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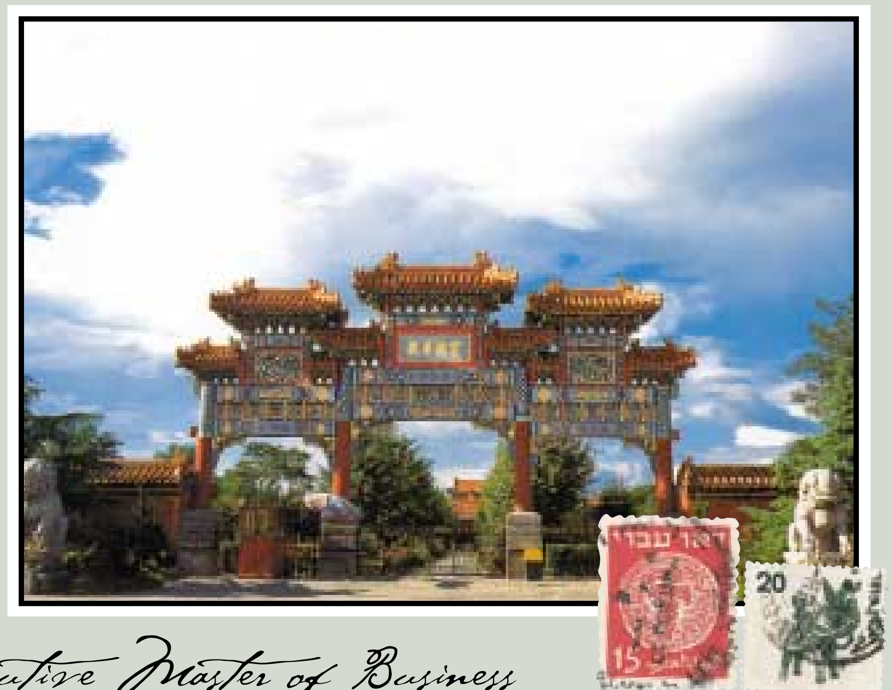

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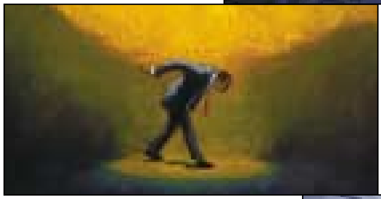

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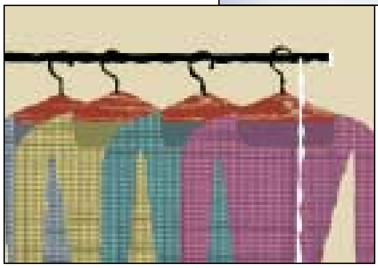

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Will the Internet Replace the University?

Some educators and technologists boldly predict the demise of the brick and mortar university as we know it. Why would anyone need a physical campus, they ask, when the virtual world is so much more convenient and less costly? Are we facing a future that holds no value for physical universities? Is the Internet a complimentary or a replacing technology with respect to education? These are serious questions all educators must be asking themselves today.

Advantages

Does an online approach bring value to education? Yes, there are many features of technology that students find very attractive. In most computer-assisted learning models, students can learn at their own pace and need not be synchronized to the entire class. This is especially attractive to students who work and can only take courses at odd hours.

Students are also not tied down by geography. Members of an online "class" might be spread across the globe. Internet students may be exposed to a much richer variety of information sources than would be possible using traditional classroom materials.

In addition, some instructors report that online courses appear better for certain personality types. Shy students, who might not dare speak in class, often find they contribute to discussions in an online environment where anonymity is higher.

Online courses give students faster feedback than traditional courses. BYU online courses, for example, have a "speedback" mechanism that gives students instantaneous results of multiple-choice tests. Faster feedback is possible with objective tests of factual material but, of course, usually not feasible with essays.

As for costs, the jury is still out. While distribution costs for course materials may be much less, at BYU we have not found that instructor time is more efficient. Some instructors find that the amount of email generated by online students mushrooms beyond their worst fears. While we are exploring methods of more efficient instructor/student interaction, online courses have not yet proven to be less expensive than traditional courses, overall.

Disadvantages

Especially for management education, online courses present some serious drawbacks. Management is about unstructured problem solving and applying judgement to complex situations. That kind of learning is not easy to put into an online format.

Some tools of management are fine for online treatment: present value analysis, tax computations, mechanics of accounting statement generation, regulations applying to hiring employees, etc. But once the tools and the facts are mastered, how and when should they be applied? What data do you need to compute present values, and where do you find them? What do you do with the results?

Another crucial part of management education is learning to work with others. We spend a significant amount of effort at the Marriott School helping students learn to work as effective team members. How do you contribute? When do you speak up or remain silent? How do you bring around a reluctant team member or one who may be having problems? These issues and relationships are almost impossible to create in an online environment.

Yes, there are important things to apply to virtual groups, but they are much different than those of real people interacting. Since most of our students are going into job situations that are more real than virtual groups, it seems they need the experiences provided by real group intereaction.

What is the Role of Computer-assisted Instruction?

"Will online instruction replace the traditional classroom?" is the wrong question to ask. A better question is, "How can online instruction be used to improve what we already do in the classroom?" Because BYU exists to help shape and mold students and help them develop the judgement needed to become great leaders and managers, I doubt that we will ever completely supplant traditional classroom methods with an online approach to learning. I don't think many of the top business schools in the country will go completely that direction either because the managers and leaders from online-only programs would be seriously short-changed in terms of a complete management education.

I think we will get better at finding out how to use technology to improve our teaching. Many classes contain factual material and analytical tools that might be most efficiently mastered via an online approach. Online tools can greatly facilitate information retrieval, sharing, and presentation.

But the real value we can give our students comes in the development of managerial judgement. What information—out of all mounds of data you can find on the web—is most valuable in the analysis of this particular situation? How can this information be used most effectively? How do our values and ethics apply to possible alternative recommendations we might make? How did your group interact to develop your suggestions for this case?

We hope to eventually sort out what computers do best from what faculty and person-to-person interaction do best. Only then can we claim to have mastered the online world as it applies to education. E

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7 Last Day of Fall Semester
8–9 Reading Days
11–15 Finals
15 Graduation, No Exercises
13 EMBA Information Session

january

8 First Day of Winter Semester
15 Martin Luther King Jr. Day Holiday
17 EMBA Information Session
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february

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march

8–9 Alumni Board Meetings
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april

6–7 Microenterprise Conference
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26 University Commencement and Graduation
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TBA Fifth Annual William G. Dyer Service Award

may

1 First Day of Spring Semester
28 Memorial Day Holiday

june

18 Last Day of Spring Semester
20–21 Finals
25 First Day of Summer Semester
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December–June

Marriott School Calendar

fall/winter 2000
marriott school
brigham young university

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J. Melody Murdock, *Editor*
Byron Bronk, *Copy Editor*
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Jenny Stathis, *Assistant Editor*

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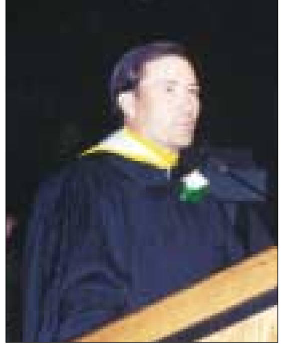


perspective, balance, and flexibility by lee a. daniels

It's an honor for me to share this special day with you to celebrate a major milestone in each of your lives. I feel humbled to be asked to speak at this convocation. My close friends know that there are few original profound thoughts that proceed out of my mouth. However, I have been blessed with twenty years of interesting work and living experiences — the majority of which have taken place outside of the United States.

I would love to say that my career has been a result of following a carefully constructed master plan with a clear vision of working overseas. However, growing up in Mapleton, Utah, I was relatively clueless to the potential global opportunities that awaited me in the business world. In fact, when I was a student, a major in business management seemed to be the safest haven for those of us who did not know what we wanted to do when we grew up. I am sure that is not the case today.

I have discovered throughout my career, whether I have been working in the United States or Japan, whether I have been in accounting or sales, whether I have been an associate or an executive, that we encounter things within our control and many things outside of our control. Ultimately, it is our attitudes that determine our happiness on a daily basis.

The theme I have selected today is "Yesterday is history, tomorrow is a mystery, and today is a gift from God and that's why it's called the present." Throughout my life, I have encountered many people who defer their happiness until some future event takes place in their life: once I get married I will be happy, once I graduate I will be happy, once my kids are in nursery I will be happy, once I get a promotion I will be happy, once I live in Utah I will be happy, once I retire I will be happy. I am sure we are all guilty of having similar thoughts.

Let me offer a few thoughts on three principles that will help us maximize our happiness on a daily basis: perspective, balance, and flexibility.

Perspective An experience I had early in my career changed my perspective on success. A couple of years after I graduated from BYU, my wife, Terry, and I moved to Los Angeles. I was just beginning my career and money was tight. So I moonlighted for a couple of professors who had an investment banking/business valuation company.

On one particular project, an entrepreneur, who was selling his company to a group of Japanese investors, retained our business valuation company to represent him in the negotiations of the selling price of his company and his compensation package. Because of my experience in Japan, the principals of the business asked me to participate in the negotiations.

The morning was spent in intense negotiations. At lunch time, the two parties split up. Our delegation went to an exclusive men's club in downtown Los Angeles. I was honored to be included in the presence of such distinguished individuals. Sitting at the lunch table with me were the two principals of the investment banking company, the owner of a multimillion-dollar business, a prominent Los Angeles attorney, and a partner in one of the Big Six accounting firms. I vividly remember the lunch conversation as I listened to these gentlemen talk about their real estate holdings, yachts, automobile collections, European ski vacations, etc. Secretly, I aspired to obtain a similar level of success.

As the conversation continued, the gentlemen started talking about their families. I was shocked to discover that the majority of my lunch companions were divorced. In fact, a couple of them mentioned that their wives and families had become a distraction to their career aspirations. When the ultimatum came to choose between their family and their career, these men determined that their business was more important and separated from their families. I remember contemplating the price that these gentlemen paid for the "so-called" success, and I remember revisiting my earlier desire to emulate them.

I don't want to give the impression that I judge people by their marital status. However, we have been taught by President David O. McKay that no other success can compensate for failure in the home, and Harold B. Lee mentioned that the greatest work we do will be within the walls of our homes. I recall the scripture in Mark 8:36: "For what shall it profit a man, if he shall gain the whole world, and lose his own soul?" Be careful how you measure success.

The tool that I use to keep things in perspective and constantly assess my priorities is a speech from President McKay. Although he was addressing a priesthood audience at the time, the principles have application for all of us. He said, "Let me assure you brethren, that someday you will have a personal priesthood interview with the Savior himself. If you are interested, I will tell you the order in which he will ask you to account for your earthly responsibilities.

"First, he will request an accountability report about your relationship with your wife. Have you been actively engaged in making her happy and ensuring that her needs have been met?

"Second, he will want an accountability report about each of your children individually. He will not attempt to have this for simply a family stewardship but will request information about your relationship to each and every child.

"Third, he will want to know what you personally have done with the talents you were given in the pre-existence.

"Fourth, he will want a summary of your activity in your church assignments. He will not necessarily be interested in what assignments you have had, for in his eyes the home teacher and mission president are probably equals, but he will request a summary of how you have been of service to your fellow men in your church assignments.

"Fifth, he will have no interest in how you earned your living, but if you were honest in all your dealings.

"Sixth, he will ask for an accountability on what you have done to contribute in a positive manner to your community, state, country, and the world."

As you all can freshly recall from your academic experience, it is nice going into the final exam knowing the questions beforehand. These six questions provide perspective, sharpen our focus, and help us prioritize and balance our lives on a daily basis. According to President McKay, our employment is not one of the top priorities in the eyes of the Lord. However, most of us discover early in our careers that maintaining an appropriate balance in life is predicated upon managing the hours we spend at work.

Balance In 1998, Terry and I had the opportunity to accompany the deputy president of the Bank of Tokyo Mitsubishi to Hawaii and participate in the Kemper Open Pro Am Golf Tournament. One evening, after a social function, we had a long ride back to the hotel. He asked me many questions about our church and I had the opportunity to explain about our lay clergy, how everyone accepted responsibilities to serve one another, how we dedicated Sundays for church service and family time, how we held family home evenings on Mondays, and how we also had activities that occupied other evenings during the week.

I will always remember his comments when he surmised that if you are a Mormon, you could never be a successful executive at a major corporation. When I asked for the rational behind his deduction, he indignantly informed me that success in business required total devotion to the corporation.

I used to find that work philosophy unique to Japan, but I am finding it more prevalent in our society. With total immersion in the information age, it seems that we can never escape the emails, voice mails, fax messages, cellular phones, and Internet information overload. I am finding fewer and fewer executives who, in my definition, have balanced lives. The rapid pace of change in technology, competition, globalization, liberalization, and consolidation force executives to work longer and longer hours to stay competitive.

Many executives justify these long hours by saying they are providing for their families. If the truth was known, most families would willingly exchange some of the material wealth for more time with their spouses, fathers, or mothers. During my career, I have turned down promotions, prestigious positions, and some attractive compensation packages because I felt that the job required too much travel or would disrupt my ability to maintain an appropriate balance in my life.

Since most of us will be required to work to provide for our families, let me share with you my philosophy on career management. All of us are going to spend a certain amount of our lives away from our families earning a living. In order to balance my time between family, church callings, employment, exercise, community service, etc., I start by determining how many hours a day I need to dedicate to work. After I have made that time allocation, I do everything in my power to be as productive and successful as possible and to maximize my earnings capability. The challenge is to not increase the amount of time we allocate to work as our management responsibilities expand and our salaries increase. It is important to safeguard the time set aside for the other important areas in our lives. Matthew 6:19–21 is a constant reminder of maintaining the right priorities:

> Lay not up for yourselves treasures upon earth where moth and rust doth corrupt and where thieves break through and steal: But lay up for yourselves treasures in Heaven, where neither moth nor rust doth corrupt, and where thieves do not break through nor steal: For where your treasure is, there will your heart be also.

Your balance and time allocations may be different from that of your coworkers. You may discover that they dedicate a larger percentage of the day to their professional pursuits. Here are some suggestions to help you be successful despite putting in fewer hours.

there will be times in your life that will require flexibility as you strive to keep balance in your life.

Find a job, position, or function that you enjoy. Ensure that there is a clear understanding of your supervisor's expectations and your work objectives. Quantify the objectives and clarify the measurement system that will be the basis for performance assessment. Continually improve your knowledge and capability. Plan your work on a daily basis and work your plan. Strive to distinguish yourself—create your own personal competitive advantage. Be a good team player.

Flexibility As you try to keep things in perspective and strive to maintain a balance in your lives, flexibility will be the key to maintaining and sustaining your daily happiness. I pursued my master's degree three nights a week for two years while I worked full time, served in a bishopric, and attempted to be a good husband and father to five children. Obviously, during this period of time, we had to make some short-term sacrifices and adjust our balancing act to accommodate one more priority.

There will be times in your life that will require flexibility as you strive to keep balance in your life. There may be a specific project at work that requires a temporary adjustment to the amount of time you allocate to your employment. It is critical that these times remain occasional exceptions rather than becoming the norm.

The one constant in today's work environment is change. Change creates anxiety and represents opportunity. Embrace it and adapt. Develop your personal competitive advantage and you will not only survive change, you will thrive.

In closing, be flexible, keep things in perspective, maintain balance in your life and you will realize that each day is a gift from God, and that's why it's called the present. E

Lee A. Daniels is president and CEO of Titus Communications. Address given at the Marriott School Convocation 11 August 2000.

THE INNOVATOR'S DILEMMA—

WHEN NEW TECHNOLOGIES CAUSE GREAT FIRMS TO FAIL

BY CLAYTON CHRISTENSEN

ILLUSTRATIONS BY ANDREW JUDD

New technologies and innovations cause even some of the best-run firms to slip and sometimes fall. As you look ahead, it may be helpful to identify innovations that will get your company the most competitive traction. I would like to offer three mental models that may explain what's happening in the industries in which you are competing. I hope these innovation models will give you a way to frame what signposts might be important for you to look for along the road between here and the future.

The puzzle for the first model came from living in the Boston area and watching Digital Equipment collapse. The collapse was such a baffle because in the 1970s and 1980s Digital was one of the most widely admired companies in our economy. I remember a 1986 *BusinessWeek* article that praised Digital's management. The article recounted home-run product after home-run product that they'd put into the market. It likened the company to a freight train—it had so much momentum that it blew apart any competitor that got in its way. It warned IBM that it was on the track and better move over. Then about 1988, the freight train just fell off the cliff, and the company began to unravel very quickly.

In 1989, *BusinessWeek* ran a post-mortem about what had gone wrong in this once-great company. Everything that went wrong was fingered at the inept management. It was such a puzzle to contrast the praise that had been heaped upon those people with the indictment that was given to the very same people just three years later. I didn't even know how to frame the question. Some framed it saying, "How can good managers get that bad that fast?" Attributing Digital's fall to a management team who had it together at one point and lost it at another was never comfortable for me because every mini computer company in the world fell off the cliff in unison: Digital, Data General, Prime, Wang, Nixdorf, and the Hewlett-Packard Mini-Computer business. You wouldn't expect these companies to collude to collapse together. There had to be a more fundamental reason.

The real puzzle was in the early 1980s when Harvard Business School curriculum was filled with case studies about Digital. Everybody admired Digital's management. Those were the years they decided that the personal computer wasn't a big deal, and Unix wasn't important. The two decisions that led to their demise were made when everybody thought this was a well-run company. I began to wonder if there might not be something about the paradigms of good management, as they're taught at business schools, that might actually cause companies to stumble. When I began to frame it in those terms and look back in history, it actually seemed quite common. For example, in the mid-1960s, if you looked at the covers of *Fortune* and

> [THE PARADIGMS OF GOOD MANAGEMENT, AS THEY'RE TAUGHT AT BUSINESS SCHOOLS, MIGHT ACTUALLY CAUSE COMPANIES TO STUMBLE.]

Forbes, the people who ran Sears had the same position in the deity of management that Bill Gates and Andy Grove have today. Yet it was right then that they decided that discount retailing wasn't a big wave and that credit cards wouldn't be an important factor in retailing. The very decisions that led Sears to stumble from the pinnacle of its industry were made when they were on top.

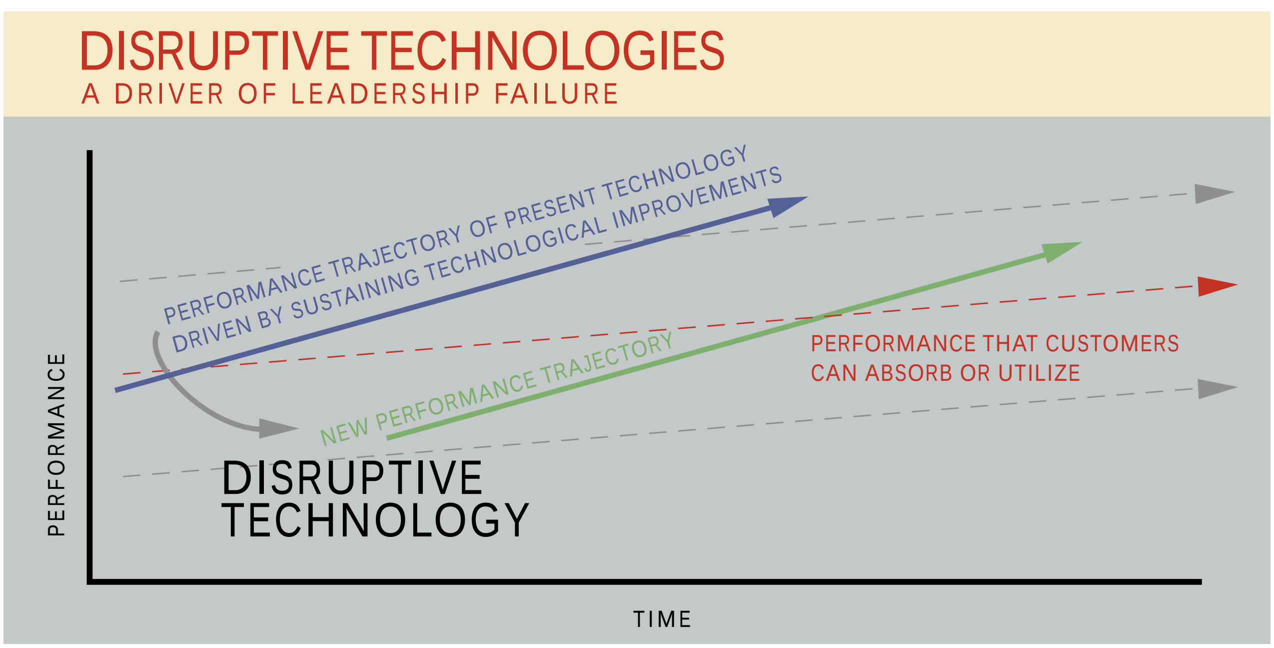
The first innovation model came out of looking at the falls of companies like Digital and Sears. However, it initially came from a deep study of the disk drive industry. It turned out to be a very fruitful industry to study, because in five of six product generations a new company entered and rose to the top, only to be toppled by another entering company. I'd hoped that I could dig a really deep and thorough hole in that one industry and try to understand why nobody could stay on top of it for longer than a single generation. Then maybe I could crawl up out of the hole and put that model on, like a set of lenses, and look back into the histories of some very different industries to see if it helped explain those. If it had robustness in that sense, then maybe I could look forward and see who else might be threatened.

On the first model diagram, you'll notice I plot the performance of a product or service over time. The first piece of the model is represented by the dotted red line, which suggests that in every market there is a trajectory of improvement the customers can absorb over time. You can visualize this in the car industry. Every year companies introduce new and improved engines. But we can't utilize all the performance they make available in the engine because we've got speed limits, traffic cops, and other factors that put a clamp on how much performance we can actually use.

The ability to absorb technology improvement exists in every market, and it's limited by how fast people's lives can change, how fast their work processes can change, or how fast they can learn new things. Performance that customers can absorb or utilize is depicted in a single line for simplicity but remember that there is a distribution of customers around the median. There are parallel dotted lines way at the high end of the market depicting very demanding customers and dotted lines that run across the bottom of the graph representing fairly simple customers at the low end that get over-satisfied with very little. The fact that there is a trajectory of improvement that customers can absorb or utilize is the first element of the model.

The second piece of the model is represented by a steeply sloping blue line. The line suggests that in every market there's a distinctly different trajectory of improvement that the innovators make available as they introduce new and improved products, generation after generation. The most important finding about this is that the trajectory of technological progress almost always outstrips the ability of customers to absorb it. That means that a company whose products or services are squarely positioned on what customers in the mainstream utilize at one point is actually prone to overshoot what the original customers use at another point because it pursues higher profit opportunities in the more sophisticated peers of the market.

To visualize this point, think of the Pentium III microprocessor in your computer. You probably don't use anywhere near the megahertz available if you're in a mainstream business application. There are people at the high-end of the industry that thank Intel for every megahertz. But overall, Intel has overshot what people in the mainstream use. This also means that a product or service that's not good enough at one point to be embraced by customers in the mainstream of the market can improve at such a rapid rate that it intersects with their needs at another. The second piece of the model says the trajectory of technological progress in most markets almost always outstrips the ability of customers to utilize it.



were about 116 new technologies of one sort or another used in the market. Of the 116, 111 were sustaining technologies, meaning they enabled innovators to bring a better product to market. Some of those sustaining technologies were, in fact, simple incremental year-to-year engineering improvements. But a remarkable number of them were dramatic leap frogs ahead of the competition, way up the curve. It didn't matter how technologically difficult it was. In all 111 of the cases where the innovation sustained the trajectory of technical progress, the companies that had led the industry in the prior technology led in the new technology. Again, it didn't matter how tough it was, as long as it enabled them to make a better product that they could sell for more money to their best customers. They figured out a way to get it done. The track record was impeccable in moving up market.

[**SUSTAINING TECHNOLOGY IS AN INNOVATION THAT MAKES GOOD TECHNOLOGY BETTER. A DISRUPTIVE TECHNOLOGY IS AN INNOVATION THAT BRINGS SOMETHING WORSE TO THE MARKET.**]

Of the 116, there were five that actually brought something worse to the market. In each of those five cases, the leading companies missed the mark and got killed. I called them disruptive technologies because they were so much worse than the product that had historically been available that none of the existing

The third piece of the model is the distinction between sustaining technological improvements along the blue trajectory line and disruptive technology, which is the down market movement. This piece was hard for me to comprehend because in academia there is a paradigm used to explain this phenomenon. It says that when a company gets big and successful, it gets more risk obverse and bureaucratic, loses its entrepreneurial zeal, and continues to seek out incremental innovation. However, it also loses its ability to come up with radical breakthrough innovations. It turns out that the paradigm doesn't hold up to the evidence. There is a very different way to cut the kinds of technologies or innovations that industry leaders spot and get right on top of and the kinds of innovations they'd strangle on. It cut a lot more cleanly along this sustaining vs. destructive distinction.

Sustaining technology is an innovation that makes good technology better. A disruptive technology is an innovation that brings something worse to the market. It sounds kind of simple, but it turns out to have made a big difference in what we studied. This idea came from the disk drive study. We built a database of every model of disk drive ever introduced by any company anywhere in the world between 1975 and the present. We had about 5,000 models.

For each of the models we got data on the components used to build the drives. That allowed us to stick our finger right on the spot in the industry's history where each new technology first got used. We could then trace the patterns by which the technology did or didn't diffuse through the industry, see who the leaders and the laggards were, and then study whether there was a correlation between being a leader or a laggard and what subsequently happened to them in the market.

Through that process, we figured that there

Andrew Judd / Masterfile

did those business plans look like? They had gross margins of 60 percent. Sell the machines for $150,000 and up. Then somebody walks in and says that the future is with the personal computer, that's where the company should invest our money. What did those business plans look like? In the very best years they had 35 percent margins, and they were headed to 20 percent fast. You could sell the machines for two or three thousand dollars apiece.

Grove asked a very interesting question: "What would you have done if you were running Digital Equipment? Would you have invested your resources in a product that your best customers needed that would improve your profit margins, or would you focus those resources on a product that none of your customers could use that would wreck your profit margins?" That's the real dilemma—doing what makes sense in the context of the business can prove to be your undoing when this particular disruptive phenomenon emerges. And something so illogical as the personal computer was to Digital, can actually be very important.

DISRUPTIVE INNOVATIONS TYPICALLY HAVE ENABLED A LARGER POPULATION OF LESS SKILLED, LESS WEALTHY PEOPLE TO DO THINGS IN A MORE CONVENIENT, LOWER COST SETTING.

Where else in our economy have you seen a company come in at the low end of the market and clean it out? Motorcycles. That's exactly what Honda did with their little SuperCub. It came up against Harley. Volkswagen did the same thing and then the Japanese car companies. Toyota made a lot of money in the 1960s, until they got joined at the low end by nondescript Japanese imports called Datsun and Honda. Because the pricing of the imports was killed at the low end, they had no alternative but to migrate to the high end of the market.

customers could use it. Yet they had other attributes that enabled it to be used in a different context. Because the pace of technological progress outstrips the ability of customers to utilize it, it improved at such a rapid rate that it blew the leaders out of the water.

Intel has used this way of thinking. I was in a management meeting in 1997 with Andy Grove looking through this mechanism with a chart similar to this, and I saw that he had a very puzzled look on his face. All of a sudden it was like the light bulb turned on and he raised his hand and said, "I figured out what you did wrong on your chart." He came up and pointed to the word "technology" under disruptive, and said, "If I understand the concept, you're going to mislead the world if you call it "disruptive *technology*." Unfortunately, the book had just been published, and it was locked in. But he said, "If I understand it, it would be more accurate to describe it as *trivial* technology that disrupts the business model of the leading companies."

He went on to give his view of what happened at Digital. As he described it, mini computers were complex and expensive. To sell them you had to sell directly to the customer. That process involved a lot of service, training, and support, and you had to have those costs in the business just to play the game. Given that cost structure, Digital had to make about 45 percent gross margins to be acceptably profitable. In that environment, somebody walks in to senior management with a proposal to make the best mini computer that's ever been made, that can reach up into the highest tiers of their markets and start to sell to customers who historically had to buy much more expensive mainframes. What

I am asked quite often if the Internet is a disruptive technology. It's a theory of relativity in many ways. To illustrate that, think about Dell, one of the most widely admired of all the companies in our economy today—admired because they are probably the largest online merchant. What was Dell before the Internet? They had tried to establish retail distribution and failed miserably. They evolved to this model where they took orders over the phone for their products and had evolved to customizing the attributes of the computers to some degree to the specific needs of their customers. This meant that they had to have highly trained telephone salespeople who could enter data manually. Now bring the Internet to Dell. What does it look like to them? It's a sustaining technology. It helps them make more money in the way they're structured to make money. It made most of their processes actually work better. Dell's achievements as an online retailer are impressive. But the odds that the leaders will end up on top in a sustaining technology battle are 100 percent—we would expect Dell to succeed at this. But to Compaq, which has traditional retail distribution, the Internet is very disruptive.

The second innovation model came about as I sought to understand the following question: "If I were running a company that needed growth because I have already made the existing as efficient as I could, how might I create new growth markets with the highest probability of success?"

Disruptive innovations typically have enabled a larger population of less skilled, less wealthy people to do things in a more convenient, lower cost setting, which historically could only be done by specialists in less convenient, centralized settings. Disruption has been one of the fundamental causal mechanisms through which the quality of our lives has improved. I had not thought this through when I wrote *The Innovator's Dilemma*. Because I'm at the Harvard Business School and our view on the world historically has been a big company view, I wrote the book from the perspective of what kinds of technologies could kill leading companies. In retrospect, I should've done a much more balanced job, because on the flip side of every one of those murders was a tremendous entrepreneurial success story. If I want to grow a new business, there really are some hints from this data about how to do it. This idea—that I should do something that enables a larger population to do something that historically had been available to the skilled or wealthy—is one of them.

Think about computing. When I was at BYU learning how to program, I had to take my punch cards to the mainframe center and an expert there had to run the job for me. When the personal computer came out, it wasn't good enough to handle complex problems, but it put the unwashed masses in the business of computing for themselves in the convenience of their home and office. We still had to refer the complex problems to the mainframe center for the experts to do, and we could handle the simple ones. But as the PC got better, it helped the unwashed masses become more and more capable. Today, there are very few esoteric problems that need to be solved on a mainframe. We consume infinitely more computing now because the personal computer enables a much larger population of less skilled people to do things that, historically, only a specialist could do, and do it in a convenient, local setting, when historically you could only do it in a centralized location.

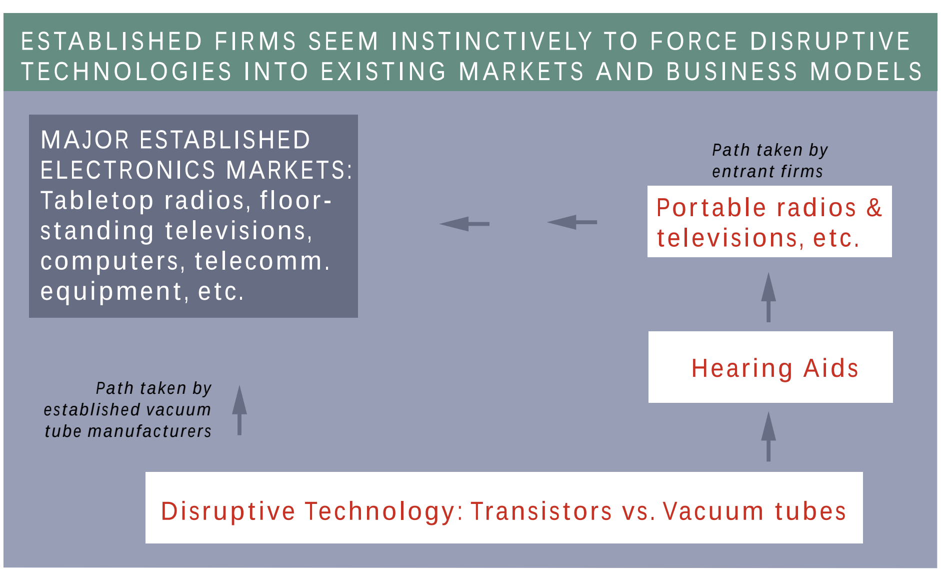
Now college students manage their own portfolios online, and nobody yearns to return to the days of the $300 commission, or to the corporate photocopy center. Almost always disruptive innovations, such as these have been ignored or opposed by the leading institutions in their industries for perfectly rational reasons.

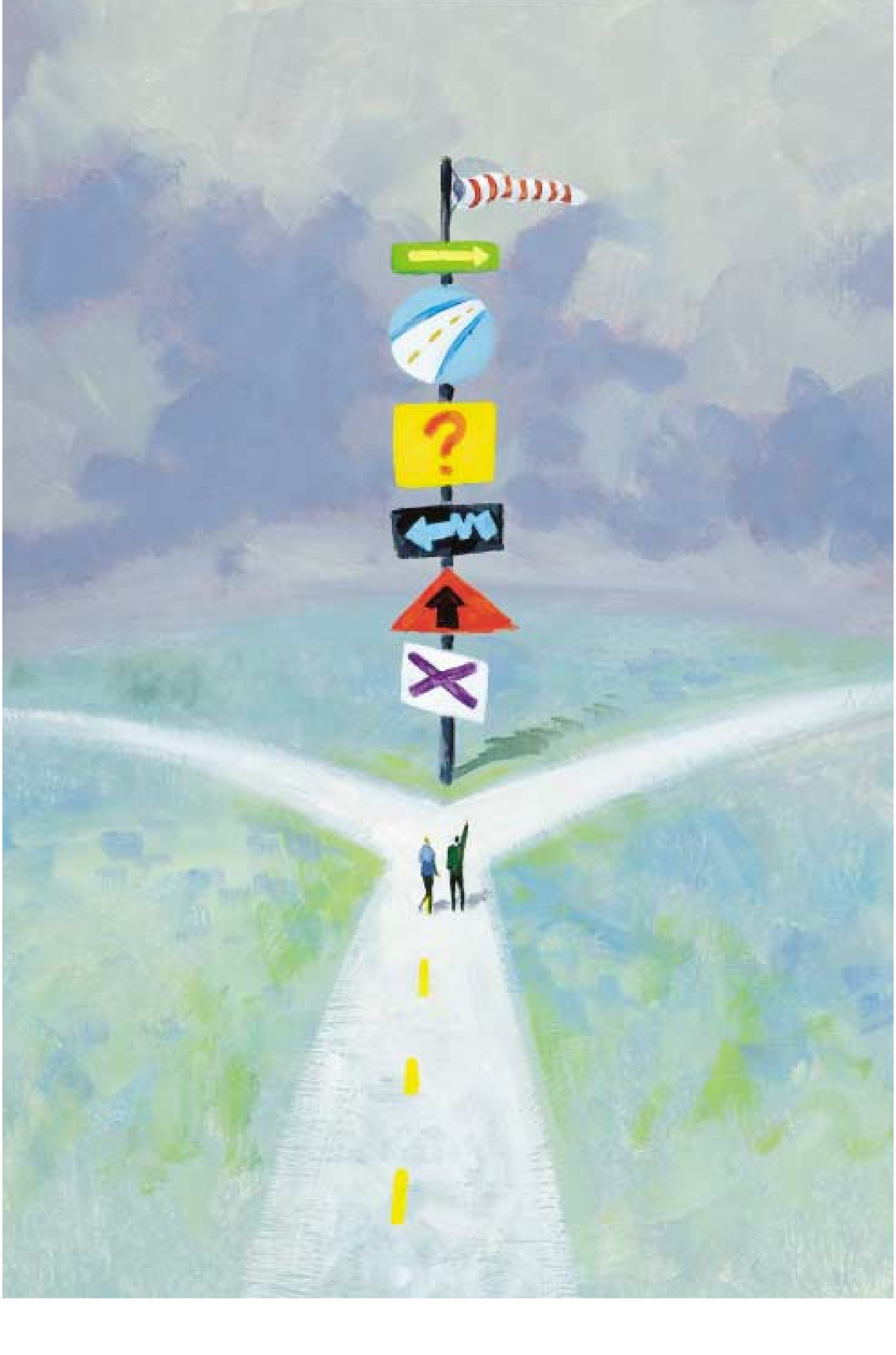
If you look at the list of companies that have all been profitable stock investments over the last twenty years, most of them had their roots as a disruptive technology company. For example, Cisco with the router is the disruptive technology against circuit switch equipment made by Nortel, Lucent, and Erickson. Intel was a disruptive technology against the wired circuit logent of large computers. EMC in storage technology did it to IBM. Every one of these companies is being disrupted themselves. If you look back in history, when the disruption came at the market from below, initially the leading company ignored it, because it wasn't important. When it finally was clear that it was important, they framed it as a threat. In reality, because the disruption enables a much larger population of less-skilled people to play in the market, they were all poised on the brink of a huge growth opportunity.

Almost always, when this has happened, the leading companies have failed to seize the opportunity because they framed it as a threat, and the new entrants caught the growth. An example of this was when the transistor first emerged as a disruptive technology vs. the vacuum tube. It

MANY OF OUR ECONOMY'S GREATEST COMPANIES BEGAN AS DISRUPTIVE INNOVATORS

Intel	*Cisco*
Sun Microsystems	*Sprint PCS*
Compaq	*Nokia*
Dell	*Toyota*
Microsoft	*Honda*
Nucor	*Sony*
Merrill Lynch	*Barnes & Noble*
Charles Schwab	*Amazon*
AT&T	*Sears*
Bloomberg	*Wal-Mart*





was disruptive because it couldn't handle the power that was required in the existing market. The established market for consumer electronics at the time were large floor-standing televisions and tabletop radios. Every one of the vacuum tube companies took a license to the transistor from Bell Labs, but they carried the license into their own laboratories and framed the problem as a technology problem. How do we make the transistor good enough that it can handle the power required in the market? They invested millions trying to cram the transistor into the market as it existed.

The transistor actually made it to the market because it had different attributes that enabled new applications to emerge, and different classes of customers to afford products that, historically, they couldn't afford.

The first application was a germanium transistor hearing aid—an application that valued the technology for the very attributes that made it unusable in the mainstream. The next market was Sony's little pocket radio in 1955. It had lousy quality and couldn't compete in any way with the quality of the tabletop radios that were made with vacuum tubes. But the Sony transistor radio enabled a much larger population of people to conveniently do something that, historically, hadn't been possible. Teenagers could listen to rock and roll out of the earshot of their parents. A big market began to coalesce. In about 1959, people wondered whether somebody could use this solid state electronics technology to make a portable television. This case history taught me a lot about why the established companies almost always frame it as a technology problem going after the established market, and why entrant companies create the new growth markets.

General Electric was the second largest television maker at the time-up. They saw this potential and hired Arthur D. Little (ADL), a management consulting firm, to study the potential of the portable television in the United States. In today's consulting dollars, they paid ADL about $5 million. ADL did a great job. They interviewed hundreds of customers about whether, when, why, and how they would use a portable television. They interviewed distributors, service people, and retailers and concluded there was no demand for portable televisions in the United States. A month after they delivered their report to General Electric, Sony introduced its first portable television and sold two million units the first year. Sony had a policy never to do market research.

I don't tell this story to ridicule General Electric or ADL, because the past is hard to understand and the future is impossible to see. But the interesting question is why General Electric paid ADL all that money to measure the size of a market that didn't exist? And why would ADL go to such pains to interview customers about the attributes of a product that they had never had the chance to think about before? Because in established markets, that's what you should do. Authors who assert that to be innovative you've got to be willing to risk failure are wrong. In an established market you never want to be wrong. The market is there; you can measure its size. The customers are there; you can understand them. The competition is there; the technology exists.

There's a business model that helps you estimate costs and revenues and return on investment. You have to carefully make investment decisions in established markets, because if you make a mistake, you can wreck a very good business. But when the same analytical process is used to evaluate whether we should fund a project to create a market that doesn't yet exist, the process paralyzes you. You can never muster convincing enough evidence that a market is going to grow from nothing when the proposal must compete for resources with products targeted at an established marketplace. One of the fundamental reasons why leading companies miss growth opportunities is in the resource allocation process. Companies need one resource allocation process to use in an established market and a different process to evaluate whether to create new growth.

We also saw this happen in the early nineties. Remember the buzz about personal digital assistants, the little handheld computing devices? Every computer company saw this coming. They weren't asleep at the switch. They framed it as a technological

[AUTHORS WHO ASSERT THAT TO BE INNOVATIVE YOU'VE GOT TO BE WILLING TO RISK FAILURE ARE WRONG. IN AN ESTABLISHED MARKET YOU NEVER WANT TO BE WRONG.]

WILL THE ELECTRIC VEHICLE DISRUPT CARS? IT'S NOT A TECHNOLOGICAL QUESTION; IT'S A MARKETING PROBLEM.

deficiency: "How do we make that little device like a computer?" Apple was the most visible, investing $350 million to make its Newton. By framing it as a computer, Apple caused the customers to say, "Well I could pay $1,200 for the Newton or $1,600 for a notebook computer. The Newton just can't do it all." Apple took enormous risks and made huge investments to try to make the technology good enough to be used in the established market, yet it's very difficult for the disruption to be as good as the sustaining one.

Palm tried the same thing at the outset. When it was clear that wouldn't work they migrated to new markets and redefined the little Pilot. At the outset it wasn't a computer, and they didn't market it as a computer. But little by little, it's getting more and more like a computer. Interestingly, other computer companies are reacting the same way, they're all moving into higher performance workstations. Dell's big thrust is to get out of the personal computer and into workstation and servers. New companies are capturing the growth. Why? At its root, the inability of the established companies to create the new markets is in the resource allocation processes they use to make decisions in new product development.

When I wrote *The Innovator's Dilemma*, I decided that rather than writing the summary chapter as a rehash of the first eight chapters, I would use the disruptive technologies model to understand the toughest innovation problem known to man, which I viewed as the electric vehicle. The question is whether the electric vehicle will ever disrupt the folks in Detroit who make gas powered vehicles? Or is it just a pipe dream of the Sierra Club? It turns out that there's some really good data on this. In the early 1990s, California mandated that by 1998 nobody could sell gas powered vehicles in California unless 2 percent of their volume was electric. The mandate set off a mad race to make electric vehicles good enough to be sold in California. By 1996, it was clear that the battery technology just couldn't cut it. They petitioned the California government to relent and give them more time. The government put off the deadline to 2003. But the deadline is still there.

I'm going to pick on Chrysler here, not because they're inept, but because they did exactly what all the other car companies did. They went to California and did market research. They asked the customers what attributes were really important in that market. One of the key requirements was to drive the car at least 150 miles between refueling stops. That's the low end of the market. The average person wants to drive 300 miles between refueling stops. Another requirement is acceleration. You've got to go from zero to sixty in about nine seconds to get on the freeway without getting killed in California. Chrysler then did economic analyses.

Did it make sense for the company to design a purpose built vehicle for electric power or should they just take one of the existing platforms and equip it with electric power? Because of their minivan volume it was a no-brainer. The minivan was a much more economical vehicle for this purpose. They set out to make an electric minivan. To get it to cruise as far as possible, they had to load 1,600 pounds of lead acid batteries in the back of the minivan. Even then, it would only cruise eighty miles. It wouldn't even meet the minimum the market required. With all the weight in the back of the minivan it would accelerate from zero to sixty in nineteen seconds, not nine. It took four times longer to stop the electric minivan than the gas minivan, and it cost $100,000. So they went back to California and did more consumer panels, asking consumers if they would prefer a car that cruised 80 miles between refueling stops, went from zero to sixty in nineteen seconds, took four times longer to stop, and cost $100,000, or whether they preferred the new, gas-powered Voyager for $23,000. Which do you want? Nobody outside the Sierra Club preferred an electric vehicle. So they went back to the government and petitioned them to back off, and they did.

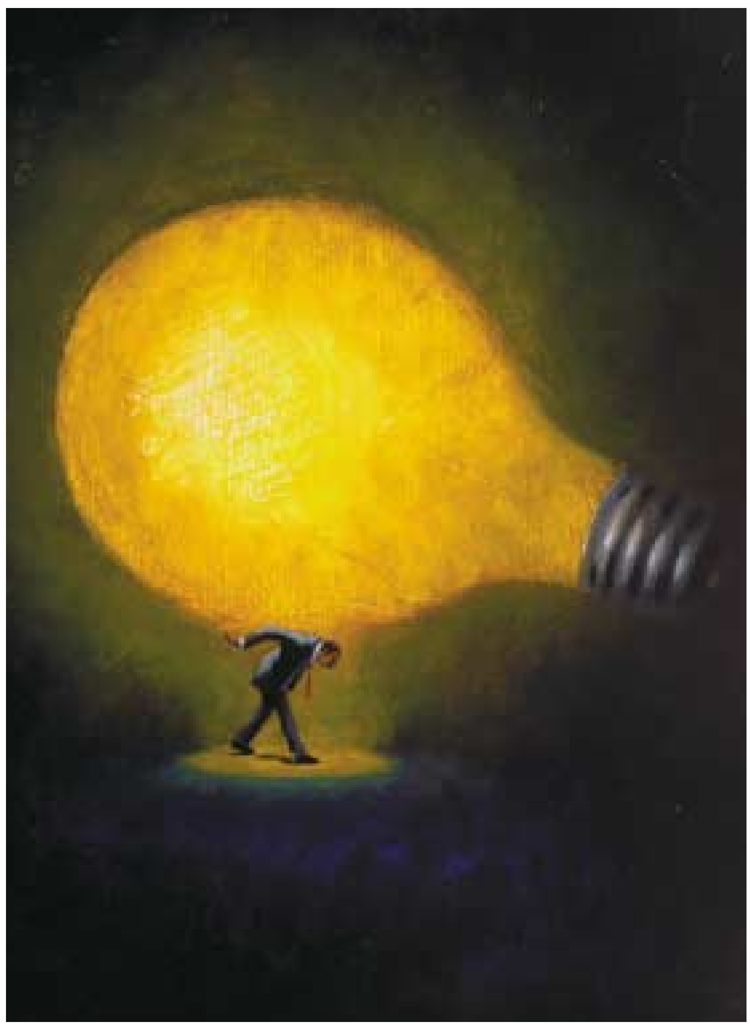
I had a brilliant student who wrote a paper on this. He said it was the right answer to the wrong question. The question to ask is whether there is a market that would proactively value, not just tolerate, but value a car that wouldn't cruise far or accelerate fast. Asking the question gives you some interesting ideas. How about the parents of teenagers? America's teenagers drive overpowered cars. Every time they get in you say, "I wish it wouldn't accelerate that fast." Teenagers primarily go to high school and visit their friends. If the electric vehicle targeted a teenager, designed as a fashion statement—where the critical trajectory of technological progress was the sound system, not the motor—there might be a market. Or, how about other possible markets like retirement communities, the golf cart industry, or the crowded streets of Bangkok.

Will the electric vehicle disrupt cars? It's not a technological question; it's a marketing problem. It will succeed if somebody creates a market that enables a new population of people to play conveniently. For teenagers, it would be a $5,000 car that you could Mastercharge. Then, from those humble beginnings, all of the technological questions—such as, "What kind of battery will it be, will it be fuel cells, will photovoltaics ever work?"—these questions will get sorted out by the folks that are in the market trying to move towards Detroit. All the while, Detroit will be working in the laboratory on what, in all probability, will be the wrong technology. Again, because they frame it as a threat rather than an opportunity they end up asking the wrong questions and missing the growth.

The third innovation model relates to how integrated companies give way to whole populations of focused companies. I read an article about four years ago that ridiculed IBM's management in the early 1980s IBM had better microprocessor technology than Intel, and better operating system technology than Microsoft, yet they chose to outsource to Intel and Microsoft, and in the process put into business the two companies that subsequently made all the profit in the industry. IBM held on to a slice of value-added, which is designing and assembling a computer, where nobody could make any money. The reason the article bugged me so much was that at the time IBM made those decisions, everybody knew this was a wise thing to do. With all the graduates of our schools running around the world today as consultants, advising everybody that they should outsource everything that's not their core competency, really made you wonder how many of today's outsourcing decisions would history judge as having been similarly flawed.

It turned out that this disruptive technology model was a good way to frame this new problem. During the era in industry history where the available technology is not good enough for what the customers need, the architecture of the product tends to be integral in character. Visualize the mainframe computer industry. You could not have existed in the early days as an independent supplier of operating systems or core memory or logic circuitry, because all the subsystems had to be interactively designed together. There were no standards by which the pieces of the system fit. They were interactively designed because the product wasn't good enough. The engineers were always compelled to put the pieces of the system together in a new, untested, and more efficient way, because they're always trying to wring the maximum performance possible out of the technology available.

Because of that, you had to be an integrated company in order to play. Even if you go up to the high end of most industries today, where they're pushing the bleeding edge of performance, you still have nonstandard, technologically integral architectures made by integrated companies. A Hewlett-Packard mission critical enterprise server, for example, has a custom version of HP UNIX carefully married with a custom designed HP risk chip all made inside of an integrated company, because they're still trying to wring the most performance possible out of available technology. In this phase of the industry's history, being integrated is a big advantage. The way you compete is to make better products. So the computing industry was dominated by IBM and Digital. Automobiles by General Motors and Ford. Photography by Kodak. Telecommunications by AT&T. Aluminum by Alcoa. Again and again this integration was a key competitive advantage when available products were not good enough.



Andrew Judd / Masterfile

Litmus Test for High-Potential Disruptive Innovations:

- >Technologically simple
- >Starts at a low price point
- >Minimizes infrastructural & regulatory barriers–follows the path of least resistance
- >Success isn't predicated upon customers' behavioral change
- >Enables a larger population of less-skilled people to conveniently do something that only expensive specialists historically could do

How do you compete, however, for the business of customers in those tiers of the market that are overserved by the available functionality? Typically, the existing players continue to pursue profit, as they perceive profit, up to the high end. The disruptive innovators who come from below begin to compete in a very different way. Speed to market now matters a lot. On the left side of the diagram, speed to market didn't matter because people were willing to wait for a better product. But when it's good enough, time to market begins to accelerate, and the ability to customize the features and functions of the product to the needs of customers in smaller and smaller niches of the market become the mechanisms by which companies compete. Innovations that improve speed to market and the ability to be convenient as a supplier, and to customize, are the kinds of innovations that get traction in the marketplace. Better products no longer cut it. To enable companies to compete on that basis, to be fast and flexible, the architecture of the product tends to migrate from integrality to modularity. In a modular world, interfaces among the pieces of the system become well defined. That enables independent companies to provide pieces of the system, and another company can assemble those pieces.

If you peeled apart an old IBM mainframe, everything inside was made by IBM, because it had to be made by IBM. If you peel the cover off a Compaq or a Dell machine, every piece is made by a different company. When disruption happens the integrated company gets displaced by a whole population of specialized companies, and the industry disintegrates.

You see it happening in the car industry. Automobiles, historically, have been integral architectures made by integrated companies. They have now overshot the functionality that people can use. Our family is a great example. We just sold our Chevy Nova, which is really a Toyota Corolla, after fourteen years of loyal service. Nothing ever went wrong in 140,000 miles. But my kids haven't been willing to ride in it for four years, because it went out of style before it wore out. So do I need Toyota, next generation, to get me a more reliable car? I can't absorb more reliability. What you see happening is that speed to market and the ability to customize the features and functions to smaller and smaller niches, those are the trajectories of innovation that the car companies are using now. Whereas on the left hand side it took six years to design a car, now they're converging on eighteen months. Later this year, you can go into a Toyota dealership and custom order a car exactly to your specs, and they'll deliver it in five days. The architecture of the car is becoming modular, rather than integral. The industry is having to disintegrate. General Motors sold off Delphi, and Ford sold off Visteon. They have to disintegrate in order to keep up with the phrenetic pace of product development.

There's one last piece from this model that has been helpful. The people who make the money in the industry are, of course, the big integrated players. The slice of value added they make is in the design and assembly of the product that the customer uses. The people that were suppliers to the integrated companies got hammered. If you were a supplier to IBM or General Motors, you lived a miserable, profit-free existence year after year after year, because they held all of the power. After disruption, the people who design and assemble the product that the customer uses have a very hard time making money, and the ones that provide the subsystems that really drive the performance of the product, they're the ones that make the money. The ability to make money in computing has migrated back to Intel, Microsoft, Sharp, Applied Materials, which themselves provide technologically integral subsystems. If you happen to be an engineer working for Compaq, and your boss tells you to design a better computer than Dell, what are you going to do? Put in a faster microprocessor? Higher capacity disk drive? More DRAM? When you're assembling a modular product, it's very hard to differentiate what you do on the basis of performance or cost.

Think about what the car companies did. They did exactly what IBM did. They sold Visteon and Delphi. They had to disintegrate, but they sold off the wrong pieces of the business, because in the future where the money will be made is in the companies that supply the chassis and the braking systems and the electrical systems. The design and assembly of a car itself will become something much more automated, mechanical, and copyable as they move to a modular architecture. This is what's happening to Microsoft. I think it will happen independently of anything the Justice Department does. Microsoft's products are integral architectures. We owe a great debt to Microsoft, because in the early years you simply couldn't do what they've enabled us to do if you didn't have an integral architecture. But now they've overshot what people can absorb. What you see coming up underneath them is Internet-based computing. In particular Internet protocols as operating systems—the Java programming languages are consummately modular. Java is not nearly good enough to be used in the applications where Microsoft makes its money, but on the Internet it has other attributes that actually make it more valuable. So you have a single integrated company at the high end fighting it out against tens of thousands of small Java programmers at the low end. The industry will disintegrate. Microsoft, in my view, will always be the dominant player in that high end of the business, just like IBM continues to dominate mainframes. However, its place of dominance will become progressively less relevant to where the center of gravity is in the computing world.

I offer you this set of innovation models as a way of structuring the way you think about how technology and markets interact and how this intersection of technological progress with what customers need actually precipitates a change in the way you have to compete. At one stage, competing with better products mattered a lot. In a later stage, innovations that enable a larger population of less-skilled people to do things with products that are more convenient and simple, are the kinds of innovations that matter. I hope that these models will constitute signposts along the road so you know what to watch for as your competitors move with you into the future.

Disruptive innovations typically have enabled a larger population of less-skilled or less-wealthy people to do things in a more convenient, lower-cost setting, which historically could only be done by specialists in less convenient, centralized settings. Disruption has been one of the fundamental causal mechanisms through which our lives have improved. E

Taken from address given at the Marriott School's Sixth Annual Management Conference 22 June 2000.

[**CLAYTON CHRISTENSEN IS AUTHOR OF THE BEST-SELLING BOOK, *THE INNOVATOR'S DILEMA* AND A PROFESSOR AT THE HARVARD BUSINESS SCHOOL.**]

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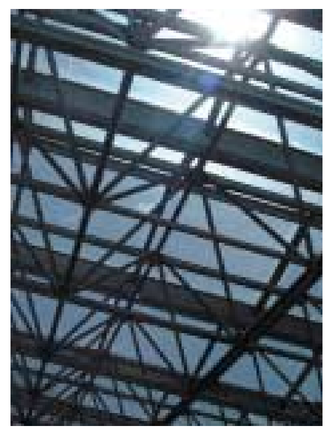


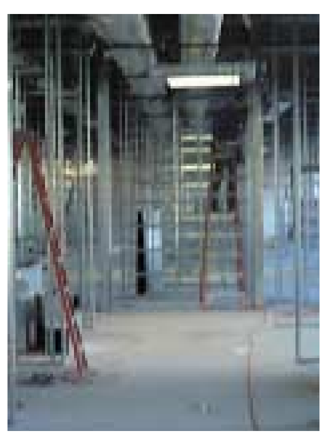


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GEORGIA WHITE

REER CENTER

BY JENNY STATHIS, *Exchange* ASSISTANT EDITOR PHOTOGRAPHY BY BRAD SLADE & TYLER WALSETH

Although Diane Patton has never been a Marriott School student nor a faculty member, she may be one of the best qualified to give a Tanner Building tour. A lead recruiter for Ford Motor Company, Patton has interviewed candidates in various rooms in the building. Never knowing who would walk in on an interview, Patton couldn't wait for the school to designate rooms for recruiters.

Roger McCarty couldn't either. Interviewing job candidates in tight spaces is not unusual for Dow Chemical's director of staffing and development. McCarty has recruited Marriott School students for twelve years. "I kept coming back because of the students—despite the interviewing conditions," he said. But this year things will be different—both Patton and McCarty will have rooms of their own.

The new Steven and Georgia White Business Career Center not only eliminates the need to search for interview rooms but also becomes the focal point for the school's placement, internship, and field study efforts. Conceptual plans for a new facility to accommodate placement needs originated in 1997 with former Dean K. Fred Skousen.

After three years of planning and eight months of construction, the center officially opened at a ribbon-cutting ceremony 16 November 2000. The center's enhanced resources include twenty interview rooms, a hosting center, a professional resource library, an eRecruiting system, and a career consulting staff.

Interview Rooms

Expanding from three to twenty interview rooms is a big jump, but the demand is great. "It can be a long day in a small closet," McCarty said. That's why he convinced Dow Chemical to name and fund one of the large interview/videotaping rooms. The twenty new interview rooms—ranging in areas from fifty-six to one hundred square feet—are a welcome change from the crowded hallways, noisy atrium, and borrowed offices of the past.

Whether recruiters' plans require on-campus interviews or videoteleconferencing facilities, the new Business Career Center provides options for corporate partners to attract and hire students. Six of the rooms are wired for videotaping capabilities, where students can practice mock interviews and critique themselves. The private soundproof rooms allow recruiters to tape interviews and return to their respective companies to review top candidates. Because some rooms feature videotaping and telephone conferencing capabilities, interviews can also be conducted via camera or over the phone. This enables companies to follow up with finalists and interview new candidates after they've visited campus.

Hosting Center

Finding the right corporate fit for a firm and a student is increasingly important. "A hosting center is very valuable to a recruiter," McCarty said. "I want to maximize the interface time I have with a student. I want to learn as much about them as I can and what they'll do for my company." The hosting center provides an area where recruiters can tell their story so both students and companies can gauge potential fit.

The hosting area gives companies

the space to present to large numbers of students—allowing valuable interview time to be reserved for an assessment of a student's skills and abilities. The center's catering facilities enable firms to stage presentations in an informal setting conducive to interaction and the exchange of ideas.

Reference Library

Learning about a firm before it arrives on campus hasn't always been easy. But recruiters know when students are prepared. "It's very clear who's done their homework and who hasn't," McCarty said. "If the student doesn't understand the issues and language of our company, we spend a lot of time interpreting."

The library allows students to learn about companies—in turn, making a better impression and promising greater internship and job placement success. Computers, annual reports, and recruiting literature on hundreds of companies, volumes of job-search and industry-related reference books, videotapes of corporate presentations, and career management workshops will be available in the new reference library.

eRecruiting System

The Marriott School's eRecruiting system facilitates the interviewing and recruiting process—giving both employers and students increased flexibility. The web-based system allows recruiters to post job descriptions, add contact information, update company data, access student resumes, make interview decisions, and view interview schedules online. Students can access the eRecruiting system to post resumes, view business-related companies recruiting at the center, set up interviews, and schedule appointments with career professionals.

Career Consultants

"The center is a great addition to the school," said Maurice Stocks, director of corporate development and career services, "but our students are what will ultimately sell recruiters." To help students look their best, the school has invested in a staff of career consultants. Five full-time professionals assist in preparing and editing resumes, enhancing preparation, and fine-tuning interview skills. Nate Heller, a second-year MBA student from San Antonio, Texas, said the center's consultants helped him find his internship with Intel eBusiness Strategy group in Phoenix. Heller said the staff helped identify which companies were the right fit for him. "They helped me position my resume so that a company as big as Intel would look at me."

The center will market the students, said Dean Ned C. Hill. "It will say to recruiters, 'We're serious about these students, and we want to place them in influential positions throughout the world.'" To remain competitive, he said, the school needed to upgrade placement services.

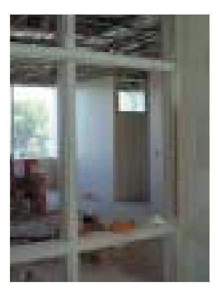
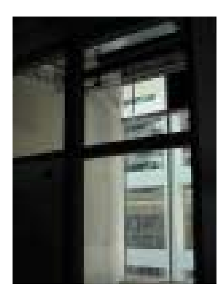
Before the new center opened, "We tried to service students out of several tiny offices," said Shawna Gygi, assistant director of career services. In addition to the cramped quarters, numerous departments were duplicating work. "We felt like it all needed to come from one place," Gygi said. Now students have one address for field studies, internships, and placement assistance.

In 1997, administrators began discussing the need for a "one-stop service"—a facility where students and recruiters could come together for a seamless placement process. With the university's new zero net square footage policy, adding on to the Tanner Building was not a viable option. When the university combined the school's business library with the new Harold B. Lee Library expansion project, the school seized the opportunity to utilize the fourth-floor space for a career center. Plans for a new placement facility were approved in January 2000.

"We appreciate Dean Skousen's vision and President Merrill Bateman's support of a first-class placement facility," said Dean





Hill. "Publications like *BusinessWeek* and *U.S. News & World Report* ask recruiters to rate their experiences at leading schools. You need a first-rate placement facility to be a top-rated business school."

"There weren't fatal flaws with the old system," said Patton. "But the new center will be invaluable." Moving from an approximate space of 1,800 to 6,700 square feet, the Business Career Center occupies the north half of the fourth floor of the Tanner Building. The center's granite floor, wood paneling, and concierge desk offer a corporate feel.

The original design was approved by the university's board of trustees—subject to the Marriott School finding funding.

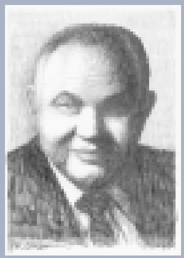
A significant portion of the cost to renovate and staff the new facility was provided by Georgia White in honor of her late husband, former National Advisory Council Chair Steven White. The White Endowment and other corporate gifts have covered the costs.

Key recruiting firms like Dow Chemical, Honeywell, and Union Pacific are stepping forward to fund and name rooms in the center. Dow's commitment to the Marriott School prompted them to contribute to and establish a large interview room bearing the company's name. Other firms are in the process of making similar contributions.

"I'm confident the center will enable us to build stronger partnerships with selected firms," said Dean Hill. "One of our objectives is to increase the number and diversity of firms recruiting at the school."

McCarty and Patton represent two of more than six hundred companies recruiting at the Marriott School. For firms already making the trek to Provo, the new center promises efficiency and service. "I keep coming back because I'm able to find a match between top students and my company," McCarty said.

Finding a private room is a lot easier this year for recruiters like McCarty and Patton. "The missing piece at the Marriott School has been a facility that matches the quality of the students," Patton said. "Now it's coming together." E




Steven and Georgia White

Steven and Georgia White have a long history of supporting BYU. Steven played a fundamental role in raising private funds to construct the Tanner Building and established the school's National Advisory Council. He served on the council and was chair from 1978 to 1980. He died in 1988.

Both Steven and Georgia were born 3 October 1928—Steve in Loma Linda, California, and Georgia in Rigby, Idaho. They married in 1945. Steven studied business at the University of California–Berkeley. After graduating and while working in Livermore, California, he joined The Church of Jesus Christ of Latter-day Saints. He was recruited in 1961 to join Bechtel Corporation's Legal Department as department and contracts manager. During his twenty-seven years at Bechtel, he held various positions including president of Bechtel Investments, Inc. Steven was a member of the Bechtel Executive Committee—the organization's highest executive body—longer than any nonfamily member in the firm's history.

Georgia worked for JCPenney during the family's early years and was very active in raising their four children. She served on the BYU Library Development Committee under Presidents Rex Lee and Merrill J. Bateman and has been an active NAC spouse. She is also an active MBA program supporter and has sponsored a number of MBA spouse activities in her home. In addition, a professorship was established in her name.

by: J. Melody Murdock, *Exchange Editor*
illustrations by: José Luis Merino

Myths and Realities of Retailing

Despite negative stereotypes, a healthy stream of business graduates are choosing jobs in the retail industry. Are the tales of long hours, low pay, and high stress only myths or is there a high price to be paid for a career in retailing?

Three Marriott School professors and the director of the school's Institute of Marketing conducted a quality of work life study to determine whether retailing stereotypes hold true. The researchers, Gary Rhoads, William Swinyard, Michael Geurts, and William Price, surveyed more than five hundred business school graduates from twenty universities to determine if careers in retailing are better, worse, or comparable to other marketing jobs. The results show that not all the myths about retailing are true.

The study examined the validity of five commonly held beliefs—that people in retail jobs experience: 1) longer work weeks, 2) lower compensation, 3) less variety, 4) less satisfaction, and 5) higher stress. Finally, the study suggests what companies can do to lower the costs of working in retailing.

Myth #1
Longer Workweeks

False. Store retailers may have long workweeks, but so do those who work in other marketing positions. The average workweek of those surveyed was 48.39 hours, suggesting that the forty-hour workweek—if it ever truly existed—is over. Only 20 percent of the graduates reported working forty hours or less. Respondents also reported working on average more than sixty hours during 15.6 weeks of the previous year.

"The hours don't seem longer than other jobs, but they're more inconvenient," says Jane Black, who worked for Nicole Miller and Nordstrom. "The hardest part of my job at both stores was working late nights, weekends, and holidays."

Not only is the workweek similar in retailing to other marketing jobs but those surveyed—store retailers, corporate retailers, business sales, and marketing managers—reported no difference in the amount of overtime they worked.

Myth #2
Less Pay

True. A similar workweek doesn't necessarily mean similar pay. Store retailers generally earn less than those in other marketing positions. The study compared the annual income levels of those working in store retailing, corporate retailing, business sales, and marketing management.

Store retailers ended up at the bottom of the heap by a substantial margin. They averaged at least $6,000 less per year than any other group. It's no wonder that one of the top reasons managerial trainees leave the retail chain is to pursue higher paying jobs.[1] "I can't blame employees for leaving if they find a job across town that will pay twice as much with regular hours," says Casey Peay, assistant manager of Eddie Bauer in Jackson Hole, Wyoming.

The good news is that those working in corporate retail carry heavier wallets. Corporate-based retailers, those who work in company headquarters or regional offices, make about the same as other marketing professionals.

The researchers also examined the level of bonus and commission income of the four groups. Those in store retail positions were again at the bottom, receiving the lowest commission and bonus income.

Steven Rees, a former employee of Banana Republic and Gap Inc., agrees that retailing isn't known for its great wages, but says that income isn't the luring factor for many in the industry. "People who work in store retail usually aren't in it for the money. They love the job for other reasons—the people interaction, the environment, and the opportunity to be creative."

Professor Swinyard points out that some may assume store retailers earn less because they're usually paid by the hour. But in fact, he says, the group studied was composed of college graduates in store leadership positions who had worked at least five years in the retail industry.

How does the future of retail compensation look? It depends who you ask. Janet Crosson, a journalist for *The Tampa Tribune*, observed that there is a growing trend for retail companies to downsize the number of salaried managers.[2] She says that this could cause remaining employees to be asked to do more, which creates opportunities for them, but may also make retailing less attractive as a career.

Price, director of the Institute of Marketing at BYU's Marriott School, disagrees with Crosson. He says retail salaries have risen considerably in the last three years. "Retail starting pay for recent college graduates has kept pace with other starting salaries and reflects the strong economy and low unemployment rates," says Price.

Myth #3 Less Autonomy and Variety

True. Retail store employees experience less autonomy and variety in their work than those in other marketing positions. These employees have few opportunities to participate in company policy making and program development.

"Store retail careers are more routine and less challenging than other marketing related jobs," says Swinyard. Researchers J. Brennan and B. McGeevor agree. In a study of working graduates, they found that only 31 percent of college graduates employed in retailing describe their jobs as a chance to exercise leadership and take responsibility.[3] Graduates also reported that their jobs gave them few opportunities to apply initiative and gain autonomy.

Jacqui Gush also examined the causes of dissatisfaction among college graduates' in retailing and found that the needs and expectations of retailers and employees are mismatched.[4] "Retail graduates' intellectual abilities and subject knowledge are being underutilized," reports Gush. "Unfulfilled expectations and high marketability are likely to lead to early withdrawal from the company."

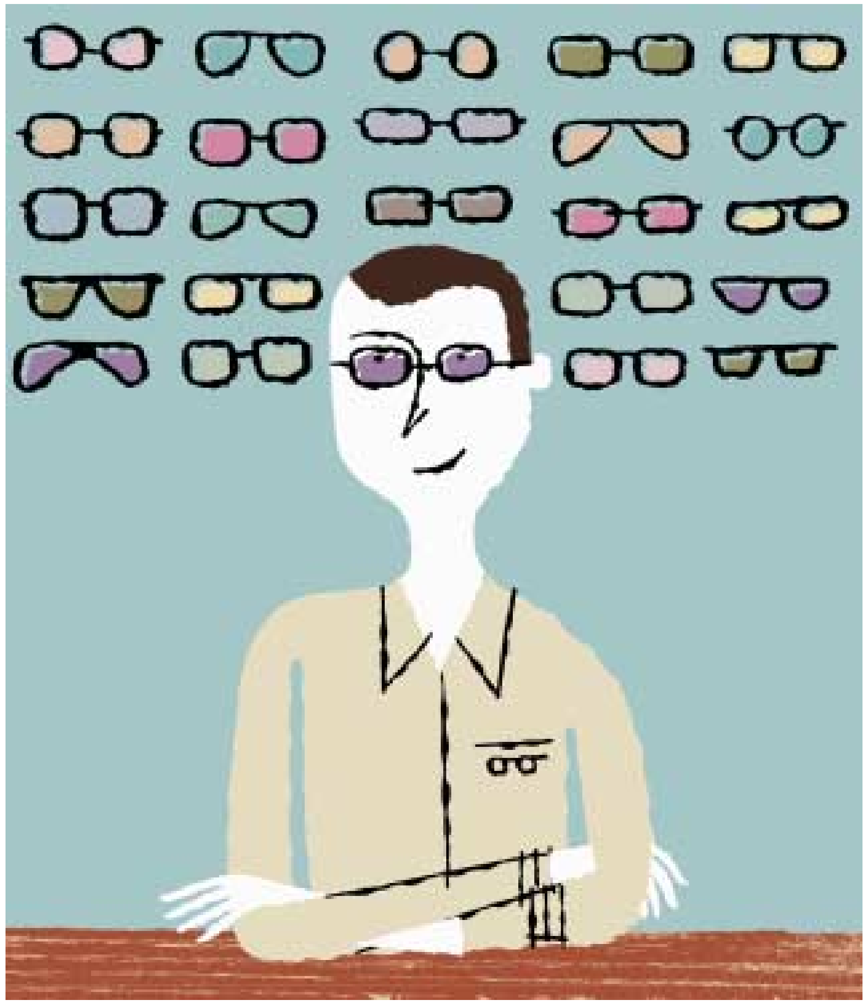
Black, a fashion merchandising graduate, says her experience in store retailing left her unsatisfied. "I felt like I went to work, sold clothes, and went home," she said. " I didn't get to make buying decisions, put together window displays, or help with decisions that really mattered."

On the other side of the spectrum, job characteristics of corporate retailers

Annual Income

Marketing Job Type	Income Category
Store Retailing	$26,000-$29,900
Marketing Management	$30,000-$35,900
Corporate Retailing	$36,000-$39,900
Business Sales	$36,000-$39,900
Overall Mean Category	$30,000-$35,900

are equal to or better than other marketing related positions. Corporate retailers are given more opportunities than store retailers to participate in policy making and new program development.



Myth #4
Less Satisfaction with Pay, Recognition, Work, & Supervisors

True. Store retailers are generally less satisfied with their pay, recognition, work, and supervisors than those in other marketing related positions.

"It's all about expectations," says Peay. "You have to know ahead of time what a store retailing job requires, then you won't be surprised or unsatisfied with the job." After five years in the industry, Peay looks at the positive side. "I get to take my vacations when nobody else does, so I avoid the crowds and get good rates."

Interested in pursuing a career in corporate retail, Peay was pleased to hear that corporate retailers are equally satisfied with all facets of their job when compared to store retailers.

Myth #5
More Stress, Burnout, & Conflict

False. Store managers do not feel more stress, burnout, and conflict than those in other marketing positions. In fact, it may be just the opposite. "Burnout isn't a key concern," explains Rhoads. "Store retail jobs don't offer enough challenge, variety, and autonomy for employees to feel stressed or burned out." For a person to burn out, they must first be on fire.[5] "Perhaps, 'rust out' is a better word for it," says Rhoads.

"I never got stressed out working in the store," says Black. "I felt like the majority of what I did could be done by anyone."

The Wall Street Journal, in a 1995 article "Sold on the Job," explained that although retail marketers face few intellectual challenges, their pressure to perform comes from the many logistical challenges they face.[6]

Weighing the Costs

Although not all the myths about retail jobs are realities, they seem convincing enough to dissuade many college graduates from remaining in the retail industry. Gush's study shows an 18 percent higher turnover rate for store retailers than corporate retailers, whose annual attrition rate is 21 percent. "Those who work in store retail have low levels of organizational commitment," explains Swinyard.

In order to attract, recruit, and retain a competent workforce able to compete in the twenty-first century, retail companies must modify working conditions and improve employee rewards. Marriott School researchers suggest four ways to lower the personal costs of working in retail:

First, retailers must hire the "right type of employees." Retailing is not for everyone. "It takes a certain person to work in and enjoy the retail environment," says Peay. "It helps to be detail oriented and creative, but you have to enjoy working with customers and have good people skills."

Employees happy in store jobs have a different set of job satisfiers than those in other jobs, says Rhoads. They are likely to have higher needs for immediate feedback, action, and social interaction. Recruiters must keep in mind that computer skills, personal interaction skills, and speed are critical behaviors necessary for retail service quality. Firms need to focus on using creative unobtrusive measures to determine top performers and their specific needs.

Second, retailers must understand what university graduates want. Why people work is becoming as important as how they work. The research team believes retailers must develop new work designs that are responsive to the values of college students. This will lead them to develop and implement new work programs that align the goals and objectives of graduates to those of retail firms.

University graduates in store retailing may report lower levels of satisfaction because retail organizations fail to recognize employee individuality and the need to progress towards personal goals. “No one ever encouraged me to stay and move up in the store,” says Black. “I felt store retailing was a dead-end job.”

Third, retailers should avoid only focusing on improving amenities. To increase employee satisfaction, there is a tendency for firms to focus on creating a more pleasant work environment by improving amenities. However, changing management style, job design, reward systems, or communication and coordination are key factors to increase the quality of work life.[7]

Rees found that reward systems helped motivate him and his coworkers. “One of the best things about working as a salesperson was the discounts and the opportunities to win contests and earn bonuses,” he says. “Banana Republic held a cashmere clothing promotion. We sold a lot of clothing that day to win our choice of any cashmere item.”

Fourth, retail firms should re-examine employee compensation. New and existing employees continually view pay as an indicator of how much they are valued by the organization. If retailers want to hold on to their most valuable assets—their best employees—they must offer more competitive salaries, says Swinyard.

“I like being a manager, but I don’t plan on staying at the store level very long,” says Peay. “The money isn’t good enough to keep me here.”

While not all the stereotypes about retail marketing hold true, there is enough reality in the myths to cause some to second guess careers in the industry. To remain competitive and attract and keep the best talent, companies must increase pay, create more opportunities for autonomy and variety, and improve employee satisfaction.

While the costs associated with a retail career may be too high for some, they are just right for others. Many thrive on the social interaction, creativity, and immediate feedback found in retailing. Top companies in the industry go a long way to empower employees, provide good compensation, and offer performance rewards.

“Improving the industry is an ongoing process,” notes Rhoads. “Regardless of where the industry is today, retailing at the store level can get better.” E

1 Myron Gable, Charles J. Hollon, and Frank Dangello, “Predicting Voluntary Managerial Trainee Turnover in a Large Retailing Organization from Information on an Employment Application Blank,” *Journal of Retailing*, 60 (Winter 1984), 43–63.

2 Janet Crosson, “Retailers: More with Less,” *The Tampa Tribune*, 8 October 1995, sec. Pasco, 1(Metro edition).

3 J. Brennon and B. McGeevor, “Graduates at Work,” *The Higher Education Policy Series*, no. 1 (1998).

4 Jacqui Gush, “Graduates into the Retail Industry: An Assessment of the Nature and Causes of Mismatches Between the Needs and Expectations of the Retail Industry and Expectations of the Retail Industry and Its Graduate Employees,” *International Journal of Retail & Distribution* 24 (1996): 9.

5 Christina Maslach, “Understanding Burnout: Definitional Issues in Analyzing a Complex Phenomenon,” in *Job Stress and Burnout: Research Theory, and Intervention Perspectives*, Whiton Steward Pine ed. (Beverly Hills: Sage Publications, 1982), *29–40*.

6 *Wall Street Journal*, “Sold on the Job,” 15 August 1995.

7 J. L. Suttle, “Improving Life at Work-Problems and Prospects,” in *Improving Life at Work: Behavioral Sciences Approaches to Organizational Change*, ed. J. R. Hackman and J. L. Suttle (Santa Barbara: Goodyear, 1977), 1–29.

First Dean Dies at 92

Weldon Johnson Taylor, the first dean of the College of Business, died 21 August in his home at the age of ninety-two. A well-known business educator and educational administrator, Taylor lived a life of great service, contribution, and example.

In 1957, Taylor began his seventeen-year tenure as dean of the College of Business—later renamed the Marriott School of Management. During his tenure, a now nationally ranked MBA program was commenced and a National Advisory Counsel was organized. He also made building the BYU business school's department of organizational behavior a top priority.

"It would be hard to overestimate the contributions Weldon Taylor gave to the Marriott School," said **Ned C. Hill,** dean of the Marriott School. "He brought in faculty from all over the country. His vision and energy was inspiring. He initiated almost every program that is in place today."

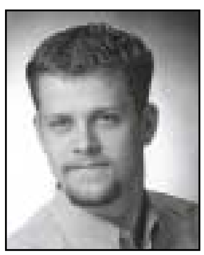
Taylor graduated from BYU in 1934, where he excelled at debate and once won a debate against future U.S. President Richard M. Nixon of Whittier College. He served as a statistician for the Federal Power Commission in Washington, D.C., through 1935 and submitted data used by Congress to enact Utilities Holding Company legislation. He graduated from the Harvard Business School in 1937 and earned a PhD in marketing from New York University in 1952.

Exchange Magazine Receives SPD Merit Award

President Hinckley's article entitled "The Business of the Church," featured in the spring 1999 issue of *Exchange* magazine, did more than attract readers—its design caught the attention of one of the most prestigious groups of designers in the country. Entered in the Society of Publication Designers' annual competition, the article earned a Merit Award for its editorial design. The feature layout was crafted by Emily Weaver of BYU's Publications and Graphics department. Photographs were taken by Pete Lacker.

Since 1964, the annual SPD design competition has drawn thousands of entries from around the world, providing a premier venue for promoting and recognizing the best in editorial design. Pages published in consumer, trade, and corporate magazines, Sunday supplements, newspapers, and annual reports are eligible for entry.

MyComputer.com Founders Download Education into Practice



JOSH JAMES

All **Josh James** can remember of his days in information systems class is a student named **John Pestana** who "corrected the teacher three times." Baffled by the logistics of the course, he approached Pestana and said, "I need to be your friend."

The two are not only friends now, but cofounders of MyComputer.com, a company that provides small businesses with the tools needed to develop and manage web sites. The pair was nominated for Utah's Entrepreneur of the Year Award, and they were among thirty finalists selected out of more than two hundred candidates.

James, age twenty-six, said the nomination was a compliment, considering he didn't even know what Microsoft was five years ago. He now runs a company with Pestana, also twenty-six, that appears to be on its way to number one in its small niche. The company helps other businesses develop web site features such as hit counters, banner ads, polls, and other resources aimed at helping web businesses become profitable.

JOHN PESTANA

Eventually, the company hopes to assist businesses manage their payrolls, employee email accounts, and other services. The business employs 120 people and services one million customers. They're now looking for a bigger office building in Utah County.

"Anybody with a domain name and an idea immediately thinks they're worth millions of dollars," said Joe Ollivier, an investor for Utah Angels. "Like all the dot-com companies, they've grown rapidly and gone through money as they've done it. What I think has helped them is the charismatic personalities of the two founders."

Other MyComputer.com investors like the idea, but they like the duo even more. Both a few credits short of graduating from the Marriott School, James, a former student in the entrepreneurial program, said "the school did too good of a job—so good that I left to start my own business."

James, an actor who has appeared in TV commercials, dramas, and movies, is the driven marketer. Pestana is the computer mastermind who taught himself HTML during his membership in BYU's Internet club.

"I think we've been a perfect match," Pestana said. "He doesn't like to do the things I like to do. We complement each other."

Although the two are different in demeanor, they share a knack for eighty-hour work weeks and a love for Adam Sandler movies—which happen to appear as names for various conference rooms in their office building.

James said an education was a means to an end for them, but they stumbled across the end sooner than expected. And as for long-term career goals, "We're in the middle of it," they say.

Students Show that Getting Outdoors Pays Off

When **Ryan Nichols** noticed the Internet moving further and further away from the needs of people's outdoor interests, he decided to pioneer a new type of Internet site—one categorizing outdoor equipment, outfitting, and recreation sites according to region and interest. The flagship feature of the site would be a search engine dedicated to the outdoors. In one click, users could find a hiking trail in the Rockies or a fly fishing shop in Australia.

Outdoorsman.com is the brainchild of Nichols, an outdoor enthusiast and BYU political science major. With the financial expertise of Marriott School accounting student **Michael Phelps,** Nichols developed a business plan for the national entrepreneur competition *Incorporate This! The Internet Business Challenge.* Phelps, a junior from Irvine, California, made the financial projections that validated Nichols' business model.

In May 2000, the two were announced the winners of the online business challenge. In addition to a $10,000 prize and a $5,000 scholarship for BYU, they were awarded an all-expense-paid trip to San Francisco to meet with companies Campsix, an e-business incubator company, and Sunflowercapital, a small investment firm. "Neither of the two are involved in the funding, but it was an invaluable experience as far as pitching our ideas, presenting our business, and profiling investors," Nichols said. "We learned how to target the type of investor that would be in our sector."

Outdoorsman.com's three-category search engine allows consumers to tailor their Internet searches to specific outdoor interests. "Consumers can now avoid long lists of irrelevant results that standard search engines provide," Nichols said.

Not only are consumers logging on to the company's site, but businesses are also signing on for new customers. Companies bid to pay a small price for each hit generated through the site. Outdoorsman.com then ranks the businesses in order from the highest to the lowest bidder, Phelps said. "A company's payments are directly related to how many customers visit their site," he said.

Student Stomps His Way Into Business

California boy through and through, **Brent Davidson** of Danville, California, is finding that dreams can come true in Utah, too. Someone stole his friend's snowboard, and lightning struck. That's when he decided there needed to be an antitheft device on snowboards—hence the Stomplock.

An economics major, Brent said his accounting professor, **Norm Nemrow,** taught him the essentials of writing a business plan and the fundamental principles to start a business. But before his plan turned marketable, he had to find the right look and feel for a snowboard lock. He started playing around with Play-Doh, then he had the prototype cut out of plastic. It took Brent and his brother Keith three to four months to find something workable.

"The design we ended up with was very different from the one we started with," Keith said.

After solidifying their idea, they attended a trade show in Las Vegas, where they met snowboard suppliers from around the world. Their idea sold, and they came away with numerous contracts and orders.

Randy Casper, the president of Marine Products/Rider's Choice Pro Shop in Salt Lake City, was convinced. With up to an $800 value, "snowboard theft is becoming a major issue," he said. "The Stomplock will be a big deterrent. It will slow the thief down and be very time consuming."

Stomplock is now being marketed around the world. They've had 5,000 orders and are negotiating with some major manufacturers in Taiwan to distribute the product in Taiwan and Japan.

Brent and Keith said they're working on other snowboard accessories and want to branch out into other areas of extreme sports. And while these dreams become realities, Brent plans to graduate in December 2000.

Brett Davidson is surrounded by Stomplocks ready to market. The Stomplock is an antitheft device innovated by Davidson and his brother Keith.

Utah Entrepreneur Challenge winners. Left to right: John Benson, Paul Wildon, and Logan Clark. Front: Becky Tate.

Students Entrepreneur Their Way to Top

Two BYU finalists won first- and second-place awards in the Utah Entrepreneur Challenge. John Benson, a senior from Littleton, Colorado, majoring in manufacturing engineering technology, and **Becky Tate,** a BYU graduate in business management from Denver, Colorado, teamed up with UVSC students Paul Wilson and Logan Clark to create CityNet systems, the winning business plan.

Four BYU students made the semi-finals, and three out of the four made the final round, said Hal Heaton, associate director of the Center for Entrepreneurship.

The students received $10,000 cash and $20,000 in goods and services from the Wayne Brown Institute. “Winning was encouraging. To know that other people feel our idea is feasible gives me the assurance that we will do very well,” Wilson said. Their business proposition—CityNet Systems—is designed to provide fast Internet access to students by installing T1 lines, or multiple Internet lines, making competition for phone lines obsolete.

Benson said the plan will provide network connections within an apartment complex and will be more affordable than current packages. “Aside from being substantially cheaper than the Internet hookup that current students are paying for, our connections will be faster, and complexes will be networked to allow students to share hard drive space if they wish,” he said.

CityNet not only sounds good for students, but also to prospective investors. In addition to winning $10,000, the CityNet team was independently awarded a package of services valued at $20,000 from the Wayne Brown Institute, a local venture capital organization. The Wayne Brown Institute will help CityNet prepare their plan for investors, Tate said.

Accounting Students Place Second in National Case Competition

Five accounting students from the Marriott School cooly handled the pressures faced by auditors—placing second in national competition. Graduate students **Brent Pugh, Troy Sheen, Heather Madsen, Josh Rowley,** and **Ryan Oviatt** participated in the Deloitte & Touche Foundation’s Fifth Annual National Student Case Study Seminar. The seminar placed teams in practical business settings with case studies developed by the firm’s accounting research department.

“We felt like real auditors,” Pugh said. “We immediately became immersed in solving a case about startup costs and felt all the pressures that a client would put on us.”

One pressure the BYU team faced was deciding which costs to expense or capitalize. Through researching accounting material, collaborating with a faculty advisor, and consulting with a Deloitte & Touche manager, the students produced a winning solution.

In addition to generating a solution to their case study, the BYU students prepared a presentation to be judged by a panel of active and retired Deloitte & Touche partners and faculty advisors. In order to best illustrate their conclusions, the team crossed over to the right side of their brains for a dose of creativity.

“Watching an accounting presentation is not the most exciting thing in the world,” Pugh said. “We tossed around several ideas and decided to visually illustrate our case solution.” A Barbie doll was chosen to represent employee training, a color swatch represented interior design costs, and a toy oven represented long-lived assets.

“If an item was to be expensed, we would place it inside a bag. If it was to be capitalized, it was placed on the floor beside the bag,” Pugh said. “It was a simple idea, but we knew it worked because all of the judges referred back to our example in the question-and-answer session.”

“Deloitte and Touche prepared these cases based on complicated business transactions and audit issues that the firm had previously encountered with clients,” said **David Cottrell,** assistant professor of accounting at the Marriott School and the team’s faculty advisor. “These cases were difficult, and the students had to put in a lot of hard work to develop their case solution and presentation.”

Investment-Savvy Student Wins Stock Competition

Nathan Gardner won $20,000 for making good predictions. He was awarded the grand prize in *Fortune* magazine and iExchange.com's $100,000 Business School Challenge for the highest rate of return—an average of 36 percent.

Twenty-one hundred participants from across the country were required to register on the the iExchange.com web site, select eight stock picks, and predict how their picks would perform over a certain period of time. Winning was based on the rate of return.

Gardner, a junior from Ogden, Utah, majoring in business management, said he plans to invest the award money which he claims was a "David and Goliath" win. "It is sort of a fun story that an undergraduate at BYU beat all the Ivy League schools," he said.

Gardner won the stock-picking competition by achieving a 36 percent average return on his picks over twelve weeks, beating the Nasdaq stock market, down 32 percent; the Dow, up 2 percent; and the S&P 500, up 1 percent for the same period.

"Most of my stock picks were new companies," Gardner said. "I predicted most of them would drop in price, because although I wasn't positive the market was going to dump, after a company goes public, most stocks will trade down to a more realistic level, especially if they're hotter stocks," he said.

BYU was also named top participating school of more than one hundred universities. **Kenton Walker**, twenty-four, a second-year MAcc student from Nauvoo, Illinois, took second place with a return of 24 percent, winning $10,000.

Students Take First Place at Northwestern Mutual Life

Besides gaining professional experience, a group of BYU students showed they have what it takes to make it in the financial services industry. While interning at Northwestern Mutual Financial Network, a team of eight BYU students including four from the Marriott School became the company's top selling intern team. Northwestern Mutual named BYU interns the 1999–2000 College Team of the Year.

BYU team members included Marriott School students **Jeff Segelke, Sally Reynolds, Robert Lockhead,** and **Chris Barlow,** along with fellow BYU students Rob Morgan, Spencer Stewart, Rob Eagleston and Trent Read.

"It feels great to know that we are the number one student intern team in the nation," said Segelke, an undergraduate business major at the Marriott School. "Northwestern Mutual Financial Network has given us a lot of recognition within the company including acknowledgment at their annual meeting in Milwaukee."

More than two hundred student intern teams from universities across the nation participated in the company's competition to sell life insurance policies. Student intern teams were allotted points according to the number and value of policies sold between June 1999 and May 2000.

In addition, teams were awarded bonus points for rookie intern sales. BYU's student intern team finished with a winning of 155 contracts and $132,907 in premiums.

Students Safeguard Sundance Community Against Wildfire

First-year graduate students at the Marriott School left their lap tops at home 26 August to help alleviate wildfire danger in Provo Canyon.

"We wanted to do a local service project with real consequences," said **Eric Rowlee**, a second-year MBA student who helped organize the event.

Wildfires have already burned more than six million aces in the West this year. To mitigate the danger, the Sundance community has been actively clearing underbrush from personal properties as well as along critical roadways and other public areas. On Saturday, their efforts received a huge boost with the arrival of 350 graduate students who donated an estimated seven hundred hours of service.

Volunteers removed noxious weeds and dead fall as well as trimmed trees and enhanced trails at various locations throughout the canyon. Graduate students worked on the Timpanogos Trail Head in the Uinta National Forest, Aspen Grove Alumni Camp, Sundance Resort, and fixed-income senior citizen homeowner properties.

"It was a positive experience. We were able to accomplish a lot in a short amount of time," said **Joe Millward,** a first-year MAcc student, who cleared underbrush from hiking trails.

Marriott School graduate students clear deadwood and debris in Provo Canyon. Students donated an estimated 700 hours of service to help prevent wildfire danger.

Top Business Executive Joins BYU Marriott School Faculty

The Marriott School is pleased to announce the appointment of recently retired Times Mirror Chair Mark Willes as a distinguished visiting professor of business management.

Willes joins the school's business faculty after retiring in April from his position as chair, president, and chief executive officer of Times Mirror, publisher of the *Los Angeles Times, Baltimore Sun*, five other newspapers, and eighteen magazines.

As a visiting professor, Willes will teach courses in business strategy and policy as well as conduct seminars. He will also participate with BYU communications faculty teaching media management courses. In addition, Willes will serve as cochair of the President's Leadership Council. The council assists the university president and board of trustees to establish strategic priorities as well as help raise the necessary funds to implement key initiatives.

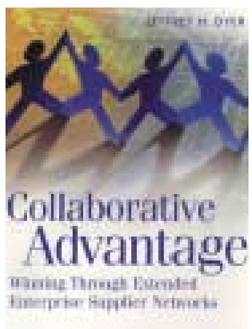
"We're thrilled to welcome an executive of Mark's stature to the faculty," said **Ned C. Hill,** dean of the Marriott School. "He brings a wealth of experience in business, government, and teaching that will enrich our curriculum."

"We believe that Mr. Willes' experience at Times Mirror—particularly with major newspapers such as *Newsday, Baltimore Sun, Hartford Current* and as publisher of the *Los Angeles Times*—will provide excellent material for study and discussion," said Laurie J. Wilson, chair of the Communications Department. "We look forward to his participation in graduate seminars on media management."

During Willes' tenure at Times Mirror, the company increased the circulation and revenues of its major newspapers and grew earnings per share at a compound rate of more than 50 percent—all at a time when many newspapers were losing circulation.

Before joining Times Mirror, Willes was vice chair of General Mills, Inc. He also served as its president and chief operating officer from 1985 to 1992, when he was named vice chair. Willes worked with the Federal Reserve System and was president of the Federal Reserve Bank of Minneapolis and first vice president of the Federal Reserve Bank of Philadelphia. Willes began his career as an assistant professor of finance at the University of Pennsylvania's Wharton School after earning his PhD from the Columbia Graduate School of Business.

New Study Says Dynamics of Competition are Changing



New research suggests collaboration may turn the traditional view of competition on its head. "Firms are recognizing the tremendous advantage of collaborating with supplier networks and competing as teams rather than as individual enterprises," said **Jeff Dyer**, a Marriott School professor and author of an eight-year study on competitive advantage.

"Major firms like Toyota and Chrysler have achieved staggering performance advantages relative to their competitors during the past decade in large part because they have created more effective enterprises. These automakers were among the first to recognize that the fundamental unit of completion has changed from the individual firm to the extended enterprise," Dyer said.

Aside from analyzing mounds of automotive industry data, Dyer interviewed more than two hundred executives and surveyed five hundred suppliers. His research focused on the changing nature of competition and competitive advantage. The automotive industry was chosen for the study because of its immense impact on the U.S. and other national economies, history of pioneering technology, ability to adapt to organizational change, and its competitiveness. Despite competitors' adoption of the Toyota production system and Chrysler's relatively small size, Dyer found that these two firms lead the industry in time-to-market, productivity, and profits. Toyota is also the industry's quality leader and, according to Dyer, Chrysler has improved its quality substantially since adopting the "extended enterprise" approach. He attributes their success to the efficiency with which they collaborate with and manage supplier networks.

"Collaboration processes are created with firms making relationship-specific investments, sharing knowledge within the extended enterprise and building trust between organizations," Dyer said. "When implementing these processes, extended enterprises will be able to respond swiftly and flexibly to opportunities and threats while maintaining significantly lower transaction costs."

Dyer cautions businesses that are slow to adopt collaboration processes. "Not only are firms in danger of becoming less profitable, but their very survival is at stake," he said.

Dyer's findings are published in *Collaborative Advantage: Winning Through Extended Enterprise Supplier Networks.* The book, published by Oxford University Press, is available at major bookstores and through online booksellers.

Dyer joined the Marriott School in 1999 and holds the Donald Staheli Term/Chair in International Strategy. Previously, he taught at the University of Pennsylvania's Wharton School where he was recognized with Excellence in Teaching Awards in 1996, 1997, 1998, and the Undergraduate Teaching Award in 1998. Dyer earned a PhD in management strategy and organization from the University of California–Los Angeles and an MBA and BA in organizational psychology from BYU.

Faculty Member Builds Business Mind

Admitting to having no knowledge of "the business side of things," **Paul Allen,** member of the entrepreneur series and associate of the Marriott School's Center for Entrepreneurship, now operates one of America's 500 fastest-growing companies.

Infobases started with a homemade CD-ROM scripture package that Allen sold out of the back seat of his car and has grown to an advanced software company providing the most contemporary LDS information.

Allen was information-, not viability-driven. "One of the first things we learned was that we didn't know anything about business," Allen said.

But he was determined to uncover the truth in learning how to grow a business. He was inspired when Infobases ascended to the Inc. 500 in 1994. He went to Philadelphia to receive the award and met people who had one thing in common: success. "I heard speakers talk about how to make a business work and how to grow a business. I was excited about what I was learning," he said.

And he was suddenly an entrepreneur. "I never really thought of myself as a businessman up until that point," Allen said. "But after that, I started reading business and marketing books. I learned how to write a business plan, how to strategize. I searched for the truth in business just as I had searched for truth in other arenas."

Eventually Allen left Infobases to focus his attention on Ancestry.com, one of the businesses Infobases had absorbed. And this time, he's building a business as a businessman, with a clear entrepreneurial perspective.

Professor Urges Students to 'Feast Daily'

Robert H. Daines, professor of strategic management in the Marriott School, spoke at a university devotional 20 June. Applying the doctrines of Jesus Christ as taught in 2 Nephi 31–32, Daines discussed the unique challenges students face and how they can overcome them using the Book of Mormon.

"This is the time when you will be making the most important decisions of your entire life—decisions concerning marriage, careers, family, where you live, etc. These decisions are stress-producing and require divine guidance," Daines said. The answers to these dilemmas in your life, he said, can and should be found in sacred places and in sacred records.

The scriptures, he said, will lead to personal revelation that will provide solutions to the problems and challenges that we face if we truly "feast," study, and meditate upon them. In turn, he said, the Lord "will affirm our devotions regarding family, career, and important relationships."

In order for decisions to be confirmed, Daines quoted President Spencer W. Kimball who said, "We must immerse ourselves in the scriptures. Only then will the distance to divinity narrow."

In closing, Daines encouraged students to establish priorities, put them in writing, review them regularly, and let them guide decisions as if they were a personal constitution.

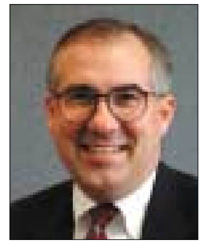
Recently retired, Daines served as a professor of business management, director of the Institute of Business Management and director of the MBA program. He earned his BS degree in economics from Utah State University, his MBA from Stanford University, and his DBA (doctor of business administration) from Indiana University.

Marriott School Professor Spoke in China

Paul Dishman, visiting associate professor at the Marriott School, was invited by the United Nations to lecture on competitive intelligence and knowledge management in China in September.

"It was a great honor to have a representative speaking at this important forum," said **Ned C. Hill,** dean of the Marriott School. "China plays a significant role in the world economy."

Dishman participated in the United Nations Senior Technical Advisers Recruitment Program. He lectured to groups of Chinese managers and academics in Beijing and Shanghai. Dishman spoke on applying competitive intelligence



to the business alliance process and its role in technical environments.

"The Chinese were anxious to develop business relationships with non-Chinese customers from a variety of industries," he said. "We made friends for BYU. There's a word for it in Chinese–guanxi," Dishman said.

Dishman is one of only thirteen professors in North America who teaches courses in competitive intelligence. In addition, he was recently elected to a three-year term on the board of directors of the International Society of Competitive Intelligence Professionals.

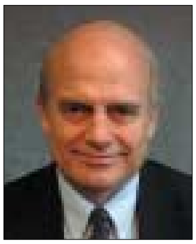
Faculty Awards and Recognition

Professor **Kevin Stocks** will hold the KPMG Professorship in Accounting for the next three years while Professor **Lee Radebaugh** serves as mission president in Brazil. KPMG, one of the Marriott School's major partner firms, is one of the school's most generous supporters.

A meritorious award was given to **Lynn J. McKell,** professor of information systems and accountancy, for the noncredit personal enrichment course Mastering MS Excel 97, Part 1—a course derived from ISYS 98. Judged against other classes in the nation, the Independent Studies office nominated McKell's course in the Course Awards Competition sponsored by the UCEA (University Continuing Education Association), the oldest organization in the U.S. for continuing education. Noncredit Awards Committee Chair Debra Nash said McKell's course was recognized for its clear and detailed instructions—allowing students to know what's expected of them.

Ron Malan, senior instructional designer for the Department of Independent Study, said the course is practical because "he uses the computer to teach the computer."

McKell, who authored the materials, said the course is valuable to the nontraditional student because it's a flexible method of making progress toward graduation away from the university. "Independent courses such as these allow for self and professional development," he said.



Warner Woodworth, professor of organizational leadership and strategy, received the Distinguished Service Award from the Utah Academy of Sciences, Arts, and Letters for his humanitarian service and his ability to mobilize students to combat poverty.

"I have accepted this award in behalf of the poor that I have been privileged to work with," he said.

The award included a stipend that Woodworth donated to H.E.L.P. International, an extension of H.E.L.P. Honduras, which created forty-seven new village banks and rendered 4,300 humanitarian service hours for victims of Hurricane Mitch.

He was also recently named the first-ever Lowell Bennion Humanitarian Award recipient, and was presented with the Circle of Honor Award in 1999, the ASQ Distinguished Lecturer Award in 1998, and the BYU Humanitarian Award in 1997.

New Marriott School Faculty

The Marriott School has completed its most successful hiring season to date. The school introduced twenty new professors to students this fall.

The added personnel will increase the school's full-time faculty from 111 to 118—making room for 150 additional undergraduate students. New faculty members will assume their positions during the 2000-2001 academic year.

School of Accountancy and Information Systems

Conan Albrecht—A PhD graduate from the University of Arizona, Albrecht focused his dissertation research on the development of a distributed framework for real-time, network-intensive collaborative behavior. Albrecht will teach information systems.

John Barrick—Barrick, CPA, earned his PhD in business administration from the University of Nebraska–Lincoln where he was granted the AAA/ABO Outstanding Doctoral Dissertation Award. Besides teaching there, he has also taught at Northeastern University and worked as a senior tax consultant for PricewaterhouseCooper.

Tatia Beaslin—Beaslin, CPA, earned her MAcc and BS in accountancy from BYU. She has worked for Arthur Andersen LLP as manager of tax and business advisory and senior tax consultant. Beaslin volunteers at the LDS Hospital Emergency Room and the Utah Chapter of the American Women's Society of Certified Public Accountants.

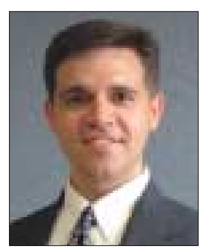
Ervin Black—Black earned his PhD from the University of Washington and has since taught there, at the University of Arkansas, and at the University of Wyoming. He has been published in dozens of print and online publications and has served on numerous committees.

Ted Christiansen—Christiansen, CPA, earned his PhD and has taught at the University of Georgia. He has also instructed at Case Western Reserve University, BYU, and Utah Valley State

College. Christiansen earned his PhD in accountancy with an emphasis in financial accountancy from the University of Georgia in 1995. He earned his BS and MAcc degrees from BYU. His research includes capital markets and the insurance industry.

Kip Krumwiede —Krumwiede joins BYU from Washington State University, where he began working as an assistant professor in 1996. He received his PhD in accounting from the University of Tennessee and his BS and MAcc degrees from BYU. He is a CPA and has researched and published widely in the field of cost and managerial accounting.

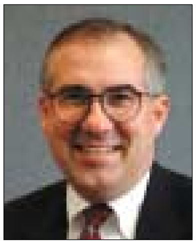
Gyung Paik—Paik earned his PhD from the University of Illinois at Urbana in financial accountancy. He taught accountancy at the University of Illinois and has researched at the Korea telecom Research Center in Seoul. He is the recipient of several awards, including the Irwin Fellowship for 1999–2000.



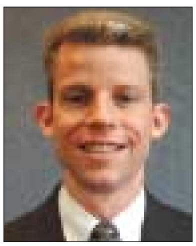
Jeff Wilks—A Cornell PhD graduate, Wilks has taught at Cornell as well as at BYU. He has received numerous honors and awards including the Deloitte & Touche Doctoral Fellowship and BYU's Outstanding Accounting Undergraduate.

Darrell Walden—Walden, CPA, earned his PhD from Virginia Commonwealth University. His research and teaching interests include financial and managerial accounting, accounting information systems, environmental reporting, issues in accounting education, innovations in technology in higher education, and e-commerce issues.

Business Management



Paul Dishman—Dishman earned his PhD from the University of North Texas in marketing and his undergraduate degree from Trinity University. He has taught at Idaho State University and Texas Woman's University.



Todd Mitton—Mitton earned his PhD from the Massachusetts Institute of Technology in financial economics. His areas of interest include corporate finance, international finance, and behavioral finance. Mitton has worked as a teaching and a research assistant.

Barrett Slade—Slade earned his PhD from the University of Georgia in business administration. To supplement his extensive teaching experience, he has conducted research in real estate indices, institutional real estate, mortgage markets, and real estate securities.

Bryan Sudweeks—Sudweeks earned his PhD in business administration from George Washington University. A certified financial analyst, Sudweeks has published two books—*Equity Market Development in Developing Countries and Foreign Portfolio Investment: Country Profiles and Cases*—and numerous articles.

Keith Vorkink—Vorkink earned his PhD in economics from the University of Rochester. Instructor and teaching assistant positions at Bryant College, the University of Rochester, and W.E. Simon Graduate School of Business Administration preceded his dissertation entitled "Robust Estimation Techniques Can Help Explain Asset Pricing Anomalies."

Romney Institute of Public Management

David Hart—A State University of New York at Albany PhD recipient, Hart earned his MPA and undergraduate degrees from BYU. He coauthored *Wall Street Polices Itself: How Securities Firms Manage the Legal Hazards of Competitive Pressures* and has written for several publications. He has taught at Mary Washington College, Texas Tech University, and Empire State College. His teaching emphasis will be in the political and social environment of public administration.

Lori Wadsworth—Wadsworth earned her PhD in business administration from the University of Utah after receiving her MPA and BS from BYU. Her research interests include work-family conflict, intragroup processes and relationships, and ethics. She is affiliated with the Academy of Management and the Western Regional Academy of Management.

Organizational Leadership and Strategy

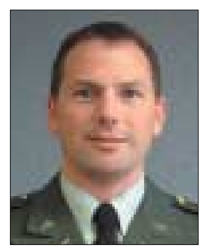
Nile Hatch—Hatch earned his PhD from the University of California at Berkeley and has taught courses at the University of Illinois at Urbana-Champaign. His research interests include the acquisition,

management, and transfer of knowledge within and across links in the value chain. Hatch has published reports in several periodicals and serves on two insurance company boards of directors.

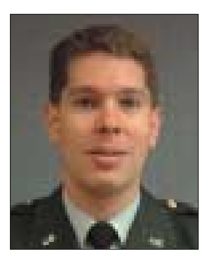
Center for Entrepreneurship

Gary Williams—Williams earned his MBA from Arizona State University and his BS from BYU. Williams is the former president and CEO of Sterling Wentworth Corporation. He has served on various boards of directors and as executive with other high-tech and manufacturing firms. Williams has taught marketing and strategy at BYU and Portland State University.

AROTC



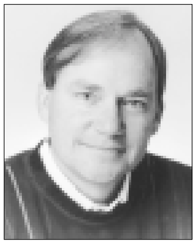
Brent Anderson, CPT—Anderson has received awards and decorations for service and achievements for national defense in the Army and Air Force. He has completed the Paladin Commanders Course and Field Artillery Officer Advance Course. He has been positioned in Limestone, Maine; Cedar City, Utah; St. George, Utah; and Provo, Utah.



Erik Hendrik Verhoef—A graduate of the Combined Arms and Services Staff School, Verhoef lived in Europe for twenty-three years, gaining firsthand knowledge of foreign affairs and history. He has served as captain, first lieutenant, and second lieutenant in the the U.S. Army. Verhoef earned his BS in Biology from Utah State University.

Alumni Spotlights

Louis Pope



Louis Pope wasn't exactly a shining star in his MBA class. He always joked he'd set up a scholarship fund for the bottom students if he ever made it big.

When Pope graduated in 1975, he worked as plant manager at his father's synthetic diamond production company for five years until he decided to expand the family business.

With the help of his father and a few partners, Pope scraped together about $200,000, built a diamond making press, and renamed the company US Synthetic.

The next thirteen years were venturous and trying. But he never lost hope—not because he had infinite faith in the company, but because he didn't want to let his father down. "Everything my father had was tied up in the company," Pope said.

The struggling company shifted its concentration to manufacturing diamond cutters for oil and gas drilling bits. In 1991, he replaced his father as president and implemented a number of strategic moves that elevated this near-failure to a model of success.

Pope now runs a factory that employs 180 workers, some with no college education who have a quarter of a million dollars in their retirement funds. Pope leads the business as the world's leading supplier of Polycrystalline Diamond Cutters to the oil-drilling industry. How's that for making it big?

Dayton Judd

In high school he read Fortune 500 magazines and learned that 50 percent of successful business people had earned their undergraduate degrees in accountancy. That was enough to convince **Dayton Judd** to enter the Marriott School's MAcc program. That and the fact that his father, **Doyle Judd,** CPA, earned his BS and MAcc degrees in accountancy from BYU in 1968 and 1969, respectively.

Doyle, CFO for Slaymaker Group, a private business that operates a number of corporate restaurants in four states, told his son that he could go to college wherever he wanted. "But we're sending your mail to BYU," he told him. "In retrospect, we think he's glad it went that way," Doyle said.

Dayton agrees. "BYU's accounting program is phenomenal," he said. A 1995 sum cum laude scholar, the MBA classes he took as part of the MAcc program gave him an edge at Harvard Business School—where he also graduated with honors.

He finished in the top 5 percent of his class, earning the distinction of a Baker Scholar. George Baker was a "wealthy banker" who funded the construction of the business school, Dayton said.

Dayton wasn't the only BYU alumnus who received the recognition. Two other BYU grads were among the top 5 percent—Jared Stone, who earned his BS in economics in 1994 and Randy Shumway, who earned his BA in international relations in 1996. "BYU is among the top eight to ten schools that get people into Harvard," Dayton said.

Dayton now works for McKinsey, a business consulting firm in Dallas, Texas. He worked for the company for two years post BYU graduation, and took part in a business analyst program. The company paid for him to return to school to earn an MBA under the condition that he work for the company for two years upon completion of the graduate program.

For now, Dayton is happy with his position at McKinsey. An associate for the company, he moves to a different division every month. "I'm learning a lot," he says. "And until something comes along that's more exciting than that, I'll stick around."

Class Notes

1939

Franklin R. Haymore worked for the BYU Press for forty years, serving as assistant director and manager. He and his wife, Lela, have eight children and several grandchildren and great–grandchildren. He has served as a bishop and as a couple missionary with his wife. They reside in Spanish Fork, Utah. He earned a BS in accountancy from BYU in 1939.

1941

Arthur C. Pierce is retired and has served several missions for the Church. He and his wife, Mary, have seven children, forty grandchildren, and seventeen great-grandchildren and reside in Vernal, Utah. He earned a BS in accountancy from BYU in 1941.

1947

Russell H. Sheffield is retired and has five children. He resides in West Bountiful, Utah. He earned a BS in accountancy from BYU in 1947.

1958

Richard L. Mower of St. George, Utah, recently retired. He earned a BS in accountancy from BYU in 1958.

1959

Vincent F. Gordacan is president of Bio-Fine Pharmaceuticals, Inc., located in Las Vegas, Nevada. He conceived the research and development of new biotech process technology at the University of Nevada School of Medicine, Department of Pharmacology, in Reno, Nevada. Gordacan and his wife are serving as stake missionaries in the Francisco Park Ward, Paradise Stake, Las Vegas, Nevada. Gordacan is a nongraduate alumnus from BYU.

1968

Lynn Green is Institute director for the Church Education System in Pasadena, California. He earned his MPA at BYU in 1968.

Williard Arthur Slaughter is human resources generalist for Thomason Hospital in El Paso, Texas. He earned his MPA at BYU in 1968.

1970

Michael Dyal is the city manager for Medford, Oregon. He earned his MPA at BYU in 1970.

John V. Parks is asset manager for GSA in Washington, D.C. He earned his MPA at BYU in 1970.

1972

Vern Christensen works as a personnel staffing specialist for Southeast CPOC in Fort Benning, Georgia. He earned his MPA at BYU in 1972.

1973

Mike Bigelow is assistant superintendant of public instruction for Olympia, Washington. He earned his MPA at BYU in 1973.

Greg Spencer was recently promoted to general manager of Prestolite Sud América, an automotive parts manufacturer and telecommunications equipment distribution company. Before being appointed to his new position, he served for two years as manager of sales and administration. He, his wife, and four children reside in Buenos Aires, Argentina. He earned his BS in accountancy from BYU in 1973.

1976

Glade R. Hamilton is the administrator for Larchwood Inns in Grand Junction, Colorado. He graduated with his MPA from BYU in 1976.

1978

Steve H. Thacker is city manager for Centerville, Utah. He earned his MPA from BYU in 1978.

1979

Michael F. Reed makes a weekly commute to Mexico City, where he is president of Intersys Mexico, a network systems integrator. His wife, Susan, is completing her third year of medical school in San Antonio. His oldest daughter will enter medical school in August at Texas Tech. He has six children, three of whom live with him and his wife in San Antonio.

Ed Thatcher is city manager for Greenville, Texas. After graduating from BYU's MPA program in 1979, he worked as an administrative assistant to the city manager of Abilene, Texas. He has been the city manager of Greenville since September 1989.

1980

Gordon S. Burt works as administrator for the Village of Glenwood, Alberta. He earned his MPA from BYU in 1980.

Dale R. Carter is management services officer for a National Security Agency in Ft. Meade, Maryland. He earned his MPA from BYU in 1980.

Brian J. Evans is Arthur Andersen associate administrative vice president of finance. Evans has worked nine years with the company, where he most recently headed the firm's strategy, finance, and economic consulting practice in northern California. He has nineteen years of professional experience as a consultant, accountant, and auditor—mostly in the San Francisco area. Evans received his undergraduate degree in accountancy from BYU in 1980 and completed an MBA at Oregon State University one year later.

Kim Wilde is a village administrator in Waunakee, Wisconsin. She earned her MPA from BYU in 1980.

1981

Marsha Madsen is a sales manager for Ridgeline Systems in Laguna Hills, California. Madsen earned her MPA from BYU in 1981.

1982

Jack C. Mitchell is chief operating officer for the Washington Regional Medical Center in Fayetteville, Arkansas. He earned his MPA from BYU in 1982.

1983

Jay Rollins relocated to the U.S. Agency for International Development's (USAID) headquarters in Washington, D.C., in 1999 after spending eight years as a USAID Foreign Service auditor in the Middle East Regional Office of the Inspector General based in Cairo, Egypt. Upon relocation to Washington, Rollins was promoted to assistant director of USAID's Division of Performance Audits. He, his wife, and seven children reside in Montclair, Virginia. Rollins earned his MBA from BYU in 1983.

Kerry Morgan is vice president-treasurer for Consolidated Freightways (CF), a leading LTL transportation carrier specializing in long-haul freight throughout North America. He is responsible for management of treasury, risk management, and strategic planning functions within the company.

Morgan, started with CF in 1986 as a financial analyst based at the Leland James Center in Portland, Oregon. In 1988, he was named controller for CF Ocean Service, a company subsidiary at the time. Three years later, Morgan assumed responsibilities as audit manager of Emery Worldwide, a subsidiary of CF's former parent company, CNF.

In 1996, Morgan was named CF's director of treasury and planning, a position he held since being elevated to vice president-treasurer.

A native of Santa Barbara, California, Morgan is married, has four children, and lives in Portland, Oregon. He earned his BS in accountancy from the Marriott School in 1983 and an MBA from the University of Southern California in 1985.

1984

Robert W. Huckvale of Camas, Washington, accepted a position in

January 2000 as vice president of finance with Purdy Corporation. He and his wife, Susie, have been married for seventeen years and have five children. Huckvale earned his BS in management information systems from BYU in 1983, and his MAcc from BYU in 1984.

Hugh I. Johnson is vice president of occupational health at CliniCare of Utah in West Valley City, Utah. He earned his MPA from BYU in 1984.

Lynne Kertamus Porter has accepted a position as executive vice president and director of risk management at Indymac in Pasadena, California. Before working for Indymac, she was director of financial services at Dole Food Company and senior vice president and director of internal audit at Home Savings of America. She recently married Christopher Porter, a senior mechanical engineer. They reside in Covina, California. Porter earned her BS in accountancy from BYU in 1984.

1985

P. Artell Smith works for Hewitt Associates as a consultant in Lincolnshire, Illinois. He graduated with an MPA from BYU in 1985.

Dale Wegkamp is assistant inspector for the Federal Bureau of Investigation in Washington, D.C. Wegkamp earned his MPA from BYU in 1985.

1986

Steve Booth followed an international career at General Motors until leaving the company to work on advanced technology microsystems products for automotive applications. He earned his MBA from BYU in 1986.

Jody D. Lemmon of Fayetteville, Arkansas, was promoted to director of field sales with GE Capital Card Services. He and his wife have three children. He earned his BS in finance from BYU in 1986.

Kurt S. Schulzke is an assistant professor of accounting at the Coles College of Business at Kennesaw State University. A member of the Coles College faculty since 1990, he teaches courses dealing with international comparitive accounting; international business law, taxation; accounting ethics and malpractice, and accounting policy.

As chair of the Coles College International Business Committee, he also works with faculty colleagues to develop international business education programs worldwide. He earned his BS degree in accountancy and his MAcc at Brigham Young University in 1986 and completed a Juris Doctor (cum laude) at Georgia State University in 1998.

1987

Scott D. Clayson of Brigham City, Utah, is currently corporate controller for Flying J, Inc. He and his wife have four children. Clayson earned his BS in accountancy from BYU in 1987.

Lee J. Glines, director of BYU's Salt Lake Center in Salt Lake City, Utah, earned his MPA from BYU in 1987.

Bill Murri is budget analyst for The Church of Jesus Christ of Latter-day Saints. Murri earned his BS in accountancy from BYU in 1987 and his MBA from the University of Utah in 1988. After earning his CPA, he expatriated in South America for three years. He and his wife, Holly, reside in Salt Lake City, Utah, and have six children.

Kelly G. Roundy is manager of clinical and general financial support for Shared Medical Systems in Salt Lake City, Utah. Roundy earned his MPA from BYU in 1987.

Gary Snyder joined Cornerstone Recruiting Services as national director of finance and accounting recruiting and as national IT associate after twelve years of finance and accounting experience with two large firms. Cornerstone Recruiting Services is an exclusive insurance industry search firm. Snyder has six children and resides in Mesa, Arizona. He earned his BS in accountancy from BYU in 1987.

J. Darren Wilcox recently joined Bessemer Trust Company as vice president in their new Atlanta offices. Bessemer Trust Company is a family office that manages investments and other financial affairs of wealthy individuals and families. The company manages about $32 billion on behalf of some 1,300 clients. Before joining Bessemer, Wilcox worked in commodity derivatives in various management, trading, and marketing positions with Goldman Sachs in New York, Louis Dreyfus, and Southern Company in Atlanta.

Wilcox lives with his wife, Nancy, and five children in Alpharetta, Georgia. He earned his undergraduate degree in computer science at BYU in 1985 and his MBA from the Marriott School in 1987.

1988

Jeff Chancey followed an international career at General Motors until leaving the company to work on advanced technology microsystems products for automotive applications. He earned his MBA from the Marriott School in 1988.

1989

R. Scott Andersen is deputy center director for Centennial Job Corps Center in Nampa, Idaho. He graduated with an MPA from the Marriott School in 1989.

Konrad Hildebrandt is city manager in Washington Terrace, Utah. He earned his MPA from the Marriott School in 1989.

David T. McGuire is director of human resources at Southern Utah University in Cedar City, Utah. McGuire graduated from the Marriott School with an MPA in 1989.

Pauline E. Rice of Oak Grove, Missouri, manages all state and local income tax functions for the Sprint PCS group—the all-digital, wireless division of Sprint Corporation in Kansas City. She has been with Sprint Corporation for three years.

She and her husband, Brad, have been married nearly eight years and have four children. Brad is a real estate agent, and Pauline also owns and manages numerous residential rental properties. They live just outside the Kansas City Metro area. Pauline earned her BS in tax from the Marriott School with an MPA in 1989.

1990

Alan Christensen is assistant city manager for Bakersfield, California. He earned his MPA from the Marriott School in 1990.

Tamara Lewis, MD, is medical director for the community health division of Intermountain Health Care in Salt Lake City, Utah. She graduated in 1990 with her MPA degree.

Scott R. Mecham is financial director of the Utah Department of Administrative Services in Salt Lake City, Utah. He earned his MPA from the Marriott School in 1990.

Dwan Wride of El Paso, Texas, accepted a position in September 1999 as senior account representative for Liberty Mutual. He is married with three sons and teaches seminary for the Church. Wride earned his BS in accountancy from the Marriot School in 1990.

1991

Corine Larson is senior policy advisor for Senator Robert F. Bennett in Washington, D.C. She graduated from the Marriott School MPA program in 1991.

R. Kevin Maryott is localization manager for International Translation & Publishing in Salt Lake City, Utah. Maryott earned his MPA from the Marriott School in 1991.

G. Kent Streuling is human resources administrator for America First Credit Union in Riverdale, Utah. He earned his MPA from the Marriott School in 1991.

1992

Brooks Holtom returned to school to earn his MAcc degree from the Marriott School after working for Arthur Andersen in Seattle for three years. He then graduated from the University of Washington in 1999 with a PhD in organizational behavior. He is a visiting assistant professor of management at the Owen Graduate School of Management at Vanderbilt University.

He is also an assistant professor of management at Marquette University. He and his wife, Kim, have two sons and reside in Nashville, Tennessee.

Allison B. McMullin is director of marketing for Intercet, Ltd., in McLean, Virginia. She earned her MPA from the Marriott School in 1992.

Merrill R. Oveson is vice president of research and development for Faneuil Research in Provo, Utah. Oveson earned his MPA from the Marriott School in 1992.

Annette Royle is vice president of events for the U.S. Ski Team in Park City, Utah. She graduated with an MPA degree from the Marriott School in 1992.

1993

Mike Chadwick works for the Governor's Office for Excellence in Government in Phoenix, Arizona, as executive management consultant. He graduated from the Marriott School with an MPA in 1993.

Melanie C. Livingston is controller of Livingston Mortgage, Inc. located in American Fork, Utah. She is married to company president Rodney Livingston. They have two children and reside in Alpine, Utah. She earned both her BS in tax and MAcc from the Marriott School in 1993.

1994

Mason Bishop is public affairs director for Utah Department of Workforce Services in Salt Lake City, Utah. He earned his MPA from the Marriott School in 1994.

Captain Brian Kehl has been awarded a full scholarship by the United States Air Force to earn a PhD in economics from George Mason University in Fairfax, Virginia. He is currently assigned to Los Angeles Air Force Base as the chief of cost research for the military's Global Positioning System constellation of navigation satellites. Kehl earned a BS in accountancy from the Marriott School in 1994 and went on to earn his MS in cost analysis from the Air Force Institute of Technology. He and his wife, Angela, have two children and will move from San Pedro, California, to Woodbridge, Virginia.

Sharon L. Loper works for the Federal Emergency Management Agency in Washington, D.C. She graduated with an MPA from the Marriott School in 1994.

Tyler Pruett is associate director at New Mexico State University in Las Cruces, New Mexico. He earned his MPA from the Marriott School in 1994.

Dale Yancey is a federal tax manager for the Safeway Corporation, headquartered in Pleasanton, California. He and his wife, Kim, have one son and live in Tracy, California. Yancey earned both his BS in tax and MAcc from the Marriott School in 1994.

1995

Jeff Bruce Benson is assistant to the director at the University of Idaho in Idaho Falls, Idaho. He earned his MPA from the Marriott School in 1995.

Marina S. Hayes is research program manager at Yale University of Medicine in New Haven, Connecticut. She earned her MPA from the Marriott School in 1995.

Amy Olsen is a sales representative for Janssen Pharmaceuticals in Salt Lake City, Utah. She earned her MPA from the Marriott School in 1995.

1996

Bruce R. LeBaron is an employment specialist for Intermountain Health Care in Salt Lake City, Utah. He earned his MPA from the Marriott School in 1996.

Yuping Zhao of Strongsville, Ohio,

left a job with PricewaterhouseCoopers in December 1999 to be a financial analyst for Forest City Enterprise in Cleveland. Zhao earned a MAcc degree from the Marriott School in 1996.

1997

Travis Boren is assistant vice president for Cecil & Co. in Dallas, Texas. He earned his MPA from the Marriott School in 1997.

Michael Gregersen is a retirement specialist for Fidelity Investments in Centerville, Utah. He earned his MPA from the Marriott School in 1997.

Adam L. Schader of San Jose, California, was recently promoted to senior consultant at Arthur Andersen's Business Process Risk Consulting (BPRC) Group. He has traveled to San Diego, New Jersey, and Singapore. Schader earned both his BS in tax and MAcc degrees from the Marriott School in 1997.

Alan Todd recently left his job at Pinnock, Robbins, Posey & Richins to accept an auditing position at the PricewaterhouseCoopers office in Salt Lake City, Utah. He and his wife, Melony, have an eight-month-old daughter and have recently built their own home. He serves as financial clerk in his ward in Layton, Utah.

1998

Travis Lane John of Idaho Falls, Idaho, passed the CPA exam on his first try, receiving the fifth highest score in the state. He works for his father's CPA firm. John has been married for more than four years and has a seventeen-month-old son. He earned both his BS in tax and MAcc degrees from the Marriott School in 1998.

Darren Alfred Marshall is a performance auditor for Utah Legislative Auditor in Salt Lake City, Utah. He earned his MPA from the Marriott School in 1998.

1999

Gregory Martin works as a management analyst for the City of Houston, Texas. He earned his MPA from the Marriott School in 1999.

Management Society News

New England Chapter Inducts New President

Lance Spencer has replaced **Bryson Cook** as president of the New Hampshire, New England Chapter. Cook founded the chapter in 1998 with only four or five participants. The organization now has more than fifty people on its mailing list.

Spencer earned his undergraduate degree from BYU in finance in 1988 and is now an MBA candidate at Boston College. During his incumbency, he said he plans to set up a BYU scholarship fund for New Hampshire residents, form an advisory board, implement participation in BYU's mentor program, and establish internships in New England for BYU students.

"The scholarship fund is an absolutely worthwhile cause, and a great opportunity for us to have some continuity in a service we can provide to students," Spencer said. "It also gives us a reason to have an awards banquet."

"The New Business Equation" Conference To Be Held in Sydney

The Australian Management Society will help host its first conference in conjunction with one of Australia's leading business schools, the Macquarie Graduate School of Management. The landmark conference designed to explore the growing importance of managing a portfolio of relationships for individuals, families, corporations, and society, will be held 14–16 February 2001.

The conference will bring together the world's leading management thinkers and will feature human resource consultant **David Ulrich** and best-selling author **Clayton Christensen**. The conference is directed at corporate leaders and political/government policy makers. It is designed to bring together some of the world's leading management and organizational consultants to help government and corporate leaders bridge the gap between the working world and the needs of employees, their families, and communities.

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Executive Director of Management Society Addresses Alumni

Dear BYU Management Society Presidents,

It is with great pleasure that I take a few minutes to write to you about some of the great things taking place at the Marriott School. In June we enjoyed the company of several renowned business leaders including the best-selling author of *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*, Clayton Christensen; Monsanto chief financial officer Gary Crittenden; and Linda and Richard Eyre, business consultants, authors, and lecturers. Many others joined these great leaders and speakers at our sixth annual Management Conference. The conference was hailed as a great success.

The BYU Management Conference is a service provided by the Marriott School. More than five hundred BYU friends and alumni enjoyed the opportunity to hear lectures, ask questions, and network with other successful business leaders. The Management Conference not only enlightened attendees intellectually but spiritually as well. Sheri Dew, second counselor in the Relief Society General Presidency and executive vice president of publishing for Deseret Book Company was the closing speaker. Dew spoke on the role of leaders in this new century exemplifying President Hinckley as such a leader. "A leader is someone who helps you do more, see more, and become more than you probably could do on your own," Dew said.

It is our goal that Management Society members become leaders in the community, in the workplace, and in the family. The societies provide many needed tools to help our alumni and friends to do just that—networking opportunities, community service projects, scholarships, and much more. We are excited about the management society and the many wonderful projects and services our chapters provide to their communities and to alumni. Keep up the great work. Warmest regards,

Rixa Oman
Executive Director

Australian Management Society Chapter Welcomes Top Business Educator

In August the Australian Management Society Chapter of the Marriott School cosponsored the visit to Australia of Professor David Ulrich of the University of Michigan. Ulrich is highly acclaimed internationally as a business thinker, writer, and presenter. *BusinessWeek* magazine named him one of the world's top ten educators in management and the top educator in human resources.

A noted researcher and professor of business administration, Ulrich codirects the human resource programs at the University of Michigan—ranked number one by *BusinessWeek, The Wall Street Journal,* and *Fortune* magazine.

While in Australia, Ulrich met with business and professional leaders and held a special workshop with 350 senior executives of the Queensland Public Service entitled "Connecting Leadership Performance and Personal Values to Business Outcomes."

During his business presentation, Ulrich mentioned his membership in The Church of Jesus Christ of Latter-day Saints and expressed how his faith largely influenced many of his business theories. The Church in Brisbane has been working for more than a year to obtain building approval for their announced temple, and many government executives in Ulrich's audience were in a position of influence in regards to this building approval.

"Professor Ulrich's visit to Australia has done wonders for the Church and for the BYU Management Society here. Many of the top leaders from Australian government and private businesses were able to hear Professor Ulrich's remarks regarding business and leadership, and also personal words concerning his faith and values," said Christopher Cooper of the Australian Management Society. "Because of Professor Ulrich's unique position in the business world, I now think these audiences will hold the LDS Church in a much higher regard."

Virginia Blueridge Chapter Hosts Scholarship Golf Outing

The Southwest Virginia Blue Ridge region hosted its third annual Spring Scholarship Golf Outing 28 April to benefit area high school seniors. Head football coaches from BYU and UVA, LaVell Edwards and George Welsh and their wives, were the guests of honor at the Hanging Rock golf course in Salem, Virginia.

The event capitalized on the opportunity that presented itself to host a "Spring Meeting & Press Conference of the Coaches" since these two schools were in the middle of a 1999–2000 series. BYU opened the 2000 Cavalier's season in Charlottesville, Virginia, in their newly expanded stadium 2 September. These two coaches have met on the gridiron three times in the past, and LaVell lamented that Welsh is the only coach in Division-One NCAA Football that he has yet to defeat.

The Virginia Blue Ridge Chapter of the BYU Management Society was chartered in the fall of 1996, but has since established itself in the region as an organization of LDS professionals that can successfully host world-class events. The annual golf outing and scholarship offering is just one of the successful activities that has not only brought these two renowned coaches into the Roanoke Valley, but has been privileged to have hosted Jim McMahon in 1999.

The event has grown each of its three years from 48 participants in 1998, to 76 in 1999, to a record 132 at the Y2K Outing. Over the three-year period this event has raised just under $30,000 and after costs and green fees, has awarded $10,000 in scholarships to twelve outstanding students who are attending nine different colleges and universities.

The scholarships are unrestricted as to race, gender, faith, or choice of higher institution. Students receiving scholarships are enrolled at the following universities:

Brigham Young University
Radford University
William & Mary
University of Virginia
Johns Hopkins University
Bucknell University
Virginia Tech
Wake Forest University
Mary Washington College

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