FALL/WINTER 2000

STERNbusiness



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long-term viability of our proved to be one of the greatest beneficiaries of the burgeoning digital economy. record high. unemployment sliding to historical lows, and

middle of it all. Throughout north of us. in the Flatiron District. and then to the south of us. around Wall York, from Long Island City, 125th St. in Harlem to

We've also been in the intellectual and strategic middle of this transformamerce. such as FinDotCom. which teaches a financial analysis of new economy companies and Data Mining and Knowledge Systems, from data related to behavior on the Internet. This fall, we major in Entrepreneurship and Innovation that will pre-

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Telework

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Paolo Fresco is the chairman of Fiat, a diversified international automotive and industrial enterprise with 200.000 employees worldwide. A graduate of the University of Genoa in Italy, he practiced law and then joined GE's Italian subsidiary in 1962. Over the next 36 years, he held a number of positions within GE, eventually becoming vice chairman and executive officer, a member of GE's corporate executive office, and a member of GE's board of directors. In 1998 he retired from GE and assumed his current role.

PaoloFresco chairman Fiat

ML: Welcome, Paolo, to the Stern School of Business. How's business?

PF: Well, you know, 45 percent of our business is automotive cars. Now, cars are picking up, because we have a new product that serves the low-end segment where we traditionally have been leaders in Europe and in the developing world. Then all the other businesses are doing well, or very well. We bought (U.S. agricultural equipment manufacturer) Case during 1999. And today that portion is close to 20 percent of our total sales business. And it is a real global company. The market is very weak, particularly in the States for agricultural equipment.

Things are fairly good in the light truck business. If you look at Fiat, you will see in general we find our specialization in smaller equipment – agriculture, construction equipment, cars, or trucks. We are the cost leaders. And we are doing very well. Now, unfortunately, in that area very often, the margins are a bit tighter.

ML: Yes, but when you draw up a bar chart showing the profit margins of, say General Electric, at 18, 19 percent and you compare that with the total Fiat, it looks like it's unfair.
PF: I don't think it's Fiat, it's the automotive business. You look at the results of Ford, GM, Toyota, Volkswagen, or DaimlerChrysler. When they have a good year they will make five percent return on sales.

ML: Is that why you're so eagerly apparently diversifying out of the automobile business?

PF: Last year we spent about \$10 billion in acquisitions – all outside of the automotive business. And the principle reason is that it is difficult to find an acquisition available in the automotive business. The real reason why, however, we are strengthening these businesses is that I believe you have to be number one, number two or you have to do something about that. So I looked at my portfolio and I saw a number of opportunities to become number one or number two on a global basis. I believe that my objective is to have a portfolio of maybe six or seven or eight businesses where we have a leadership position.

ML: Your operations are in many developing countries.
Which of these many countries do you think offer the best opportunities, the optimal opportunities for Fiat?
PF: Short term, our biggest area will continue to be Latin America. We are market leaders particularly in Brazil, and also in Argentina. If you look at the longer term, you have some two billion people that



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.

one day will need a car, if you put together just India and China. So, obviously those two countries for the longer term are extremely important.

ML: International trade is very important to you. Do you worry about perhaps a rise of protectionism in different parts of the world, and the anti-globalization movement?

PF: Yes, I do worry. I've seen signs of anti-globalization, particularly in Europe. I didn't see it when I was living here. And I almost feel like the intelligentsia in Europe has been pretty leftist and want to have revenge against being proven wrong when they were supporting Communism. And if there is a chance to say capitalism does not work, they're all very happy.

ML: Comment on what are some of the things that European business people tend to do better than US business people. And conversely, what are some of the things that American business people may tend to do better than the Europeans?

PF: Rather than drawing distinctions between the way the Europeans do business and the way the Americans do business you have to draw a distinction between a modern way of doing business and an ancient, old fashioned way of doing business. And you have examples of both on both sides of the Atlantic. The ancient way is highly hierarchical. Very few people make all the decisions and supposedly know everything. And a lot of people know very little and do all the action. And the modern way of working is spreading information.

If you had to take a percentage, you would see that American companies have a higher percentage of modern companies versus European companies. But when I went to Fiat I found the same principles, the same values whether it's creation of value, customer satisfaction, or employee involvement - that I had in GE. Maybe I see more difference in the culture of the two countries: Anglo-Saxon versus Continental culture. I think the continental culture is something about work being really punishment. (Laughter) Well, think about when Adam and Eve were sent out from the Garden of Eden they were told, you sinned and therefore you're going out and you're going to earn your bread with the sweat of your brow. Now the Anglo-Saxon culture is work is the best way of self-fulfilling or manifesting yourself. And, you know, I always remember, in this country every time that somebody asks somebody else about his job, the first thing they ask is, "Are you having fun?" I started to say, "Are you having fun" in Europe and people were looking at me like I was crazy.

ML: Do you find that there is a spread of entrepreneurship in Europe now?

PF: I think there are as many entrepreneurs in Europe as there are in the States. The difference, again, is a systemic difference. This country has a system that will favor entrepreneurs. Venture capital is available. Until two or three years ago it was available three or four times as much as it is in Europe. Now last year I've just found out there's been catching up. with this sort of thing? **PF:** Well, let me start with Fiat. I thought I was working hard when I was in GE. But in terms of hours of work, I work much harder in Fiat. I mean, I go in in the morning at eight o'clock and at nine o'clock everybody's there, in the evening. I think that here (in the U.S.), people are better organized.

I thought I was working hard when I was in GE...I worked much harder in Fiat.

ML: I came back last week from the annual World Economic Forum meeting with a firm impression that the Europeans are substantially behind the Americans in using the Internet for business and information technology. Do you agree?

PF: I agree 100 percent and my concern is that the Europeans are losing ground. The Europeans are moving, but the Americans are moving so rapidly, that rather than catching up at present, the gap, in my opinion, if anything, is widening. But, you know, I believe that that is not going to last forever. European companies have a lot of highly trained technologists, so there is no reason why the same technology should not be applied.

ML: European industry is generally thought to be handicapped by very tough labor unions, by stern government control, by high wages, and by short hours. How do you cope So in, say ten hours a day of work, they accomplish what you need twelve or thirteen or fifteen hours of work in Europe. The telephone system is better, the communications are better, people are used to being crisper in meetings. I believe the biggest problem is government's excessive regulation. I think there are so many useless rules and nobody cancels the rule because a new one has been introduced. I remember when I was here and Jack Welch was complaining about the excessive number of rules here. This is heaven.

ML: You work those long hours. How do you bring balance into your life?
PF: Well, you go to the museum during the night.
(Laughter) No, listen, jokes apart. In Italy, we were trained to have a broader array of interests. You study art and you study literature, you study history and you do it very inten-

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Blake Darcy ceo DLJ Direct

Blake Darcy is CEO of DLJ Direct, the online brokerage service of Donaldson, Lufkin, Jenrette Securities Corporation. He began his career as a retail broker for Lehman Brothers. In 1984, he joined DLJ, where he was soon chosen to form a new business unit at DLJ's Pershing Division. In 1988, he introduced DLJ Direct, originally called the PC Financial Network, one of the first providers of online discount brokerage services. Today, it has over 700,000 customer accounts and \$14.2 billion in assets. In 1997, under Mr. Darcy's direction,

DLJ Direct created a separate technology company, Onyx Technologies, that develops online solutions for financial organizations.

ML: Well, good afternoon. How did you get the idea for DLJ Direct and how did you manage to start this company? **BD:** The idea had come to us through Prodigy. Prodigy at that time was an IBM series joint venture. They had shopped around this idea, doing online brokerage on their service to a number of firms, including Charles Schwab and Fidelity. And at that point, prior to the 1987 crash, nothing had worked in the online world. Schwab and Fidelity turned them down. They weren't sure what they needed to do to get

an online brokerage system up. And they came to the Pershing Division of DLJ, because Pershing was known for having great brokerage technology.

So I was given the task of building a business plan, to see whether it made any sense whatsoever to do this. I listened to all the experts who said it didn't make any sense. And we said that we would do it on a very low key basis, just to see if it would work. We got management approval. I think at that point it was about half a million dollars. Interestingly, it was the day of the crash when our first meeting was due to be held with Prodigy to get this project started. And Prodigy called up at about 10:00 o'clock in the morning. I said, well, why don't you call us in a couple of weeks. If we're still in business, maybe we can talk. I think we were able to succeed early on because we kept our costs low; we kept very focused on what we needed to do. And just gradually, it began to take off.

ML: In the early years, how did your curve go? Did you have

to have eight years of going slow, to train people that could do this sort of thing? **BD:** You know, at the time it seemed like it zoomed up. If you're doing 50 trades a day and then you go to 200 trades, you feel like you just quadrupled everything. But in hindsight, nothing happened, really, until 1996, when the Internet came along.

ML: And how big now is the market? How many investors actually are online?BD: I would say, probably about 30 percent of the transactions

that are occurring right now are occurring online. So, my guess would be maybe 20 million households trade online.

ML: Does that mean that most of those get online with a conventional broker?

BD: There are certain people who have transferred all their assets online. So when you talk to our customer base, there's about a third of them. Another third break it up into multiple sort of online accounts. A lot of people still like the comfort of having a full-service broker. About 75 percent of the U.S. brokerage assets are still in fullservice organizations.

ML: Well I've often wondered what distinguishes your company from a full-service broker. You appear to be doing just about everything that a full-service broker does, but at a small fraction of the price.

BD: Well, that's the idea. And the idea is to try to find all the points of value that a full-service firm has. We can do it at a fraction of the cost. because we don't have the high cost distribution network of brokers. And you can scale the technology fairly easily. You're going to see that online firms look more and more like the Merrill Lynches and the Morgan Stanleys. And the Morgan Stanleys and the Merrill Lynches are going to look more and more like the online firms.

ML: But then how will the Merrill Lynches and DLJs be able to survive? Presumably that means

One of the great things about the Internet is it's a great place for people to find out who's adding value and who isn't adding value.

that their brokerage revenues will go down sharply and so will their profits?

BD: Well that's where the broker has to really prove its value to the consumer. One of the great things about the Internet is it's a great place for people to find out who's adding value, who isn't adding value. A Merrill Lynch broker who has 600 accounts right now, may talk to 20 of those accounts per day. With the Internet, if they use it effectively as a communication vehicle, they can communicate with every single customer every day at any hour of the day by using customized mass e-mails. There are all sorts of ways of using the technology to make the brokers more effective. The bottom line, the broker will only keep those customers if they're adding value by improving the performance of the investor in the marketplace.

ML: What percentage of investors should deal substantially or wholly online? Fifty percent? Seventy percent?
BD: I've always said it was probably 50 percent of the population probably would do it. And that percentage would go up over time, as more and more people become very comfortable managing their own investments. If you looked back 20 years ago versus now as far as

the personal finance publications, the television shows, the books, magazines – all of these things have just proliferated. And individuals are taking much more of a personal interest in managing their own finances. But I think at this point, there's still a lot of people who want to give it to someone else.

ML: Tell us some of the changes and advances that we can expect in the future. The 18-month future, the five-year future, and the far distant future. BD: What you're going to see in the next 18 months is this issue of advice online. More and more people being able to do sophisticated asset allocation, investment selection online. I think you're going to see much more in the way of use of broadband. I think you'll see a lot more in audio-video. I think you're going to be able to go online and I think you're going to be able to see analysts having conference calls with corporations, and talking directly to management.

But you look out five years from now. Right now, in the U.S., you basically invest in U.S. securities and some ADRs in foreign companies. But in the future, I think you're going to be able to say, "You know what? I don't like the U.S. market anymore; I really think I like some of the Asian economies an awful lot more." And the beauty of the Internet is going to be that information is going to be right there at your fingertips.

ML: Will I be able to get information only from your DLJ analysts or will I be able to get information from Merrill Lynch analysts and other analysts as well? **BD:** Certainly there are going to be the proprietary studies. So at DLJ Direct, that's where you go to get your DLJ research. At Merrill Lynch, you'll get your Merrill Lynch information. But we already have other third-party providers of information on our site, where companies are aggregating other brokerage firms' information.

ML: Who are your biggest competitors, or your toughest competitors?

BD: Well, right now Schwab is clearly the best competitor in a lot of ways. They have been in the business longer. They continue to re-invent themselves as times change. Clearly the big danger in our field are the people like Merrill Lynch and Morgan Stanley and even Goldman Sachs, as they come in and bring a lot of the resources that they have as traditional investment banking firms online.

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Paolo Fresco, Cont'd.

sively. So you come out from this school system – you're more prepared to enjoy the cultural life.

But in terms of finding the balance, I think it's the same thing. My father was a hard worker. But you know, at six o'clock he was home, seven being good at what you're doing. I hate golf because I don't know how to play golf.

ML: How's the Italian economy doing this year?

PF: It's trailing the European economy, and the European economy is trailing the American economy. So it's below two percent growth this

They told me, you have to make one contribution to Fiat...you have to have fun at what you're doing.

o'clock he was home. He came home for lunch, had a nap, and went back to the office at three o'clock. And he was considered a hard worker. So now we have a different situation. People take off on Friday. I can have all kinds of work in the world, I take off on Friday and come back on Sunday night. So there are two days a week that I don't work.

ML: Are the other people having fun in your office? PF: They told me, you have to make one contribution to Fiat, and maybe to the Italian working culture: you have to have fun at what you're doing. Now, in order to have fun, you must know how to do it well. When I speak with students, I tell them, think of making an investment in your future happiness, because if you just do the right work, the right preparation, you're going to be good in what you're doing and there is nothing more enjoyable than year, but there are some signs that it's picking up slightly.

ML: What's the problem? **PF:** Well, I would say, "What is the key to the U.S. miracle?" must be the real question, because you never had an economy growing four or five percent without inflation. My impression is that now the growth in productivity is heavily dependent on the use of information technology. I think as soon as there is a utilization of information technology in Europe, I think you'll be able to get similar growth.

Q & A with Students

Q: Is Europe making any demonstrable progress at reducing double digit unemployment by having greater freedom and flexibility in labor markets?

PF: The answer is, very little, very little. And the problem is that the whole system is geared

at protecting people who already have a job rather than helping people find a new job. We, at GE, 10 years ago bought a government company in Italy. The best technical talent in the world, the best product in the world, yet they had 20 percent of the global market and the American competition had 60 percent. This government company was staying away from increasing the volume because they were afraid they would undertake obligations that would last forever. I think we are making progress in Italy and we have now created parttime work, which is acceptable, and temporary work. And this is going to reduce unemployment.

Q: A lot of people when they think of Fiat, they think of it as an automotive company. What would be the main forte of Fiat in the twenty first century? **PF:** For a corporation, I think, you have to always ask yourself, what is my key competency? What am I good at? And no doubt Fiat has developed over a century competencies in metal mechanical work. And somehow related to transportation. So you look at trucks, you look at agricultural equipment. You look at all these things. I like the idea of expanding and having a portfolio of businesses which are leaders on a global basis, and having these businesses integrating their competencies and their resources together.

Q: Given the declining birthrate, the aging population – not only in Italy but in other countries in Europe – how much concern do you have about that?

PF: I think there are two sides to this coin. Today I think that there are people in their sixties or their seventies who can make important work contributions. So let's look at the positive side of that and enjoy it and applaud it. Then there is the fact that you have less and less working strength because people do not have children anymore. The birth rate is going down. I think that inevitably, in Europe, this will be taken care of by greater immigration.

Q: When you describe Fiat's current international thrust, you revert to talking about the auto business. Are you going to try to expand all your other businesses into the rest of the world?

PF: Yes. I start speaking of Fiat and of the beauty of all its diversification, and then my mind in some of the answers goes back to automotives. Let me tell you that we are much more diversified internationally in the non-automotive business than we are in the automotive business. Our agricultural equipment business is the best global company in the world in this respect. We are from Asia to the United States to Latin America, to Europe, all over the world.

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Blake Darcy, Cont'd.

Of course we're fortunate in being part of DLJ. We have all those capabilities right now.

ML: Is there going to be a shake-out in this industry?
BD: What you've seen in this stage is a vast expansion because everyone's making money and everyone's doing well. And the market is allowing there to be lots of players. When you start to see a downturn, and it's got to be some-

Q & A with Students

Q: I was curious what you thought about the viability of doing IPOs online and eventually even disintermediating the investment banks?

BD: There have been a number of companies who have started off saying, we're going to make this a democratic process. We're going to bring in the individual. We're going to get rid of the intermediaries. And yet, all of those compa-

Everyone says brand is everything on the Internet. It isn't. The ultimate winners will have the best service with the best value.

what of a prolonged down-turn, then you're going to start to see more in the way of consolidation. And you're going to see some of the people who have made a lot of money, saying, "Time to sell out."

ML: If you were just graduating from business school, and you were thinking of building a career in your field, where would you go?

BD: I think it always comes down to: Pick a business that you're going to be passionate about. Pick a business that you think has a great operating model. Don't worry about making a fast decision. Don't worry about dropping out of school and giving it all up because it's a bubble. nies look very much like a traditional investment bank when all is said and done. Because the services that an issuer needs aren't just pricing. The piece that's big has to do with making sure everything is set with due diligence and aftermarket coverage. So I don't think any investment banking firm is going to get disintermediated.

Q: What do you think the DLJ brand is, and is brand more or less important now with the online brokers?

BD: DLJ Direct is a brand really started back in late 1997, when we renamed it from PC Financial Network. And our attempt is to attach it to the DLJ brand which stands for

high quality research and information analysis. We're positioning our brand as a high-end/ sophisticated, serious brand. And you've not seen us use a lot of humor. We're trying to tell people to take this seriously. This isn't a game.

Everyone says brand is everything on the Internet. It isn't. Longer term, the ultimate winners will be the ones who have the best service with the best value.

You look at Amazon. How much advertising did Amazon do to create Amazon.com? Next to zero. It had a great product, a great positioning right from the start.

Ultimately it will get back to who has the best product and the best service, and the best value point.

M: I'm with the faculty in management. Schwab and DLJ have taken rather different approaches to partnering in the Japanese market. Given the rate of resources that you need in every single national market that you anticipate penetrating, how are you going to go about entering these markets? **BD:** We have taken the approach where, in most markets, we will partner in a joint venture with someone who really understands the local markets. We knew that we would not be able to enter the Japanese market very successfully unless we had a very strong partner who put huge resources behind it. So, we

partnered with a Japanese firm and were able to get out as the first U.S. broker online in Japan. They helped us from a regulatory standpoint, understanding who to talk to. They understand the cultural differences which we would have no clue about. I mean they showed me advertising. I said, that's absolutely horrible, disgusting, I'd never use it here. And they say it's great, and they're always right and I'm always wrong.

W: Where does DLJ Direct expect its new customer growth to come from? BD: We're always happy to take them from our competitors in the discount world. But I think we're going to probably take them more from the fullservice environment to a very large degree. Because they have higher assets, they're more in line with what we are looking for. We grab our assets from Schwab, from Fidelity, from Merrill Lynch, from Smith Barney. And we continue to have success against those companies.

When you look at the new people coming online, most of those people are coming right out of college or business school. They don't have a lot of assets, so they're not necessarily who we're targeting. We're targeting people with \$100,000.00 or more in investable assets.

For more information on this lecture series and others, go to: http://www.stern.nyu.edu/lectures

Location, Location, Location

By Daniel Gross

ne of the many far-reaching promises of the Internet is that the global neural system of modems, servers and fiber-optic cable has liberated individuals from geographical shackles. After all, the Internet allows a store in New Britain, Connecticut, to sell books to customers in Great Britain, a tour guide in Nepal to pitch customers in Nebraska, and a magazine editor in a New York apartment building to swap files with a magazine designer in New Orleans.

Today, in theory, participants in the digital economy can do business from anywhere. But in the Information Age, many businesses are finding that location not only still matters – it

matters even more. Last fall, I spent some time at Lincoln-Mercury's new headquarters in Irvine, California. The executives rhapsodized about how leaving their historic home of Detroit and joining the burgeoning car-design center in Southern



California had rejuvenated the organization.

Personal-computer maker Gateway 2000 is the prototypical New Economy company. Ted Waitt and Mike Hammond started Gateway in 1985 in an Iowa farmhouse and moved the business north to North Sioux City, South Dakota. The company made virtue of its remote location. taking advantage of low labor and realestate costs to get a leg up on competitors. But Gateway quickly outgrew its prairie digs. By 1998, it had 14.000 employees and sales of \$7.5 billion. And its founders realized that this Fortune 500 company needed to be somewhere else to attract seasoned executives. So in 1998. Gateway moved its administrative headquarters to San Diego.

For an increasing number of companies like Gateway, cities

have become more appealing. During the Old Economy recession of the 1990s, the downtown areas of New York, San Francisco, and Los Angeles were written off as obsolete ghost-towns. But in the past several years, each has come roaring back, creating hundreds of thousands of new jobs. And in an unexpected twist, cities like New York have become among the biggest beneficiaries of the digital economy.

Many observers have noted and chronicled the growth of New York's Silicon Alley. As a result, local readers are probably conversant with the "whos" and "wheres" of New York's digital epicenter. But until now, nobody has attempted to account for the "how" and "why." And that makes Theresa Lant's piece on the rise of Silicon Alley (p. 9) a perfect centerpiece for this issue. Lant weaves together the trends in technology, politics, and the local economy with the career arcs of individual players. The end result is a compelling narrative that explains the unexpected rise of a thriving and prosperous Silicon Alley from the gloom of the downtown recession of the early 1990s.

ne of the trends that continues to propel the digital economy forward has been the belated but steady move by established firms onto the Internet. Metropolitan areas have also benefited from this trend. New York-based bookseller Barnes & Noble, for example, begat New York-based online bookseller Barnesandnoble.com. Toys'r'Us, based in suburban New Jersey, spawned Fort Lee, N.J.-based toysrus.com. And it made perfect sense for Donaldson, Lufkin, & Jenrette base its online offering. to DLJDirect.com, in Jersey City and New York. Marshall Loeb's insightful interview with DLJDirect CEO Blake Darcy (p. 4) brings to light the challenges and opportunities established Wall Street firms face when confronting the Internet.

nitially, many observers felt the growth of online commerce would be a threat to cities like New York. After all, New York is, among other things, the retail capital of the world. Millions of shoppers annually flood into the city's department stores and boutiques in search of bargains and hard-to-find goods. The rise of online retailers threatened to disintermediate stores, from Armani to Zegna. And analysts and researchers hastened to issue hyperbolic predictions. In his timely piece, Joel Steckel (p. 22) looks into the origins of today's wildly disparate predictions about e-commerce, and (politely) asks forecasters to show us the methodology!

These days, as online retail pioneers like eToys and Amazon.com continue to pile up losses, e-tailing has fallen out of favor. The original Internet business model of selling lowmargin goods seems to be on the outs. at least temporarily. Online retailers had also justified such aggressive spending as necessary to build a lasting brand. But it is important for investors to consider that brands may not always stand the test of time. In his useful study (p. 31), Peter Golder digs into history to suggest why some leading brands survive for decades and why others don't.

Online retailers have been replaced in the media and investors' imagination by digital newcomers like business-to-business firms, or on-line application service providers. And next year, the pages of *Business Week* and *Fortune* will probably be filled with talk of entirely new modes of doing business. That's why we thought it would be useful to sit down for a chat with Christopher Tucci, the co-author of a new textbook on Internet business strategy (p. 16). He provides some suggestions for considering what types of companies will make it here, and which may not.

One of the downsides of the rebirth of many American cities has been the concurrent growth in traffic. In urban areas like Atlanta, Los Angeles, and Washington, and, yes, New York, hour-long commutes have become commonplace. Many companies have sought to battle the scourge of traffic by having employees work from remote locations. But this poses challenges. And as Roger Dunbar and Ragu Garud note in their forwardlooking essay (p. 18), this new mode of working – "telework" – promises to transform corporate culture.

To a degree, all of us have become teleworkers. Cell phones, the Internet, and wireless devices now link us to our offices, and to one another, regardless of our location. As a result, executives in all types of businesses are being forced to consider, and reconsider, the physical location of their headquarters.

hus far, the digital economy has been a boon to cities. I believe it will continue to be. These days, you can start and run a business anywhere. But if you want the enterprise to live to its full potential, you might have to physically move it to a place where it can tap into the best resources: technological, financial and human. And today, the richest deposits of these resources typically can be found in large cities.

DANIEL GROSS is editor of STERNbusiness.





LICON ALLEY



The creation of Manhattan's \$17 billion Internet and New Media industry was neither inevitable nor an accident. Theresa Lant introduces us to the people and forces that paved New York's streets with entrepreneurial gold.

By Theresa K. Lant

THE CITY AND THE Digital economy

t was happening before the dot-com fever of 1999 and the April 2000 crash. Before anyone had heard of Doubleclick or Jupiter Communications; before Razorfish was a multinational firm. In the mid-1990s, a new industry was emerging in the lofts and officer towers of downtown Manhattan. Of course, the larger world didn't notice Silicon Alley until it had created 250,000 full time jobs, revenues of \$17 billion, and thousands of new business entities. But once venture capital money started moving into the city in 1998, and the bull market triggered a rash of local dot-com IPOs in 1999, New York was on the New Economy map. And while many area firms have suffered in the recent correction, Silicon Alley is still a remarkably vital force.

Why did Silicon Alley arise in Manhattan in the late 1990s?

There are compelling academic theories that account for the emergence of regional "hot spots." Economists note the proximity to resources and customers. Sociologists delve into regional cultures of entrepreneurship. But while these analytical tools can explain the

The creation of hundreds of Internetrelated companies in a few square miles of lower Manhattan was neither foreordained nor inevitable.

existence of regional clusters of similar firms, they neglect the complex dynamics that give rise to regional clusters and their idiosyncratic characteristics.

My research focuses on how managers make sense of their "economic" world, and how this sense-making influences decisions about how to go about their business. In recent years, of course, a large number of people in my NYU neighborhood seemed to be starting Internetrelated businesses. So I began to wonder why such clustering would occur when the businesses in question were, by definition, not constrained by geography.

My conclusion? The creation of hundreds of Internet-related companies in a few square miles of lower Manhattan was neither foreordained nor inevitable. Rather, it was the product of a unique set of events and individual characters, and the intricate, non-linear interactions between them. Indeed, Silicon Alley is what we call a "complex adaptive system." Understanding the components and dynamics of such a system can help shed light on the rise of Silicon Alley.

What makes systems adaptive and complex? First, these systems have a property called aggregation. This means that complex large-scale behaviors can emerge from the aggregate interactions of less complex agents. For example, the interactions of firms in the U.S. in the aggregate result in the overall characteristics of the U.S. economy. An emergent aggregate property of the U.S. economy is the gross domestic product.

Aggregate properties are the result of nonlinear interactions among agents. So, for example, the pool of venture capital (VC) available to new firms in New York City is not just the sum of VC1 + VC2 + ...VCn. Rather, the decisions of venture capitalists to consider New York firms and the amount they will invest is influenced by, among other things, what other VCs are doing. Thus, VC spending in NYC is the multiplicative interaction of distinct variables, not the sum.

Complex systems also require inputs of energy and resources like cash, human effort, and raw materials. The emergence of Silicon Alley depended on significant

> effort by individuals and the organizations they created. As the tireless work of early "evangelists" helped legitimize New York as a new media center, interest and resource flows from consulting firms, law firms, and venture capitalists followed. Once such resource flows interact, a complex system

will often exhibit positive feedback effects, in which, for example, investments in dot-coms produce ever more investment in dot-coms.

inally, complex systems are made up of different types of actors. The pioneers in Silicon Alley came from a wide variety of professional backgrounds and industries, including advertising, graphic design, publishing, digital technology, software development, visual and performing arts, and journalism. As these people interacted, professional boundaries and definitions defined by traditional media and traditional industries began to fall away.

New York in the 90's

The stock market "crash" of October 19, 1987 plunged New York City, especially lower Manhattan, into a recession that lasted into the mid 1990s. In 1990, Drexel Burnham Lambert went bankrupt, leaving its cavernous office building at 55 Broad Street empty. After Drexel's departure, the Rudin family, which owns extensive properties in New York, discovered that the cost to modernize the building couldn't be justified given the economic conditions at that time. By 1994, after all, the office vacancy rate in downtown Manhattan was 30 percent, with 25 million square feet lying fallow. When Stern moved into its new quarters at 44 W. 4th street, the university was unable to find a buyer or tenant for its old offices at Nichols and Merrill Hall on Trinity Place. Fiftyfive Broad Street remained empty for six years.

n December 1994, Mayor Rudolph Guiliani introduced the Lower Manhattan Revitalization Plan. He formed a task force, called the New York Information Technology District Commission (NYITDC), which included Deputy Mayor Fran Reiter, Con Edison, the New York City Partnership, the Alliance for Downtown New York, KPMG Peat Marwick, IBM, NYNEX, Brooklyn Polytechnic University, and Columbia University.

The NYITDC conducted a study that recommended the formation of a technology district and center in downtown Manhattan. The technology center required a building in which to showcase New York information technology. In June 1995, Carl Weisbrod of the Alliance for Downtown New York called Bill Rudin and offered to do the project at 55 Broad St.

Mr. Rudin, the scion of a powerful real estate family, was aware of the new media

start-ups that were locating around the Flatiron and Soho neighborhoods. The Rudins accepted the risky project, which was announced in June 1995. It was not easy convincing new media tenants to move downtown. Most new media entrepreneurs viewed the Wall Street area as an unhip, starched-shirt ghost town. Nonetheless, new tenants were attracted by the cheap rents and excellent wiring. In September 1995, online CD retailer N2K (now part of CDNow) became the first tenant at the new Technology Center. And in October of 1995, Governor Pataki signed legislation for the Mayor's plan in front of 55 Broad Street. The event, broadcast over the Internet, was the first ever cyber-bill-signing.

Local government and commercial property owners thus played a key role in creating the environment in



Regional economics, technological developments, human resource characteristics, and individual initiatives helped created an opportunity space for Silicon Alley to emerge.

which new media start-ups thrived. But they did not "cause" Silicon Alley to happen. For during the same time, regional economics, technological developments, human resource characteristics, and individual initiatives helped created an opportunity space for Silicon Alley to emerge.

In the mid-1990s, there were significant numbers of unemployed New Yorkers. Among their ranks were graphic artists from advertising firms as well as Wall Street traders. Coincidentally, the Internet became accessible to large numbers of people with the evolution of the hypertext markup protocol, the tcp/ip protocol, and the Web browser. In fact, Alice O'Rourke, the current president of the New York New Media Association, has suggested that the preponderance of smart, creative, unem-

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Silicon Alley's indigenous population? Brainy mathand-music types with impressive liberal-arts educations, mostly upper-crust backgrounds, and birthdays in or around 1966.

ployed people in New York apartments, with desktop computers, phones, and time on their hands, helped trigger the city's dot-com boom.

In 1994, Brian Horey, a local venture capitalist, founded the New York New Media Association (NYNMA), a non-profit trade association – so that "we could stop flying to California every other week to do business." Since 1994, NYNMA's membership has grown to 7,000 individuals representing 2,500 companies. NYNMA members work in such diverse fields as broadcasting and publishing, web site development, design, entertainment, education, and professional and financial services. Their firms range from one-person shops to *Fortune 500* corporations. NYNMA formalized networking among new media participants by holding regular Cybersuds meetings at clubs such as the Roxy.

Another group in the emerging community has been called the "Early True Believers." They are, in New York magazine's words, "the closest thing Silicon Alley has to an indigenous population...they're brainy math-and-music types with impressive liberal-arts educations, mostly upper-crust backgrounds, and birthdays in or around 1966." Throughout the early and mid-1990s, this informal group held social networking events called "CyberSlacker parties." Many of the friends and attendees went on to found Silicon Alley stalwarts such as MTVi, Feed, Razorfish, Pseudo.com, StockObjects, Nerve, and the Silicon Alley Reporter.

Beyond social networking, these actors moved quickly to spread the word about the possibilities for new media business and about how and why New York was both different and "the place to be" for new media. They sponsored and organized "events" – conferences, seminars, parties, etc. that would draw both "true believers" and newcomers together. In March 1997, the Global Community Sandbox opened at 55 Broad Street. The

image of a sandbox is that of converging and shifting and blurred boundaries among its components. This exemplifies the interaction among actors with different backgrounds that meet at the Sandbox to share ideas. These interactions are also exemplified by advertisements for the Silicon Alley 1998 conference, which looks like a Venn diagram illustrating the interaction of different "sets" of people and businesses. second vehicle was online publication and communication. In 1995, two entrepreneurs started @NY – The New York Internet Newsletter, an online publication dedicated to news about Silicon Alley (atnewyork.com). It is important to note the lexicon used in New York to refer to Internet based businesses. New media (not e-commerce) means exactly that – new forms of media. New York is a major media center, with a large number of media firms, ranging across the realms of publishing, entertainment, journalism, broadcasting, cable, and advertising. Thus, many of the first start-up businesses were media firms. This was particularly significant for the growth of Silicon

Alley because media itself is a vehicle for communication and information diffusion.

Silicon Alley pioneers also used traditional media to spread the word about new media. In 1996, a local entrepreneur started

a print publication to cover both business and social aspects of Silicon Alley, called the *Silicon Alley Reporter*, which moved to nationwide distribution in mid-1998. In December 1996, another pair of entrepreneurs launched a second print publication devoted to Silicon Alley, called the *AlleyCat News*.

Old and new media played an important role in facilitating the legitimacy of Silicon Alley. New media advertising abounds on the pages of old media print publications and old broadcast media. Opinion leaders in the media also use their positions to shape the cognitive understanding of the emerging field. Each publication not only provides information, but also contributes frames of reference, interpretations, and evaluations. The information they provide is not "value-free." The choice of what appears in the publications and what does not, in and of itself, frames what is important and what is not.

For example, many New York publications began to publish lists of Silicon Alley firms or people that they identified as being important or deserving of media attention. *Crain's New York Business* in 1997 published its "Top Cats" list of "players shaping Silicon Alley." *@NY* created the @NewYork.com 25, a group of companies "who distinguished themselves in some important or innovative way in 1997." The attention and legitimacy produced by these lists can be very powerful. And the publications have a great deal of discretion in deciding whom to reward with such recognition. The manner in which information is communicated by the media also influences the perceived "identity" of Silicon Alley. Much of what is written focuses on what makes New York new media distinctive. As the editor of the *Silicon Alley Reporter* put it in 1998:

"New York and Los Angeles are becoming the driving force in the Internet Industry for a very simple reason: They are the talent and media capitals of the world. Sure, content and community are going to take longer to play out than the tools to make them. Right now, L.A. and NYC may be on the bottom of the food chain by the *Red Herring*'s and *Upside*'s standards because we don't

New York and Los Angeles are becoming the driving force in the Internet Industry for a very simple reason: they are the talent and media capitals of the world.

have the immediate revenues that make myopic venture capitalists drool. But there's no place on the food chain I'd rather be. Would you rather have made the camera that shot *Citizen Kane*, or make *Citizen Kane*?"

Silicon Alley is unique, but the fundamental processes that have facilitated its emergence are not. Because Silicon Alley is so close to home, it is a good place to start to learn about complex adaptive systems. The regional agglomeration we now know of as Silicon Alley is the aggregate outcome of a wide variety of events and actions over the course of several years. The actors involved have been diverse, and yet have engaged in extensive interaction and collaboration. The outcomes of these interactions have been difficult to predict, however. What if Brian Horey had not founded the New York New Media Association? What if legislation to create a business development district in downtown Manhattan had not passed? What if New York had not been in a recession when the World Wide Web came online? What if local entrepreneurs had not gone out of their way to evangelize the potential of New York new media? It is impossible to know what would be the same and what would be different. This is a key feature of complex adaptive systems. Small changes in variables, even energy and enthusiasm, can yield large differences in the way a system evolves.

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Internet Business Models an Interview with Christopher Tucci

Thus far, Internet companies have been known primarily for racking up astonishing losses. But some Internet business models will work, explains Christopher Tucci, co-author of a new textbook on Internet business strategy.

Christopher Tucci, assistant professor of Entrepreneurship and Innovation at Stern, is co-author, with Allan Afuah of the University of Michigan, of a new textbook: *Internet Business Models and Strategies: Text and Cases*. Published in August by Irwin/McGraw-Hill, the book is the first geared toward MBA students that deals with Internet strategy. Last summer, STERNbusiness sat down with Tucci to discuss the lessons that can be learned from the last several tumultuous years in e-business.

SB: How did you get interested in the business aspects of the Internet?

CT: I've been working on Internet topics since I graduated from college, about twenty years ago. I started doing work in computer science research in California, and was very involved in working on Internet protocols. Then I got interested in the business aspects of how companies manage their research and development. And for my dissertation, in 1995-1996, I did one of the first academic surveys conducted over the Internet.

SB: What surprising or important conclusions emerge from these cases?

CT: First, it turns out that customer value is one of the most important components of the business model. Whoever you are, you've got to find something that customers love. A second point is, that if you're a start-up, you should take care to locate your place in the value network. Managers shouldn't just jump in and say that because the business-to-business area is exploding they're going to start a B-to-B exchange. A third point is that the critical piece is sources of revenue. At this point, it is becoming obvious that the advertising model is not going to really sustain a huge number of businesses out there.

SB: Many Silicon Alley companies either depend on advertising or are involved in creating online advertising. How does this conclusion impact them?

CT: Online advertising is growing and is going to be around forever. So New York companies like DoubleClick, or 24/7, which are providing the technology and service for advertisers, will be around. The companies that are depending on advertising as their sole source of revenue will have a tougher time. If you look at the long-term trend, advertising prices have been declining for the last few years. And the massive companies – the AOLs and Yahoos – are always going to get a premium. But as soon as you drop off the list of the top few companies, it becomes very difficult to attract significant advertising revenues.

SB: Can we say that some of the models or modes of doing business on the Internet do work? Or don't work? **CT:** It's still too early. In the book, we describe ten different segments. Some of them are getting harder and harder to enter. If I had to pick one that was going to be a tough business, it would be content aggregation. It's not that there's no way to make money in it, it is just that probably only the top companies are going to make money in the long run. Companies that deal in financial content and entertainment, and those that successfully add value are going to be around for a long time.

SB: Amazon.com set the tone for retailers: Offer low margins and great customer service, and spend lots on marketing. For a few years, the market seemed willing to ignore the fact that these goals created huge losses. Now, however, many e-tailers are suffering, financially and in the stockmarket. Has that business model been discredited? **CT:** A lot of this was actually driven by AOL. Many years ago, when AOL blanketed the country with disks, critics said it was a lousy business plan, and they were spending too much on marketing. But in the meantime, they were building this powerful network. And in the end, they ended up making money and doing quite well. That encouraged people to think, I don't want to miss out on an opportunity like that. So retailers that can build a network of reliable and loval users might be in the game. As far as I'm concerned, the pure low-margin retailer that is simply going to compete on cost will have great difficulty. I think you're going to see a lot of the smaller on-line retailers come and go.

SB: Aside from technology, what will help companies become profitable?

CT: What a lot of people have shown is that the complementary assets, when they are tightly held, can be a very powerful tool. Complementary assets could be your logistics, or your customer base, your brand or corporate reputation, or your existing network of bricks-and-mortar stores. Pure online companies must spend loads of money to build such complementary assets. Compare Barnes & Noble and Borders' reaction to Amazon. Barnes & Noble really embraced the Internet, and began competing

head-to-head by setting up barnesandnoble.com as a separate entity. The company has used its complementary assets - namely its brand name and network of stores - to help grow business at barnesandnoble.com. The two firms share advertising and promotions, and you can return books ordered from barnesandnoble.com at stores.

SB: Internet companies seem to change their business plans rather frequently. Is that a danger sign?

CT: It is true that online business plans evolve more quickly than in the manufacturing economy. When you build a plant, you have huge sunk costs, so once you've got it, you're sort of stuck with it and you want to milk it in some ways. Online companies are less wedded to their original plans. Yahoo is an example of a company that has changed its value proposition quite a bit in terms of the specific products and services that it offers. And they're making money on things other than advertising, such as auctions.

SB: One of the cases deals with iVillage, the New Yorkbased network of women's sites. The company recently announced it was getting out of its online retailing business, iBaby, about a year after acquiring it. Are such abrupt changes warning signs or good signs?

CT: iVillage is a great case, because they have this community, which is a real thing. But the problem is that its original advertising-supported model was not sustainable by itself. So they were looking for additional revenue sources. E-commerce was one idea. But competencies like order fulfillment and order taking were not necessarily what they knew best. And there's nothing wrong with thinking something through, and saying, this isn't going down the right road. The case also really shows the tension that once you've built up a community, it's a sensitive issue how you manage these other revenue sources. How that transition is managed is what's going

to separate the successes from the has-beens.

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SB: These days, the market isn't placing a particularly high value on New York-based community Internet companies like iVillage and TheGlobe.com. Are there other ways for their managers to monetize their assets? **CT:** It is possible that someone else might be able to monetize them better than they will. We've seen cases where large companies buy small companies with little or no revenues but large numbers of users because they think they can monetize them. America Online paid \$300 million for ICQ, the company that created instant messaging technology. Excite@home acquired

Bluemountain.com, a free online greeting card company, which also had no revenues. The time to make these transitions is when you're flying high. If you wait too long, once the market sort of starts souring on your business plan, it becomes more difficult.

SB: Some of the cases in your textbook are written by students. How would you rate their level of interest in and sophistication about how these companies work? **CT:** It's phenomenal. The cases are very high quality. We have a case series here in the Berkley Center, and we're making these cases that the students have written - I probably have 40 or 50 – available for use inside and outside Stern. And it gives us a nice base of up-to-date high-tech cases.

More information can be found at: http://www.mhhe. com/catalogs/0072397241.mhtml

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Telecommuting? That's so last century. The explosion in bandwidth and networking power is forcing companies to adapt to a new mode of managing workers in remote locations.

The Brave New World of Telework



By Roger Dunbar and Raghu Garud

The advent of portable computing and the Internet has rapidly opened up possibilities for a new mode of work: teleworking. This new workstyle is more flexible and dynamic than telecommuting, which has typically simply meant working from home. Under telework, employees are based wherever their work happens to be. > But the growth of telework is a double-edged sword. The upside? Employees are able to work from their cars, hotels, or airplanes, and out of other firm's offices, and from their homes, and on weekends and at night. The downside? Employees may be expected to work from their cars, hotels, or airplanes, and out of other firm's offices, and from their homes, and on weekends and at nights. Telework presents challenges to both management and workers, and their relations with one another. After all, most corporate work cultures are designed to support face-to-face work activities at the office. And while some employees find the teleworking notion natural and attractive, others find the idea of working continually untethered and off-site disconcerting. If Under the right circumstances, of course, telework can lead to that great desideratum: improved quality of life. And yet some employees will fret about the meaning of corporate membership if they have no physical corporate office they can call their own. Telework also terrifies some managers. After all, how do you motivate and supervise employees you rarely see?



But the local laborers. accustomed to working at their own rhythms, chafed at the new behavioral constraints. Mr. Wedgwood's response would have made Chainsaw Al Dunlap proud. He imposed stiff fines for transgressions and created a supervisory career structure that rewarded those who followed the rules with easier work and higher pay. Eventually, Mr. Wedgwood attracted a work force willing to play by his rules. The new work culture was epitomized by the idea: "You are paid to do, not to think."

Such managerial impositions curtailed human creativity. But they also harnessed machine productivity and forged a new industrial culture in the 19th century. Encouraged by productivity gains, the architects of industrialization continued to explore how a work logic based on ever more refined divisions of labor could further increase productivity. Eventually, much mass production work became completely meaningless to the workers and

anaging in the culture of telework requires executives and workers alike to cast off longheld beliefs and adopt new ones. For telework, by its nature, transforms the way a company lives and breathes. It alters the very genetic make-up of an organization. Rather than being stable and revolving around the workplace, telework is highly dynamic and centers around the work people do.

Wrenching a company around to accommodate telework is a process – more like turning around a battleship than clicking a mouse. It takes time. And throughout history, changes in corporate culture have rarely come easily or without pain.

Back in the 1760s, Josiah Wedgwood tried to bring the techniques of mass production to his pottery factory. many viewed it as exploitative.

The mass-production culture bore fruit: think Henry Ford's Model T. But it also wrought strikes, violence, and sabotage. The crisis it imposed ultimately shifted power from management to labor unions, and required managers to reconsider the meaning of work. In response, a new management culture slowly emerged based on the notion that more meaningful work experiences would improve work performance. This led to recommendations that increased worker participation and to extensive redesign of factories and offices.

The advent of information technologies in the late 20th century has set the stage for the next round of cultural change. In the past, managers and entrepreneurs sought to boost efficiency by manipulating structural

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designs – devising a better assembly line or installing airconditioning. But telework technologies extend the human mind – they liberate rather than limit or constrain thoughts and ideas. As a result, the great workplace slogan of the 21st century may be: "You are paid both to think and to do."

omputers – and the networks that link them – have changed the very locus and mode of work. The Internet allows people to be in constant contact with others who think in different ways. And as new information becomes available, they may think about work matters differently. Historically, the content of a work culture has been centered on specific tasks. In the wired economy, however, participants continually renegotiate and redefine the system of meaning – the very nature of work. As a result, telework tends to evolve and change quickly in unexpected ways.

Indeed, telework makes it more difficult to identify and define corporate cultures. Generally, organizations

Telework techniques extend the human mind – they liberate rather than limit or constrain thoughts and ideas.



have relatively identifiable, stable cultures. The members share norms, beliefs, and behaviors that develop over time as a result of face-to-face interaction and shared experiences. In many instances, managers lay down the infrastructure of corporate culture.

When they introduce

telework, managers must be aware of the way it can affect corporate culture. If the organization portrays the arrangements simply as a cost-reduction measure, the telecommuting assignments may involve routine work. Technology may be used simply to send and return assignments. Those who continue to work in the office are likely to feel they have a preferred status while those working outside are likely to feel they have been transformed into a source of cheap, out-sourced labor. If teleworkers view the firm's actions as isolating, alienating, exploitative, and devoid of human sensitivity, an unhealthy culture will develop.

In contrast, if the organization makes telecommuting assignments with the intent of developing the firm's human capital faster, telecommuters may be seen to be among the privileged elite. And as teleworkers anticipate and enjoy their relative independence and flexibility, they may feel empowered and develop unique cultures supportive of their work activities.

A teleworking company will differ, by its very nature, from a traditional organization company. Organization culture is built upon the ground of specified locations, determined tasks and bounded social units. Members build a shared identity based on daily personal contact. It is solid. You can see, touch, and feel it. As a result, it is more likely to produce an enduring organizational identity.

The telework culture, by contrast, is built upon the ground of individuals with computers working intensively on assigned tasks. It's more amorphous. The values, norms, behaviors, and symbols that it forms around are associated with ongoing computer work performance.

In a teleworking culture, employees interact differently with one another. And that changes everything. Indeed, the use of e-mail – simple as it may sound – becomes an enormously important component of culture.

As any computer user knows, chatting by e-mail is far different than talking in person. E-mail is far more dynamic than real conversation. It requires high user involvement and interaction, but is also easy to use. It takes little effort to turn on a computer and send an e-mail – to one person or to forty – and there is no need to be physically and temporally co-located with others. Electronic and phone messages await teleworkers, which allows teleworkers to be truly distributed over time and space.

Teleworkers tend to rely on e-mail to communicate with one another. As a result, the overall emerging network content – the overarching conversation among employees – reflects a combination of individual user initiatives acting in conjunction with other interactions. A person might send an e-mail that contains a link to a website, or an attached file, or a photograph. A second person can pass the message – or part of it – along to one person, or to an entire group. In this way, the content of the conversation is continually being influenced but never controlled by individual teleworkers.

Teleworkers' culture – their values, norms and beliefs – are continually emerging through a constant process of negotiation among the members of open and burgeoning e-mail networks. Telework culture is thus composed of the partial and temporary set of agreements members reach about a network's current values, norms, and beliefs. It offers a common ground to foster interactions among the various team members involved in a particular project. By using e-mail, groups of workers can easily add members. This attribute generates an acceptance and expectation of fluid memberships.

orous boundaries are a corollary to fluid membership. Members can jump in and out of chatrooms after they have made their contributions.

And at any point in time, teleworkers may in fact be members of several groups. A chief financial officer may simultaneously be teleworking with a company's treasury staff on the budget and sitting in on a branding strategy meeting. Consequently, teleworkers' experiences from one work group impact processes in other groups. The same individual may be running one task group and merely observing another. Best practices gleaned from one group may be tried out in another. And so the culture changes yet again.

E-mail also generates content in its very use. As teleworkers exchange messages, information about their interactions and relationship is recorded. And since these information threads are frequently accessible, the e-mail record becomes a trace of evolving understandings, with people applying their own perspectives and interpretations.

This mode of working can have its downsides. At some point, most networks need to develop ways to summarize, simplify, and clarify the understandings they have accumulated. This task becomes more difficult in a telework culture. And as the numbers of people involved in a conversation expands, the whole process can become overwhelming: a Tower of E-Babel. Norms of interaction, designed to maintain work focus and control, may overload. These norms may include rules for how and when to respond to e-mails, the topics that may be raised in a particular group, membership issues, or the use of signals to communicate message urgency. They may also include cultural understandings as to when to send an email, or when to phone. Or when a face-to-face meeting might be in order.

ven as norms evolve, there is still no possibility that a stable cultural state will emerge. Consider what happens when a new member is added to an ongoing e-mail exchange network. The new member can get up to speed by examining the records and asking questions of clarification as needed. But once this happens, she will immediately begin to add her own perspective and insight to the conversation.

How do collective values shape these fluid processes? In traditional work groups, values – think quality, excellence, diversity – are often considered to be stable. But the members of a telework group are often not sure what is going to emerge from their efforts. So they only evolve to an understanding of what is not acceptable to the collective based on what is inviolate at an individual level.

This issue is apparent in the way Hatim Tyabji, the CEO of Verifone, Hewlett-Packard's e-payment solutions unit, governed his virtual enterprise. In defining his organization culture, Mr. Tyabji suggested that Verifone would "create and lead the transaction automation industry worldwide," and his firm would be close to customers and respond quickly to their needs.

To achieve these broad goals, Verifone mobilized many cross-functional teams, many of which had members in different locations relying on e-mail. While team tasks were defined, the methods by which they would achieve those tasks were usually left undefined. Members relied on each other's ideas to determine what should be done. Teams posted both progress and problems on corporate networks. As situations arose, they sought help from across the company. Members of Verifone who had worked at other corporations were frequently astounded at the response speed created by these arrangements.

But the speed also generated tension and misunderstandings. And it quickly became apparent that face-toface interactions were necessary to complement e-mail messages. As a result, one third of Verifone's employees were always on the road having "off-line" meetings.

In traditional groups, individuals are likely to identify strongly with specific group values. In telework groups, where employees are likely to be members of more than one practice community at the same time, employees can shift their identification from one group to another depending upon the specific group that they are operating in at any particular time. So instead of regarding themselves as mem-

As the numbers of people involved in a conversation expands, the whole process can become overwhelming: A Tower of E-Babel.



bers of stable organizations, workers will see themselves as affiliates of several constantly evolving entities.

In the past, executives and experts viewed culture as stable content. But like evolution itself, telework culture is a process always in-the-making. Every day, individuals with different interpretive schemes show up for work – wherever that may be – and negotiate the meanings associated with the information they exchange.

And that's not the only tension created by the growth of telework. In centered organizations, there is often widespread agreement about the norms of interaction. But as organizations grow more decentralized, interaction norms become subject to continuing negotiation, and conflicts between member beliefs, organization norms, and even its values may emerge.

Given such tensions, managers seeking to institute a new culture may face the same type of resistance that Mr. Wedgwood did back in the 1960s. But the modern-day process is likely to give rise to new challenges. Instead of inviting the crisis of alienation and meaninglessness that mass production brought, telework may spawn boundarylessness and burnout. In our 24x7 world, after all, distinctions between work and play inevitably blur. And that may yet prove to be the Internet's great contribution to commercial culture.

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Stormy Weather? The Art and Science of Forecasting Online Shopping

By Joel Steckel

Readers of both the popular and trade press are regularly bombarded with high expectations for online consumer shopping and buying. For as they seek publicity, research suppliers rush to outdo one another by broadcasting key optimistic findings. Forrester Research predicts that by 2004, 49 million U.S. households will spend \$184 billion dollars online. e-Marketer predicts 67.2 million Americans will purchase goods and services on the Internet by 2002. Jupiter Communications foresees that 85 million Americans will spend \$78 billion online in 2003.





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n addition to being large – as a reference point, Forrester estimated that just 17 million households bought online in 1999 – online shopping estimates and forecasts vary greatly. The Boston Consulting Group estimates that 1999 U.S. consumer online revenues totaled \$36 billion. But the Direct Marketing Association pegged the same quantity at about 11 percent of that total: \$3.9 billion.

Why do the forecasts of different research vendors vary so much? And what must happen in the business and consumer environment for these extraordinary growth projections to be realized?

Some of my recent research has been directed at answering these two questions. I've found that variation in forecasts can be attributed to variations in the approaches used to obtain them. However, analyzing these differences is very difficult, since suppliers do not always provide details about how they obtained their forecasts. Furthermore, I believe that the extraordinary growth projections cannot simply be achieved with a continuation of existing trends.

Why do the forecasts of different research vendors vary so much?

Analysts produce forecasts by applying a specific methodology (or a group of methodologies) to a set of data under a certain set of

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assumptions. Methodologies, data, and assumptions can vary in numerous ways.

Judgmental methods – like expert judgment – are probably the most common forecasting methods in use today. Experts know a tremendous amount about a specific market and bring all their cognitive resources to bear on the problem at hand. Of course, each expert has an idiosyncratic set of experiences and attitudes. One may be more familiar with online book sales; another may be more familiar with online travel. One may have a tendency towards optimism; another has a tendency towards pessimism. (Viewers of financial news networks like CNBC will recognize certain pundits as congenital bulls or as perpetual bears.) As such, comparing the news releases of different online experts can be akin to comparing e-apples and e-oranges.

any market analyses are made via *customer surveys*. These surveys are centered on a question of the form "Do you intend to....?" While it is likely that a plurality or majority of people responding in a positive manner to such a question is indicative of a bright future for the concept, research has shown that people are notoriously bad at predicting their own future behavior. So when research suppliers use intentions data to make precise forecasts, they are likely overestimating true results.

Time series analysis involves the extrapolation of his-

torical data. However, forecasting the adoption of a phenomenon as new as online shopping is very difficult because historical data are very sparse.

Causal methods express demand as a function of a set of potential causal factors. Under these methods, data are plugged into statistical procedures, which produces a forecasting model. Such a model can then be used to forecast demand if the future values of the causal factors are either known or could be forecasted in another way.

Obviously, different methodologies can lead to different forecasts. In addition, practitioners employing different methodologies may use different means of processing data. After all, research suppliers generally do not open their methodologies to public scrutiny, presenting another problem for objective analysts. Some may provide a flavor in their web sites and promotional literature. For

A significant feature of online buying is that it is contingent on other innovations. One cannot buy online without *being* online.

example, Forrester describes its methodology as being based on interviews with consumers and business executives. eMarketer claims to enter data from a wide variety of published, publicly available sources into a proprietary aggregation model. Other companies, including the Gartner Group's DataQuest division, are much more secretive. Repeated telephone calls to Gartner failed to produce an informative response.

These companies argue that their competitive advantage depends on their methodologies remaining proprietary. This is unfortunate, for it is impossible to evaluate a forecast without knowing the methodology and any assumptions it harbors in detail. Even those companies that hint at their procedures do not give sufficient detail. Forrester does not explain how it arrives at a projection of \$184 billion spent online in 2004. e-Marketer does not post its proprietary formula. Gartner tells us nothing.

Do companies need to keep their methodologies confidential to be credible? Not really. Even if a methodology were to be completely revealed, a competitor would still need the raw data used by the research supplier in order to duplicate the supplier's forecasts. Research suppliers can produce proprietary forecasts by maintaining proprietary data.

There's another reason why suppliers should explain their methodologies more fully. Most suppliers have an economic interest in making optimistic forecasts. These firms all either sell other research or provide consulting services to Internet commerce companies. Forecasts of huge volume and high growth not only attract attention, they may recruit new players into Internet commerce and hence increase the universe of potential clients. But for

any forecast to be

credible, the methodolo-

gies, data, and assumptions behind

it must be beyond reproach. Unfortunately, clients and investors have not made these firms accountable.

nsatisfied with the forecasts provided by the usual suppliers, I decided to develop modelbased five-year "forecasts" of online shopping and buying. My forecasts are not based on what people say they will do or on some secret proprietary model. Rather, I applied standard time-seriesbased marketing methodology to U.S. Census data and survey data collected from people who describe what they have already done.

I further focused on forecasting the number of people participating in online shopping, as opposed to sales revenues, for two reasons. First, sales revenues comprise the number of people and how much they spend. By focusing on a simpler construct – the number of people – I have a better chance at success. Second, marketing scholars have a standard time series-oriented technology for forecasting the number of people who have adopted an innovation: *diffusion models*.

Diffusion models produce a lifecycle curve for a particular innovation – be it the microwave oven, the cellular phone, or the Internet. The premise behind these models is that an innovation is adopted by a small, select group of adopters in the population based on mass media communications. These adopters, called innovators, then influence others to adopt via word-of-mouth. As time goes on,

THE CITY AND THE DIGITAL ECONOMY

and more people adopt the innovation, all non-adopters are subject to the same type of word of mouth. This process continues until all members of the population who will eventually adopt the innovation have done so.

significant feature of online buying is that it is contingent on other innovations. One cannot buy online without being online. Furthermore – recent technological developments notwithstanding – one generally cannot have access to the Internet without having a personal computer (PC). The diffusion approach allows for interrelated innovations. The models I developed allow for each of the variables – PC access, Internet access, and online shopping – to impact and to be impacted by each other.

The data I used come from two sources. The U.S. Census Bureau captures data on PC and Internet access. (See: www.census.gov) A private Internet marketing research firm, Cyber Dialogue, provided data on PC access, Internet access, and online shopping. Cyber Dialogue's methodology, in contrast to other suppliers, is described in complete detail on its web site (www.cyber-dialogue.com). It involves multiple, random-digit-dialed surveys per year. As such, the company surveys both users and non-users of the Internet. Its data on PC access and Internet access are remarkably consistent with those of the Census Bureau.

So what did I find? Well, my study produces the following generalizations:

1. By the year 2004, at least 60 percent of those U.S. residents having access to PCs will have bought over the Internet.

2. Online consumer purchasing in the U.S. will grow about 1/3 over the next year or two and 20 percent for a year or two after that. This amounts to a 150 to 200 percent increase in the number of online buyers within five years.

3. Personal computer and Internet access are approaching plateaus in the United States.

4. Within five years, 90 percent of the population with PC access will have Internet access as well.

The first generalization above suggests that more and more Internet users will use the medium for shopping. The second generalization suggests that this growth will indeed be considerable. It is in line with Forrester's projected growth for the number of households participat-



I have a challenge for research suppliers whose projections are even more optimistic than mine: "Show me the methodology!"

ing. But my number significantly lags the Gartner Group estimate that online purchasing will rise from \$20.5 billion in 1999 to \$147 billion in 2003 – a 600 percent increase in four years!

The third conclusion – that Internet and PC penetration may be plateauing – is very informative with respect to the future of online shopping. For without a corresponding increase in PC and Internet users, the growth in the number of online shoppers is limited. The Census Bureau data are very clear on this. The number of new PC and Internet users each year is now decreasing. The Census Bureau estimated that in September 1999, 59 million Americans used the Internet at work or at home.

> ot surprisingly, other research suppliers have published substantially higher estimates. Nielsen/Netratings estimated that 118.4 million Americans had Internet access in December 1999. This figure seems unusually

high. And a search of Nua Internet Survey's collection of "How Many Online?" studies confirms that the top five estimates all belong to Nielsen subdivisions. The vast majority of estimates are in fact much lower – in the 50-75 million range.

Can the Optimistic Forecasts be Achieved?

The wildly optimistic online shopping forecasts, like those of the Gartner Group, probably do not take into account the impending plateaus of PC and Internet usage. Many in the industry simply take for granted the continued galloping growth of Internet access. For example, Nielsen/Netratings last December claimed that between October 1999 and November 1999 the number of Americans with Internet access rose a stunning 5.4 million. But a recent Cyber Dialogue report found that one third of U.S. adults believe they have no need at all for the Internet, and that a significant number (estimated at 27.7 million) have tried the Internet and found they have no use for it. The Census Bureau data support this latter assertion.

So if the optimistic forecasts are to be achieved, something must change in the pattern of Internet access. Possibilities include:

Everyone who purchases over the Internet does ALL of his or her buying online;

Some discontinuity has to occur to expand the population that has Internet access; or

A vehicle other than the PC will have to be used to access the Internet.

The first of these possibilities is very unlikely. After all, there are a significant number of goods that consumers must experience before they buy them; tailored clothing, fresh fruit, and antique furniture will be very difficult to sell over the Internet. The second possibility would require the Internet to penetrate the lower income strata of society. Thus far, however, the lower cost of computers and free-PC model have yet to accomplish that goal. Finally, firms like Nokia are forecasting that five years from now, most Internet access will take place through handheld devices, such as the Palm Pilot or cell phones. The question remains as to whether such developments will expand the Internet user base or simply shift usage from one medium to another. (I believe the latter is more likely.)

A Challenge to Research Suppliers

Indeed, the more one crunches the numbers, the more difficult it becomes to square the sunny projections of research suppliers with more objective analysis. So I have a challenge for research suppliers, such as the Gartner Group, whose projections are even more optimistic than mine: "Show Me the Methodology!" Look. It's likely that both they and I are wrong. That's the nature of the forecasting game. But executives and analysts need to know which e-commerce forecasts are the most reasonable to use for business planning. And the reasonability of any forecast depends on the credibility of its assumptions, integrity of the data, and soundness of the methodology used.

I've posted my major assumptions and the details of my methodology on Stern's web site – at @www.stern. nyu.edu/Faculty/workingpapers/papers/steckel2000. Anyone who finds my assumptions and/or methodology unreasonable is free to reject my forecast.

ut the usual suppliers provide no such opportunity. What is their methodology? Do they project increased purchasing per customer? If so, how much? Will Internet access trends revert from declining growth rates to increasing ones? And if so, will they come through a medium other than the PC?

The suppliers of the data consumed so willingly by the media and the business community do not attempt to answer such questions. They provide a number and a mysterious black box, and ask us to take their results on faith. And they are slow to alter their projections. In response to questions from a *Wall Street Journal* reporter, the Gartner Group indicated that it was lowering its online shopping revenue forecast by about 35 percent through 2003 because research had revealed an unanticipated pullback in venture-capital funding for Internet retailers. The *Wall Street Journal* article appeared on May 25, 2000. Yet on September 15, 2000, Gartner still displayed its original optimistic forecast on its web site.

The Internet has empowered consumers of everything from airline tickets to stocks by improving disclosure. Today, an immense amount of previously hard-to-get information on everything from corporate finance to government operations is now available gratis on the Internet. And with every passing day, more data is available to businesses and consumers.

Given these developments, it's more than ironic that some of the biggest boosters of e-commerce continue to operate behind a cloak of secrecy.

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ULTIMATE CAPITALIST TOOL: THE

What's the ultimate capitalist tool? Some executives say it's the Internet. Others place their faith in junk bonds. For the privileged few, it's a Gulfstream V jet. All are important. But Michael Capek says the real answer is something we all can afford: language.

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anguage constitutes the foundation of human interaction and advancement. It is the medium in which we exist, survive, and thrive. It is what has allowed us in the space of a few thousand years to travel from marginal nomadic existences to the moon. It is the means by which we get the useful material trapped in our heads into the minds of others.

In today's business culture, effective communication skills are regarded as a sine qua non

for success. But comparatively few people real-

ize that language remains, at root, a tool. Indeed, language is as critical a prop for road warriors and global executives today as jawbones, flints, and wooden clubs were to our lessevolved ancestors eons ago.

Language is the bridge between material fact and mental abstraction. But it's even more powerful than that. As management guru Peter Senge has written, "the alternative to seeing language as describing an independent reality is to recognize the power of language - to bring forth new realities."

In fact, reality shows up in language before it shows up

anywhere else. By the mid-1980s, Japanese car manufacturers had captured a big chunk of the American car market. Having taken their cue from American quality guru W. Edwards Deming, they developed systems of building cars of of superior quality.

Indeed, it was reported at the time that the Japanese had fundamentally redefined and expanded the concept of quality. In Japanese atarimae no hinshitsu means ordinary quality, quality of a type that is "taken for granted." The new, expanded concept, called mirvokuteki na hinshitsu, translates into "things

gone right" - indicating a breadth and depth of quality beyond what the consumer expects or can even imagine. One of the reasons Japan produced cars of superior quality has to do with language. For the Japanese miryokuteki na hinshitsu constituted reality, and it found embodiment in Toyotas and Hondas.

Most of us are comfortable with the thought that language is a means of communication. But we are less aware that language is our primary tool for representing reality to ourselves and to others. It enables us to suspend our thoughts in air or capture them on paper, or on a computer screen, or store them on a hard drive, so that our thinking

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can be seen, examined, and modified. And in a very real sense, business is language. Business is analyzed and talked about in language, business takes place in language, and virtually all breakdowns in business are either breakdowns in communication or are accompanied by breakdowns in communication. Recognizing this seemingly innocuous presumption is important because it enables a different

conversation about business and business problems. And it leads us to the conclusion that the very language we use

can profoundly influence outcomes. or example, there are times when articulating a single phrase can produce dramatic results. When famed banker John Reed first

arrived at what was then First National City Bank, the Operating Group, one of the bank's six divisions, was experiencing breakdowns of a magnitude that

threatened the entire entity. At the time, the Operating Group was viewed simply as a mechani-

cal support function for the customer contact offices.

Reed, who would later rise to become CEO of Citicorp, was not the first to view the Operating Group as an independent, high-volume production operation. But he was the first to insist on calling it a "factory – which designed and controlled its own processes and products in the style of a manufacturing organization." This 'naming' allowed something quite remarkable to happen. Once that fundamental shift in perception took hold, the bank installed the appropriate personnel – professional production management – and they managed to resolve the systemic difficulties that had plagued the Operating Group. The point here is that the importance of language in business goes beyond good communication skills. It goes to the heart of understanding your business and what makes it work.

Using language as an effective business tool is complicated by the fact that words are not like Morse Code, in which there is a fixed meaning for each symbol. In fact, words do not contain meaning at all. Rather, words have meaning attributed to them by people. Many successful business leaders seem to grasp intuitively that one of the most important things they manage is meaning. Part of Jan Carlzon's success in turning around the airline SAS was his emphasis on front-line workers – those who keep business customers happy. Early on he declared that henceforth they would be known as managers: "It may seem like a mere word game but I use the term to remind my staff – and perhaps mostly those at upper levels of the old pyramid – that

words things things use do not contain meaning em at all. Rather, words have meaning attributed to them by people. Many successful business leaders seem to grasp intuitively that one of the most important things e conc- they manage is above

meaning.

their roles have undergone a fundamental change." Similarly, GE's Jack Welch used the phrase "boundaryless corporation" to help legitimize what he saw as the essential egalitarian nature of organizational success.

Because our core vocabulary has multiple meanings, there is always a certain amount of slippage between how

we perceive things and represent them to ourselves, and how we are able to describe those things to others. Thoughtful, intelligent

employees can be communicating at their best, but a company may continue to lose market share. Why? Part of the reason may be a gap between perception and reality, a failure of language.

Consider one of the most frequently used terms in business: problem. The process of identifying problems sounds simple. But as every businessperson knows, gaining consensus about exactly what constitutes a problem – or 'the' problem – can be a challenging undertaking. We can point to,

see, and sit on a chair. And even when chairs are not

physically present we have no difficulty communicating about them. But we normally cannot 'see' a problem. A problem is an abstraction from the outset, and herein lies part of the difficulty. In fact, 'problem definition' has become an industry. Consulting firms make millions by taking on this process for client companies. At a time when many industries are undergoing profound change and new industries are developing willy-nilly, the 'sense-making' ability of managers is all the more critical.

he other major barrier limiting our ability to use language effectively to achieve business goals is the tendency to believe that our perceptions are a description of what reality actually is. Indeed, the trick to communicating effectively is to distinguish what we are getting from outside versus what we are getting from inside our heads. This is a prerequisite for then being able to put into words the 'meaning' of what is going on externally, in front of our eyes.

To be sure, this process is among the most complex and least understood of all human activities. But by becoming aware of the tool-like nature of language, we can become more aware of our capacity to create meaning and to leverage our ability to manage effectively, as well.

More information available at:
http://www.stern.nyu.
edu/~mcapek/mginglng.html

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"History is bunk" - Henry Ford

In general, most marketing experts have agreed with Ford's conclusion. While some researchers have advocated using historical or longitudinal approaches to study marketing phenomena, others have dismissed the vast field of history as inherently subjective and hopelessly unscientific.

Brand New or Brand Old?

believe the historical method is well suited to address strategic issues in marketing. After all, it's an endeavor in which relationships must be examined over a long period. And I have found it to be of particular use in asking the question:

How stable are the market shares of leading brands over prolonged periods?

Research has found evidence of strong and stable product-preference patterns due to product differentiation advantages of established brands. Gregory Carpenter and Kent Nakamoto in 1989 reported that "leading brands outsell their rivals for years and sometimes decades." And Philip Kotler in 1997 found that "19 out of 25 companies who were market

What history teaches us about the BNOUPANCE of brands

By Peter N. Golder

leaders in 1923 were still the market leaders in 1983, sixty years later."

Based on these assertions, maintaining market leadership must be surprisingly common since over 75 percent of leaders maintained their leadership for at least 60 years. More recently, the concept of stable or stationary market shares has been found to be an empirical generalization. Based on a database of over 400 prior analyses, Marnik DeKimpe and Dominique Hanssens in 1995 concluded that "even when looking at prolonged periods of time, market shares tend to be in a long-run equilibrium position."

But there's a problem with these assertions. The first two cited above seem to be drawn from a 1983 Advertising Age study. The Advertising Age

study claims to show that long-term success is due to well-managed promotions and contemporary graphic presentations. Makes sense. But my investigation into the data used in that study leads me to quite a different conclusion.

he Advertising Age results relied on a book published in 1923 by two New York University professors, George Burton Hotchkiss and Richard B. Franken, entitled The Leadership of Advertised Brands.

Sample of Leading Brands in 1923 and 1997							
Product Category 1923 Leaders 1997 Leaders							
Single Dominant Brand in 1923 (well-known categories)							
Cleanser Old Dutch (744) Comet, Soft Scrub, Ajax							
Chewing Gum Wrigley (664), Adams (97) Wrigley's, Bubble Yum, Br	ubblicious						
Motorcycles Indian (564), Harley-Davidson (156) Harley-Davidson, Honda, I	Kawasaki						
Single Dominant Brand in 1923 (less well-known categories)							
5-Cent Mint Candies Life-Savers (436) Breath-Savers, Tic Tac, C	erts						
Peanut Butter Beech-Nut (435), Heinz (140) Jif, Skippy, Peter Pan							
Razors Gillette (396), Gem (87), Gillette, Bic, Schick							
Ever Ready (50)							
Single Leading Brand in 1923							
Soft DrinksCoca-Cola (353), Cliquot Club (85)Coca-Cola, Pepsi,Bevo (75), Hires (51)Dr.Pepper/Cadbury							
Coffee Arbuckle's Yuban (224), Folger's, Maxwell House, White House (100), Hotel Astor (56) George Washington (55)	Hills Bros.						
Laundry Soap Fels Naptha (192), Octagon (93) Tide, Cheer, Wisk Kirkman (83), Ivory (82) Babbitts (51), Crystal White (51)							
Brands Sharing Leadership in 1923							
Typewriters Underwood (394), Remington (265) Smith Corona, Brother, L Oliver (100), Corona (53)	.exmark						
Cigarettes Camel (256), Fatima (156) Marlboro, Winston. News Pall Mall (90), Murad (72) Lucky Strike (64)	port						
Hosiery Holeproof (180), Onyx (156) L'Eggs, Hanes, No Nonsen Phoenix (66), Luxite (60)	ISC .						
Leading Brands in 1923 do not have Pronounced Leadership							
Shoes Douglas (146), Walkover (120) Nike, Reebok Hanan (52)							
Candy Huyler's (144), Loft (94) Hershey, M&M/Mars, Nes Page & Shaw (91), Whitman (89)	stle						
Jelly or Jam Heinz (62) Smucker's, Welch's, Kraf	t						

A fresh look at the book reveals that the commonly referenced data that "19 out of 25" market leaders maintained their leadership for at least 60 years is based on a biased sample of companies. The original 1923 study covered 100 categories, not 25. Advertising Age plainly chose the sample of 25 selectively to demonstrate long-term leadership.

Given that this conclusion is misleading, the questions remain: What is the proper estimate of long-term leadership? And how stable are the market shares of leading brands over prolonged periods?

By comparing the leading brands in 1923 with the leading brands today in all 100 categories, I have determined that the actual percentage of former leaders that have maintained leadership is actually far lower. In addition, I've been able to consider the market share stability of leading brands over this period.

First, however, we have to go back to the original data. The NYU professors collected data in 1920 and 1921 from 512 males and 512 females at a representative sample of U.S. colleges. Most were in the Northeast and Mid-Atlantic states, with some colleges from the South, Midwest, and West included as well. Subjects were given a list of 100 categories and asked to write the brand or manufacturer they first thought of for each category. The analysis of these data considers all brands mentioned by at least 50 people. The only exceptions are four categories where the leading brand is included even though it was mentioned by fewer than 50 people.

he data collected in 1997 are the leading brands in each category based on market share. Data sources used to compile this include Gale's Market Share Reporter, Simmon's Study of Media and Markets, trade publications, and multiple sources referenced in the Business Periodicals Index, Readers' Guide to Periodical Literature and Lexis-Nexis. Reports of market share are primarily based on 1996 sales.

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Table 2							
Long-Term Success Rate of 1923							
Market Leaders							
Later Market Share Rank							
	Current Knowledg	e New Findings					
	(based on biased	(based on com-					
	1983 sample)	plete 1997 sample)					
Number 1	76 %	23%					
Number 2	16%	8%					
Number 3	4%	9%					
Top 5	4%	8%					
Top 10	0%	7%					
Below 10	0%	16%					
Failed	0%	28%					

After investigating these 100 categories, five no longer seem relevant for today's consumers. Independent public reports of market share were available for 85 percent of the remaining categories. Market shares for the remaining categories are estimated based on (i) company reports and (ii) visits to multiple stores in New York City and Los Angeles.

Table 1 presents a sample of the 100 categories and the leading brands in 1923 and 1997. These 15 categories are grouped according to a classification from the 1923 study. The numbers in parentheses beside the 1923 leaders are the number of respondents mentioning that brand.

Table 2 compares marketing's current knowledge (which is based on a biased sample) with the new findings based on the full sample of categories.

The difference in the findings is striking. It turns out leading brands maintain their leadership at a rate less than one-third of that currently believed! **Table 3** presents a broader set of findings based on these data. Since there may be differences between durables and non-durables

Table 3								
	Comparison of Starting and Ending Market Share Positions							
		Endi	ng (1997)	Starting (1	923)			
	Sample Size	No. 1	No. 2	No. 3	Top 5	Top 10	>10	Failed
Number 1 Brand	97	23 %	8%	9%	8%	7%	16%	28%
Group 1	19	42%	5%	11%	5%	5%	5%	26 %
Group 2	11	18%	18%	18%	9%	9%	0%	27%
Group 3	25	24%	8%	12%	12%	8%	20%	16%
Group 4	15	13%	7%	7%	20 %	13%	20%	20%
Group 5	27	15%	7%	4%	0%	4%	26 %	44%
Number 2 Brand	70	11%	9%	3%	4%	9%	26 %	39 %
Number 3 Brand	43	5%	7%	2%	5%	9%	14%	58%
Number 4 Brand	26	4%	4%	4%	4%	8%	42 %	35 %
Number 5 Brand	12	0%	0%	25%	0%	17%	42 %	17%
Number 6 Brand	5	0%	0%	0%	0%	20%	20%	60%
Number 7 Brand	1	0%	0%	0%	0%	0%	0%	100%

Table 4								
Comparison of Starting and Ending Market Share Positions for Durable Goods								
Ending (1997) Starting (1923)								
Samule Size No. 1 No. 2 No. 3 Ton 5 Ton 10 > 10 Failed								
Number 1 Brand	45	16%	4%	13%	7%	2%	16%	42%
Number 2 Brand	28	11%	7%	0%	0%	11%	25%	46%
Number 3 Brand	17	6%	6%	0%	6%	6%	6%	71%
Number 4 Brand	8	13%	0%	13%	13%	13%	38%	13%
Number 5 Brand	4	0%	0%	50%	0%	25%	0%	25%
Number 6 Brand	2	0%	0%	0%	0%	0%	0%	100%
Number 7 Brand	1	0%	0%	0%	0%	0%	0%	100%

Table 5								
Comparison of Starting and Ending Market Share Positions for Non-durable Goods								
Ending (1997) Starting (1923)								
	Sample Size	No. 1	No. 2	No. 3	Top 5	Top 10	> 10	Failed
Number 1 Brand	51	29%	10%	6%	10%	12%	18%	16%
Number 2 Brand	41	10%	10%	5%	7%	7%	27%	34%
Number 3 Brand	25	4%	8%	4%	0%	12%	20%	52%
Number 4 Brand	17	0%	6%	0%	0%	6%	47%	41%
Number 5 Brand	7	0%	0%	14%	0%	0%	71%	14%
Number 6 Brand	2	0%	0%	0%				

(durables last for many uses while non-durables do not), **Tables 4 and 5** present findings for these two classes of goods.

The data can be mined for other important conclusions. It turns out, for example, that more of the leading brands in 1923 failed than remained leaders. In addition, more of the top three brands in 1923 failed than remained among the top five brands. All of which leads us to believe that market shares over this prolonged period are simply not stable, and, as a rule, decrease over time. However, the long-term success or failure of brands is proportional to the strength or weakness of their starting positions.

What kinds of brands last? As a

rule, for durable goods, the rate of maintaining leadership is lower than the overall average and the rate of failure is higher than the overall average. For non-durable goods, the rate of maintaining leadership is higher than the overall average and the rate of failure is lower. None of the members of the clothing subgroup maintained leadership and 67 percent of the 1923 leaders failed. Meanwhile, in the food and beverage sub-group, 39 percent of the 1923 brands maintained leadership and only 21 percent of former leaders failed. Brands that consumers eat and drink constitute brands that are plainly built to last.

The findings from this analysis show that the rate of long-term leadership is much lower than currently believed. In addition, these findings raise doubts about the currently accepted empirical generalization that market shares are stable over prolonged periods. While market shares may be stable over shorter periods, they are clearly not stable in these categories over the period considered.

Many historians believe that a reasonable outcome of historically generated knowledge is being able to manage better in similar situations.

n 1923, Wrigley's had become the established brand leader through extensive advertising. Its main competitor, American Chicle also known as the chewing gum trust - tended to maximize profits by skimping on marketing. Since 1923, Wrigley's continued success has been primarily based on three factors: maintaining and building strong brands, focusing on a single product, and being in a category that simply has not changed much.

In 1927, Wrigley's was an early sponsor of national radio. By some reports, the firm was the largest, singleproduct national advertiser in the 1930s. Wriglev's also showed a great commitment to its brands throughout World War II. Due to scarce supplies of the ingredients crucial to its normal quality gum, Wrigley's pulled its traditional brands and introduced another brand. At the same time, Wrigley continued to advertise traditional brands with the slogan

"Remember this Wrapper." After the war, sales soon surpassed the pre-war level.

More recently, Wrigley has continued to manage its brand equity carefully. When sugarless gum and bubble gum became popular in the 1970s, Wrigley did not The second factor in Wrigley's long-term dominance is the firm's unrelenting focus on chewing gum. Even though the company owned the Chicago Cubs baseball team for many years, the team was a sideline to the firm's main busi-

A Non-Durable Leader That Endured: Wrigley's Chewing Gum



reflexively extend its brand. Several years after the sugarless gum market had taken off, it introduced a product, but under the same brand it had used for the World War II-era sub par gum. It wasn't until 1984 – with "extra" – that Wrigley committed to the sugarless gum market. Meanwhile, in bubble gum, Wrigley used a subsidiary to introduce Hubba Bubba. ness. For over 100 years, Wrigley has been run by three generations of Wrigleys. Collectively, the family still owns over 40 percent of the company.

In the 1960s, the family chose not to expand into other businesses and referred to diversification as a dirty word. Management rejected joining a conglomerate, American Home Products. even though Warner-Lambert and Squibb had acquired its major competitors. As a single-product company, Wrigley has continued to grow and prosper, domestically and internationally. Over the last 10 years, dollar sales have grown nearly 10 percent per

year in what is considered a mature category.

The third factor contributing to Wrigley's long-term dominance is the fact that chewing gum has changed very little over the years. In some ways, the market has simplified. In the 1920s, at least 25 flavors of chewing gum were available. Today, only mint-flavored gums dominate sales. These minimal changes have made later entry very difficult. In fact, Beech-Nut (now part of Nabisco) was the last major chewing gum company to enter, way back in 1911. Although chewing gum has changed relatively little, Wrigley maintains a serious

R&D effort to improve its products and packaging.



Everybody knows Santayana's line about those who don't remember the past being condemned to relive it. The same holds true for brand managers. Understanding how and why brands succeed and fail over time can help executives and marketers do their jobs better. There may be areas of inquiry where history, indeed, remains bunk. When studying the Internet and e-commerce, for example, we have precious few antecedents to guide our understanding of the current situation. Therefore, the tools and techniques of history can act like torches simultaneously illuminating the path we've already taken and the road ahead. To understand where we are today – and where we may be tomorrow – it can never hurt to know where we were yesterday, or in 1923. More information can be found at: www.stern.nyu.edu/Faculty /workingpapers/papers/golder

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nderwood was the leading typewriter brand in 1923. Over the next three decades. Underwood was profitable. But instead of innovating, Underwood sought to collude with its competitors. According to a 1939 federal antitrust indictment, the four largest typewriter manufacturers, who together set prices and cornered 90 percent of the market, met to coordinate activities as early as 1930. One vear after the indictment. Underwood and the other three manufacturers agreed to a consent degree that prohibited their monopolistic practices.

During World War II, many companies developed technology that would be useful after the war. But not Underwood. The company's profitability from 1945 to 1955 was due to pent-up, post-war demand for typewriters, a growing economy, and sales from the Korean War effort. During this period, Underwood continued to pay high dividends rather than invest more in product development and manufacturing. While other companies invested heavily in computer technology, Underwood

acquired only tiny Electronic Computer Corporation of Brooklyn in 1952.

In 1956, several factors exposed Underwood's weaknesses. Lower-priced foreign competitors' share of manual typewriters began a five-year increase from 15 percent to 40 percent. Outdated manufacturing facilities became too lacking the necessary technical expertise.

After a few more unprofitable years, Underwood was acquired by Olivetti. While Olivetti's U.S. subsidiary returned to profitability from the mid-1960s until 1970, it lost money throughout the 1970s and early 1980s. The Underwood name was phased

A Durable Leader That Did Not Endure: Underwood Typewriters



costly, and electric typewriters became more competitive, eventually surpassing sales of manual typewriters in the early 1960s. These conditions led to increasingly large losses and failed efforts at new strategic directions. Underwood spent \$12 million to diversify into computers, but gave up after 18 months, out, and today, Olivetti is only a very small part of a relatively unimportant category.

Underwood's lack of innovation stands in stark contrast with IBM. IBM bought Electromatic Typewriter in 1933 and introduced the first successful electric typewriter in 1935. In 1941. IBM introduced proportional letter spacing. In 1961, Big Blue introduced the Selectric typewriter with the "golf-ball" typing element. In 1964, the company introduced an automatic typewriter that stored information on magnetic tape. These advances and others enabled IBM to dominate electric typewriters through the late 1970s.

More important than succeeding in typewriters, IBM leveraged its strong position to become the dominant firm in computers. During World War II, IBM developed the Mark I computing calculator. The company sold its first computer to the government research facility at Los Alamos, New Mexico in 1953 and soon afterwards captured market leadership. IBM's leadership in important segments of the computer industry continues today.

Underwood's demise demonstrates the importance of continuous innovation. At least up until the mid-1930s, Underwood was well positioned to be the dominant firm in office automation. Its revenues were about equal to IBM's in 1937. But by 1957, IBM's revenues were about 15 times those of Underwood!



SUPERMARKET CHECKOUT ROULETTE

These days, New York is one of the safest cities in the world. But there are some places that remain remarkably treacherous: supermarket aisles. Larry White guides us through the Express Lane.

ife in modern New York engenders a great deal of uncertainty, even anxiety. For many residents of Gotham, the basics of everyday life are frequently a question of chance: finding an affordable apartment, hailing a taxi during rush hour, getting a reservation at that hot new Asian/Italian/Peruvian restaurant. And every day, hundreds of thousands of New Yorkers involuntarily take their chances in another game of chance they surely would prefer not to play: supermarket checkout roulette.

When shoppers load up their carts at D'Agostino's or the Food Emporium, and head down their final aisle, a series of questions pop up: Which is the fastest checkout line? How many people are in which line? How full are their shopping carts? Which checkout clerk is the speediest? Will the woman in front of me decide to write a check? Or ask for a price verification? Will the store manager have to come over?

To top it all off, we risk being flattened by speeding shopping carts when a new checkout line suddenly opens. Indeed, the traffic jams of maneuvering carts frequently rival those of the approach to the 59th St. Bridge at rush hour.

In recent years, the supermarket industry has introduced some wrinkles that it plainly believes will improve shoppers' odds. But while well-meaning, these efforts have largely failed. The "ten items or fewer" line doesn't really solve the problem. Our anxiety levels are just as high when we scrutinize the baskets of the people in front of us and wonder whether we should challenge the man who clearly has thirteen items in his basket. Does the "two cans for a dollar" special count as one item or two? How about two six-packs of Sprite? Do they comprise two items or twelve? And while barcode scanners at checkout counters have been beneficial, they haven't really eliminated the roulette game.

Of course, this is one area of retailing in which New Yorkers can comfort ourselves that we're not at a disadvantage. Supermarkets throughout the country have persisted in this entirely archaic checkout system for decades.

B ut there is a better way – and one that is based on sound economic principles. For at least thirty years, many banks and airlines have served their customers through a system of "one line serves all." All customers form a single line and then proceed to the next open teller or clerk, whether they are cashing twenty-five checks worth \$500,000 or depositing two rolls of quarters, whether they are buying a ticket to France or vainly attempting to get a better seat. Even the legendarily logy Post Office has adopted this system. And the "take a number" system employed by bakeries, butchers, and delicatessens is partly designed to accomplish the same end.

Now, as any management expert could tell you, the one-line-serves-all method doesn't speed customers through service lines any faster – on average. But it does have the salutary result of reducing variance and the elements of luck. And as any psychologist could tell you,



that surely reduces anxiety. For New Yorkers, what could be of greater value?

So, why haven't the supermarkets followed the lead of their counterparts in banking and airlines? Could this all be a conspiracy by the tabloid publishers, who want shoppers to linger in line and buy their latest alien revelations? But the current system isn't any slower on average; it just increases variance and anxietv. So, the tabloids could still have the same average shot at you in that single waiting line. Tempting as it is, we can not collar them as the villains.

n its defense, the supermarket industry would probably complain about the scarce (and expensive) square feet of selling space and the extra problems of shopping carts. But this would just be an alibi to cover their sluggishness. Space is



scarce for every retailer in New York, and shopping carts are simply an extra complication, not an insuperable barrier to change. Anyone who wants to see how the one-line-serves-all system could be successfully adapted to similar retailing should pay a visit to any Old Navy store.

Supermarkets may also pull out a trump card: technology. After all, we have been told that customer-held checkout computers, which will eliminate unpredictable lines and hence anxiety, will appear imminently. With all due respect, people who believe this claim have been reading too many of those tabloids while waiting for the store manager to verify the price of asparagus.

Can the academic business literature help explain why the supermarket industry has been so slow? Unfortunately, standard microeconomics is not much help here. There are enough supermarket chains remaining in this country so that at least one of them would have experimented with one-line-serves-all. But it hasn't happened yet.

And this state of affairs can't be a problem of "network economics." Unlike the prevalent and highly efficient barcode/scanner technology, which required group action and cooperation between manufacturers, distributors, and retailers, the rearrangement of a supermarket floor layout to accommodate one-lineserves-all could be undertaken by a single actor. All it would take is one brave supermarket. But, again, it hasn't happened.

It is this economist's humble opinion that we need to explore more sociological dimensions. Supermarkets, after all, are a relatively old industry. (They date to the 1930s.) And it is one in which technological change – or even any kind of change – does not happen often. The last major innovation in supermarkets (aside from the

bulk-food sections) was the bar code/scanner technology, which is now over 20 years old. We have to go back to the 1950s – and the cash register that automatically calculates and dispenses change – to find another leap forward.

One major innovation every 20 years seems to be the norm for this industry. And if the hand-held checkout computer is the current focus of industry attention, then I fear we may have to wait another 20 years before oneline-serves-all is even considered. In this age of rapid technological improvement, surely the supermarket industry can do better than that.

Ralph Waldo Emerson told us that the world would beat a path to the person who invents a better mousetrap. I'll settle for a better supermarket checkout system, and I will be eager to take my business to the chain that develops it first.

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In their search for the root causes of international financial meltdowns, politicians and bureaucrats have been looking in the wrong places. The best defense against economic crises is good, solid banks.

By Paul Wachtel

For much of the past decade, government officials, officials of international financial institutions and international bankers have hopped the globe like firefighters – dousing conflagrations in far-flung economies. The Mexican crisis in 1994-95. The enduring Japanese depression. The meltdown in the Asian economies in 1997. The collapse of the Russian economy in 1998. Each of these wildfires burned the local economy and threatened to torch the world's financial infrastructure. In each instance, observers searched for culprits. The usual suspects include government fiscal policy, currency speculators, unpredictable changes in the tide of capital flows, overzealous Western investment banks, and corrupt local governments. In each episode, however, one important factor was often overlooked: the banks.



ntil recently, macroeconomists paid comparatively little attention to banks and other financial institutions. The analysis of monetary policy has tended to rely on the study of interest rates, credit availability, and government policy. The unique role of banks as a link between monetary authorities and the economy was often overlooked. However, today, in developing countries and emerging markets, financial intermediation by banks and the existence of

sound domestic financial institutions are accepted as necessary conditions for economic growth.

The greater appreciation of the role of banks is partially due to the transition economies of Eastern Europe and the former Soviet Union. After all, Sovietera planned economies did not have modern banking sectors. Eastern bloc banks were merely

payment agents for government bureaucracies. As a result, the transformation of the various state monobanking systems into systems composed of a central bank and commercial banks was frequently one of the first steps of modernization. Indeed, in countries such as Hungary and, more recently, China, the transformation started before political liberalization.

Since banks were established before other economic reforms or structural changes were enacted, they continued to function as sources of credit to state-owned enterprises. As a result, these newly established banks did not develop lending skills, easily became overextended, and had to be recapitalized. The existence of weak banks, which were backed by central banks and sometimes aided by international financial institutions, led to resource misallocations. Specifically, banks failed to develop risk management skills because they expected the central bank and the international community to be a lender of last resort.

The failures of many of these banks led to increased focus on efforts to design and implement appropriate regulatory structures. As a result, it is now generally

In developing countries and emerging markets, financial intermediation by banks and existence of sound domestic financial institutions are accepted as necessary conditions for economic growth. As a result, it is now generally accepted that sound domestic market-oriented financial institutions will enhance the stability of the international financial system. Such banking systems, however, must meet three essential criteria: (1) independence from political influence with or without private ownership; (2) market competition or at least contestability; and (3) credible

and effective regulation.

Independence. In more than a few countries, many banks are private in name only. Extensive government ownership is common. Even where banks are privately owned, government-bank links are frequently very strong. Moreover, foreign ownership of banks or allowing foreign participation in the financial services industry is often proscribed. Such insulation from international markets is a destabilizing influence, and the lack of independence from the state deters sound banking.

Privatization is usually viewed as the way to create market-oriented banking sectors in transition economies.



Indeed, market-oriented banking requires the state to disengage from direct governance of banks (whether they are state-owned or privatized) and to develop an effective regulatory framework for the banking sector. Governments thus face the tricky maneuver of simultaneously getting out of the banking business and getting into the regulatory/supervisory business.

Managing these two seemingly contradictory tasks is often difficult. Successful regulatory policy requires the state to assume an arms-

the state to assume an armslength role as banking sector regulator and supervisor without any direct involvement in the conduct of the banking business – even if it remains a passive shareholder in certain institutions.

n independent banking sector also requires entities that are independent of control by insiders. The inherited legacies of planning mechanisms (in transition economies) or economic oligarchies (in many non-democratic developing economies) encourage a continuation of directed credit allocation that is not based entirely on strict commercial conditions. For example, the Czech banks continue to support large firms with massive loans and Indonesian banks were responsible for the diversion of assets to the President's family. Interlocking arrangements between bank insiders and clients often result in excessive accumulation of bad debt in hostage-like situations. Due to a combination of political interference and a lack of expertise, bank personnel are often incapable of and

Competition in banking does not require a large number of banks. The situation in the U.S. – with thousands of banks – is the exception and not the rule.

unwilling to monitor company behavior. An independent bank is able to shed its unprofitable customers without state interference or the influence of managers.

Competition. The second element of market-oriented banking is competition or contestability. Competition can be introduced by easing the entry of new entities into the local banking scene. However, an increase in the number of banks is problematic for at

least three reasons. First, the creation of a bunch of inefficient and poorly capitalized banking institutions may not improve the efficiency of financial intermediation. Second, poorly capitalized banks that undertake risky activities have systemic implications. Third, since bank licensing is often subject to political influ-

ences, the managers and owners of new domestic banks are often poorly chosen.

Competition in banking does not require a large number of banks. Many countries (both small and large) have relatively few banking institutions. The situation in the U.S. – with thousands of banks – is the exception and not the rule. In other countries, competitive pressures come from the structure of the financial system generally and the extent to which other non-bank financial institutions compete with the banks.

The possibility of the entry of foreign banks and the provision of banking services by other institutions make the financial services market contestable. Contestability can lead banks in even a highly concentrated, seemingly



protected market to operate as they would under pure competition. And it can create a competitive framework for banking without increasing systemic risks.

Effective regulation. The third element of an independent banking system is an effective bank regulatory structure. The regulatory structure must remain independent of any residual state involvement in the banking business; the credibility of bank supervisors and regulators must be unquestioned. This is not a simple matter of put-



ting legislation and bureaucracies in place. Rather, it entails the development of institutions that can provide credible regulatory threats to the banks.

There is no clearly appropriate design for bank regulatory structures. The mechanism can be run by the Finance Ministry, a central bank, or by some other entity. Where it is located is less important than how it operates.

ecent large country experiences have illustrated the importance of these issues. In the United States, an inadequate regulatory structure was not, in all likelihood, responsible for the crisis in the thrift industry in the 1980s. However, the inadequacies of the regulatory response probably aggravated the crisis. A similar argument can be made regarding the ongoing crisis in Japanese banking. Although a regulatory structure is in place, it has not responded in a sufficiently timely fashion.

A regulatory structure that responds quickly is an important tool in avoiding the international exposure of both banks and firms with excessive risks. The Asian crisis of 1997 showed clearly that international financial stability is threatened when both domestic and foreign institutions rely on lender of last resort promises and inadequate supervision. These experiences suggest that conventional forms of bank supervision may not be able to stem bank failures in all situations.

The regulatory framework should not serve as a sub-

stitute for the salutary effects of market discipline but as a complement to it. In New Zealand, regulatory authorities are introducing a system where conventional bank regulation will be augmented by market discipline. The government will not provide deposit insurance and banks will be required to publish information on their condition regularly. We are likely to see other countries experimenting with such market-based regulatory mechanisms.

International standards for regulatory oversight are important because central

banks can sometimes find themselves with conflicting goals. For example, the central bank may be reluctant to take regulatory actions that might lead to increased demand for central bank loans if, at the same time, macroeconomic policy dictates that it tighten the money supply.

And if the central bank does not provide liquidity to a troubled banking institution, another regulatory structure must be in place to oversee the troubled institution's needs. That is, there needs to be an independent regulator, such as a powerful deposit insurance agency, that can either close down or sustain failed banks.

Since it is almost impossible to envision a deposit insurance fund that is sufficiently well capitalized to provide insurance against all risks, the deposit insurance agency should have sufficient power to minimize the calls on the insurance funds. Thus, the deposit insurance agency should also have extensive regulatory powers over banks.

he rules regarding the deposit insurance scheme should be as transparent as possible and should be uniformly and consistently applied. Any deviation from specified rules will create the expectation that the government is willing to guarantee the continued existence of banks. The efficacy of bank regulation is undercut when all the players – bankers and government officials alike – believe that the government will provide support in the event of any bank failure.

Coordination of regulatory authority is particularly

important when banks may be viewed as being too big to fail. In such instances, regulatory action must be timely because closing the bank with or without deposit insurance guarantees may be impossible for any of several reasons.

n some cases, bank closure may simply be

politically unfeasible. Or regulators may fear systemic economic consequences. If closure is precluded, then effective regulation takes the form of examining and disci-

plining the bank's activities.

Regulators should have a clear understanding of the types of sanctions – a forced sale, merger, recapitalization, or limits on activities – that can be applied to a troubled bank prior to closure and they should be applied promptly.

In many countries, authorities are beginning to recognize the need to ensure independence, contestability, and credible regulation in domestic financial services. Sound banking is a necessary complement to the sound fiscal and monetary policies that have been the focus of macroeconomists in the past.

Frequently, the introduction of foreign banks or foreign owners has helped push the development of sound banking forward. Nevertheless, there is still a persistent and puzzling resistance to foreign entry.

Countries as disparate as Brazil, France, and Poland have been loath to let the national financial system become subject to foreign influence. And foreign ownership of the banks seems to convey the appearance of foreign control. But there are many fundamental reasons why foreign strategic investors are important to the banking industry. Even when foreign banks enter with little capital at risk, they are placing their international reputational capital at risk. Foreign ownership helps clarify private sector control that is independent of the government. Foreign banks are able to transfer modern banking technology easily. And such ownership reduces the potential for politicization of bank lending and increases the international integration of financial markets.

Most importantly, foreign bank ownership may reduce the likelihood of financial crises. Indeed, it would have significantly reduced the seriousness of the recent financial crises in Asia. Making foreign investors – the bank owners in emerging markets – responsible for the consequences of their lending practices creates a disincentive for damaging speculative short-term financial flows. Foreign banking interest is a genuine market test of the value and soundness of domestic banks. So it is a useful signal when local financial markets are too thin or too small to draw such attention. If we have learned anything from the cascading crises of the past five years, it is that traditional macroeconomic analysis of external sector fundamentals is not always an adequate indicator of vulnerability to exchange rate crises. Indeed, understanding the crucial role of banks and financial institutions should lead analysis into an incisive new

> direction. For in addition to the traditional macro fundamentals – inflation, growth, fiscal deficit, external debt, current account, and exchange rate – we must now monitor the new fundamentals that relate to the financial sector. These new fundamentals include

the strength of the banking system, quality of bank supervision, exchange rate exposure of the financial sector, and the adequacy of the legal and financial infrastructure.

nderstanding and monitoring these new fundamentals may help ward off international financial crises, for domestic banking crises are more often than not precursors to exchange rate crises. An important implication of the relationship between financial fragility and international crises is that financial liberalization and the development of sound financial institutions and regulatory structure should be carefully sequenced.

In the end, the best protection against exchange rate crises may be a sound banking system. Moreover, the integration of financial systems that comes with open financial markets, international banking, and foreign bank ownership provides a clear incentive to maintain a sound banking system. Poor banking practices and poor banking regulation invite destabilizing capital flows and unsound financial decisions. A closed banking sector that is protected by government ownership or regulatory weaknesses leads to moral hazards. An independent and open financial system on the other hand will have selfinterest in avoiding destabilizing transactions.

It is no surprise that international financial institutions like the International Monetary Fund have begun to pay more attention to the financial sectors in their regular country evaluations. As we strive to head off the next international financial crisis, it may be more important to evaluate the financial sector than to monitor traditional macroeconomic indicators.

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Domestic banking crises are more often than not precursors to exchange rate crises.

Paper By Daniel Gross

ew Yorkers are not alone among urbanites in thinking their city to be the center of the world. If you spend any significant amount of time in London, or Paris, or Beijing, or Madrid, you will realize that the locals believe that their hometown stands at the geographical center of all that matters.

It has always been thus. The residents of Rome, the world's largest city about 2,000 years ago, liked to note that all roads led to their metropolis.

But for the great cities of the world, fame can be fleeting. Rome, the eternal city, lost its status as the world's largest about 1,700 years ago. And some of the members of the global top five in 100 A.D. don't even exist any longer.

The shifting fortunes of the world's largest cities speak volumes about the vast economic, technological. and social trends that have swept the world throughout the last two millennia. Well into the



The World's Largest Cities In...

		-	
100 A.D. Rome Loyang, China Seleucia, Persia Alexandria Antioch	450,000 420,000 250,000 250,000 150,000	1925 New York London Tokyo Paris Berlin	7,774,000 7,742,000 5,300,000 4,800,000 4,013,000
1000 A.D. Cordova, Spain Kaifeng, China Constantinople Angkor, Cambodia Kyoto, Japan	450,000 400,000 300,000 200,000 175,000	1950 New York London Tokyo Paris Shanghai	12,463,000 8,860,000 7,000,000 5,900,000 5,406,000
Peking Vijayanagar, S. India Cairo Hangchow, China Tabriz, Persia 1700	672,000 500,000 400,000 250,000 250,000	1975 Tokyo New York Osaka, Japan Mexico City Moscow	23,000,000 17,100,000 15,500,000 11,300,000 10,700,000
Constantinople Yedo, Japan Peking London Paris	700,000 688,000 650,000 550,000 530,000	2000 (estimates) Tokyo New York Mexico City Bembay	28,000,000 20,100,000 18,100,000
London New York Paris Berlin Chicago	6,480,000 4,242,000 3,330,000 2,707,000 1,717,000	Sao Paulo, Brazil Source: "4,000 Years An Historical Census (St. David's Universit	of Urban Growth: "Teritius Chandler Press, 1987)

Once the industrial revolution caught hold, however, Western cities experienced massive population and economic growth. By 1900, the world's largest five cities were all in either Europe or the U.S. One of the newcomers to the 1900 list was our home - New York.

Indeed, the self-professed financial, media, fashion, and advertising capital of the world is a relative neophyte onto the world scene. In 1,700, when Japan, Yedo. counted 688,000 souls, Gotham was nothing more than a warren of streets in southern Manhattan and some farms.

And New York's reign at the top has been relatively brief, in historical terms. Today, the New York Metropolitan area sits a distant second behind Tokyo. And when a global census is taken in 2020, it is likely the Big Apple will be surpassed in size by the likes of Mexico City and Bombay.

As the Romans might have put it, sic transit gloria.

Middle Ages, Asia was frequently more advanced in many areas than Europe. As a result, it was home to some of the globe's largest concentrations of population.

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