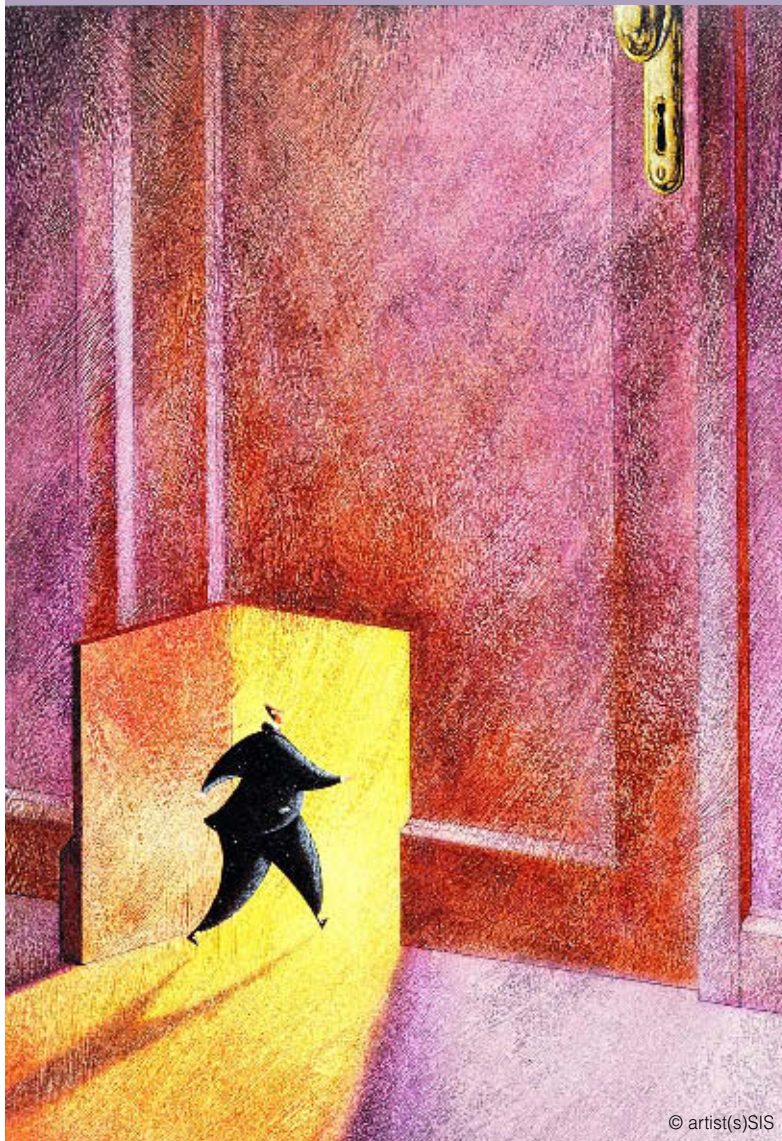
AS: What we've already started to do is plot all of the United States for those stores that can hit our economic models. We've already plotted out 1,500 stores that we think we can do here in the United States. As you learn more, you can continue to up the amount. We serve a need that's unfulfilled in America today, which is the all-day café, a place to congregate with great products. We truly believe that every neighborhood can handle a Cosí. And if that's the case, hopefully there will be many thousands. ■

U.S. Supreme Court Justice Potter Stewart famously said of pornography that he couldn't define it, "but I know it when I see it."

One might very well say the same thing about entrepreneurship. We all encounter entrepreneurs in our work. We recognize them when we see them. But when pressed for a definition, we might find it difficult to come up with a concise answer. What makes an organization entrepreneurial? What are the distinguishing characteristics of an entrepreneur? Is entrepreneurship a trait people are born with, or can it be taught and learned? A survey of *STERNbusiness*'s diverse readership would undoubtedly yield dozens of answers.

Of course, in today's economy, when no market leader's status is secure and competition can rise from myriad sources, the ability to act like an entrepreneur is crucial to survival – whether you're a car manufacturer or a university. Indeed, in the lead article of

INNOVATIVE THINKING



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this issue, Professor Ari Ginsberg, director of NYU Stern's Berkley Center for Entrepreneurial Studies, examines how managers in larger, mature corporations have focused

on the important role of entrepreneurship in creating opportunities for corporate growth and renewal (p. 12). In fact, Ginsberg notes, all sorts of firms are using "corporate venturing" to leverage their assets and capabilities and create new businesses.

Of course, classic entrepreneurs are individuals who start businesses from scratch, or take tiny enterprises and grow them into something much, much larger. That's why the trio of successful entrepreneurs whose appearances at Stern are chronicled in this issue are particularly appropriate. Taken together, the words of these three CEOs constitute a sort of first-person manual on how to start, grow, and re-start businesses. And there are some valuable lessons to be learned from their experience.

An often overlooked component of entrepreneurship is knowing when to sell. That frequently excruciating decision, after all, can often mean the difference between survival and extinction. Kenneth Cron (p. 2), who led the Uproar Network, an Internet-entertainment start-up,

through the dot-com shakeout, recognized the necessity of joining up with a larger outfit and engineered the sale of his company to Vivendi. While many of its independent rivals have been relegated to the dot-com dustbin, Uproar is still alive and well.

The essence of entrepreneurship is seeing an opportunity where others do not and making the most of your resources. In 1994, upscale urban coffee shops were popping up like wildflowers after a spring rain. But Andrew Stenzler (p. 6), who received his Stern MBA that year, saw a niche. He founded Xando, Inc., which combined the coffee house concept with a neighborhood bar. “Most restaurants get three usages out of their real estate, i.e. breakfast, lunch and dinner,” he said. “We get five full day parts.” The company, since renamed Xando Cosí, now has an impressive 55 outlets.

What else defines an entrepreneur? How about resilience? J. Peterman, co-founder and former CEO of J. Peterman Company, was rejected by 100 venture capitalists before an advertisement in *The New Yorker* helped coax an investor to fund his catalog of off-beat products. The rest is history: the company grew rapidly, Peterman evolved into a cult hero, and the firm ran into troubles and went bankrupt. But Peterman himself was undeterred by the failure. “I’m presented with another opportunity in life,” he says. Peterman took some time off, worked on a book – *Peterman Rides Again* – and, naturally, has started a new company.

There’s also much to be learned by studying those who wrote and thought about entrepreneurship. Take Pulitzer-prize-winning historian Thomas McCraw’s profile of the leading theorist of entrepreneurship – Joseph Schumpeter (p. 18). Although he died a half-century ago, Schumpeter is enjoying something of a present-day vogue. After all, he coined the term “Creative Destruction,” a buzzword of the New Economy. But the economist’s legacy was far greater than a few catchy terms, McCraw argues. Schumpeter delved into history, sociology, and psychology to make penetrating observations on the workings, motivations, and effects of entrepreneurs.

In their article, Anthony Afuah and Christopher Tucci put some of Schumpeter’s theory into practice (p. 24). The authors wondered exactly how one of the great vehicles for entrepreneurship – the Internet – acts as a force of creative destruction. They constructed a theoretical model, which they then applied to three broad industry groups, defined by the ways in which they use technology. Their conclusions may prove valuable to managers and executives.

The relationship between patents and entrepreneurs has always been complicated. Patents, after all, have long provided inventors and innovators a way to protect their new products from imitation. On the other hand, patents have also been wielded by their holders as a blunt instrument in warding off potential competition. In the Internet economy, patents covering business mod-

els have emerged as a topic of great controversy and litigation: think Priceline.com’s shopping system or Amazon.com’s one-click ordering method. William Greene provides some valuable perspective on the history of business-method patents (p. 30).

Aside from the United States Patent and Trademark Office, there’s another government agency that has occasionally proved something of a challenge to entrepreneurs: the Federal Communications Commission. Among other responsibilities, the FCC manages the airwaves, which have been a platform for entrepreneurship dating back to the first radio stations in the 1920s. And analysts are placing great store in the publicly-managed spectrum as the host to wireless and other next-generation Internet applications. But Lawrence White (p. 42) argues that the FCC’s spectrum management philosophy, rooted in thinking that may have made sense in the 1920s, is outdated and serves to stifle entrepreneurship and innovation. White proposes a radical, but logical alternative: regulators should think of the airwaves as another form of real estate, and enact a regulatory regime similar to that which governs the use of property in this country.

It’s precisely this sort of entrepreneurial thinking that makes this issue of *STERNbusiness* an enjoyable, interesting, and useful read.

DANIEL GROSS is editor of *STERNbusiness*.



BLUE & HIP: ENTREPRENEURS: CORPORATE VENTURING AND CREATIVE DESTRUCTION

By **Ari Ginsberg**

The escalating pace of change over the last few years has introduced new terms such as *hypercompetition*, *disruptive technology*, and *new economy* into the business vernacular. This high-growth, high-risk world of continuous discontinuity reflects the transformational power of entrepreneurship and technological innovation – a dynamic anticipated over half a century ago by Joseph Schumpeter, the famed Austrian-born economist whose ideas about capitalism have made him a 21st century superstar.

Schumpeter portended the *new economy* in his seminal book *Capitalism, Socialism and Democracy* (1942). He believed new technologies and “combinations” that disrupt the prevailing equilibrium were the key to long-term growth and the development of capitalist economies – not the steady accumulation of capital stock, as economic orthodoxy held. “The process of industrial mutation,” he wrote, “incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one.” Schumpeter dubbed this process “creative destruction,” and argued that it was “the essential fact about capitalism.” This idea is so powerful

that even people who have never heard of the long-deceased economist are familiar with the phrase he coined.

Schumpeter was referring to the processes that influence the outcome of a collection of companies rather than the processes that occur within a single company. But creative destruction can take place in both a macro and a micro setting. In a corporate setting the most dramatic acts of “destruction” are the decisions to sell or shut down a division. A milder form might be to spin off a business unit. The point of destruction in these cases is, as Schumpeter implied, to make way for creation, to refresh or renew the corporation.

But individual companies do not

do nearly as good a job of creative destruction as capital markets. Richard Foster and Sarah Kaplan, co-authors of the recent book *Creative Destruction*, argue that markets – not corporations – allow new companies to enter more freely, and ruthlessly force the elimination of those companies without competitive prospects. Moreover, markets change much faster and on a larger scale than do corporations. Whereas markets operate on the assumption of discontinuity and accommodate continuity, corporations assume continuity and attempt to accommodate discontinuity.

These major differences pose a serious threat to managers of even the most successful and well-established



corporations. Based on the results of a McKinsey & Co.-sponsored study of more than 1000 companies in 15 industries over almost four decades, Foster and Kaplan predict that by 2020 more than three quarters of the S&P 500 will consist of new companies that will be drawn into the mael-

Corporate Venturing

One answer that many have turned to is *corporate venturing*. Corporate venturing is a practice that aims to enable companies to successfully surf the waves of creative destruction. It involves the development of an organized effort to

leverage existing assets and capabilities to help create new businesses. It differs from other traditional business practices that facilitate growth through access to new technology, such as acquisitions and corporate research and development (R&D). New businesses developed through corporate venturing are typically developed through an incubation process rather than through acquisition and integration into the company. Corporate venturing investments are usually riskier and less subject to rigid management of internal costs than conventional R&D. In fact, protecting venture

than traditional operating companies. In replacing the traditional assumption of continuity with the assumption of discontinuity, they have become important drivers of change in the world's largest economy, created enormous wealth for their investors, and shown how individual companies can create value at the pace and scale of the market.

The first corporate venture programs were inspired by the successes of the VC firms that backed such start-ups as Digital Equipment and Raychem. During the late 1960s and early 1970s, more than 25% of *Fortune 500* firms had corporate venturing programs. Many were disbanded in the second half of the 1970s following a severe decline in public market and VC activity. Following dramatic growth in the VC market in the early 1980s and the successes of firms that backed such smash hits as Apple and Genentech, corporations again set up venturing programs. By 1986, corporate venture capital represented 12% of total VC investing. Many of these programs were again discontinued after the 1987 market downturn and the ensuing dramatic drop in VC fundraising. Almost 40% of corporate venturing programs were abandoned within four years of their initiation. By 1992, corporate venture capital had fallen to 5% of total venture capital investing.

The second half of the 1990s brought a third wave of venture capital success and inspiration. Fueled by emerging technologies, opportunities posed by the Internet and a robust economy, independent venture funds began to notch annual returns of more than 50% after 1995. VC investment rebounded from an annual average of \$6 billion in the mid-1980s to over \$17 billion in 1998, and to over \$100 billion in 2000.

The first corporate venture programs were inspired by the successes of the venture capital firms that backed such start-ups as Digital Equipment and Raychem.



strom of economic activity from the periphery.

So, how can corporations make themselves more like the market? The answer, according to Foster and Kaplan, is to establish a more dynamic view that mandates managing creative destruction first and operations second. But the corporation must do so in a highly decentralized way, without sacrificing control.

This is easier said than done. Few corporate leaders have the energy or time to manage the processes of creative destruction, especially at the pace and scale necessary to compete with the market.

investments from such controls is a key reason why start-ups are organized separately from the ongoing corporate business.

The history of corporate venturing reflects an enduring corporate fascination with the success of venture capital (VC) firms over the last forty years. Venture capitalists are certainly not infallible; they are eminently capable of entering markets too early or too late, picking the wrong start-up teams, and riding some investments longer than they should. But over the past twenty years, VC firms have done a far better job of embracing the spirit of creative destruction



And once again, corporate venturing programs followed. Between 1995 and 1999, the number of U.S. companies that made corporate venture investments increased from 62 to 415. According to the research firm Venture Economics, corporate venture capital activity soared from \$542 million in 1996 to \$1.1 billion in 1997, \$1.6 billion in 1998, \$8.6 billion in 1999, and \$16.5 billion in 2000.

The Track Record

Early studies of corporate venturing programs, which took place in the 1980s and early 1990s, led many to conclude that they were inherently unstable and unlikely to succeed. Researchers observe such difficulties as building and sustaining internal support for new ventures from top management, potential inherent conflicts of interest arising between the sponsoring firm and the new venture, and the inability of the corporation to provide an appropriate risk/reward compensation to new venture managers.

But more recent empirical research paints a much more positive picture of the value of corporate venturing programs. In a study comparing over thirty thousand investments in start-ups over a 15-year period, Professors Paul Gompers and Josh Lerner found that corporate venture investments appear to be at least as successful (using such measures as the probability of a portfolio firm going public) as traditional venture capital firms. In another study analyzing over 300 venture capital-backed, information technology IPOs in 1998-1999, researchers

Marku Maula and Gordon Murray demonstrated that emerging technology companies performed better with corporate equity investments than with traditional VC investors. The financial involvement of *Global Fortune 500* 'Infocom' companies was directly associated with higher first-day valuations. In both these studies, success is correlated with the strategic fit between the corporate parent or corporate investor and the venture.

Both the problems and successes in corporate venturing can be traced to the fundamental difference between such programs and independent venture capital. In contrast to VC firms, which have financial returns as their fundamental goal, most companies pursuing corporate venturing programs cite *strategic*

returns as their fundamental aim. Strategic returns include exposure to radically new and disruptive technologies, access to new products and markets, and identification of acquisition targets.

A major cause of corporate venturing failure is the desire to accomplish a wide array of objectives that are not necessarily compatible. To maximize financial returns, firms are best advised to emulate independent VC firms. They need to provide complete autonomy to the new ventures' managers and to compensate risk-taking behavior with equity stakes. They also need to exercise strict discipline by staging the financial support pending the achievement of certain milestone events and by providing intensive guidance and oversight without interfering with the basic decision-making responsibilities of the entrepreneurs who run the business. This includes a practiced indifference to potential synergies or complementarities with other businesses in the corporate portfolio.

Resolving Conflicts

But this posture can create conflicts. By emulating such venture capital practices, firms negate the important strategic mandate of corporate venturing programs. If the prime motivation for the new venture is strategic, then providing greater autonomy, a disproportionately higher compensation level, strict financial discipline on the downside, and ignoring strategic complementarities will increase the likelihood of potential conflict between the new venture and the established business.

Given such conflicts, it is not enough for corporate venturing programs to be managed more like private venture capital. Instead, they must be hybrids. Corporate venturing programs must be designed to benefit





from certain practices employed by venture capitalists, while at the same time leveraging structural advantages to manage the development and commercialization of new technologies that are not available to independent venture capital firms.

Let's take a few examples of how this works. All investments made by private venture capital firms are assumed to have a limited life – typically seven to 10 years or less. At the end of that time VCs are required to sell their investments and return the capital to their limited partners. This limited horizon creates an incentive alignment between limited partners and the venture capital partners that encourages venture capitalists to invest only when they have a clear idea about the pace and scale of the gains that can be achieved. Corporations, on the other hand, do not face the same pressure to produce liquidity events for new businesses. As a result, they can fund and sustain longer-term projects, which often involve the development of radical innovations and technological breakthroughs.

A second important structural advantage comes from the corporation's ownership of important physical, knowledge-based and intangible complementary assets that cannot be freely traded in the external markets, like a company's brand name or its reputation. In addition, certain technologies require the coordination of complementary technologies in order to deliver value. For example, last year Qualcomm, the wireless telephone company, created a \$500 million corporate venture fund to invest in start-ups that develop wireless Internet applications – particularly those that will lead to the adoption of a technology for transmissions that complements the standards employed by Qualcomm.

Finally, there is the potential learn-

ing advantage companies gain from investing in new ventures even when they fail. For example, 3M has developed a culture that not only tolerates failure but has also institutionalized practices that facilitate learning and knowledge transfer among employees involved in technological innovation. Each of the investments made by Eastman Chemical Company this past year led to the development of a strategic relationship that has given the company access to early development of important technology.

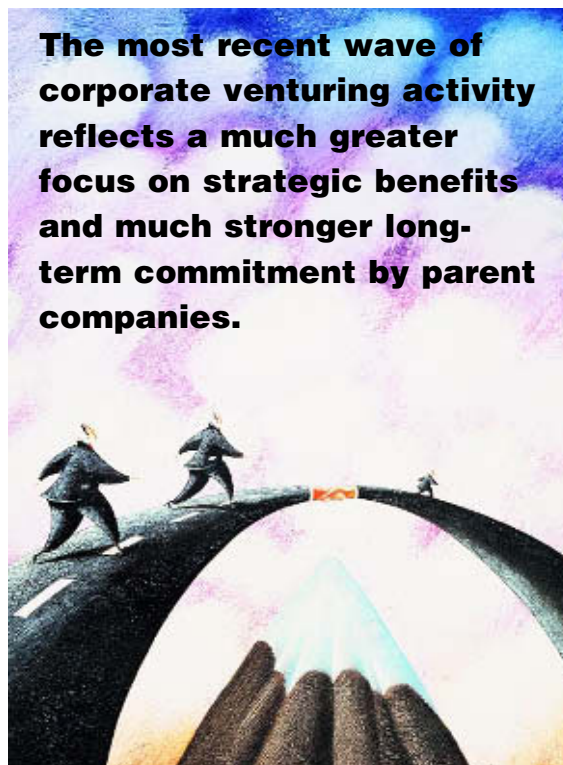
its corporate venturing investments are allocated even if this means less control over the direction the new venture will take?

Second, senior management must decide on the principal goals of the corporate venturing initiative. This means more than declaring that the goals are primarily strategic. It means identifying the specific type of goal and ensuring that multiple goals are compatible. Does the corporation want to have access to new technology that will lead to capitalizing on the

next “new, new thing?” Does it wish to invest in competing technologies in which a dominant new standard is likely to emerge, but in which the outcome is unclear? Does the company want to invest in start-ups that will serve to promote demand for its core products? Or does the company just want to expand its current R&D efforts by complementing them with external investments?

Third, senior management must determine whether it has the resources and talent necessary to carry out these goals. Does it have employees with the requisite experience to lead the initiative? Can it easily hire them? Does it have the capital to finance the large investments that are required? Does it have a culture that encourages the sharing of information across units?

Fourth, senior management must decide on the appropriate design for the corporate venturing unit and its governance. Corporations use a variety of structural forms to engage in venturing. These forms reflect increasing corporate internalization



The most recent wave of corporate venturing activity reflects a much greater focus on strategic benefits and much stronger long-term commitment by parent companies.

Elements of Corporate Venturing Strategy

So what can a corporation do to increase its odds of succeeding at corporate venturing? First, it must be committed to the mantra of creative destruction. Does senior management regularly think about the companies that define the periphery of the industry? Do they have the courage to shut down ventures that are not working out? Is the company willing to let customer demand control how



or involvement, and range from acting as a limited partner in venture funds established by independent venture capitalists to creating a corporate unit that makes direct investments in start-ups, some of which are subsequently “spun out” as independent companies while others are “spun in” as acquisitions. For example, when Procter & Gamble’s new venture, Reflect.com, confronted the corporation’s inability to provide it with necessary know-how regarding the Internet and e-commerce, P&G opted to use an “outsourced model,” in which the company worked in partnership with an independent venture capital firm. P&G agreed to invest \$35 million in the Web business and keep a 65% equity stake, licensing its patented manufacturing technology to Reflect.com. The independent venture capital firm agreed to invest \$15 million and take a 15% equity stake. Each party received two seats on the board. Xerox, in contrast, has opted for a “business incubation” model, forming a new entity – Xerox New Enterprises – in 1996 to capture the value of Xerox technologies in a portfolio of entrepreneurial companies with important document processing hardware and software technologies in various stages of development.

Two other important aspects of design involve the reporting structure and the incentive system. Research suggests that to be successful, a corporate venturing unit must have a high-level champion within the corporation. To increase company-wide support, corporate venturing units should have their managers report directly to the CEO or to a key business-unit head. Designing incentive packages to be in line with the market for venture capitalists as well as with the compensation received by employee peers within the corpora-

tion poses an inherent conflict. An effort should nevertheless be made to design an incentive system that fits the goals of the corporate venturing initiative, the risk/reward levels involved, and the length of the performance horizon.

A New Wave

Given the “boom and bust” history of corporate venturing that took place over the last forty years, one cannot but wonder whether the recent economic downturn and the ensuing meltdown among VC firms will lead once again to a reduction in corporate venturing activity. There are certainly some signs of retrenchment. During the first six months of 2001, a number of major corporations disclosed that their venture capital portfolios incurred significant losses. These include banking and investment giants J.P. Morgan Chase & Co. and Wells Fargo, and leading computer companies Compaq and Dell. Lucent Venture Partners, the venture capital unit of Lucent Technologies, is now investing at a slower pace than in years past because of the pull-back among the traditional VCs with which Lucent co-invests. And Motorola Ventures, the venture capital unit of Motorola, will be investing in fewer deals this year due to a shift in investment strategy.

In general however, this go-around appears to be different than past cycles. Companies such as Qualcomm, Nokia, Eastman Chemical Corporation, UPS, General Mills, and even Coca-Cola continued to invest aggressively, even in the dismal fourth quarter of 2000 and the gloomy first quarter of 2001. Despite the serious problems plaguing both Motorola and Lucent, neither company has slated its corporate venturing programs for elimination. And while Compaq recently shut down its corporate development office in the wake of a company-wide restructuring, it still expects to make the same

number of venture deals through its existing business units.

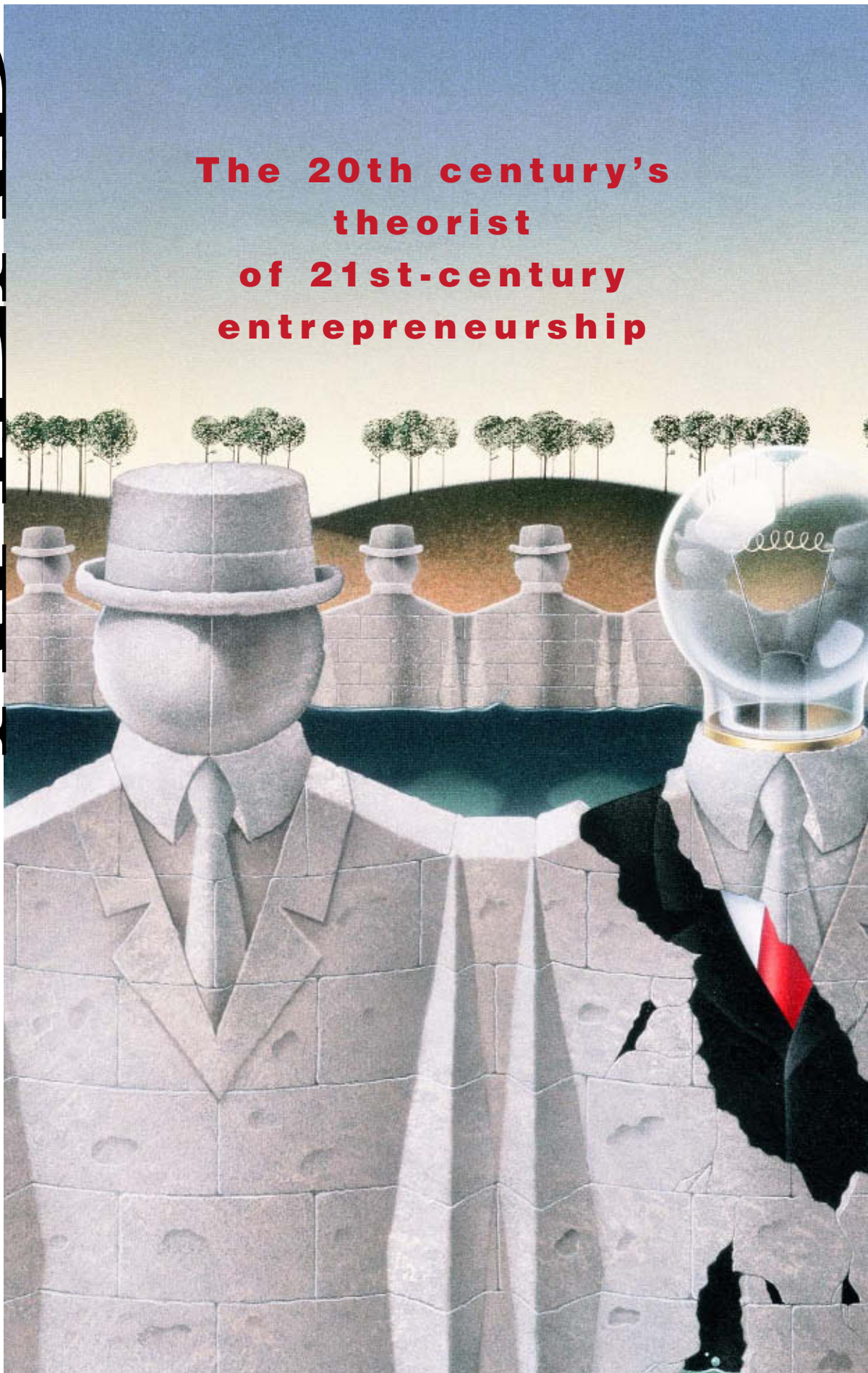
The most recent wave of corporate venturing activity reflects a much greater focus on strategic benefits and much stronger long-term commitment by parent companies. The dramatic reduction in funding by independent venture capitalists during this time has created more opportunities for corporations to invest. And the impressive track record of many corporate venturing programs in helping early stage companies develop has given them more credibility with entrepreneurs as well as conventional VCs, who are now much less prone to viewing corporate venture capital as “dumb money.”

Increasingly mindful of the disruptive capabilities of new business entrants, managers of large corporations are more aggressive than ever about winning the creative destruction game. And they appear to have a much better grasp of the important role of corporate venturing in creating opportunities for corporate growth and renewal. Strong financial pressures will certainly force some corporations to reorganize or downsize their corporate venturing efforts. But savvy executives have come to understand that their companies cannot afford to stop investing in innovation during an economic slowdown. So while many VC firms continue to lick their wounds from the “destructive creation” they helped generate among Internet start-ups, corporate venturing has an unprecedented opportunity to drive the next wave of technological change and economic growth.

ARI GINSBERG is Harold Price professor of entrepreneurship and director of the Berkley Center for Entrepreneurial Studies at NYU Stern.

THINK AHEAD

**The 20th century's
theorist
of 21st-century
entrepreneurship**





By **Thomas G. McCraw**

Management journals and New Economy magazines are filled with an unending stream of thinking and writing about entrepreneurship. But amid the proliferation of management gurus, there's one theorist whose voice pierces through the clutter: Joseph Schumpeter. More than a half-century ago, the Moravia-born economist coined the enduring term "creative destruction" as a great metaphor for capitalism. But his understanding of the dynamics of capitalism and the role of entrepreneurs are just as salient and incisive today as they were when he first made them.

Born in 1883, Schumpeter was educated at the University of Vienna, where he received degrees in law and political economy. From 1909 until 1911, he taught at the University of Czernowitz, where he wrote *The Theory of Economic Development*, the 657-page foundation stone of his theory of entrepreneurship. He taught at universities in Austria, Germany, and Japan, worked as a lawyer in Egypt, briefly ran Austria's finance ministry in 1919, and served – unsuccessfully – as president of Vienna's private Biederman Bank from 1921 until 1924. Meanwhile, he found time to indulge in a plethora of romantic liaisons, of which he liked to boast. (He would marry three times.) Schumpeter came to Harvard permanently in 1932, and became an American citizen. He died in 1950.

A serious scholar – he had almost no recreation other than the occasional game of tennis – Schumpeter was one of the great polymaths of the twentieth century. Between 1905 and 1950, he produced 15 books, six pamphlets, about 100 book reviews, and at least 148 articles, and comments. But it isn't just the quantity that impresses, it is the quality. The intellectual historian Martin Kessler argues that Schumpeter was, apart from John Maynard Keynes, “the only truly great economist the 20th century has produced.” And business historians like Alfred D. Chandler, Jr., regard Schumpeter as the economist who best understood the rise of big business and the central roles of innovation and entrepreneurship.

Unlike many famous scholars, Schumpeter exhibited a lively inter-

est in and respect for well-done work regardless of the disciplinary banner under which it appeared. As his Harvard colleague Seymour Harris once put it, Schumpeter was primarily an economist, but “historians and sociologists can include him as one of their stars” too. He held as an article of faith that all good economics must include theory, history, and statistics. And he relentlessly evangelized in favor of econometrics. Schumpeter helped organize the Econometric Society and served as its president from 1937 to 1941.

Although his work encompassed a wide range of subjects, it is his theory of entrepreneurship –

“Between 1905 and 1950, he produced 15 books, six pamphlets, about 100 book reviews, and at least 148 articles and comments. But it isn't just the quantity that impresses, it is the quality.”

a word and phenomenon with which his name will likely forever be linked – that is most relevant to contemporary business practitioners. Schumpeter developed his innovative theories in three main books: *The Theory of Economic Development* (1911), *Business Cycles* (1939), and *Capitalism, Socialism, and Democracy* (1942).

The Theory of Economic Development

In the early 20th century, economic thought was dominated by theorists who posited that economic systems were fueled by a “circular

flow” of inputs and outputs, and were generally at a state of equilibrium. But Schumpeter found that this traditional economic analysis lacked a workable theory of innovation or finance – i.e. a realistic model of the way saving and investment actually operate in a dynamic economic system.

In his 1911 book *Die Theorie der Wirtschaftlichen Entwicklung* (the English version, *The Theory of Economic Development*, did not appear until 1934), Schumpeter set forth the first thoroughgoing exposition of a more complex system. In his new model, economic routine is periodically interrupted by entrepreneurial behavior that comes in clusters and disrupts equilibrium. Entrepreneurs, who could effectively function as free agents, unconnected to a single firm, disrupt the circular flow by “carrying out new combinations.” This, he asserts, is the basis of economic development, and embodies the essence of capitalism.

In an effort to divine the motivations of entrepreneurs, Schumpeter departed from economics and dipped into the realm of psychology. “The typical entrepreneur is more self-centered than other types, because he relies less than they do on tradition and connection and because his characteristic task consists precisely in breaking up old, and creating new, tradition,” he wrote. An entrepreneur is motivated by “the dream and the will to found a private kingdom.” Other motivations, he wrote, include “the will to conquer,” “the impulse to fight,” and “the joy of creating.”

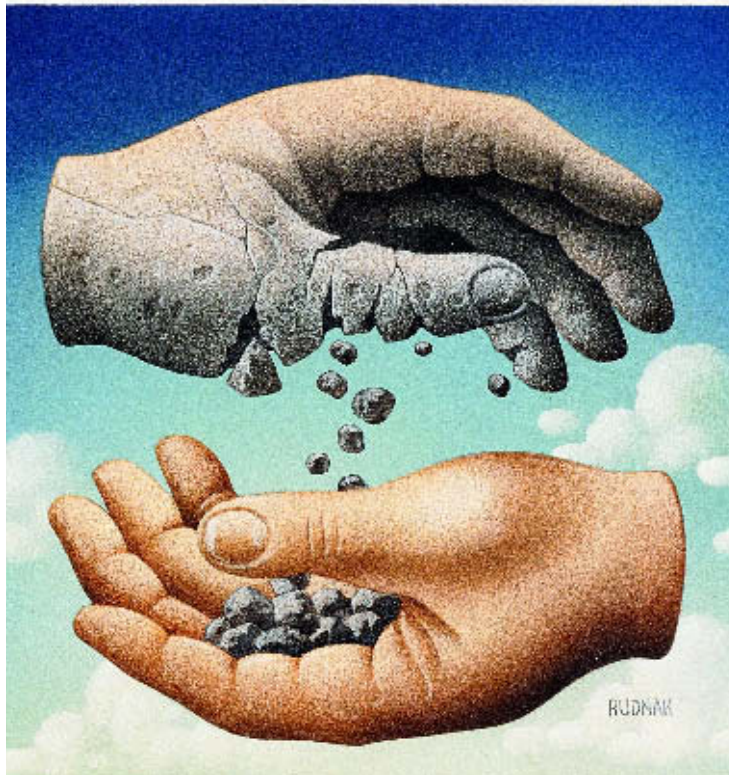
Schumpeter also saw profound sociological implications in the rise of some entrepreneurs and the obso-



lescence of others. Just as businesses rise and fall, so too do entrepreneurs and their families. Or as he put it in one of his many great metaphors, “the upper strata of [a capitalist] society are like hotels which are indeed always full of people, but people who are forever changing.” Schumpeter also noted that just as intellectual entrepreneurs proposing new theories face opposition, business entrepreneurs seeking to overthrow conventional wisdom encounter resistance from entrenched interests. Those whose positions are threatened by innovation, he wrote, may be expected to fight innovation, even to organize against it by throwing up legal and political impediments.

The last vital element in the system Schumpeter delineates in *The Theory of Economic Development* in what he calls “the swarm-like appearance of entrepreneurs,” which represents the kickoff of a new business cycle under capitalism. He relates his theory of entrepreneurial activity directly to what was for his generation the most difficult analytical problem posed by capitalist economies: the “jerky disturbance” of “the equilibrium position,” as Schumpeter himself calls it – not any gentle ebb and flow, but rather “a disturbance of a different order of magnitude.” It was to the mysteries of such disturbances that Schumpeter would devote his next big book, *Business Cycles* (1939).

“ He came to believe that capitalism contains the seeds of its own destruction – not for economic reasons but for sociological ones. ”



Business Cycles

Some 27 years elapsed between the publication of *The Theory of Economic Development* and the 1939 appearance of *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process*. During those years Schumpeter experienced multiple personal traumas: living through World War I and its aftermath in Austria, fleeing Germany, and losing his family. By 1939, he had become deeply pessimistic about the state of the world.

A book with grand ambitions,

the 1,100-page, two-volume work nonetheless proved a monumental disappointment to Schumpeter’s many admirers and to the author himself. It was thoroughly upstaged by Keynes’s *General Theory of Employment, Interest, and Money*, which appeared in 1936. Schumpeter did not work well with editors, and was loath to show work-in-progress even to his professional colleagues, let alone to seek editorial advice. As a result, his work was repetitive and undisciplined; his aversion to the editorial may have limited his influence among the larger public.

In *Business Cycles*, Schumpeter again set about to marry multiple disciplines. He tried to turn cyclical economic patterns into predictive scientific wave theories borrowed from physics. The book is also imbued

with a remarkable richness of historical detail and understanding. Although the technical explanation of cycles remained problematical, the historical vision that underlay Schumpeter’s effort at synthesis was squarely on point: that capitalism – not all economic activity, just capitalism – is fundamentally an unstable, disequilibrating process. Despite its sophistication, *Business Cycles* sold only about 1,500 copies.

Capitalism, Socialism, and Democracy

The failure of *Business Cycles*

may have informed Schumpeter's next book, *Capitalism, Socialism, and Democracy*, which was published in 1942. It is as though the author, now deeply pessimistic not only about the indifferent reception of *Business Cycles* but also about the state of the world, decided to unburden himself on an array of other subjects in addition to economics narrowly construed.

Despite the book's title, it contains little of lasting interest about either socialism or democracy. But it bursts with ideas about capitalism, and as a "performance" – a term Schumpeter liked to apply to others' works – it may be the best analysis of capitalism ever written. It was here that Schumpeter first coined the oxymoronic phrase "creative destruction," which quickly took second place only to Adam Smith's "invisible hand" in the history of a discipline already rich in memorable metaphors.

Schumpeter's core argument in *Capitalism, Socialism, and Democracy* is reducible to three major tenets:

1. The essence of capitalism is innovation ("creative destruction") in particular sectors. Certain standard tools of economics, such as static equilibrium and macroeconomic analysis, are useful; but carried too far they can disguise reality and mislead scholars and students.

2. The virtues of capitalism – in particular its steady but gradual pattern of growth – are long-run and hard to see; its defects, such as inequality, apparent monopoly, and wild gyrations in the business cycle, are short-run, conspicuous, and

directly hurtful to important interest groups.

3. It is dangerous for economists to prescribe "general" recipes and nostrums for reform, because political and social circumstances are always changing.

In many ways, *Business Cycles* was a synthesis. Some of the major themes of *Capitalism, Socialism, and Democracy* represent reworkings of ideas Schumpeter had first presented in articles published long before, while in his twenties (he was 59 in 1942, when the book appeared). Others came directly out of *Business Cycles*. A capitalist economy, he now wrote, "is not and cannot be stationary. Nor is it merely

“ Pushing his analysis to its limits, Schumpeter further identifies capitalist entrepreneurship with technological progress itself. ”

expanding in a steady manner. Every situation is being upset before it has had time to work itself out. Economic progress, in capitalist society, means turmoil.”

The contemporary structure of business, Schumpeter argues, is best understood as having evolved from a long "organizational development." It reflects a "process of industrial mutation – if I may use that biological term – that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one." In sum, the process is one of

"creative destruction" – the sweeping out of old products, old enterprises, and old organizational forms by new ones. "It is what capitalism consists in and what every capitalist concern has got to live in."

It may sound relatively mild to the contemporary ear. But with these radical declarations, Schumpeter was, in effect, indicting the entire profession of mainstream economics for failing to acknowledge that continuous innovation is endogenous to capitalism. Pushing his analysis to its limits, Schumpeter further identifies capitalist entrepreneurship with technological progress itself. As a matter of historical record, they were "essentially one and the same thing," the first being "the propelling force" of the second.

These vital statements led Schumpeter to a somewhat more pessimistic conclusion. For he came to believe that capitalism contains the seeds of its own destruction – not for economic reasons but for sociological ones.

Capitalism, Socialism, and Democracy delves deeply into sociology to describe the ways in which capitalism undermined the traditional underpinnings of civilized society and created new economic orders, which in turn sets off recurring cycles of creative destruction. Capitalism is so successful economically, he wrote, that it "creates, educates and subsidizes a vested interest in social unrest." He concludes, in the end, by professing to see not only the decline of capitalism but also the ultimate triumph of socialism. "Can capitalism survive?" he asked. "No.



I do not think it can.”

When *Capitalism, Socialism, and Democracy* was first published in 1942, it received a modicum of attention, probably because World War II was dominating not only the news but intellectual and economic life as well. A second edition, which appeared in 1946, attracted wider notice. But the third edition, published in 1950 at a high point in the Cold War, when capitalism and socialism were, in fact, competing furiously for the world’s allegiance, became an international best-seller. It produced thousands of future citations by scholars in sociology, history, economics, and other disciplines. Translated into at least 16 languages, *Business Cycles* still sells widely in paperback editions.

Creative Destruction and Entrepreneurship

Of course, Schumpeter turned out to be incorrect. Several decades after his death, it was capitalism that ultimately triumphed over socialism – not the other way around. But the lasting value of Schumpeter’s work lies not in his accuracy as a prognosticator, but in his brilliant analysis of how entrepreneurs work, and in his ability to change the way economists, students, and practitioners write and think about entrepreneurship and technological change.

Schumpeter’s work began to find a wider audience during the 1960s and 1970s, and a still broader one in the last two decades of the 20th century. In the years after his death, scholars began to analyze not only the process of creation, but also the destruction that was its inevitable

“Has there ever been a more penetrating analyst of capitalism in all its dimensions than Joseph Schumpeter? No, I do not think there has.”

concomitant. They wondered about the human costs of economic “progress,” and started to rethink the nature of human existence under capitalism. They turned their thoughts to the inescapable tradeoffs between economic values on the one hand and social ones on the other.

In the 1980s and 1990s, the demise of command economies in eastern and central Europe and the remarkable economic performance of China and other Asian countries raised perplexing questions about the relationship between capitalism on the one hand and democracy on the other.

At the same time, in many business schools, perhaps most notably Harvard and Babson, entrepreneurial studies took off. Masses of students began to express interest in the subject and to demand curricula. The total number of business schools with offerings in entrepreneurially-oriented courses soared from six in 1967 to 370 by 1993.

At the Harvard Business School, where in the late 1940s Schumpeter had helped to set up the Research Center in Entrepreneurial History, enrollment in elective courses offered by the newly organized Entrepreneurial Management Unit

reached more than 1,100 in 1996. In 1999, the School’s administration introduced a new course entitled “The Entrepreneurial Manager” into the required curriculum.

Meanwhile, in the United States, and to a lesser extent in Western Europe, the phenomenal run-up of securities markets throughout the 1990s piqued sharp new interest in the entrepreneurs who became dot-com millionaires and billionaires. In this new setting,

Schumpeter’s work on entrepreneurship acquired a compelling new interest. Scholars from many disciplines began to find in his writings either answers to their own questions or valuable maps and guidebooks for new avenues of research. During the 1990s, the number of academic citations to Schumpeter’s works actually overtook those to Keynes’s, a phenomenon that would have seemed inconceivable a generation earlier.

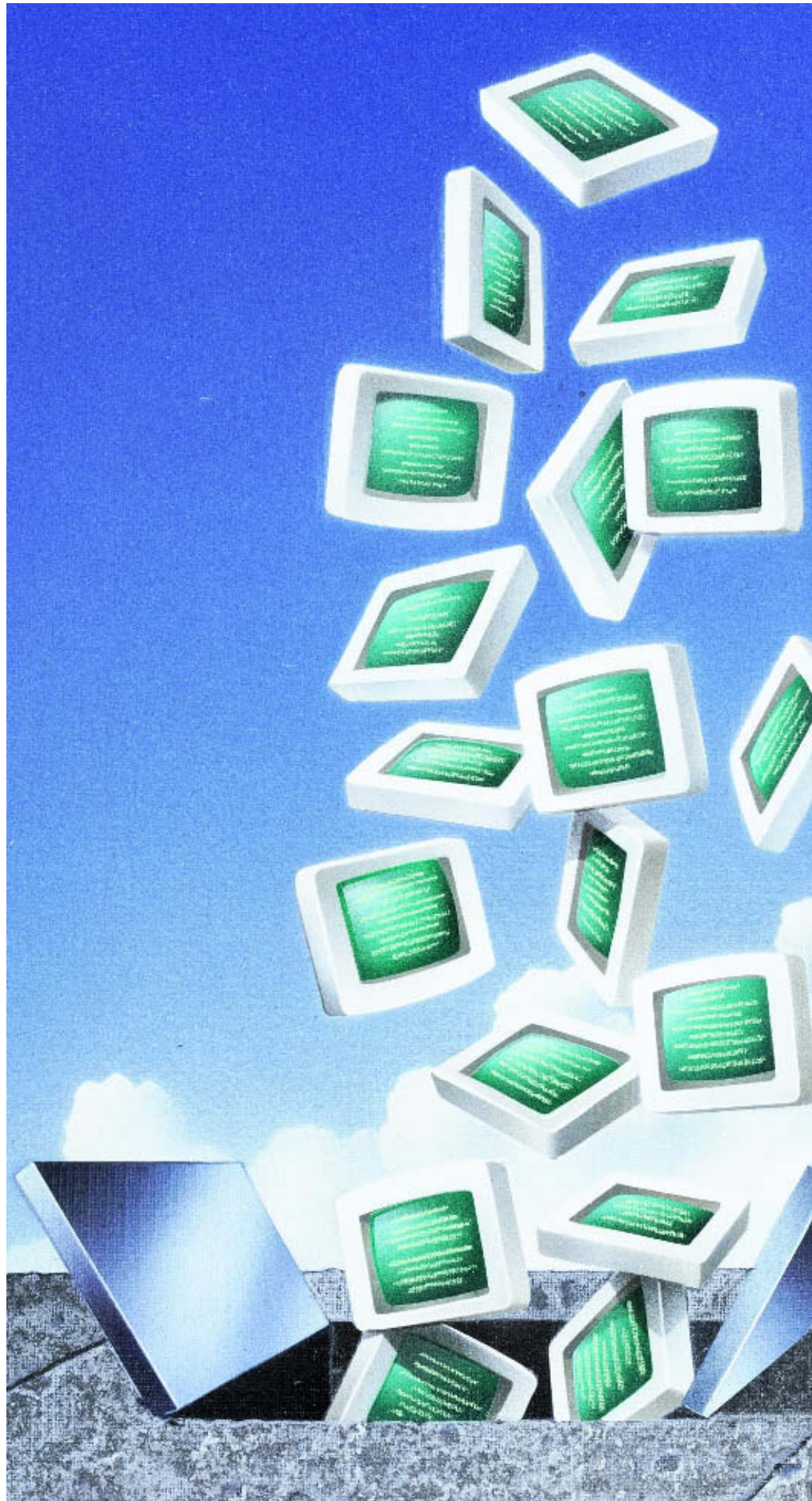
In the end, the fundamental reason for the ongoing relevance of Schumpeter to the study of business and social science comes down to his passionate insistence on the invisibility of intellectual inquiry, together with the sheer fertility and power of his mind.

Has there ever been a more penetrating analyst of capitalism in all its dimensions than Joseph Schumpeter? No, I do not think there has.

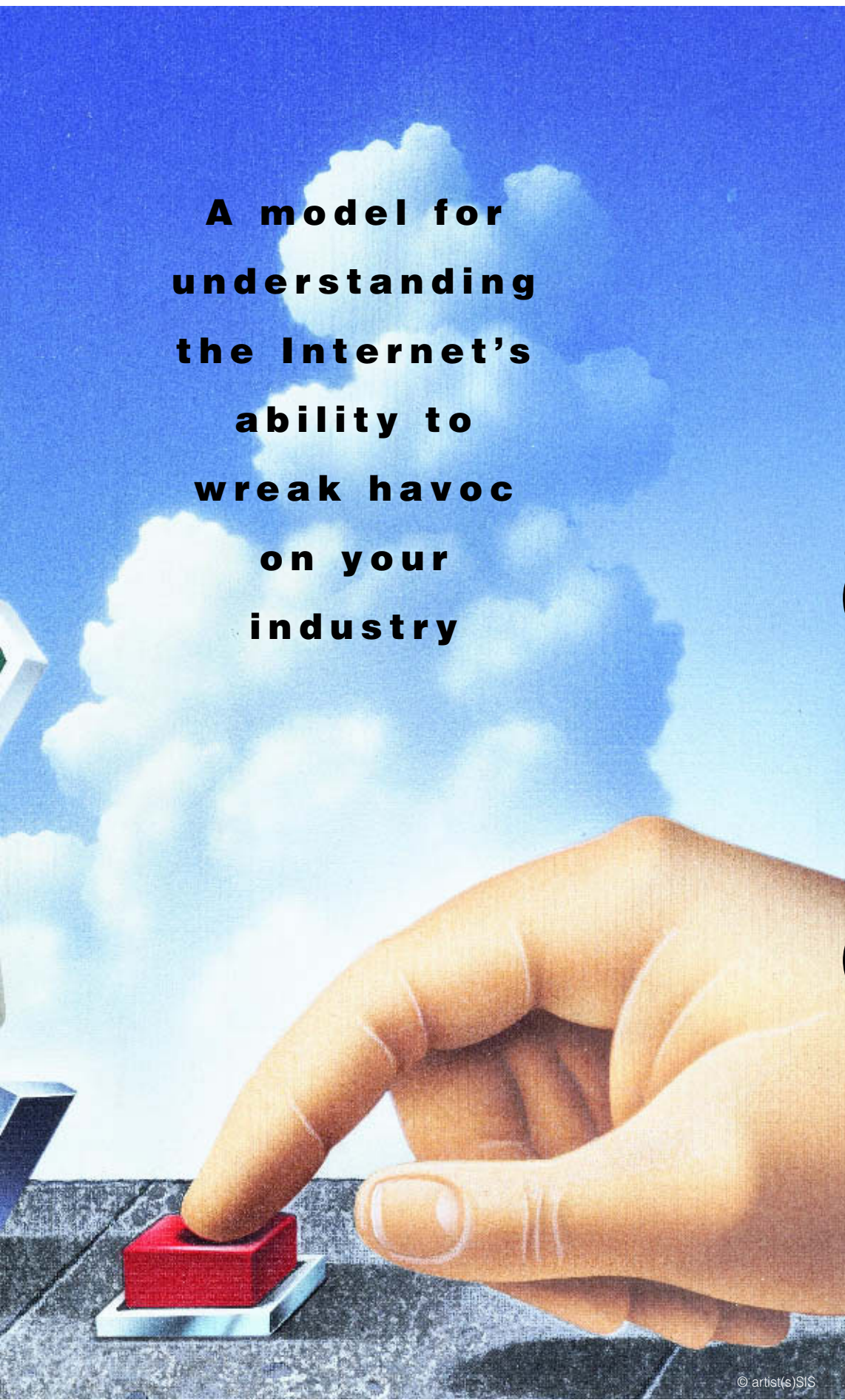
THOMAS MCCRAW, *the Isidor Straus professor of business history at Harvard Business School, is editor of the Business History Review. Last spring, the Pulitzer Prize winner was the entrepreneurship scholar-in-residence at NYU Stern’s Berkley Center for Entrepreneurial Studies.*

By **Allan Afuah**
and **Christopher Tucci**

“Creative destruction” is the term economist Joseph Schumpeter coined to describe the way entrepreneurs create new wealth through innovation that destroys existing market structures used by incumbents to derive competitive advantage. Of course, technological change — like the advent of the Internet — can be the basis for creative destruction. And the term has been much in vogue in recent years as the New Economy picked up steam. But how widespread and deep is the creative destruction from a technological change such as the Internet? What types of industries are likely to be affected and how deep is the impact likely to be in each? Where should entrepreneurs seek opportunities? And how can incumbents exploit their existing positions?



**A model for
understanding
the Internet's
ability to
wreak havoc
on your
industry**



© artist(s)SIS

OPERATIONAL STRATEGY



To get at these large questions, we constructed a model of the Internet as creative destroyer. Then we applied the model to three broad industry groups, defined by the ways in which they use technology. The results provide some interesting conclusions and guides for further research.

The Model

Our model, shown in **Figure 1**, posits that a new technology such as the Internet can lead to creative destruction through four means: creating new value, rendering function-

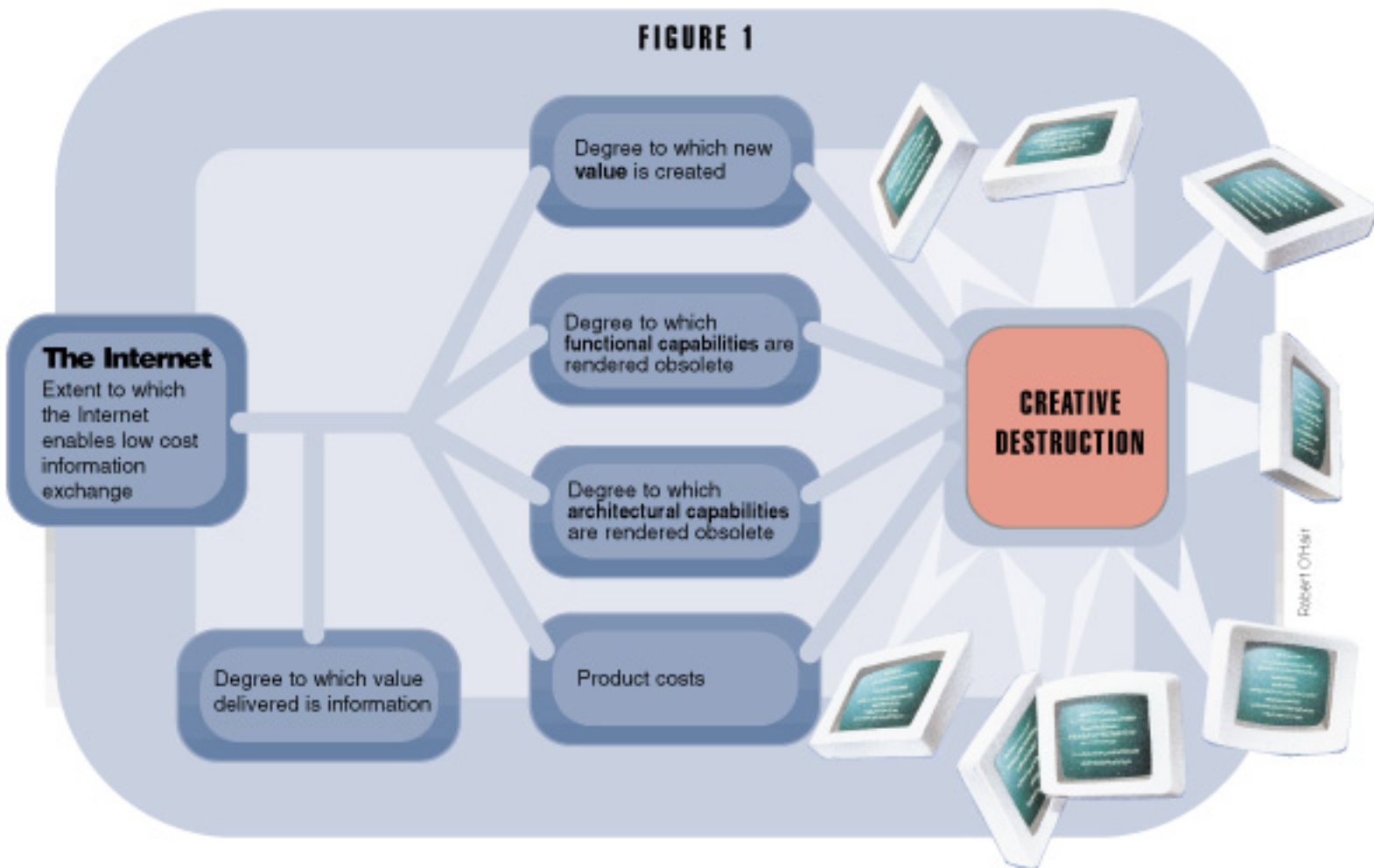
al capabilities obsolete, rendering architectural capabilities obsolete, and reducing product costs.

Creating new value. Customer value comes in different forms: product features, timing, and product mix. The Internet improves all these forms of value. Better coordination between and within a firm, via intranets and exchanges, means firms can invent products or services with better features for customers, e.g., make-to-order customized cars. The Internet can also increase customer value by increasing the mix of products a firm offers. As of May 1999, for example, Amazon.com offered 16 million items for sale on

its store front.

Rendering functional capabilities obsolete. In performing their activities, the functions that comprise a company's system must interact with each other. Building a car requires not only knowledge of design, manufacturing, and marketing, but also knowledge of the linkages between these functions. The impact of the Internet in this area varies by industry: it depends on the extent to which the Internet offers new and better ways of performing each function. The Internet may not fundamentally change the way cars are manufactured, for example, but it does radically change the way clients invest in stocks.

FIGURE 1



Robert O'Hair



Rendering architectural capabilities obsolete. Architectural capabilities refers to knowledge of how the functions interact with each other. The more different functions can coordinate their activities, the more effective they can be. With the Internet, functions that were physically separated in a bricks-and-mortar world can now communicate and exchange information that they could not before. Companies can make information available to far-flung employees by using a corporate Intranet, for example.

Reducing Costs. For many industries, the Internet can lower transaction costs, e.g., the costs of searching for sellers and buyers; collecting information on products; and negotiating, writing, monitoring and enforcing contracts. For products such as software, music, and video that are in digital form, the Internet can also sharply reduce transportation costs. Since production usually involves an exchange of information, the Internet can also reduce production costs.

These then, are the four ways that the Internet can effect creative destruction. The depth and impact of each of the four determinants, however, depends on another variable: the extent to which the value added is information.

Applying the Model

For the purposes of our study, it made sense to apply the model to different industries, according to the way in which they use technology.

Several years ago, J.D. Thompson proposed that the technologies on which firm activities in different industries rest can be divided into three groups: long-linked, mediating, and intensive. We found this a

“ The impact of the Internet depends on the extent to which the Internet offers new and better ways of performing each function. The Internet may not fundamentally change the way cars are manufactured, for example, but it does radically change the way clients invest in stocks. ”

useful means of categorization.

Long-linked industries are ones in which inputs are transformed into outputs by a set of sequentially interdependent activities, say X, Y, & Z, in which activity Y can be performed only after successful completion of activity X, and Z performed only after successful completion of Y. A chip maker will start fabricating the chips only after they have been designed, and assemble and test them only after they have been fabricated. Manufacturing firms are predominantly long-linked.

M *ediating industries* are ones that use technologies to link clients or customers who are interdependent or would like to be. Mediating tech-

nologies can potentially exploit the network externalities (the value that clients derive from a network based on the size of the network itself.) Commercial banks, which link borrowers and depositors; investment banks, which link issuers of equity to investors; and the telephone system, which links people who want to communicate are all good examples of this category.

I *ntensive industries* utilize intensive technology to effect a change of some object. And the mix of resources they use to do so is a function of the feedback that they get from the object. Consider a hospital in which the object is a patient who gets admitted and may

require some combination of dietary, x-ray, laboratory, and housekeeping services as well as such specialties as pharmaceutical services, occupational therapies, social work, and spiritual or religious services. The resources used and the order in which they are used are a function of the state of the patient and the results of the patient using the other resources. Universities, hospitals, research laboratories, and management consulting firms are primarily based on intensive technologies.

The Impact of the Internet on Different Industries

Table 1 (page 28) summarizes the results of the impact of the Internet on industries grouped by the three technologies.



TABLE 1: IMPACT OF THE INTERNET ON INDUSTRY ORGANIZATIONAL TECHNOLOGIES

Industry	Value creation	Impact on functional capabilities	Impact on architectural capabilities	Impact on costs	Degree to which the value added or delivered is information	Relative level of creative destruction
Long-linked	New value	Left relatively intact	Rendered obsolete	Decreases transaction cost Limited decrease in production costs	Largely physical components or materials	High
Mediating	New value Entire new value network created	Rendered obsolete	Rendered obsolete	Both transaction and production costs reduced	All information	Highest
Intensive	New value	Left relatively intact	Rendered obsolete	Decreases transaction cost Limited decrease in production costs	Largely information	Higher

Robert O'Hair

For *long-linked industries*, the Internet drastically improves communication and coordination between and within stages, X, Y, and Z. Such an improvement can result in, for example, improved car quality and lead times. It also potentially has a huge impact on the linkages between stages. However, many of the core concepts that underpin each functional area remain the same. The Internet may allow auto design and development groups to obtain information directly from customers, or allow manufacturing to follow the design and development of a car as it progresses. It may even let customers check the status of their cars as they go through the assembly line. But it does not affect as deeply a firm's knowledge of the fundamentals of thermodynamics, combustion engineering, and metal-

lurgy on which internal combustion engineering rests.

The Internet is therefore an *architectural* innovation to firms whose products/services rest on long-linked technologies. Now, changes in linkages can trigger enough changes in components to result in improved cost or value to customers. A build-to-order system that relies on the Internet can drastically reduce shipping costs, for example. But such a system would require shorter lead times from the existing 30-60 days that it now takes from metal forming to complete car.

For *mediating technology* industries, the impact of the Internet is deeper. Mediating technology firms can use the Internet to reach greater numbers of customers, and to offer customers larger networks and greater convenience. A banking

client using the Internet can not only perform banking transactions 24 hours a day, she can also examine her account transactions and the status of a loan application. The Internet also creates entirely new value networks for mediating technologies – e.g., business-to-business exchanges, which act as intermediaries between buyers and sellers where parties can go to find information about potential partners.

Since the Internet is a superior linking technology compared to many bricks-and-mortar mediating technologies, it renders obsolete many bricks-and-mortar functions and underlying capabilities. Pre-Internet, stock brokers were a key resource for most brokerage clients. With the Internet, they are not important for many clients, who have access to much investment



information and can make their own choices.

Unlike long-linked technologies, where the value added and delivered is both information and physical components, the value added and delivered in mediating technologies is *all* information. Offline, brokerage customers would talk to brokers on the phone, and brokers would send investment and research reports by mail. In an Internet world, the client has direct and instant access to numerous investment reports on the Web, and to his or her account. Thus, any capabilities that a broker developed in a bricks-and-mortar world to interact with his or her research department to more efficiently get research reports to customers or to more quickly enter orders for a client are now obsolete. The Internet has also allowed companies using mediating technologies to reduce costs: the per-trade cost for brokerage firms has dropped from \$180 to about \$8.

For *intensive technology* industries, the Internet can also have a significant impact. Most of the value that intensive technology firms offer customers comes from the *information asymmetry* that exists between firms and their clients. A mathematics professor adds value by imparting some of the knowledge he has that students in his classroom do not. With the help of the Internet, the same professor potentially can teach millions of stu-

dents at their workplaces or homes. Frequently asked health or consulting questions can also be made available to clients via a Web site, 24 hours a day.

The core concepts that underpin each of the functions that are drawn on to effect change in the object in

long-linked and intensive technologies, the Internet has the same impact on the four determinants of creative destruction. However, the value added by or delivered to each function for intensive technologies is largely information, while that for long-linked technologies is largely in physical components or materials. Therefore we propose that the Internet causes more creative destruction in intensive technologies than in long-linked technologies.

Of course, creative destruction can be operationalized by several measures. This includes the market value of startups, number of new entrants, number of incumbents that fail, number of incumbents that exit businesses, rate of drop in incumbent profits, increase in the ratio of new entrant profits relative to incumbent profits, number of entries by new firms, number of new entrants relative to number of incumbents, and reduction in incumbent sales and profitability are all possibilities. Given the high level of activities that the Internet is generating in business and the potential for research on its impact on competitive advantage, our propositions are only the start of what can be fertile ground for theory development.

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“The impact of the Internet on the four determinants of creative destruction suggests that mediating technologies should have the highest level of creative destruction.”

an intensive technology are not changed by the Internet. But the linkages among them do. In a hospital, for example, the core concepts on which x-ray, laboratory work, surgery, and occupational therapy rest are not changed radically by the Internet. But in an online world, x-rays do not have to be physically delivered in person. Moreover, physicians and specialists from anywhere in the world can collaborate in examining the x-rays in real time. Thus, architectural capabilities that served firms well in a bricks-and-mortar world may be rendered obsolete by the Internet.

Conclusions

The impact of the Internet on the four determinants of creative destruction suggests that mediating technologies should have the highest level of creative destruction. For



SPECULATIVE SCHEMERS

By **William Greene**



**Bold
entrepreneurs
are trying to
patent business
models
in the digital
economy**

Most contemporary thinkers don't regard Ralph Waldo Emerson as much of a management thinker. The New England transcendentalist was more concerned with matters of the mind and spirit than cash-flow figures and motivation. But Emerson did grasp one of the fundamental drivers of American-style entrepreneurial capitalism. "If a man can write a better book, preach a better sermon, or create a better mousetrap than his neighbor," he wrote, "though he builds his house in the woods the world will make a beaten path to his door."

Inventors, tinkerers, and entrepreneurs have long been laboring in their houses in the woods (and in their garages in the suburbs) to create the proverbial better mousetrap. For more than two centuries, the desks of clerks at the U.S. Patent and Trademark Office (USPTO) have been cluttered with patent applications for wondrous new devices: a light bulb (Thomas Edison, 1880), a flotation device (Abraham Lincoln, 1849), a new self-guidance system for torpedoes (actress Hedy Lamarr, 1942), and a compound to help sufferers of depression (Eli Lilly, Inc. The drug Prozac is covered by six chemical patents granted between 1974 and 1986). In recent years, patents have assumed an important role in the burgeoning field of e-commerce. But not all patents are created equal: consider U.S. Patent No. 5,443,036, granted in 1995, which is shown below.

This is not a joke. The patent is held by Messrs. Kevin Amiss and

Martin Abbott, who managed to demonstrate both the utility and novelty of using a laser pointer to play with a cat. Now, it is possible the applicants and the USPTO were just having fun. But the patent nonetheless illustrates an important trend. It was not granted for a device, or a thing. Instead, it is a patent for how to do something. Other intrepid inventors have been awarded patents for methods of completing quotidian activities, like finding the right bra size (No. 5,965,809) and hitting a tennis stroke while wearing a knee pad (No. 5,993,366). While these patents may seem like novelties, this trend is not entirely new. The USPTO has been awarding so-called "methods" patents for decades. But in recent years, the numbers have risen dramatically. And patenting "business methods," some of them stunningly obvious – such as using a single mouse click to complete an online book order – has become a hallmark of entrepreneurship in the digital economy.


The Background of Patents

The patent law of 1790 created an office that was empowered by the Constitution to "Promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries" (Article One, Section 8). In 211 years, the USPTO has established a proud tradition of rewarding the development of technologies of all sorts (though often for things that might seem at a distance to be trivial, or obvious, or both). The objective has always been to draw out of the collective genius inventions that would promote the good of the nation. But granting patents can be a Faustian bargain. On the one hand, by commercially rewarding the efforts of inventors, we call forth their creative efforts. On the other hand, we create monopolies and all the evils that attend them.

The patent laws grant inventors a 20-year window during which they – and only they – may exploit the commercial potential of their work as they see fit. The philosophy of the USPTO seems to embrace the 'solitary genius' model of innovation, wherein the lone innovator receives protection from competition while he or she perfects the reaper, or the cotton gin, or the cellular phone. But other elements of our government have expressed ambivalence about the granting of exclusive monopolies. "It was never the object of patent laws to grant a monopoly for every trifling device, every shadow of a shade of an idea, which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufactures," the Supreme Court ruled in an 1882 case (*Atlantic Works vs. Brady*). "Such an indiscriminate creation of exclusive privileges tends

United States Patent [19]

Amiss et al.



US005443036A

[11] **Patent Number:** 5,443,036

[45] **Date of Patent:** Aug., 22, 1995

[54] **METHOD OF EXERCISING A CAT** 5,194,007 3/1993 Marshall et al.

[76] **Inventors:** Kevin T. Amiss, 255 S. Pickett St., #301, Alexandria, Va. Martin H Amiss, 10549 Assembly Dr., Fairfax, Va. 22030

[21] **Appl. No.:** 144,473

[22] **Filed:** Nov. 2, 1993

[51] **Int. Cl.6**A01K 29/00

[52] **U.S. Cl.** 119/707

[58] **Field of Search** 119/702, 707, 174, 905; 466/485

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Primary Examiner– Todd E Manahan

[57] **ABSTRACT**

Amethod for inducing cats to exercise consists of directing a beam of invisible light produced by a hand-held laser apparatus onto the floor or wall or other opaque surface in the vicinity of the cat, then moving the laser so as to cause the bright pattern of light to move in an irregular way fascinating to cats, and to any other animal with a chase instinct.

4 Claims, 1 Drawing Sheet

Robert O'Hair



rather to obstruct than to stimulate invention. It creates a class of speculative schemers who make it their business to watch the advancing wave of improvements, and gather its foam in the form of patented monopolies, which enable them to lay a heavy tax on the industry of the country, without contributing anything to the real advancement of the arts.” Six-score years later, these words resonate with those who view some contemporary business model patents as little more than sand thrown into the gears of the digital economy by “speculative schemers.”

Patenting Business Methods

The idea of patenting a method of doing business is as old as the Internet is brand new. Todd Dickinson, director of the USPTO, offers as evidence a patent awarded in 1867 for a method of registering hotel guests in a book with advertisements in the margins that “looks suspiciously like a commercial (web)site.” But even those completely comfortable with the idea of patenting a “how to” might still be puzzled by Patent No. 4,744,028, awarded in 1988 to Narendra Karmakar, then at Bell Laboratories, for the solution to a mathematical problem – the linear programming problem with large numbers of activities. After all, haven’t we been taught that equations are laws of nature? Apparently not all are, since dozens of patents have been awarded for equations, including, Pierre Duhamel’s Patent No. 4,797,847 for the Discrete Cosine Transform, a mathematical result that is used in designing compact storage for video data. (For readers who may suddenly feel inspired to patent Einstein’s $E=mc^2$, save your energy. This one *is* viewed as a law of nature, and is regrettably not patentable.)

In order to be patented, an equation must be new, and must have some commercial potential. Karmakar’s solution was new, and it has proved very useful to the airlines in assigning planes to routes and flights. But here, again, the government has created something of a muddle. The Supreme Court has singled out mathematical algorithms for exclusion from patentability. They are unpatentable if they merely represent an abstract idea – abstract ideas can’t be patented. But, in a 1981 case, *Diamond v. Diehr*, the court left the door ajar; noting that “certain types of mathematical subject matter standing alone, represent nothing more than abstract ideas until reduced to some type of practical application.” Of course, any business model is an idea, an abstract expression. But, one can certainly argue that a business model has a practical application, especially when it is put into use.

When an Internet entrepreneur tries to gain a patent on a business method, she is not just patenting the idea – she is patenting the software that runs the transaction. And in order to obtain a patent on software, one has to be able to patent an algorithm, which is essentially an equation. In the mid-1990s, when dealing with such a question, the USPTO seemed to turn a corner that led to the current flood of business method patents.

The ‘Hub and Spoke’

In 1993, designer/inventor Todd Boes created a “Hub and Spoke” data-processing system for Signature Financial Services Corp. The system was designed to keep track of indi-

"Patenting 'business methods', some of them stunningly obvious – such as using a single mouse click to complete an online book order – has become a hallmark of entrepreneurship in the digital economy."

vidual mutual fund investments that had been pooled into a single portfolio. Boes created a computer algorithm for doing the computations. At the time, computer programs could be copyrighted but not patented. (The distinction between a copyright and a patent is subtle. Superficially, a copyright gives the holder protection only against physical reproduction for commercial gain of their idea or creation whereas the patent literally protects the use of the idea. Thus, for example, two people could both copyright the same dramatic photograph or painting – assuming they had created them independently.) The patent holder, say to an equation, can prevent all others from using their idea for commercial gain without their permission. Boes, however, did obtain a patent for the underlying idea, which was assigned to Signature Financial Services in 1993.

State Street Bank and Trust attempted to negotiate a license to use Signature’s technology. When the negotiations broke down, State Street sued, arguing that the patent was invalid since it covered a mathematical algorithm. The district court agreed, and granted a summary judgment in State Street’s favor, with the judge noting that “as established by a series of older cases, business methods are unpatentable abstract ideas.” However, the Federal Circuit Court disagreed and



"The idea of patenting a method of doing business is as old as the Internet is brand new."

overturned, and the patent held.

This case, which forms the foundation of the current environment of business model patenting, opened the floodgates. Individuals and groups such as Walker Digital, the Stamford, Ct.-based idea factory run by Priceline.com founder Jay Walker, have been emboldened to comb the intellectual landscape for patentable ideas great and small. The number of applications for business model patents jumped from roughly 700 to 2,600 from 1996 to 1999. The number of patents granted for business methods jumped from less than 100 to over 500 in the same period. In general, applications for Internet-related business-method patents seem to have been warmly received at USPTO, though sometimes the agency makes obvious mistakes. In 1993, it awarded a patent to Compton's New Media (Compton's Encyclopedia) which apparently laid a basis for the company's claim to multimedia itself. The patent was as ridiculous as it seems, and at the instruction of

USPTO Director Dickinson, Compton's claims were ultimately overturned.

Walker Digital has applied for hundreds of business model patents. One of them which was granted is for "shopping up," a system in which a customer at a store, such as a Kentucky Fried Chicken outlet, takes their change "in kind," in the form of an additional food product. Even more striking, and perhaps better known, is Walker's patent on the pricing method used by Priceline.com, which looks like a patent on the English Auction, a device which has been in the public stock of knowledge for decades. The poster child for this entire debate is Amazon.com's famous "1 click" method and system for placing a purchase order via a communications network (U.S. Patent No. 5,960,411, granted in September, 1999).

The Rationale for Digital Commerce Patents

Why should we have business model patents such as these? By his

own account, Jeff Bezos of Amazon.com has been besieged with correspondence about Patent No. 5,960,411. In an open letter on this subject he argues that business model patents should be treated differently by the USPTO. And while he suggests a shorter track from application to award and a shorter lifespan for the patent (five years instead of 20), he nonetheless enthusiastically endorses them as good for both his shareholders and his customers. After all, he writes, "online, the balance of power shifts away from the merchant and toward the consumer." What one takes away from Bezos' missive is the sense that online entrepreneurs need patents for business methods because the heat of competition on the web is greater than in the "old economy." Entry is easy, and customers are fickle – branding is difficult and customer loyalty is hard to come by. Amazon.com's mantra, "Get Big Fast," should more appropriately read "get it as fast as you can, while you can." First-movers like Bezos



obviously believe a little sand in the gears to slow down the competition can't hurt. But I'm not sure this justifies a fast track to quick monopoly profits before they evaporate.

One could argue that patent protection provides a crucial role in allowing developers of "things" such as pharmaceuticals to recoup the huge, sunk research and development costs. Obviously, it costs a substantial sum of money to design and build a truly effective website. But, as a general proposition, this hardly seems a compelling case for patenting methods of conducting business such as shopping up, or a system for providing expertise online – as AskJeeves.com, another Walker Digital creation, did in Patent No. 5,862,223.

One of the challenges facing patent-granting bureaucrats is that the amount of prior art (existing knowledge) which must be verified for business model applications is vast and the art, itself, is often ambiguous and diffuse. And the lingo and newness of the Internet sometimes aggravates the situation. American University law professor James Boyle believes, "the Patent Office is issuing patents for blindingly obvious things just because they are being done with software or on the Internet," and that such patents are causing a "chilling effect on electronic commerce." New York University Law School's Rochelle Dreyfuss argues forcefully that business model patents "undermine the very basis on which the anti-monopoly argument depends."

There has been very little proof offered in the literature to support the notion that monopolies on business methods are a good thing. And the prodigious volume of entry (and, of late, exit) of new businesses on the Internet makes it hard to accept the argument that these temporary

monopolies are really necessary to give entrepreneurs incentive to try their newly invented hand at business on the Web.

Even so, some patent professionals embrace the notion of granting business-method patents. USPTO Director David Dickinson states that business model patents represent "a very logical extension of the patent system" that has served America so well. Dean Alderucci, head legal counsel for Walker Digital, suggests, "If you have a new and useful business method, a patent can force the money out of it and benefit the public."

The challenge for the USPTO – and for those who would apply for such patents – is that the criterion of new and useful are subjective. And the conundrum for those who would challenge such patents is that the definitions of ridiculous and obvious are equally in the eye of the beholder.

Courting Controversy

In the end, many of these questions may be settled in the courts. Amazon.com's "1 click" feature was made available to its customers in September, 1997, and the company received a patent for it on September 28, 1999. Three weeks later, on October 20, Amazon sued rival bookseller Barnes & Noble – and its online subsidiary, barnesandnoble.com – for infringement. U.S. District Court Judge Marcha Pechman granted an injunction on December 14, 2000. But, on February 14, 2001, a federal appeals court overturned the injunction.

For the time being at least, "1 click" is public domain. The trial at which the issue is supposed to be

"The poster child for this entire debate is Amazon.com's famous '1 click' 'Method and system for placing a purchase order via a communications network'"

resolved will convene in Seattle on September 10, 2001. Until then, this case suggests that at least some are reconsidering the wisdom of a trend toward ubiquitous patenting of every mechanical aspect of Internet commerce. But even as it prepares for trial, Amazon.com has also served notice that it will defend its recently obtained patent on "affiliate programs," which are widely used on the Web. These programs are used by many Internet retailers to link their sites to other retailers' catalogues. This is a far-reaching and potentially very disruptive patent that is certain to evoke a cornucopia of lawsuits and countersuits.

But perhaps there is justice (and a touch of irony) in cyberspace. As part of its expansion efforts, Amazon.com in the late 1990s began offering CDs for sale, and it used new technology to let potential customers listen to a snippet of a Frank Sinatra song before buying the whole disc. It turns out another company already had that idea. On April 12, 2000, San Francisco-based Intouch Group Inc. sued Amazon.com for infringing patented methods for consumers to preview music samples over the Internet.

It may not be entirely original, but what goes around, comes around.

WILLIAM GREENE *is professor of economics at NYU Stern.*

Common Sense.

How an ancient legal tradition can guide regulation of the brave new world of securities trading

By **Larry Alan Bear** and **Rita Maldonado-Bear**

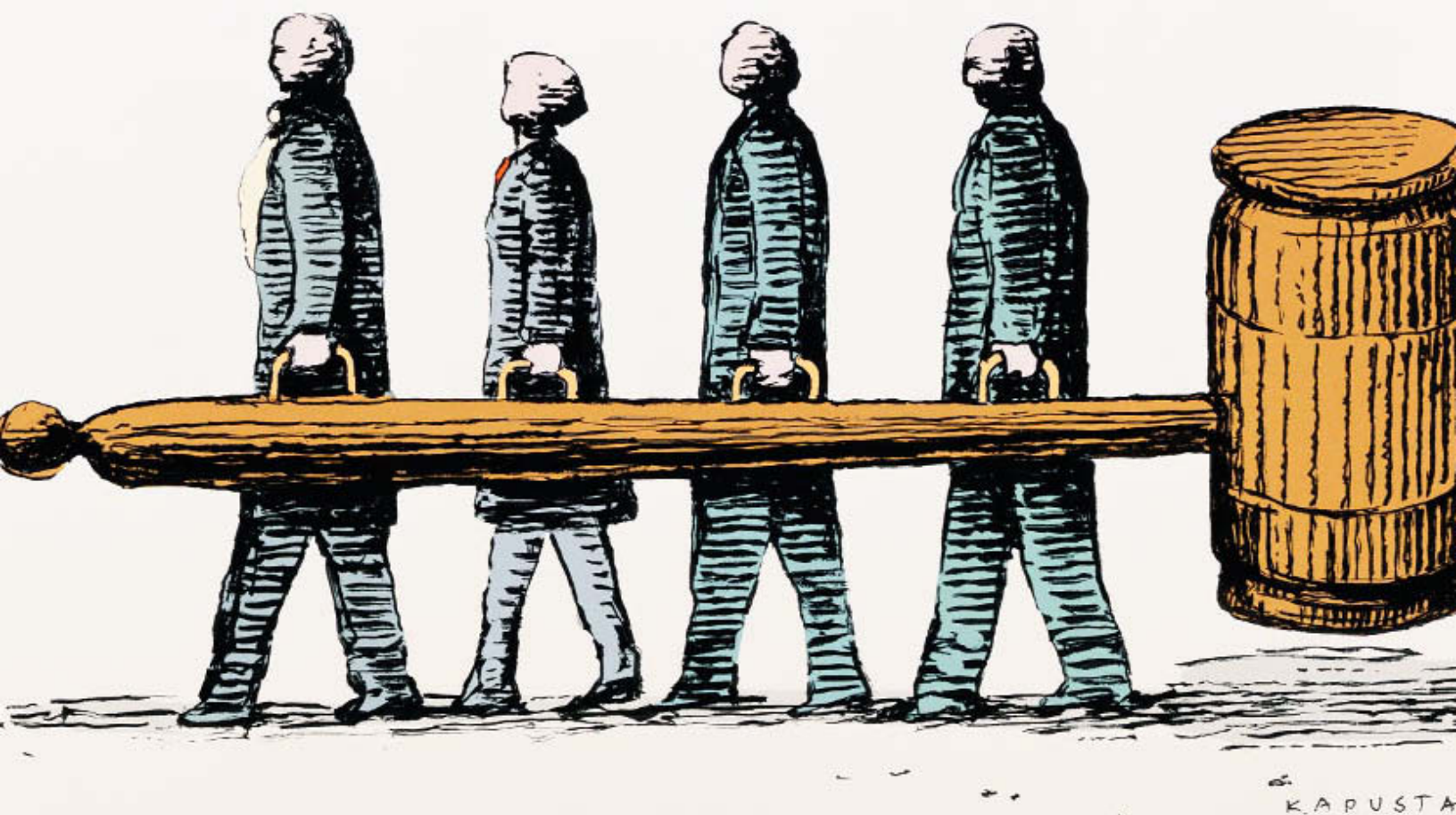
The securities markets have been at the epicenter of the ongoing revolution in technology, finance and globalization. And in this hypercompetitive environment – in which every trade is viewed as a zero-sum game – the ground has been about as solid as quicksand. Traders are seen as modern-day gunslingers, using sharp elbows to gain whatever advantage they can while adhering to the established rules. But as stock-trading moves online, and as new players and structures continue to transform the market, the rules seem to be shifting. What was acceptable in 1996 may not be acceptable today. And common practices today may be outmoded and deemed unfair in 2003. Despite several scandals and setbacks, the U.S. markets

have weathered the changes rather well. And for that, we can thank our unique age-old legal tradition – the Common Law – which should continue to guide market participants and regulators as we enter the 21st century.

The U.S. Constitution lays down several bedrock principals, among them the separation of church and state and the right to free speech. But it is the common law that determines the practical shape these values assume, and how they are protected and enforced. The Common Law system, which derives from broad principles based on notions of justice, reason and common sense rather than the strict adherence to codes, originated in England and was adopted in the United States. Importantly, these principles, however, can change to respond to

changing social, economic and political conditions. Judges, who make the Common Law, must honor rulings in similar cases. When judges wish to depart from this doctrine of *stare decisis*, they must elucidate, in writing, a good cause for doing so. And they are subject to reversal by a higher court.

In the U.S., Congress and state legislatures are charged with enacting laws. But since no legislative body could possibly maintain oversight over all industries, legislative bodies enable administrative and regulatory agencies like the Securities and Exchange Commission (SEC) to flesh out the basic laws with due concern to the social affects as dictated by our Common Law philosophy. Thus, an agency like the SEC deals not only with what brokerage houses and



investment banks do, in fact – i.e. their actual conduct – but with what they ought to do.

This presents something of a conflict. For many market participants believe that simply playing strictly by the rules as they are currently written is all that is required. “As an anonymous participant in financial markets, I never had to weigh the social consequences of my actions,” hedge fund trader George Soros wrote. “I felt justified in ignoring them on the grounds that I was playing by the rules.” “This,” he continued, “makes it all the more important that the rules that govern markets should be properly formulated.”

Soros has actually shown his concern for social consequences and conditions by actively engaging in a

range of socio-political endeavors, ranging from promoting democracy in Eastern Europe to supporting schools in New York City. But we don’t buy the notion that in the fiercely competitive struggle for profits “playing by the rules” is all that can be asked – or expected – of any participant. For given the nature of our Common Law, any securities market manager who engages in unethical action may not only find himself in serious personal trouble, he may well harm his firm and the reputation of his industry. In fact, we are convinced that, given recent developments in regulation, legislation, and technology, ethical and socio-political insights and skills should be required of every manager with authority to act for his firm in securities markets operations.

Crime and Punishment

Until very recently, corporations were generally not held criminally liable for illegal actions taken by their employees. But in 1984, Congress passed the Sentencing Reform Act, which set up a Federal Sentencing Commission. As an outgrowth of the Commission’s work, Congress in 1991 enacted Chapter 8 of the Federal Sentencing Guidelines, which dealt with white-collar crime and organizations. As a result, organizations themselves can now be held responsible for violations of any of 3,000-odd federal laws dealing with securities, commercial banking, anti-trust, and governmental fraud, listed in 46 separate categories.

Chapter 8 is evidence of official government recognition of an important ethical reality: that much of the

"We don't buy the notion that in the fiercely competitive struggle for profits 'playing by the rules' is all that can be asked – or expected – of any participant."

illegal action of an organization's employees arises out of the corporate culture within which they function. For under the guidelines, the way a company and its executives behave and conduct themselves bears a direct relationship to the severity of the penalty.

The Federal Sentencing Guidelines specifies penalties for specified violations, which judges must faithfully apply – unless their reasons for deviation are fully explained and justified, in writing. Offenses are ranked on a scale. Minor offenses are ranked at six or less, and can carry fines of \$5,000, while more serious ones, such as certain anti-trust offenses, can be ranked as high as 38 and carry fines of up to \$72.5 million.

Penalties may be adjusted upward or downward within the mandated categories depending upon the steps the organization has previously taken to avoid criminal conduct, upon cooperation with the government, and upon the involvement of high-level personnel in the infraction. These elements become the basis for what is referred to as the organizational "culpability score," ranging from a low fraction up to four. If a particular corporate crime is at level 38 or above, and the culpability score is at four, the total fine for that one infraction would be a sobering \$290 million. Conversely, corporations may have taken actions

that would mitigate the offense level, say down to 28. Given an insignificant "culpability score," the total penalty could be \$10 million rather than \$290 million.

One major before-the-fact mitigating factor is the existence within the organization of "an effective program to prevent and detect violations of the law." There are 10 elements that make up such a program, including compliance standards and procedure, oversight by high-level personnel, and a "reporting system" employees might use without fear of retaliation. As part of the punishment, the government can place a company on probation and force it to install "an effective program." The government could also assign an overseer to watch over the new program, on site.

The Guidelines are, to our knowledge, the only such body of law in the world focused on corporate behavior and calculated to motivate the maintenance of a corporate culture that actively promotes lawful and ethical behavior. To be sure, the word "ethics" does not appear specifically in Chapter 8. But in practice, government regulators are very much affected by the presence, or the absence, of a corporate code of ethics that supports a corporate compliance program.

The Organizational Sentencing Guidelines, however, do not substitute the corporate offender for the individual offender. In fact, corporate punishments can be mitigated if the corporation proactively self-reports its offenses and helps identify individuals responsible for the criminal conduct. Employees who continue to believe that they are

acting properly as long as what they do satisfies the prevailing corporate behavior are in for a rude awakening when that same corporation suddenly hangs them out to dry.

The numbers are beginning to add up. In 1999, in addition to bargained and settled organizational cases under the Guidelines, 255 organizations were sentenced under Chapter 8, a 15.9% increase from 1998. Fines were imposed on 200 organizations. The sentenced organizations pled guilty in 91.4% of the cases; 8.2% were convicted after trial. As in 1998, fraud was the most frequent offense committed by an organization. The highest fine in 1999 was \$500 million. Some 56,000 individual defendants were reported to the Commission under the Guidelines in 1999, up from some 51,000 in 1998. Behind drug trafficking, fraud was the section of the Guidelines most frequently applied.

The Federal Sentencing Guidelines are the legal result of a Common Law process whose basic purpose is to eschew the civil law function of reducing all behavior to inviolate rules. And while many securities firms have run afoul of the Sentencing Guidelines in such areas as insider trading and other forms of fraud, some securities firms have run into trouble with behavior that was seemingly within commonly accepted Wall Street rules but was nonetheless ethically and legally questionable – as the following examples show.

Spinning IPOs

In the 1990s, a practice on Wall Street known as spinning initial public offerings was relatively common. As a way of building up goodwill and attracting future business, investment banks would allocate shares of IPOs to the accounts they

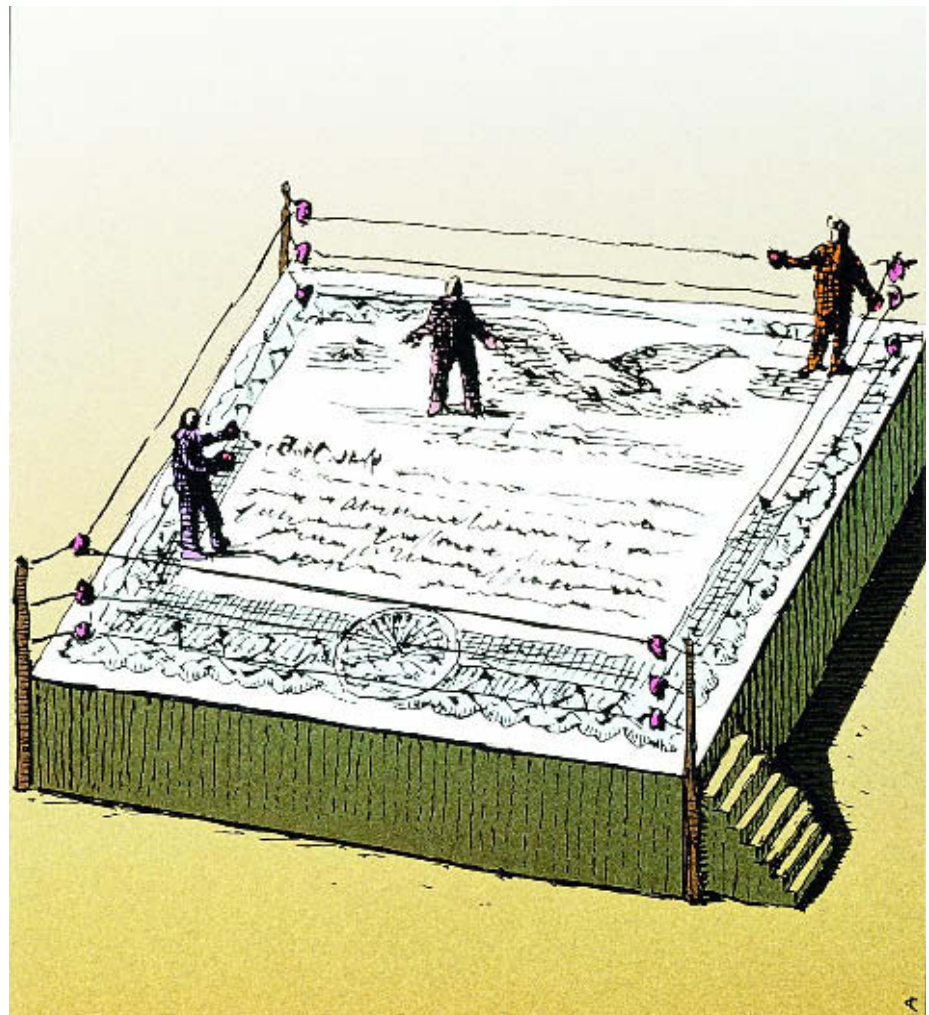
held for individual corporate executives and venture capitalists. Brokers at the investment banks would quickly sell – or spin – the stock if the IPO took off.

According to the rules of Wall Street, there was nothing wrong with this practice. But fiduciaries like corporate officers and brokers have an affirmative duty not to profit by virtue of their position as a fiduciary; and an affirmative duty to disclose to principals – i.e. other brokerage customers – any and all information in their possession that bears upon any decision the principals might make. And in spinning stocks for top clients, brokers seemed to violate this duty. Many firms who spun IPO stock for major firms' officers had been effectively preventing lesser customers of the firm, who manage to get a small piece of an IPO, from “flipping” the very same stock.

When the process was exposed in the press, the “justice, reason and common sense” of the Common Law process was set in motion. The SEC is investigating spinning. State securities regulators like those in Massachusetts charged brokerage firms with wrongdoing and stated that “requiring firms to abandon (these) policies is one of the more severe sanctions we will impose.” If it hasn't been abandoned entirely, spinning has been significantly reduced. And those who insist on playing that game are now opened up to lawsuits, in which the “rules” will be no defense.

Is Bear Baron's Keeper?

Or consider the case of Bear Stearns and A. R. Baron & Co. Bear Stearns is one of the leading clearing firms on Wall Street. Clearing firms are large brokerage houses that are hired by smaller firms, called intro-



"Under the Sentencing Guidelines, the way a company and its executives behave and conduct themselves bears a direct relationship to the severity of the penalty."

ducing brokers, to execute and settle trades for them, and to maintain and process client records. The clearing firm requires introducing firms to put up a deposit, usually about \$250,000, levies a “ticket charge” of \$10 to \$25 on each trade it conducts, and charges interest, usually 1% per month, on margin loans it makes to these customers.

Since 1982, when commissions were deregulated, clearing firms have not had legally determined oversight

responsibilities for their introducing brokers. No rule specifically stated that the clearing firm had to be concerned with the ethical character of the introducing firm. One of the clearing clients of Bear Stearns, whose clearing operations represented more than 25% of its multi-billion dollar business in recent years, was A.R. Baron & Co., a highly dysfunctional firm. In 1995, Baron's credit was so bad it was unable to qualify for a corporate gasoline credit card

and it paid a \$1.5 million fine to settle NASD charges that it bilked customers. But when Baron's capital fell below the regulatory minimum and a Baron customer notified Bear Stearns of unauthorized trading in its accounts, Bear Stearns simply referred the matter back to Baron and injected \$1.1 million into the company to keep it afloat. After a range of investigations, the SEC ordered Baron to halt all operations in May, 1996. Baron was also charged by the Manhattan District Attorney with being a criminal enterprise that defrauded investors out of \$75 million. The firm ultimately went bankrupt.

By early June 1997, NYSE and NASD officials met with several clearing firm officials. One firm, Oppenheimer & Co., announced plans to stop processing trades for any introducing broker client accused by regulators of charging excess commissions. But Bear Stearns took the position that a clearing broker had neither access to, nor control over, any introducing broker, and that if it were subjected to customer claims, the firm might well get out of the business altogether. The SEC then let Bear Stearns know it was preparing to consider making civil securities fraud charges against it, with attendant Sentencing Guidelines penalties if the U.S. Attorney went further with criminal charges. Bear Stearns settled, agreeing to pay a fine and \$25 million in restitution to A.R. Baron customers. The Bear Stearns senior executive in charge of the clearing business later resigned.

How could a major investment bank fail to see changes blowing in the wind? It could be that Bear Stearns' admittedly strong compliance culture (nobody there is allowed to actually



"Bear Stearns likely overlooked the Common Law notion that the system assigns basic duties of care to those who are paid to provide skilled services to others for a fee – and the definition and application of these duties are susceptible to change and evolution."

break the law) did not focus on ethical sensitivity at all. More likely is that it overlooked the Common Law notion that the system assigns basic duties of care to those who are paid to provide skilled services to others for a fee – and the definition and application of these duties are susceptible to change and evolution.

Common Law for a Cyber World?

The growth of technology has

further complicated some of these issues, as the advent of online trading has already changed the structure of the securities industry. Online transactions in 1998 rose from less than 11% of total stock trades in the first quarter to 13% in the fourth quarter. Today, many customers trade on the Internet much as they would on the ground, while others day trade, darting in and out of stocks rapidly.

It might be argued that we are in

a brave new world in securities trading, where the true ethic is “assumption of the risk.” As customers place and execute orders by themselves online, they may be fully responsible for their choices, win or lose. But an ethic calling for the consumer’s full and complete assumption of the risk is no ethic at all. To negate meaningful duty to investors in the presence of technological leaps would be to argue that constitutional values are now outmoded. The Rule of Law will, and must, prevail, even on the Internet. But in keeping with our Common Law tradition, new workable, practical legal and regulatory shapes that cannot now be foreseen will have to emerge, just as they always have.

Offline, all stockbrokers have some form of legal duty to every single client. A broker receiving a simple buy order from a sophisticated client must properly execute the trade. A broker advising an elderly widow has a far higher duty of care. And if the broker is handling a “discretionary” account in which she has full authority to buy and sell for the client’s portfolio, then the broker’s duty is fiduciary.

An investor choosing to invest online with the advice and assistance of a broker is entitled to broker duties of care equal to any on-the-ground transaction. The New York Stock Exchange requires that brokers in all instances know their clients’ overall goals, risk preferences and time horizon before they execute an order. This is referred to as the “suitability” rule. The NASD holds brokers firmly to a suitability rule when the seller has recommended the transaction, and is considering enlarging the duty to all transactions in cyberspace.

Certainly, what is reasonable in cyberspace may require different suitability rules depending upon the nature of the relationship; however, some duty of suitability must be implied, even in cyberspace – whether it involves mandatory pre-trading customer information filing or trade blocking for particular customers of specified risky investments. The form this takes must be dictated by the presence of transparency, honesty, and non-misleading behavior and by reasonable accommodation to the new structure and function of existing technology.

Much of the burden in forging this brave new world will fall, at it has in the past, on the regulators. This is a challenge. Technology-driven market change has outrun our capacity to comprehend fully the meaning of what has already happened in our securities markets, much less what ought to be happening in the future. Nonetheless, regulators ought first to examine where current securities markets changes appear to be taking us – in the direction of rapid institutional and product development and diffused delivery systems. And they must be sensitive to the potential conflicts of interest posed by the new developments. Newly formed computerized stock trading services known as electronic communications networks, or ECNs, are applying to the SEC to become new stock exchanges. But customers may find that best execution and best price may not always be forthcoming from an ECN owned by a brokerage firm. Meanwhile, in response to such upstarts, established exchanges like the NASDAQ

"The Guidelines are, to our knowledge, the only such body of law in the world focused on corporate behavior and calculated to motivate the maintenance of a corporate culture that actively promotes lawful and ethical behavior."

and NYSE are contemplating selling shares to the public and becoming publicly-held for-profit companies. One might also legitimately ask whether a publicly owned NYSE, with self-regulating powers, could be truly dependable and fair to all customers in the face of the Wall Street imperative to make as much money as possible for its owners.

Dealing with these issues, even in the absence of cyberspace technology has not been – and still is not – easy. But our trump card has always been an established culture of public interest protection. For more than two centuries, our Common Law-based system has allowed for effective legal and regulatory responses to social demand. In essence, it has promoted adherence to the spirit, as well as to the letter, of the law. Maintaining this law and regulatory system in the face of rapid technological development will be ever more difficult, but ever more essential, if we are to protect and preserve the Constitutional value system upon which we – as investors and citizens – all depend for safety, growth and fulfillment.

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KEEPING IT REAL



**WANT TO FREE UP THE AIRWAVES FOR INNOVATION?
THINK OF THE SPECTRUM AS REAL ESTATE.**

By **Lawrence J. White**

The electromagnetic spectrum can't be seen, tasted, smelled, or touched. It isn't high on most people's lists of daily concerns. But it is integral to the development of modern telecommunications, including the broadband revolution of information dissemination and retrieval.

Unfortunately, the spectrum is mired in a system of all-encompassing federal regulation that sometimes makes the former Soviet Union look like a paragon of efficiency. The time is long overdue for fundamental reform. The answer lies not in reinventing government jargon, but in the simple language of one of America's oldest and most entrepreneurial sectors: real estate. Only by "propertyzing" the spectrum – i.e., applying real-estate-like property rights to the spectrum – will we unleash the full potential of this

immensely valuable but invisible national resource.

The Spectrum

The spectrum encompasses all possible frequencies of electromagnetic waves. The radio spectrum, which is what needs reform, covers the range from 30 Hz (cycles per second) to 300 GHz (billion cycles per second). These "airwaves" are used for an ever expanding array of over-the-air electronic transmissions and wireless devices – radio and television broadcasting, cellular phones, mobile radio, satellite communications, microwave cooking,

garage door openers. A large part of the "broadband revolution" will occur through spectrum-based devices.

Different bands of the spectrum have different characteristics that make them better or worse for various uses. Some frequencies are better at long-distance transmission; others are better at penetrating solid objects. And one person's use of a portion of the spectrum can be easily interfered with by another person's transmission use of the same wavelength, in the same place, at the same time. Interference also occurs from incidental transmissions originating in neighboring geographical

locations or spectrum bands and from extraneous sources such as sunspots, lightning, electrical motors or generators, and transmission lines.



"The spectrum is mired in a system of all-encompassing federal regulation that sometimes makes the former Soviet Union look like a paragon of efficiency."

Spectrum Management and Mismanagement

In 1927, when interference "chaos" threatened the nascent broadcasting industry, Congress and President Calvin Coolidge who famously said "the chief business of the American people is business" – enacted a Soviet-style central planning solution: The federal government would prevent interference by making all spectrum allocation decisions. As a result, for the past 74 years the spectrum has effectively been the property of the American public, and the Federal Communications Commission

(FCC) has been charged with managing the spectrum "in the public interest." To this day, the FCC decides the use – say, broadcasting, or cellular phones, or garage door openers – to which a specific block of spectrum will be put. Then it defines the parameters of service, such as transmitter power and location. The FCC grants a license to a specific party to operate a transmitter over a specific frequency band, and then enforces its allocations, service rules, and assignments to ensure that interference does not arise.

In the 1920s, when the technology was rudimentary and the possibilities were limited, this management process was arguably tolerable: The early users of spectrum – radio broadcasters – were like homesteaders: First-come, first-served for a free renewable FCC spectrum license was an acceptable method of assignment.

But since the 1920s, the technologies of spectrum use have exploded. And as the rising value of the multiple uses of the spectrum has become increasingly apparent, competitors, in ever-larger numbers, have contended for the use of various spectrum parcels.

The FCC has tried to adapt to the changing climate. From the late 1920s until the late 1970s, if the FCC concluded that, say, an additional AM radio station should be broadcasting in Dubuque, the agency held comparative hearings ("beauty contests") to decide which party would best serve "the public interest" and thereby receive the FCC's free renewable license.

This process collapsed of its own weight in the early 1980s as the FCC prepared to assign the first set of licenses for cellular telephone service. The agency was swamped with applicants and appealed to Congress to allow other allocation methods. Congress responded by authorizing lotteries for the free licenses.

The lotteries were duly conducted. But the FCC and Congress soon realized that the process was arbitrary and that many lottery winners simply "flipped" their licenses and earned large windfall profits. Accordingly, the FCC and Congress considered other alternatives. Auctions seemed a natural choice. But incumbent license holders – especially broadcasters – feared that auctions for new spectrum allocations might someday be the precedent for auctioning their (currently free) spectrum parcels and fiercely opposed them.

Nevertheless, Congress, desperate to raise budgetary revenue, authorized auctions in 1993. As of June 2001, 34 auctions, many of them for cell phone spectrum usage, had raised about \$42 billion. Despite some glitches, the auctions have been a substantial success. Cell phone usage has exploded; over a third of total U.S. telephone "lines" today are cell phones. But while they were a welcome improvement, the auctions have affected only a small fraction of the usable spectrum. Use and service restrictions still apply even for the slivers of spectrum that have been auctioned. In the end, auctions have been simply another assignment method occurring within the larger FCC allocation process.

An Unworkable System

This allocation system simply can't be efficient, or even equitable.



At its foundation, the FCC's spectrum management process rests upon a fallacy: that the agency knows exactly the right uses of the right bands of spectrum in the right places using the right technologies and by the right parties – in every instance. As new technologies arise, Congress expects the FCC will recognize them and unerringly accommodate them.

A quick comparison easily shows the absurdity of these expectations. Imagine, for a moment, that private ownership of real estate was not permitted in the United States and that a single federal agency made all decisions as to the specific uses to which specific land parcels could be put, the technologies that could be used on them, and who would be allowed to use the land rent-free, with indefinitely renewable leases.

If the FCC were perfect and omniscient, and if incumbents didn't lobby fiercely to retain their spectrum parcels once granted, the system might work as designed. But all too often the FCC has discouraged competition, and favored incumbents over entrants and innovators – all the while claiming its decisions and actions were “in the public interest.” In the early 1950s, in the name of encouraging a local orientation for television channels, the FCC assigned channels in a way that made nearly impossible the formation of more national networks beyond the three incumbents. In the 1960s and 1970s, the FCC impeded the expansion of cable television. In the 1980s and 1990s the FCC and the Congress stymied the expansion of locally based (“wireless cable”) and satellite-based (“direct broadcast satellite”) alternatives to incumbent local cable companies. The FCC delayed the initial rollout of

cellular telephone service by 10-15 years, and then initially licensed only two carriers per region in such a way as to reduce the competitive pressures that cellular telephone would bring. And the FCC's national allocation patterns of spectrum for mobile radio uses have meant, for example, that forestry communications allocations have lain idle in New York City, while its allocations of spectrum for taxicab communications have been idle in Idaho.

There are other drawbacks. The FCC's management process, combined with the free licenses, has yielded “shortages” of spectrum for current uses. And the spectrum “shortage” has provided a justification (unfortunately, upheld by the Supreme Court) for the FCC and the Congress to impose content obligations on radio and television broadcasters that would be outrageous Constitutional violations if applied to the print media.

The problem is not clumsiness or incompetence by FCC personnel. The FCC has been, is, and will continue to be staffed by knowledgeable, able, hard-working individuals, with capable leadership. But its task is impossible. No organization could gather all the necessary information, process it, and make the right decisions – and then do so again and again, as technology and/or economic conditions change. And a cautious, bureaucratic environment with constant, frequently excruciating pressures from Congress and lobbyists is not one that encourages innovation and entrepreneurship.

A Better Way

There is a better way and U.S. real estate provides a good model.

At first blush, the two spheres don't seem to have much in common.

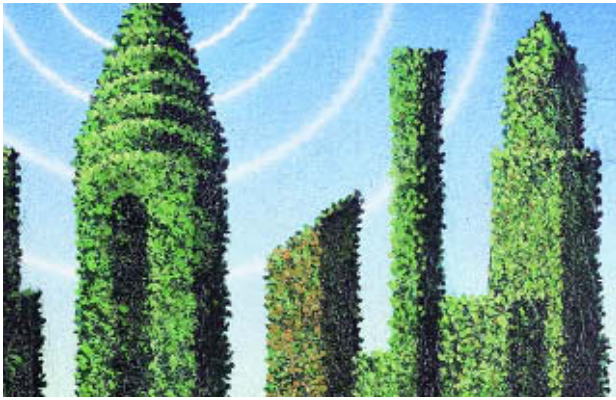


"Only by 'propertyzing' the spectrum – i.e. applying real-estate-like property rights to the spectrum – will we unleash the full potential of this immensely valuable but invisible national resource."

But upon examination, real estate and spectrum share a great deal of similarities, and their management and use present some of the same challenges. Both are finite. Productive land is “scarce;” the same is true of spectrum. As with land, different types of spectrum are often inherently better suited for different uses. Technological change can improve the efficiency of the use of both land and spectrum. Technological change can expand the amount of land that is considered usable and productive; ditto for spectrum. And some uses of both land and spectrum may interfere with neighboring uses of the same resource.

The solution is thus to construct a legal and regulatory regime that would treat spectrum much the way our legal system currently treats real estate. Here's how, in principle, it would work:

The government would recognize a property right (in perpetuity) for an owner to transmit over a specified



"The solution is thus to construct a legal and regulatory regime that would treat spectrum much the way our legal system currently treats real estate."

spectrum band, so long as the signals do not exceed a specified strength beyond specified geographic boundaries during a specified time period. The owners of such parcels would have the right to be free from others' transmissions that interfered with the reception of their own spectrum transmission. Owners, including government agencies, would be free to sub-divide and to buy and sell parcels. Owners would also have the right not to use their parcels, just as real estate owners do. Non-use would make sense if, for example, spectrum use requires investment in complementary facilities and the owner expects that technological change or uncertainty could render current investments obsolete. The antitrust

laws would, of course, apply. And interference claims would initially be addressed through negotiations, with ultimate recourse to the courts.

An interim "expert" agency would initially configure the entire set of spectrum "parcels," which would then be auctioned. Winning bidders could subsequently buy and

sell so as to reconfigure their parcels and renegotiate beyond-boundary signal-strength limits among themselves. As new technologies open new possibilities and as economic demands for spectrum-use change, the owners of parcels would be free continually to reconfigure the parameters of their parcels. Formal or informal spectrum markets, with brokers and other intermediaries, would surely develop rapidly to help owners buy, sell,

lease, or rent parcels.

This would not be "privatization;" it would be "propertyzing." Under the new regime, government agencies could bid for and become owners of spectrum, just as they currently hold and own real estate and other forms of property. Current government/public uses of spectrum – public radio and TV broadcasting, defense and public safety communications, emergency communications channels, radio astronomy, etc. – could continue, so long as taxpayers are willing to fund the purchase and maintenance of the spectrum facilities. To facilitate transactions and assist in the enforcement of property rights, a national registry of spectrum ownership would be

maintained, comparable to local land registries.

How to Get There from Here

Imposing this ideal structure on the current spectrum system would be politically impossible. There are tens of thousands of incumbent holders of FCC-issued licenses, and virtually all of them treat their licenses as *de facto* property. Many bought their licenses indirectly by purchasing companies that already owned licenses. Tens of billions of dollars of investments in facilities, equipment, personnel, and brand-name reputation surround those licenses.

But we can start from where we are today. The FCC's licenses constitute a set of *de facto* properties, with protections against interference. Unfortunately, the licenses are often defined in terms of inputs (the power of a transmitter, the height of the transmitting tower) rather than in the output terms of a signal's strength beyond a territory perimeter. Nevertheless, these licenses should simply be assigned, as is, to their incumbent holders in perpetuity, with the existing protections against interference. This would appear to be a giveaway of valuable public properties. But the FCC has already given away most of the usable spectrum through its licenses, with their near-automatic renewals. And it is unrealistic to believe that incumbent holders of these licenses would readily yield them back to the Federal Government at zero cost. (Because the new flexibility in use could be a "windfall" for incumbents, the possibility of taxing some of the windfall gains ought to be considered.)

The owners of these licenses could then sub-divide, buy, sell,



lease, or rent their parcels. Further, they could begin to adjust their input combinations, so long as they did not violate the interference restrictions that are implicit in the license, or they could negotiate mutually advantageous arrangements with transmission “neighbors.” Interference disputes that could not be settled by negotiation would, during an initial transition period, be referred to the FCC for arbitration. The FCC should hasten this process by offering (quickly) to redefine the input-oriented licenses into roughly equivalent output-oriented licenses. After the transition period, disputes would be referred to the courts rather than to the FCC, and the FCC would transform itself into a restricted-scope “pollution (interference) control” agency, with economic efficiency as its goal.

Bands of spectrum that are currently under-utilized should be auctioned.

Government agencies would receive the same property rights to their currently held spectrum licenses as would other holders; but Congress should require government agencies to make a special evaluation of their spectrum inventories and to auction the surplus. The government currently holds a claim on about a third of the usable spectrum, which is substantially in excess of what it needs. In the late 20th century, Congress successfully legislated disposals of surplus military real estate (military bases); it could do the same with surplus spectrum. The market prices for spectrum that will quickly emerge will provide a valuable benchmark for the Congress and spur disposal decisions.

Benefits of Propertyzing

There are many benefits to this approach. In a property rights

regime, the owners of spectrum could flexibly adapt their uses – for broadcasting, telephone, data transmission, Internet, mobile radio, and any new uses that might arise – to new technologies and new economic demands. A spectrum “drought” would be impossible; artificial scarcities could not exist. The scarcity justification for the First Amendment restrictions on broadcasting would vanish.

Of course, a system of property rights and markets for spectrum use would sometimes reach outcomes that, with the benefit of 20/20 hindsight, aren’t the most efficient. Entrepreneurs make mistakes; markets are not perfect. But a system of property rights and markets for spectrum would be far less likely to be biased toward incumbency and discouraging innovation, as the FCC has been. In the fast-changing world of the 21st century, a “propertyzed” spectrum’s flexibility and responsiveness would surely bring high returns to the U.S. economy.

With the FCC (and Congress) removed from the processes of spectrum allocation and assignment, radio and television over-the-air broadcasting, cable transmission, local microwave (wireless cable) transmission, and satellite-based transmission would be unleashed to compete. Similarly, cellular telephone and other mobile communication services would be freed from regulatory shackles; an even greater cornucopia of competitive innovations would surely follow.

A Brave New World

Some might object that this scheme would lead the FCC to abandon its charge to maintain the “pub-

lic interest.” But the “public interest” is a vague, ill-defined concept, which has led the government to establish far too many anti-competitive, anti-innovative, inflexible, output-limiting, anti-First Amendment regulatory regimes.

Others might argue that the property rights regime might favor large and powerful corporations over individual entrepreneurs. But most holders of current FCC licenses – including large corporations such as General Electric (NBC), Viacom (CBS), Disney (ABC), Verizon, and AT&T – are not exactly the meek and the poor. The FCC stewardship and licensing system has in fact imposed severe limitations on general access to spectrum use, and the limitations have favored rich individuals and sizable companies. Though spectrum ownership would surely mimic the distribution found for other kinds of property – richer individuals would own more – a property rights system would democratize this valuable resource. Antitrust laws would apply to spectrum markets, just as they apply to most other markets in the U.S.

The transformation is not likely to be friction-free or uncontroversial. Though aggressive actions by a “propertyzing” minded FCC could surely move spectrum policy strongly in the right directions, ultimately the Congress would have to pass new laws.

But under a property rights system the spectrum truly would approach real estate in its rights and uses. And the U.S. economy would be all the better for it.

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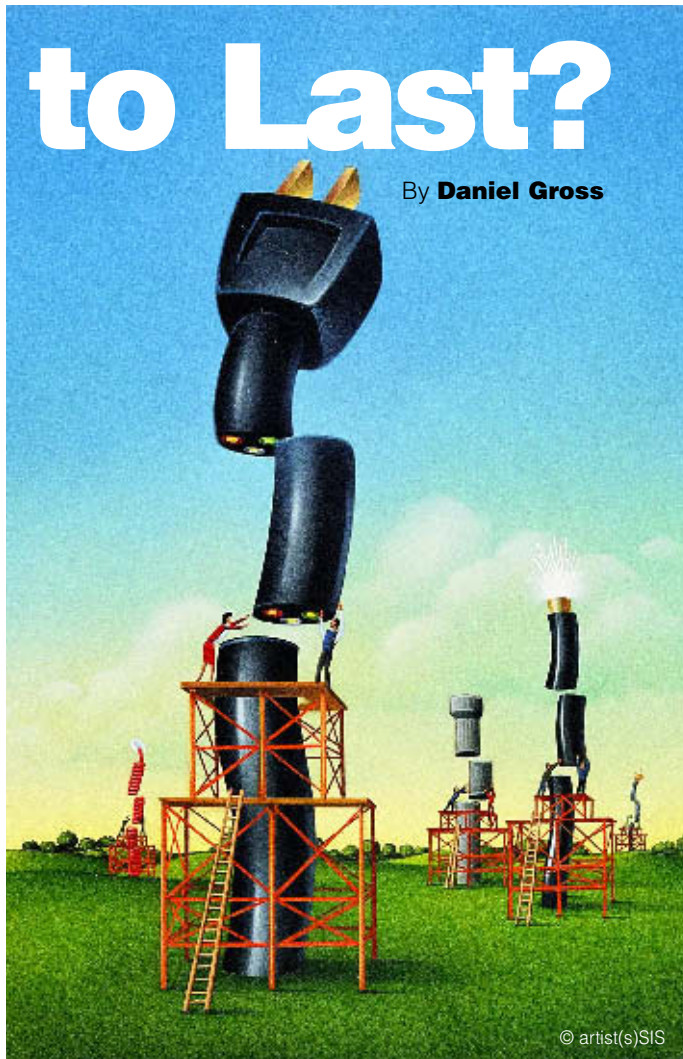
Built to Last?

By **Daniel Gross**

In recent months, there has been a great deal of handwringing about the demise of Internet-related companies that raised hundreds of millions, and, in some instances, billions of dollars. E-Toys, which came out of nowhere to completely alter the deadly serious business of selling toys, filed for bankruptcy. Now, aggressively entrepreneurial Internet infrastructure firms like Exodus Communications, Level 3 Communications, and Global Crossing, are struggling for survival.

Of course, we've seen this all before. Technology booms have always unleashed entrepreneurial enthusiasm and prodigious fundraising – and ultimately, bankruptcy and consolidation.

A century and a half ago, soon after Samuel F.B. Morse invented the telegraph, hundreds of upstart telecom moguls began erecting poles and stringing wire. Their network-building efforts were funded by the antebellum version of venture capital: subscriptions by local investors and government subsidies. By 1866, with strikes, competition, and the Civil War disrupting business, Western Union emerged as a powerful consolidator. With its solid balance sheet, control of patents, and 44,000 miles of telegraph wire,



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Western Union was in a position to absorb its two remaining serious rivals. It went on to control 90% of the telegraph business.

Between 1860 and 1890, investors poured nearly \$9 billion into the next new thing: railroads. The hyper-construction led to competition and excess capacity, which was good for freight shippers and passengers. But when an economic crisis hit in 1893, it spelled disaster. In 1895, about 20% of the nation's rail capacity was in bankruptcy. J.P. Morgan cleaned up the mess, and cleaned up in the process.

By 1908, the year Henry Ford started his company, some 515 car manufacturers had entered the decade-old industry – and half of them had already failed. Twenty years later, General Motors, Chrysler, and Ford controlled 80% of the market.

Similar processes occurred with revolutionary technologies such as telephony, radio, and the personal computer: remember the Commodore, the TRS-80, and Packard-Bell?

But just as the failure of most of the local telegraph companies in the 1850s and 1860s didn't signal an end to the telegraph's influence on society, the present-day travails of dot-coms and Internet infrastructure firms doesn't mean the Internet is done transforming the way we live.

Internet usage is still growing, albeit at a slower pace than originally predicted. New products and services that utilize this immensely powerful platform are introduced each month.

Unfortunately, the aggressive first movers may not be around to reap the ultimate profits. Creative destruction, it turns out, is the *mot juste* to characterize our entrepreneurial economy – and especially the Internet economy. Many new companies have been created; almost as many will be destroyed.

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