SPECIAL: BREAKTHROUGH IDEAS FOR 2006

Harvard Business Review

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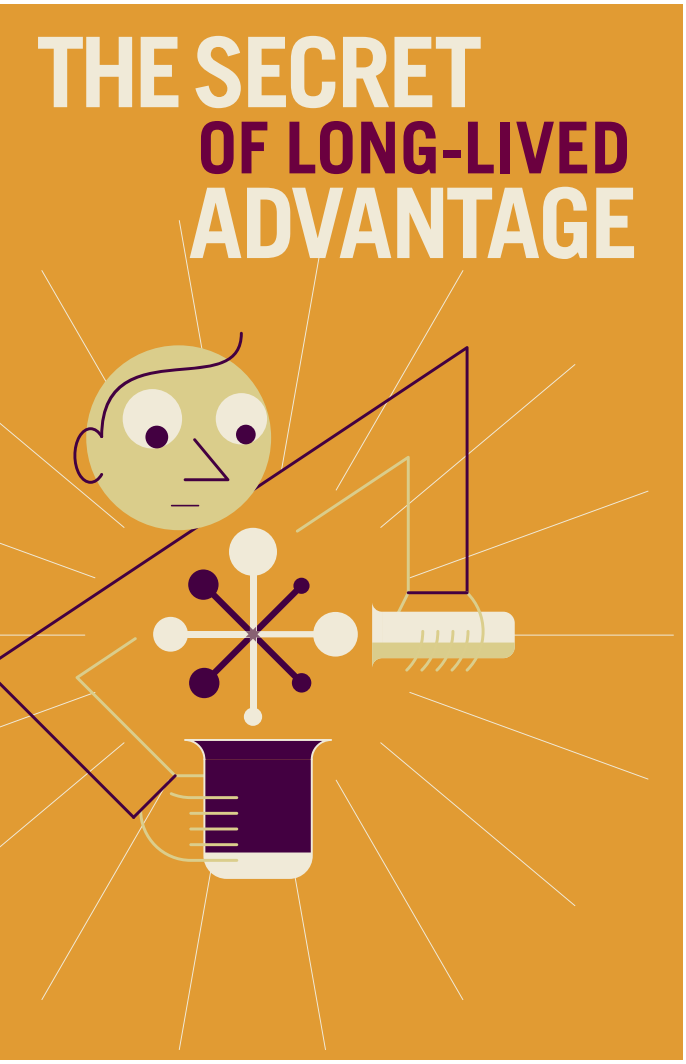
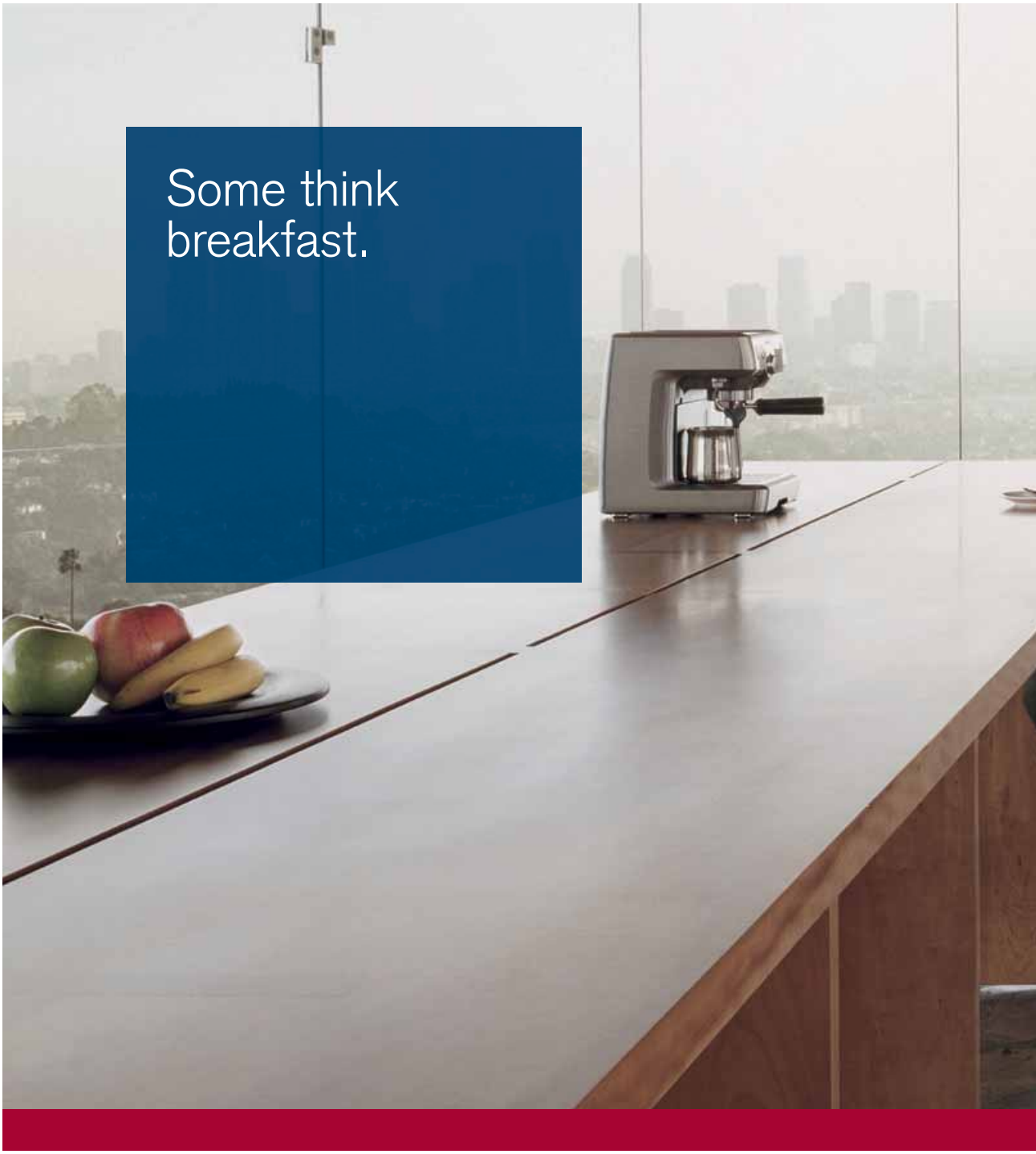
February 2006



PAGE 72



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High-performance customer service, delivered.

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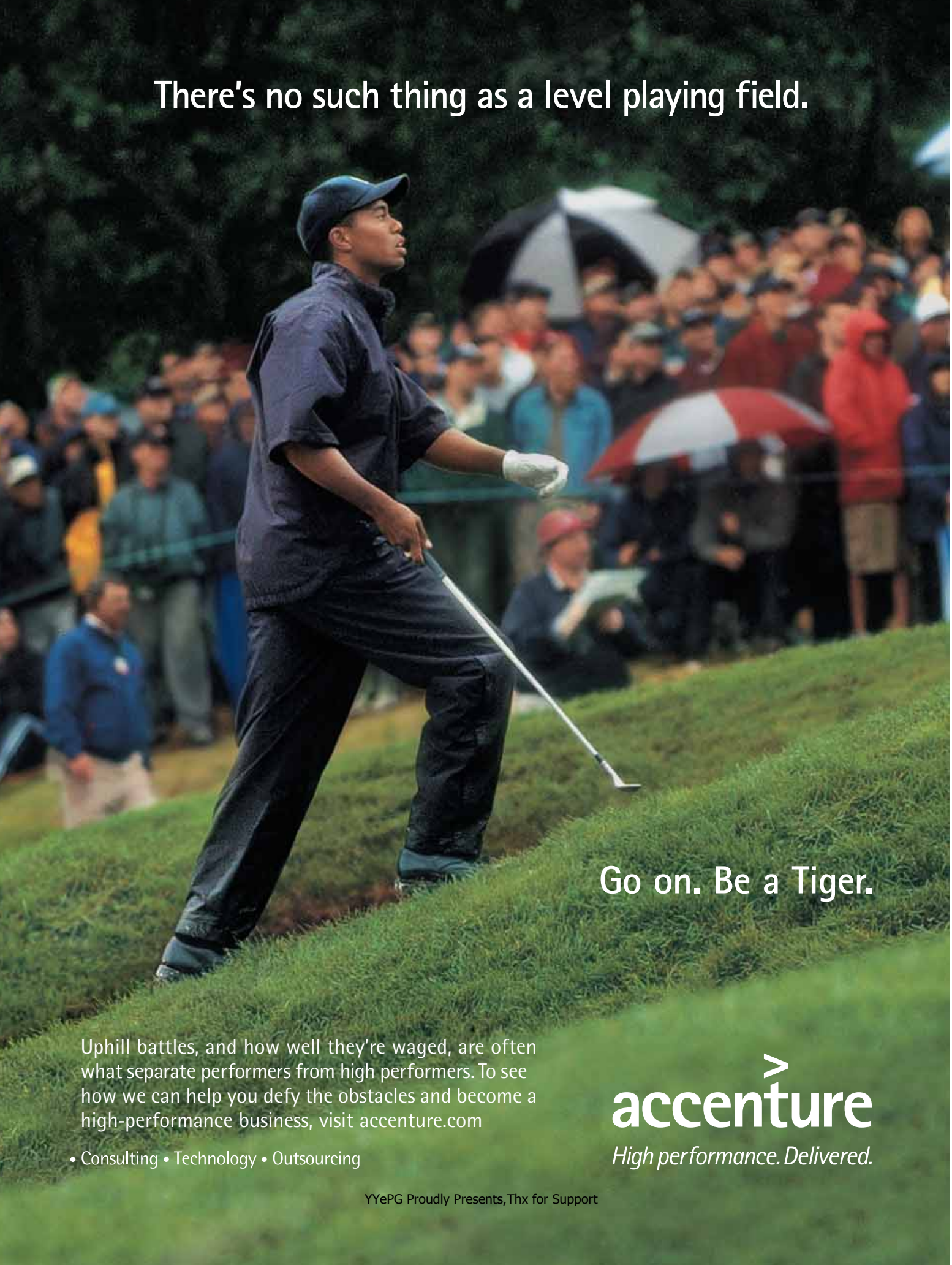
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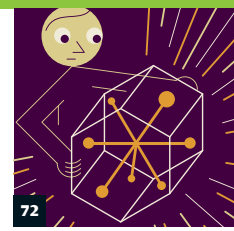
February 2006



continued on page 10

COVER ART: GREG MABLY

The world consumes two barrels of oil for every barrel discovered.

So is this something you should be worried about?

The world consumes 84 million barrels of oil a day.

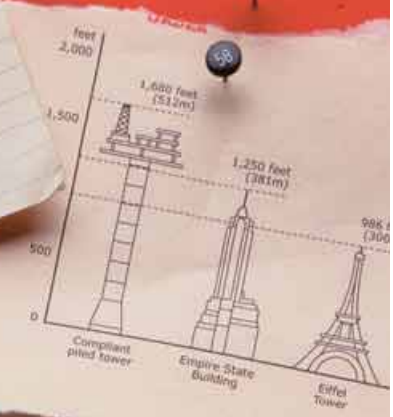
By 2030 the number of cars in the world will increase by 50%.

The fact is, the world has been finding less oil than it's been using for twenty years now. Not only has demand been soaring, but the oil we've been finding is coming from places that are tough to reach. At the same time, more of this newly discovered oil is of the type that requires a greater investment to refine. And because demand for this precious resource will grow, according to some, by over 40% by 2025, fueling the world's growing economic prosperity will take a lot more energy from every possible source.

The energy industry needs to get more from existing fields while continuing to search for new reserves. Automakers must continue to improve fuel efficiency and perfect hybrid vehicles. Technological improvements are needed so that wind, solar and hydrogen can be more viable parts of the energy equation. Governments need to create energy policies that promote economically and environmentally sound development. Consumers must demand, and be willing to pay for, some of these solutions, while practicing conservation efforts of their own.

Inaction is not an option. But if everyone works together, we can balance this equation. We're taking some of the steps needed to get started, but we need your help to get the rest of the way.

willyoujoinus.com



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- Committing more than $300 million each year on clean and renewable energies

Finding even more energy today:

- In 2004, achieved exploration record 78% higher than 10-year industry average
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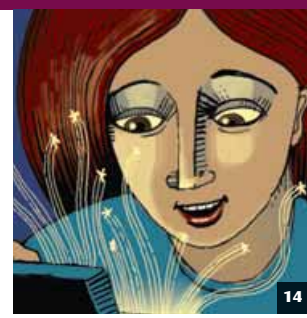
DEPARTMENTS

February 2006



Organizations in this issue are indexed to the first page of each article in which they are mentioned. Subsidiaries are listed under their own names.

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"Even worse, now that our stock has tanked, we might have to go back to sitting at desks in cubicles."

DAVID BROWN

Cynics cured.

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the skeptical.
We're skeptics
ourselves.
Constantly
challenging
the way
law firms serve
their clients.
In doing so,
we've turned the
formerly frustrated
into the
currently ecstatic.

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Where Ideas Come From

HARVARD BUSINESS REVIEW seeks to improve the practice of management and its impact in a changing world. In that statement are at least three hidden assumptions. One is that the world is changing; another, that to cope with change, behavior should change; the third, that better management makes a difference – it can help people and organizations deal with change, and it can itself be an instrument to change the world for the better.

Those premises are not self-evident truths. The world is always in motion – but not all motion is change. Babies are born every second, but human nature seems to change little, if at all. We find cautionary tales about leadership in Shakespeare; he found them in Plutarch. Businesses invent or adopt new technologies – but, as Michael Porter reminded HBR readers in "Strategy and the Internet" in March 2001, new tools rarely alter the fundamentals of strategy or operations. As to the efficacy of management, isn't there a lot of truth in the saying that it's better to be a mediocre company in a great business than a great company in a mediocre business?

Yet in a sense, the very existence of HBR is an argument in favor of those premises – and every issue is evidence in support of them. The edition before you makes a particularly compelling case. Start with Gary Hamel's important article, "The Why, What, and How of Management Innovation." To most people, innovation means new products or ways of marketing. But management itself can also be a field for innovation. Indeed, Hamel maintains (and history supports him) that managerial innovations such as the invention of brand management or the divisionalized corporation have created greater value and longer-lived competitive advantage than anything that ever came out of a laboratory or a focus group.

A principle of managerial innovation, says Hamel, is to look for powerful ideas in unusual places. That principle animated us in putting together "The HBR List: Breakthrough Ideas for 2006," where you will read about discovering advanced environmental thinking in polluted China, finding creative solutions for retail stores in cyberspace, using private-label goods as a bulwark to protect brand-name products, and extending the boundaries of science by violating a central tenet of the scientific method – the controlled experiment. For the second year, we collaborated with the World Economic Forum to cohost a summer meeting to which we invited a score of people, picked simply because they are really smart and interesting, to discuss emerging ideas that they felt could have large effects on business and society. This year we met in Geneva – a city whose combination of political neutrality and capitalist opportunism has historically made it hospitable to new thinking. That gathering, plus an ongoing quest led by senior editors Leigh Buchanan and Paul Hemp, produced the list of provocative ideas you will see in the pages ahead.

Ideas should change behavior, whether directly (when we put an idea into practice) or indirectly (when an idea – say, Freudian psychology – changes our view of ourselves and, consequently, our actions). I don't mean to deny the value or virtue of thinking for thinking's sake, or art for art's. But even "pure," platonic ideas have real-world implications. Certainly in business, trouble often lies ahead when ideas and actions become uncoupled. That has happened to the idea of market segmentation. An earlier generation of HBR readers was the first to learn about market segmentation, in Daniel Yankelovich's "New Criteria for Market Segmentation," published four decades ago. There he proposed segmentation as a powerful strategic tool, a means of identifying ways to change consumer behavior by discerning unmet customer needs and devising offerings to satisfy them. These days, it has devolved into a psychographic tool, used mostly by ad agencies, that simply describes various customer types. But since those don't change – Joe Six-Pack does not morph into a metrosexual – segmentation has lost its link to action and much of its value. Yankelovich is back, with David Meer of the Marakon consulting firm, in this issue's "Rediscovering Market Segmentation" to show how to create new value by applying a great old idea to a changed world.

Thomas A. Stewart

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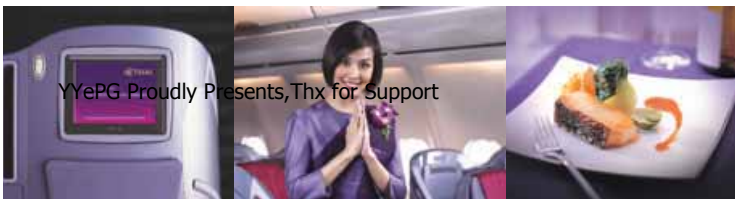

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Paul Kennedy is a good fellow who trusts people, and he's in line to become CEO of Daner Associates. Is he tough enough for the job?

DANIEL VASCONCELLOS

The Nice Guy

by Russ Edelman and Tim Hiltabiddle

7:01 AM

Driving East on Clifton Boulevard Toward Downtown Cleveland

Damn. I'm still stuck in traffic. Accident ahead? Thank goodness Larry doesn't show up these days until 11:00 at the earliest. I can get a lot done before our one-on-one later today provided Lisa finalized those projections for the European offices yesterday. Once she's plugged the numbers into the forecasting model, we'll have our economic case close to perfect. When I show Larry the expansion plans, he'll give me one of those arm punches and tell me how great I am. Maybe he'll say he's finally ready to pass me the baton. We could jointly announce it at the company meeting next week.

Poor Sheila. She didn't look well this morning when I kissed her goodbye… Amy had the sniffles last night. Hope we're not in for another winter cold. That's two already this year. I don't want Sheila to be sick on Friday. We've got reservations at Giovanni's. Jeez, married 15 years already. Hard to believe. Can't wait 'til she sees the diamond studs I bought her. Note to self: Remember to buy roses.

[*Brakes suddenly.*] Whoa, it would be nice if you signaled, lady! Oh, I see, "Baby on Board." The kid's probably crying…. I remember that time, driving Amy to day care. She dropped her bottle and screamed her head off.

Wow, Clifton's a parking lot today. I'll give Lake a shot. I may as well try to

HBR's cases, which are fictional, present common managerial dilemmas and offer concrete solutions from experts.

make some calls. Maybe Lisa's in the office already.

7:14 AM

Heading Eastbound on Lake Avenue

[*Calls Lisa on her cell.*] "Hi Lisa, it's me, Paul. Hey. I need to touch base on two things. First, how's your mom doing? Did she have a good night?....Uh huh....I see....Wow, I'm sorry to hear that. That's really rough. Sheila sends her love. Please let Lilly know she's in our prayers, OK?

Also, I want to confirm that we're all set on the expansion numbers. I need the model for my meeting with Larry at 1:30....What?....Oh, I see. What time is her doctor's appointment?... Mmmm....Uh, no, don't sweat it. Just do what you need to do, and I'll figure out a way to finalize the data. Who was helping you out, Lynne or Aaron?... Neither? Ugh. All right, all right. Call me when you're on your way in to the office, OK? See ya." [*Hangs up.*]

When I show Larry the expansion plans, he'll give me one of those arm punches and tell me how great I am. Maybe he'll say he's finally ready to pass me the baton.

Damn. This totally messes up my morning. Now I'll have to try to hack my way through the spreadsheet before the meeting.

I can't imagine what it's like taking care of a parent with a terminal illness. How awful. But Lisa's really slipping. She was such a go-getter and a great operations manager, but her focus has been shot since her mother got sick. Last week she forgot to copy the latest spreadsheets to the network. Not cool. Work used to be a big priority in her life. But now....I know she still loves Daner as much as I do. It's in her blood. She's always telling me how much better the work environment is since I joined ten years ago.

That long? I can remember so clearly when Larry first told me about Daner Associates, the line he gave me. "Ad agencies are passé," he said. Instead, he was starting a "new media" company. The notion of leaving a great job at TRH and joining his team was the furthest thing from my mind, yet the crazy guy pitched me so hard I couldn't resist. And he was right. He knew that companies would need a strategic partner that could provide creative ideas in all media – print, radio, TV, and "that information superhighway I keep hearing about." Daner was going to be that partner. We've had our ups and downs, but it's been an incredible ride. Up from five people to over a hundred, a client list that boasts some of the biggest companies in the world. And the best part is, it's just the beginning.

Larry is still a tiger, but he's getting a bit tired and wants to golf. I can't blame him for that. It's definitely time for him to retire. Lately I could swear he's been doing the nudge-nudge, wink-wink in my direction. George thinks he's in the running too, but I think he'll be cool with reporting to me. Wonder: Once I'm CEO, should I put George in charge of our European expansion? A footprint in Europe will make us even more indispensable to our clients. It will make us a global leader, not just a domestic shop.

George has done well under Larry for the past two years. He was pretty psyched about his promotion to VP of business development. He's great on the technical end of things, but he still needs more polish and experience with customers. He is feisty, though – always willing to take on anything. And he'll challenge Larry at the drop of a hat. I'm surprised Larry puts up with it and doesn't chop him off at the knees.

Still, when it comes to people, Larry can really be so hard-nosed. His take-no-prisoners attitude is understandable when bidding on business but not when it comes to people. Like when Larry said Lisa's become a liability lately; he even hinted about replacing her. Ugh. Lay off Lisa? I can barely think the words, let alone say them to her. She's always been my right arm. She usually knows what I'm thinking even before I do. Sure, Jim or Andrea could eventually handle the role of operations manager, but there's a steep learning curve. Note to self: Have another heart-to-heart with Lisa to discuss the possibility of reducing her workload for a while – or maybe see how she'd feel about taking a leave of absence that would let her focus on her mom. I really want the old Lisa back.

7:38 AM

Passing Edgewater Park on the Shoreway

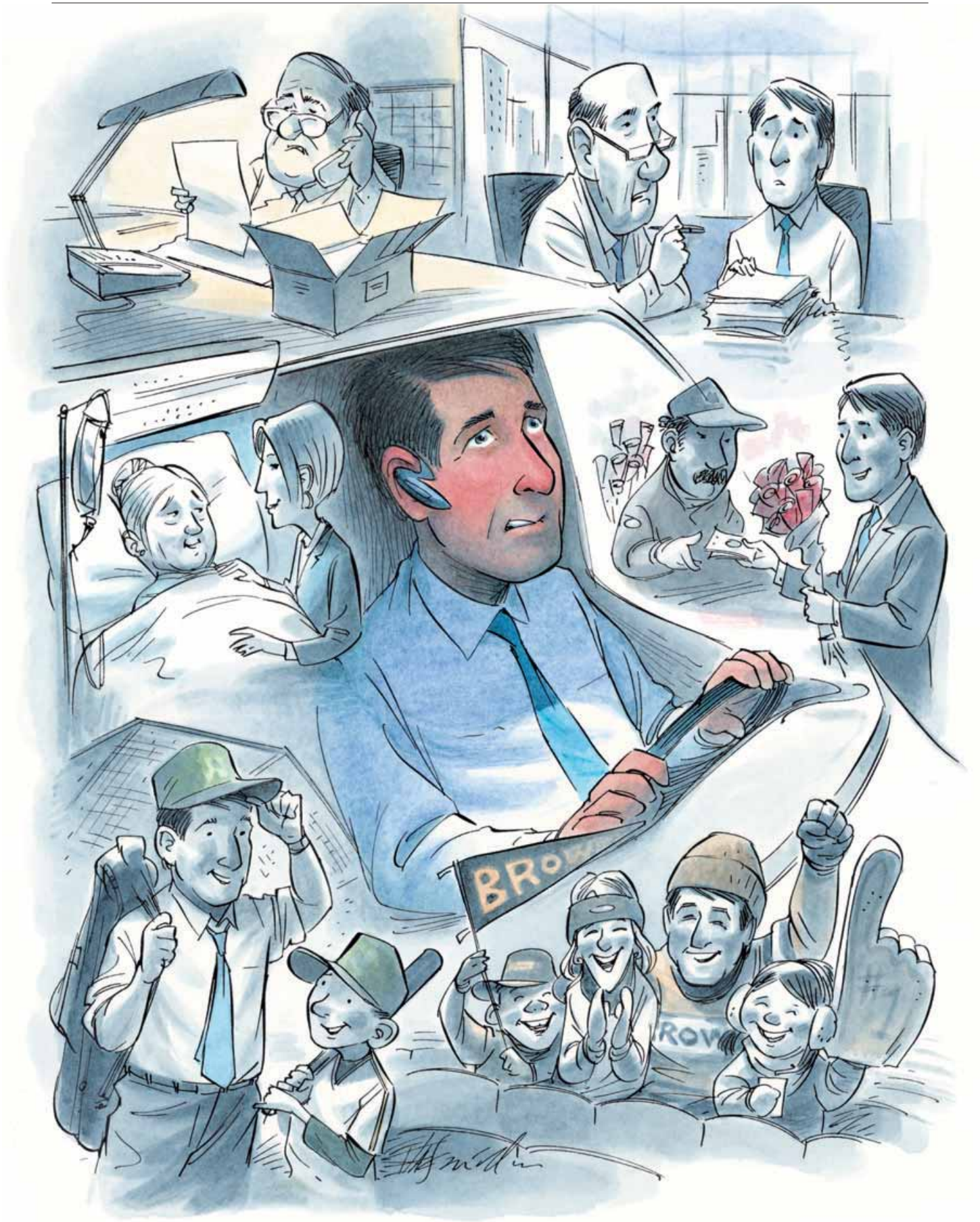
This traffic is ridiculous. If I leave by 6:00, I'm golden. But if I wait until after 6:30 to wake Sheila and the kids on my way out, I'm hosed. At least today I get to see an amazing sunrise. Bonus.

Man, I could jog faster than this. I remember all those brainstorming jogs with Larry along the lake. It was great to compare notes and talk about the future. For an old guy, he did pretty well – up until his heart attack three years ago. I almost lost it last week when he said that he was going to start jogging again – and he's aiming to run the Boston Marathon in April. Please, Larry, stick with golf and sailing!

It'll be fun to blow him away with the strategy and the numbers. It's been a ton of work preparing for this, but now we're ready. We can mobilize quickly once he gives us the green light. I'm a little surprised that he's stayed away from our recent planning sessions. I thought he'd want to provide some feedback and direction. Perhaps it's his way of pulling back and empowering me before handing me the reins.

So, the million-dollar question is: What will he say? I think I know the answer. He'll love the bottom line – that he can golf and sail as much as he wants. He'll like his new chairman-only role so that he can step away from the day-

Russ Edelman *(russe@niceguystrategies.com) and* ***Tim Hiltabiddle*** *(timh@niceguystrategies.com) are the founders of Nice Guy Strategies, a consulting firm in Boston.*



to-day operations. And he'll admire the return to the origins of the company in which staff development programs become an integral part of Daner's growth strategy.

7:51 AM

Exiting at West 45th Street

Could this traffic be any more annoying? Maybe I'll have better luck on Detroit. Better call Justin back – he left that obscure message. Hope I don't have to run more interference with printing the Sheffield job.

[*Calls Justin.*] "Justin, it's me, Paul. Yeah, I got your message. Fill me in…. OK, call Randy and push back….No, I'm not stepping in yet. This is your baby. It's your job. Between you and me, I'm not totally ruling out compromise, but you need to push back. Remind them how much business we've given them over the years, and remember we're talking about a big chunk of change here. Besides, they should have caught the mistake. You can do this, Justin. Keep me posted."

I can't believe this. More problems? Abbe Printing had to redo the whole thing because of their mistake, and now that rep Randy is trying to convince Justin that Daner should split the cost of the reprint with them? Forget it! I can't stand it when people try to take advantage. I grew up in a print shop, for cryin' out loud. Gimme a break!

Justin does have a point, though. The murky print specs Lisa prepared on that job created a bit of a gray area in terms of culpability, but still – we give Abbe dozens of jobs a year. Over $2 million in revenues, I'll bet! We could be hard-nosed on this. Sticking us with a bill like this just doesn't feel right. Still…maybe there's room for compromise. I know that Randy is a good guy, and besides, they've gone above and beyond the call of duty for us many times. I really don't want to torch that vendor relationship.

8:08 AM

Crossing the Detroit-Superior Bridge

[*Calls Sheila.*] "Hey honey, how are you feeling?…Oh, hon. Maybe you can sleep a little after the kids go to school….OK, put Quinn on, but make it quick….Hey, Quinn, good luck with the test today. I know you'll do great. Finish eating, and I'll see you tonight for baseball practice….Yes, I've got all the equipment….No, I don't think Tommy should try to pitch; he's a great outfielder. We'll talk tonight, OK? Let me speak to Amy real quick….Oh, all right, put me back on with Mommy….Hi hon.… What?…No, I can't pick up the dry cleaning. I passed it ten minutes ago. And I'm already late to the office.… All right, love ya. I'll talk to you later – remember to give Amy a kiss, OK? Feel better. Bye." Note to self: Talk to Tommy's dad about why I'm keeping him in the outfield tonight – gotta figure out a nice way to let him know that his kid is talent challenged as a pitcher.

8:16 AM

Turning on West 3rd Street, near Public Square

There's the stadium. Too bad the Browns stink this year. And last year. And the year before. Damn, I really miss the old days. What a great routine we had – Mom, Dad, Gracie, and me… I…Dad always did the impossible and found a way to get tickets to the Browns-Steelers game every year. What a blast. I miss watching the games with Dad. That's when we bonded. That was our time together.

It was tough for both Dad and Mom to balance work and family, but somehow they did. They were always there for me. And boy, did they love their work. What great role models. Gracie and I were forever hanging out at the plant after school and on weekends, too. The place was always buzzing, and the teamwork was amazing. The employees felt such ownership, such a sense of responsibility for each job, big or small. Mom and Dad's formula was as relevant then as it is now. Management 101: Treat everyone with respect and consideration – employees, clients, vendors – and you get loyalty and productivity. They were so patient with me switching majors from art to sociology in college. They were so proud when I finally got my MBA….

I can't wait to run this company. I'm going to show Larry, the team – damn, the world – where Daner can go! Note to self: Get tickets for a game this season, and take all the managers. And grab four for the family, too. I want to start making it a tradition with Sheila and the kids.

8:22 AM

Pulling into the Parking Lot, Warehouse District

This is crazy. By the time I get into the office, I've spent over an hour commuting. I've got to have Lisa – or someone – look into office space on the West Side. We'd all appreciate a reduced commute, easier parking, and more room and amenities. Remember to mention it to Larry, too.

10:52 AM

Paul's Office

[*On the phone.*] "You're right, George. Cuyagen needs us. We're clearly the best fit for the job. But I don't think we have quite the leverage you think we do. I feel that they're really price sensitive. What happens if we play it your way, refuse to lower our estimate, and then they walk and go with Dewald Media? I really hate Dewald. We've already lost several accounts to those guys because of their ridiculously low fees….Yeah, I hear ya – but think of the bigger picture. We can't afford to lose ground in biotech right now. It's growing, and we need to be seen as a player, not an afterthought. Let's find a way to make the deal work and still be reasonably profitable. Maybe we reduce our pricing to get in the door, then get back to our normal fee structure down the road? Have you discussed with them our approach for quantifying the ROI on campaigns like this?…And they're still balking? Even with an ROI that could pass any sniff test? Unbelievable!…All right. I'll get back to you after I've given it some thought. Thanks for the update."

Sometimes George is so smug. I can't believe that Cuyagen wants the entire deal for 60% of what we proposed. I

wonder if they're just playing hardball to see how low we'll go or if they're really that clueless when it comes to the costs of mounting an effective campaign of this size. They won't get that with Dewald. But damn, we need this deal! I'd hate to lose the business, especially in this economy. It would be a great toehold for us in biotech.

George thinks they'll ultimately go for the higher price, even with some kicking and screaming. George and Larry have a similar approach. I'll bet if Larry saw their measly counteroffer, he'd laugh and half jokingly tell them to pound sand! Larry's always willing to walk away. Sometimes it works. Sometimes it doesn't. But this one's too important to lose.

I need to get tougher? What in blazes does that mean? Become an absolute jerk like George?

Note to self: Try to find out what other biotech companies have spent on comparable campaigns and provide Cuyagen with comparative studies. We need some leverage.

1:12 PM

Paul's Office

Let me think....Where can I find Lisa's spreadsheets? Which folder? Here they are. Once I get through these numbers, I'll have Lynne call Lisa to confirm that the figures are still accurate. I wonder if Lynne would be a good replacement for Lisa. She's smart, she does great work, and she's quick on the uptake. I think I'll ask her to pick up some of the slack.

OK, I've got the forecasting model. I've got the expansion plans printed. I think I'm all set....I sometimes wonder if working in the shop as a kid set the stage for this...or was it B school that made a difference? A combination of both, probably.

Time to meet with Larry. Which conference room was it again?

4:12 PM

Paul's Office

Oh, God, please tell me that this is just a nightmare and I'm going to wake up any minute now. How could we be so far apart when I thought we were on the same page for so long? Man, I really misread the situation. So Larry hasn't been pegging me for CEO after all. I have many of the ingredients for the job, but I've got to get tougher? "I'm thinking of you for number two." How could he? And worst of all, now he wants to consider George! What's going on here?

5:24 PM

Heading Westbound on the Shoreway

OK, Paul, pull yourself together, buddy. Let's take stock here. So Larry isn't convinced I'm the man – at least not yet. Maybe I should have done a better job managing up. But I can do this job ten times better than George. There's no comparison. I think Larry's just been smitten by all the business George has been closing. Plus lately they've been drinking scotch together late into the night and telling dirty jokes. That's never been my thing.

I've been a leader in this company for ten years. George has two. I've touched virtually every facet of Daner's existence. He's been focused exclusively on new business. Larry can't deny my ability to deal with creative, operations, sales, and marketing. Customers and vendors love me, and I know the team sees me as their natural leader, friend, and champion.

So, OK, he's giving it more thought. Sometimes it feels like I don't even know Larry anymore. He used to get it. What happened? Come on....

I've clearly demonstrated my tenacity time and time again. I need to get meaner and tougher? What in blazes does that mean? Become an absolute jerk like George? Should I do that? Can I do that? Do I even want to? Do I still belong here?

What must Paul do to land the top job? • Four commentators offer expert advice.

Eric Schmidt is the CEO of Google in Mountain View, California.

There is no single way to lead, and Paul's conundrum has much to do with the culture of Daner Associates. Larry doesn't come across as an all-knowing, my-way-or-the-highway type of CEO who discounts his managers' judgments, and I doubt he has run the company like an army boot camp – if he had, Paul would probably have left long ago. We might assume, then, that Larry may prefer to manage by consensus and encourages his people to do the same. In that case, Paul has some room to leverage his natural gifts while polishing his own leadership skills.

Like so many nice-guy managers, Paul is a worrier. In this case, he worries that if he doesn't accommodate others' needs, they will react in a way that will harm the company – specifically, that they might quit. This is a legitimate concern. Lisa, for example, has demonstrated that she's a top player when she's not distracted by family troubles, and it's clear that she had already let him know about her problems outside work. But Paul is an unsuccessful nice guy, afraid to confront reality, and that gets in the way of winning.

The successful nice-guy manager makes people feel very supported – to the point where they are ready to accept judgments that override their personal interests.

Let's step back in time and imagine that Paul has his first opportunity to hear Lisa's troubles out. And let's assume that Lisa has bravely tried to deal with her mother's illness by herself before confessing what's going on to her boss. She doesn't know how to fix what's happening in her life, but she doesn't really expect him to fix anything for her either. Maybe all she wants is a sympathetic ear. This is Paul's first opportunity to engage in a management technique I call "leadership therapy." This technique allows the person with the problem to feel heard and supported, but it also adjusts the picture and puts the onus for dealing with the problem right back where it belongs.

Here's how I practice leadership therapy. When a manager comes into my office and wants to talk about a problem or feels like complaining, I pull out a sheet of paper and a pen. While he talks, I listen and take notes about what he's saying. After he's finished, I look at my notes and say, "Let me make sure I understand you," and then I summarize what I've heard in a few sentences. I've found that when people see I've given them my full attention and have proven it by repeating what they've said, they feel very supported – to the point where they are ready to accept my judgment, even if it overrides their personal interests. (By the way, it's perfectly OK to toss the piece of paper afterwards.)

I always base my response on the principles, policies, and values of the greater good, meaning the company. For example, if a valued employee comes to me complaining that he needs a raise now rather than at the standard beginning of the year, I might say something like, "I understand your position. We can't respond to your request now because that's not the way we do things around here, but I tell you what I'll do. Keep your performance at your current level or higher, and in January we'll pay particular attention to your situation." If this person tries the old ultimatum trick ("I have another offer, so give me what I demand or lose me"), I never negotiate because hostage taking goes against our core values. I say congratulations and wish him the best of luck.

Paul can practice leadership therapy with Lisa, Justin, and the others who consciously or unconsciously devolve their responsibilities onto him – the perceived nice guy. For example, Paul could listen to Lisa and then negotiate a six-month part-time contract with her. In return for backfilling for her and keeping her job open, he can demand a firm commitment from her to return full-time after that period. This is a clear and explicit response that both respects her needs and challenges her. If Lisa is the performer Paul thinks she is, she will return to work with redoubled loyalty, commitment, and performance. His success in handling Lisa's situation will demonstrate his managerial skills – not only to Larry but to everyone at Daner Associates and, most important, to himself.

WENDY WRAY

Nani Beccalli, President & CEO, GE International says France has a talent for innovation.

GE is as American as apple pie. What's it like doing business with the French?

GE today is a truly global company with a long history in Europe. There is a way of doing business which France and the United States have in common. Look at our 50/50 joint venture with SNECMA producing jet engines in France [CFM International]. It's an outstanding and extremely successful partnership. It has existed for 30 years and will probably be around for 30 more.

What qualities does France have to offer?

The French have a passion for engineering and technology, for research and solutions that push back the boundaries. The Ecole Polytechnique is one of the best engineering schools in the world and French technology tends to be very sophisticated. I'm a car fanatic, and I can still remember when the Citroën DS was introduced in the mid 50s. It was incredibly advanced, way ahead of its time.

Has France kept that edge?

A lot of European countries have either limited or even non-existent portfolios of technology products. France is different. They still have a pharmaceutical industry, aviation, space, a helicopter industry, a train industry…

GE in France

- Established in France for more than 50 years
- 9,500 employees, 3 R&D centers, 6 production sites
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Does that make it attractive for a foreign investor?

Yes, especially if you're trying to make a technological product. In France, GE has one of the world's most technologically advanced units for producing turbines as well as the technology center for our medical business. The French are very creative. They have a great capacity for dreaming and they're not afraid to launch large-scale projects. TGV is a perfect example.

The French also value tradition. Does that make them conservative?

Respect for tradition doesn't mean you're afraid of change. I've brought my fair share of change to GE, but I have tremendous respect for tradition. You can tell by the way I dress. I'd say France strikes the right balance between tradition and innovation.

> "The French have a passion for engineering and technology, for research and solutions that push back the boundaries."

GE is a major player in financial services. How do you rate France in that department?

France is an advanced and sophisticated country where it's natural for financial services to be thriving. It has 60 million consumers. That's a rich community of people that has to save money, spend money, buy houses, buy cars, take out mortgages and borrow.

Would you live there?

Absolutely. Paris is my favorite city. I'm Italian, but I prefer Paris to Rome by a factor of 100. Paris is a place which combines tradition with modernity.

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In my experience, good leaders demonstrate qualities that the ancient Greeks identified as *ethos*, *pathos*, and *logos*. Ethos pertains to personal values and a track record that embodies those values. Pathos involves the ability to listen deeply and empathize. Logos is the root of the word "logic" and relates to the ability to think rationally and strategically.

Paul already has plenty of ethos. He has fine ethical underpinnings and demonstrates kindness and concern for people. On the ethos downside, Paul lives too much in his own world – a world in which he feels comfortable and authentic, but one that has little to do with outward effectiveness.

I don't believe a leopard can change its spots, but I do believe people can change theirs. People have the power to choose.

Paul must make up his mind about his commitment to the company. If he really wants to be CEO, he needs to wake up. Daner Associates is not about his personal experience, values, and ambitions; it's about customers and top- and bottom-line growth. I don't believe a leopard can change its spots, but I do believe people can change theirs. People have the power to choose their responses to their past and present circumstances and the power to change their habits. Paul can learn to be both nice and a strong leader at the same time. To be effective, Paul has to be both: That is the definition of maturity as a leader.

Assuming Paul really does want the top job, there are some steps he can take immediately to show Larry that he's CEO material. Paul needs to demonstrate that he can be more effective in his relationships with others, starting with Larry. The two of them are experiencing a classic breakdown in communication. Larry may not have done a great job of communicating with Paul up to this point, but, for his part, Paul doesn't seem to care much about what Larry is thinking. Nice as he tries to be, Paul is downright disrespectful of his boss, believing him to be more interested in playing golf than in the future welfare of the company. Instead of really listening to Larry, Paul self-justifies, rationalizes, and defensively attempts to explain away his boss's feedback.

For the sake of argument, let's postulate that Larry hasn't made a final decision and is thinking hard about handing over the reins to the candidate who can best grow the company. We can safely assume that Larry appreciates the fact that Paul is a kind, ethical person who lives the values of the company and performs well. We can also assume that he's not sure whether Paul is strong and aggressive enough to run the company and that he is being candid with Paul about his deliberations. He wants to see how Paul reacts and whether he steps up to the plate.

Instead of seeing the problem as a choice between his personal integrity and his ambition, Paul needs to get out of his own head and explore a third alternative – that of pathos. He can use his substantial powers of empathy to really listen to Larry, reflect on what his boss is saying, and show that he is able to learn and grow from the experience. If I were Paul, I would go to Larry and say, "When you gave me the feedback, I should have listened more closely to you." He can ask Larry about his views and question him about his ideas and concerns. In the course of a few meetings, Paul will doubtless discover many things about which he knew very little.

Once Paul demonstrates that he has grasped his boss's perspective on the business, Larry will surely develop a new appreciation for him. Larry may find himself surprised and pleased with Paul's openness and willingness to be influenced – ethos *and* pathos. At that juncture, Paul would do well to show Larry his command of the quality of logos. He can share with Larry his ideas regarding the company's strategic direction and his growth plans. He can also discuss how he plans to align the culture with the strategy by applying strong value-based leadership. Convinced that Paul has the three critical qualities of a good leader, Larry may conclude that Paul is the right man for the job after all.

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Paul needs to take a good, hard look at himself in the mirror and then decide who he wants to be when he grows up. Despite all his navel-gazing, it seems obvious that he doesn't understand himself very well. Instead of driving around locked up in his inner world and daydreaming about being Daner Associates' CEO, Paul really needs to go back to school and bone up on Leadership 101.

Paul's parents were good people, but they appear to have failed to teach Paul the harsher lessons of business. In the end, good leadership is like good parenting – it's a balancing act between kindness and toughness. Sometimes, the leader needs to be a firm disciplinarian, particularly when the future of the company is at stake.

Because he seems to believe that leadership is all about being nice, Paul is too timid to hold his people accountable for their responsibilities and goals, despite his boss's suggestions. He loses an opportunity to do this, for example, when he needs the financial data for a significant meeting. When he discovers that Lisa isn't coming into the office because of difficulties at home, her problems become his, and he has to put out her fires. Certainly, she has an obligation to her parent, but she also has one to her profession. Like any responsible adult, she needs to find a backup caretaker for her mother or, failing that, make sure that someone at the office is doing what needs to be done in her absence. Instead of confronting her with this fact, Paul lets her off the hook. This isn't fair to him, to the company, or to Lisa herself.

In losing out to a tougher player, Paul demonstrates his failure to understand that running a business requires a certain amount of hardball. I remember learning this lesson when I was earning my MBA. The professor broke the class up into teams and told us that there were three ways of winning a hypothetical deal through a series of strategic transactions. The first way was to go it alone. The second was to join a team and take advantage of another team's weakness. The third was to form an alliance with another team and work together to achieve the goal. We chose the second. As our team captain, I spent a long time watching the other captains, one of whom was a very nice fellow. I quietly worked the final transaction in favor of our own team by taking advantage of his softheartedness. The result of the exercise was very interesting: The captain was embarrassed that he allowed himself to be used, and his team was angry at him as well.

The lesson I learned was that business is a competitive sport for tough players – those who play it nice quite often fall behind. In tough times, you simply can't afford to take prisoners.

Paul isn't the only one at fault here. Larry, too, needs to be tougher. It looks as if Larry has already made up his mind that George will be the next CEO, but he hasn't been straight with Paul. He doesn't want to lose Paul, but he owes him an open and honest explanation as to why he didn't get the job. Larry should sit down with Paul and walk through what he believes are the leadership requirements for the company. Larry should make it clear that he can't micromanage Paul – that it's Paul's job to balance his management style and toughen up.

If I were Larry, I'd give Paul specific goals and a six-month deadline. As Lee Iacocca used to say: "In this game, you either lead, follow, or get out of the way."

If I were in Larry's shoes, I'd suggest that Paul work closely with an executive coach. I'd give Paul specific goals and a six-month deadline. If at the end of that time, Paul hasn't demonstrated a stiffer upper lip, then Larry – or the new CEO, George – should consider a different role for him. As Lee Iacocca used to say: "In this game, you either lead, follow, or get out of the way."

Poor Paul. He's stuck in the old people-pleasing trap. It's a trap that often catches talented women because of the way we're socialized to nurture others. But I've worked with plenty of men who get stuck in it as well. If Paul were to become CEO, he would probably be the type who cuts a strategic meeting short to attend the ten-year anniversary of the janitor. Employees would love him for this, but since he tends to be so accommodating, he doesn't manage his time efficiently. In the end, he could hurt the company.

Very often, people like Paul are so attached to their internal beliefs about what makes a good leader that they put themselves through a lot of pain at work. Psychologically speaking, Paul is engaging in transference: the unconscious tendency to impose the family patterns he grew up with on people at work. Paul's parents, as hardworking owners of a family business, probably inculcated in him the value of kindness, genuineness, and the common touch. While the common touch is commendable in a leader, Paul doesn't know when to quit.

People pleasers like Paul often feel they lose their authenticity when they focus on external definitions of success expressed in pay and power. They believe they're losing touch with the internal definitions to which they are so deeply attached. As a people pleaser, Paul thinks and acts as if he's the most flexible guy in the world; as such, he assumes he'd do an even better job as CEO than Larry. Little does he know that his biggest problem is his own inflexible definition of what a leader should be. By imposing his penchant for pleasing on his boss, his colleagues, and others in his company, he runs the risk of self-sabotage.

If he wants to become CEO, Paul must operate with his head as well as his heart. In terms of organizational dynamics, this means becoming more open-minded about what motivates employees and why.

Take his relationship with Lisa. Paul wants to have a heart-to-heart with her, but what he really needs is to go head-to-head. As Peter Drucker once noted, "To keep misfits in jobs they cannot do is not being kind; it is being cruel."

Lisa is not a misfit, but her disorganization is making her one. Viewed from a broader perspective, Paul should realize that it's uncaring to allow Lisa to put her job, his reputation, and the company's well-being at risk. If he doesn't take the time to sit down and work out a strategy that will help her balance her personal needs with his professional expectations, the only thing he can count on is that she's going to continue to drop the ball.

Paul thinks and acts as if he's the most flexible guy in the world. Little does he know that his biggest problem is his own inflexible view of leadership.

Moreover, Lisa may not respect the fact that Paul hasn't set clear standards, although she'd probably never tell him so. She won't admit that she needs a manager who holds her more accountable, because it's so convenient for her to work for such a nice guy. However, when she loses her job and can't find another one, she may be a lot less grateful.

It's not too late. Paul is clearly talented, and his relationship with Larry seems solid. But if he wants this promotion, he will need to prove beyond a shadow of a doubt that he can move out of his people-pleasing comfort zone and operate more decisively. If he can't do this, it is likely that George will get the job. Who knows how the corporate culture will evolve then? The personal incentive for Paul is that if he can learn to define more flexibly what it is to be a great leader, he has a solid shot at preserving both the economic security and the interpersonal well-being of the employees who count on him.

Reprint R0602A
To order, see page 167.

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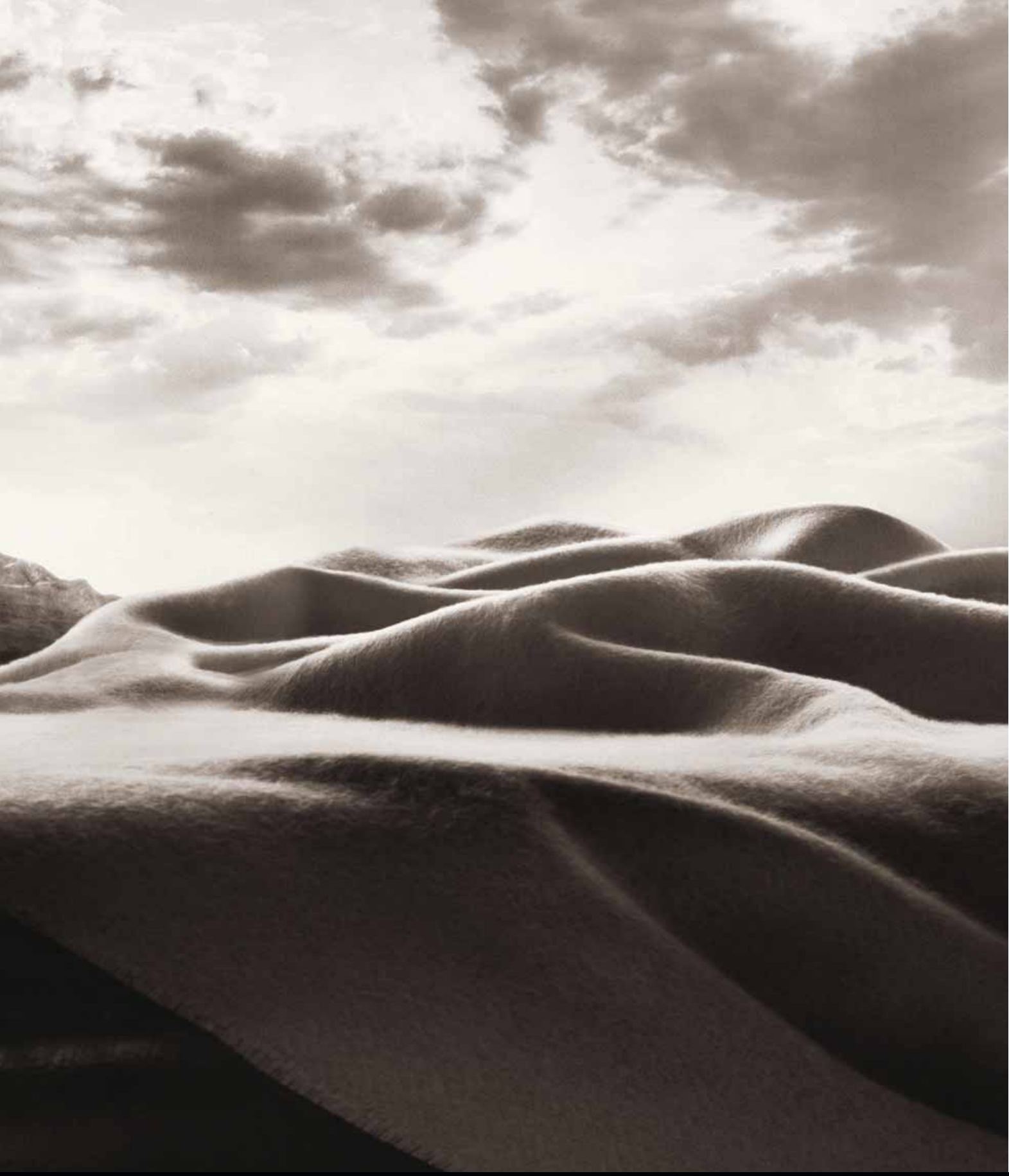

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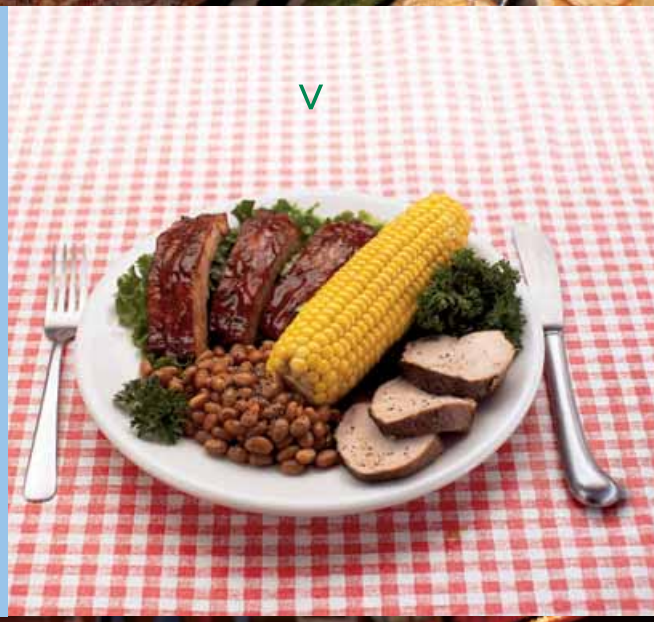

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The HBR List

[Breakthrough Ideas for 2006]

Our annual survey of emerging ideas considers the single most important trait of future leaders, the marketing potential of digitally split personalities, a challenge tougher than managing risk, and the best hope for oil-importing countries.

When a group of 20 or so provocative thinkers on business, management, and economics got together last July at the World Economic Forum's headquarters in Geneva to come up with a list of "breakthrough ideas," people initially stopped to ponder the term. Must a breakthrough idea be enduring as well as earthshaking? Does it represent immediate or future opportunity? Is it defined as much by the way it is expressed as by what it is? Indeed, must it be a brand-new idea at all, or can it simply be one poised to break through from theory into practice?

Despite the variety of definitions offered up, a theme began to emerge from the discussion. A breakthrough idea is a springboard, not a perfect landing; a conversation provoker, not a definitive answer; a starter's gun, not a finish line. It's something that makes you stand up and take notice, not sit down and work out the application of a specific formula.

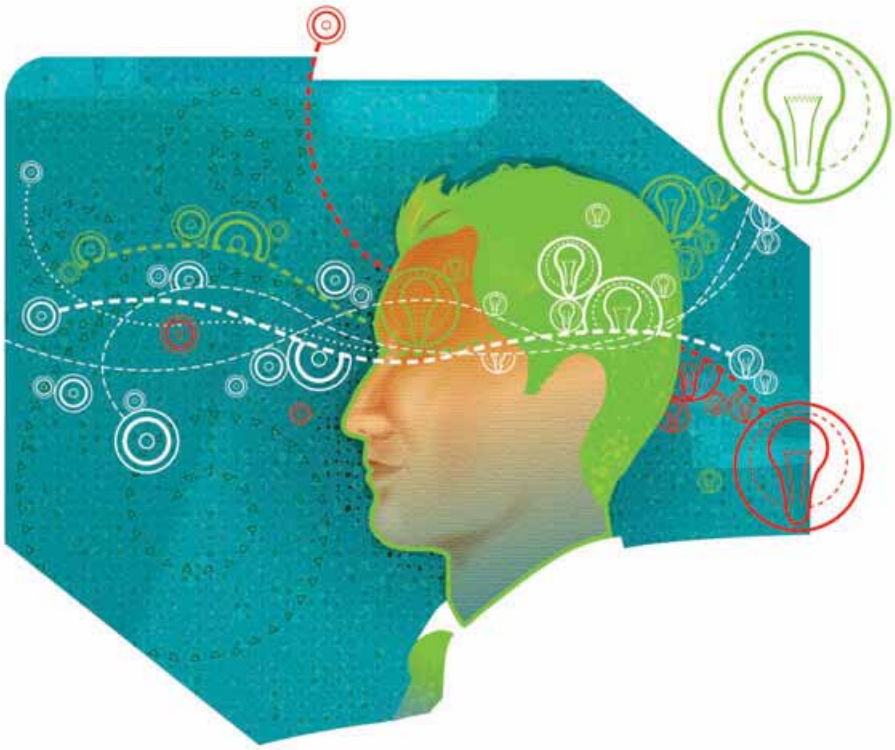
That is certainly true of the 20 essays in this, our sixth annual HBR List. They are designed to deliver sharp-pointed concepts that may pop open a whole new way of looking at a particular management challenge – or simply prod you into some long-overdue thinking about an issue.

As we did last year, we've collaborated with the World Economic Forum in the compilation of the List. Besides the brainstorming session last summer, a number of sessions devoted to the ideas were held at the WEF's annual meeting in Davos, Switzerland, last month. We hope that you are as stimulated by these ideas as we were in seeking them out and in discussing the possibilities they raise.

HUAN TRAN

1

The Synthesizing Leader



The Nobel Prize–winning physicist Murray Gell-Mann once said to me that he thought the most valued personal trait in the twenty-first century would be a facility for synthesizing information. Increasingly, I am convinced he was correct. The ability to decide what information to heed, what to ignore, and how to organize and communicate that which we judge to be important is becoming a core competence for those living in the developed world.

The skill of synthesis is particularly crucial for leaders. The decisions they make are fraught with big-picture complexity, and the consequences of those decisions are often momentous. In addition, because leaders command more information sources than most people, they have more opportunities to be confused or distracted. Information systems, though helpful to a point, are blunt instruments when it comes to nuanced contexts or sensitive emotional issues. And while staff members and advisers provide pieces of information, these individuals are too narrowly focused – and often too biased – to perform the requisite sifting, weighting, and stitching together such information requires. The synthesis mandate, therefore, falls squarely on the leader.

Given the ubiquity of information about the ubiquity of information, I was surprised to find little guidance on how to synthesize in the vast literature on thinking and problem solving. So here I offer my own suggested best practices, illustrated by an example.

Consider an executive asked to produce and present a report on a company she has recently joined. Her conclusions will carry weight because she is a leader. But because she is an outsider, she must first make sense of an enormous amount of new information. And she is working within a limited time frame.

All syntheses should begin with an initial protosynthesis of the most readily available information. The executive will want to include both published material and insights she has gleaned from personal observations and conversations. And because she must communicate her synthesis effectively, she must decide what format best conveys the relationships among the pieces of information she selects. That format might be a story, a set of propositions, a table or taxonomy, or a PowerPoint presentation.

The most important step in synthesis is establishing criteria for what information to include and what to discard. There are many possible standards. Some involve credibility: For example, the executive might choose to consider only information she can verify with an independent source, or information from people who have proven trustworthy. Other standards have to do with relevance: for instance, information that pertains to a certain time frame or market. Whatever criteria the executive chooses, she must adhere to them rigorously. But she must also step back periodically and ask, Does this information form a coherent story? Do the trends make sense? If not, she should change the criteria and reassess the information she has accumulated against the new standards.

When an outline emerges with a clear direction and enough details to feel substantial, it is time to produce a rough draft of the final synthesis. At this point, feedback from knowledgeable associates is critical. These associates can judge whether the executive has hit the right points. They can also detect holes, comment on the format, and suggest additional information or analysis. There will probably be time for only one revision, but the more iterative the process the better. As synthesizers go about their work, they become masters of their subjects and increasingly sensitive to what is truly new or significant. The synthesizer with enough knowledge to notice nonobvious relationships and anomalies is the one most likely to have important insights and imaginative breakthroughs.

One of the great synthesizers of all time was Charles Darwin. He had his initial intimations of the theory of evolution at the conclusion of his five-year voyage aboard the *Beagle.* Yet he labored for nearly a quarter-century to gather information relevant to the case he was building: reviewing his notebooks from the voyage, drawing on his own meticulous studies of pigeons and

orchids, and corresponding with dozens of informants worldwide. The naturalist Alfred Wallace made the same fundamental discovery, but we honor Darwin for his peerless synthesis of data. As our understanding of synthesis grows, we will have more leaders who, like Darwin, can prune the many trees that may temporarily block our vision and enable us to behold a single, coherent forest.

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2 Can I Hear Me Now?

For decades, technology has enhanced our ability to communicate with other people. Soon it will also enhance the way our bodies communicate their needs and influence their environments. Body area networks (BANs) are changing both what we know about our anatomies and how we interact with the space around us.

In many situations, we want information about our bodies – is our blood sugar up or down, for example, or are we dehydrated? We want quick answers so that we can respond promptly or – even better – we want smart environments that can respond for us. But the cuffs and monitors we strap on at the gym or at the doctor's office are clumsy and intrusive. Furthermore, each requires us to consult a different interface for information. We want more information; we do not want more hardware.

Body area networks rely on sensors embedded into "smart" fabrics and materials (researchers at MIT, for example, have built electronic circuits entirely from textiles). These sensors will eventually appear in a range of consumer products – from shoes to keyboards to jewelry and even makeup. They will monitor changes in our temperature and other vital signs, as well as in our emotions and physical activity. They will transmit the results to interfaces that are already integral parts of our lives, such as cell phones, video screens, and appliances. Consumers, if they wish, will be able to set those sensors so that they transmit data to family, health practitioners, and trainers. However, the overarching goal is not to alert others in case of medical emergency but rather to monitor and respond to our own constantly shifting interior landscapes. This wellness-management model promises to reduce health care costs.

Improving safety is another potential application for this intimate technology. Rosalind Picard and a team at the MIT Media Lab worked with DaimlerChrysler and Motorola to design a car with sensors embedded in the steering wheel, driver's seat, and other components that touch the driver's body. (They also placed eye-movement detectors in the rearview mirror.) When the sensors detect an increase in heart rate and skin temperature, a tightening grip on the wheel, or other signs of increased stress, the vehicle responds by lowering the volume on the radio, cooling the air, and temporarily diverting calls coming in to the driver's cell phone. Other environments – from offices to kitchens – could be similarly equipped to reduce distractions in periods of increased anxiety. Cars or keyboards might be programmed to alert a user who appears momentarily confused or is slipping into a daze.

A more nascent category of BAN would incorporate gadgets, chiefly for entertainment and communication, onto the body. Ian Pearson, the acclaimed futurist at British Telecom, has described phones that will be "printed" on the wrist and smart contact lenses that will act as video screens. Such devices might charge themselves by drawing on body heat or a user's physical activity. In another application, current BAN research aims to improve spectators' experience of sporting and other events. For example, viewers might pay extra for channels that tell them the physiological status and performance output of athletes. Soon, auto-racing fans will be able to see telemetry data about a driver's condition displayed on their mobile devices' virtual dashboards. That kind of data may later be included in hyperrealistic games, videos, software, and other content.

Not surprisingly, these advances have attracted critics who raise privacy and data-rights concerns similar to the ones surrounding radio frequency identification (RFID) technology. But body area networks are qualitatively different because the data generated by a person's body are for use by that person alone. Data streams aren't coursing over wires and through the surrounding air, so there are fewer opportunities for abuse. Still, we'll need security features to avoid becoming walking ticker tapes for our own physiological status.

For firms, the challenge is to integrate the technology unobtrusively into simple, friendly offerings. Consumers are

Sensors will eventually appear in a range of consumer products – from shoes to keyboards to jewelry and even makeup.

unlikely to sacrifice fashion, lifestyle, or convenience even for information that will keep them healthier or more entertained. The history of personal technology is of devices getting progressively smaller and more pervasive. From the onset, intimate technology must be all but invisible.

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3 China as a Green Lab *

China's energetic transformation into a largely urban, market economy may produce more than an economic powerhouse and billions of affluent consumers. It could also give China an advantage in an unlikely arena: the development of strategies for sustainable economic growth.

Consider Chinese president Hu Jintao's recent invitation to Asian-Pacific business leaders to join China in developing a clean, resource-conserving "circular economy," which he said would yield both steady growth and ecological vitality throughout the Pacific Rim. Given China's well-documented environmental problems, it would be easy to dismiss this call to action as political rhetoric. But President Hu's declaration was an explicit acknowledgment that the country – with challenges ranging from water shortages in many of its cities to the voracious appetites of its fossil-fuel-burning industries – must find ways to decouple economic growth from ecological destruction.

Indeed, the very urgency of China's environmental problems is forcing a flowering of innovation. And its search for solutions will have global impact, opening up vast markets for forward-looking energy and technology companies while simultaneously creating a rich seedbed for new types of ecologically intelligent products, services, and technologies.

So what is the circular economy to which President Hu refers? Broadly defined, it is one based on nature's regenerative cycles. Thus, it is powered by clean and renewable energy; uses material inputs that have positive or benign effects on people and the environment; and employs manufacturing, distribution, and recovery systems that allow those material inputs to be returned to fully productive use (not merely turned into products of lesser value, as in conventional recycling).

One way in which China is working toward a circular economy is through its involvement with the China-U.S. Center for Sustainable Development. Founded in 1999, the center brings together a variety of organizations – business, governmental, nongovernmental, scientific – to develop commercially, socially, and environmentally advantageous enterprises. Among the participants in the center's projects are China's ministries of Science and Technology; Land and Resources; and Construction; private groups such as the China Real Estate Chamber of Commerce; and multinational corporations such as BP, Intel, Ford, and BASF.

In one project in Huangbaiyu, Liaoning Province, a China-U.S. Center team is advising local developers on the planning and construction of a sustainable rural village that the government hopes will serve as a prototype for improving the lives of 800 million rural Chinese. But Huangbaiyu village also highlights the business opportunities that a Chinese circular economy would offer Western companies.

The very urgency of China's environmental problems is forcing a flowering of innovation.

Model homes, which are being used to test environmentally friendly materials and technologies, feature recyclable polystyrene roof panels and insulation produced by BASF; compressed earth-and-straw-bale block walls created

* Codeveloped by *Harvard Business Review* and the World Economic Forum

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with machines made by Vermeer, a U.S. industrial-equipment company; and a 1,000-watt solar panel made by energy giant BP. BASF sees a huge market in China for superinsulating polystyrene as a possible alternative to resource-intensive building materials like coal-fired brick, which was recently banned in many cities under new Chinese environmental regulations. And if BP can accelerate China's move into the mass production of solar collectors, we will see a rapid, cost-efficient expansion of the global solar marketplace.

In another project, my architecture firm, under the guidance of the China Housing Industry Association and the China-U.S. Center, is creating plans for a variety of "new towns" that we hope will offer a model for healthy, vibrant twenty-first-century cities. The plan for one of the sites, in the city of Miyun, near Beijing, includes eco-industrial sites in which the outputs of one enterprise can be linked with the inputs of another. For example, wasted heat from a green textile factory could be used to dry grain in a nearby brewery; the spent grains from the brewery could be used as bedding for neighboring mushroom growers. These kinds of experiments not only present commercial opportunities for Western firms but also may yield valuable economic lessons for the entire world.

Many of China's sustainable development projects are still in their early stages. But there is another reason, besides economic necessity, for being optimistic about such initiatives: China's 4,000-year-old tradition of resource conservation and regeneration. Though the advent of industrialization may have created a kind of cultural amnesia in China, circular economics is built in part on a simple principle – waste ultimately equals food – that enabled the Chinese to farm the same fields for 40 centuries without destroying the land's fertility. In fact, what represents circular economics more vividly than the traditional admonishment of a rural Chinese host to his guests that, before returning home after a good meal, they replenish his bucket of "night soil"? As a symbol for sustainability, that's no laughing matter.

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4 Risk, Uncertainty, and Doubt *

Management as a discipline is about a century old. Frederick W. Taylor's *Principles of Scientific Management* was published in 1911. Dartmouth's graduate business school opened its doors in 1900; Harvard's, in 1908. The twentieth century emphasized managing risk: finding ways to eliminate unnecessary risk, control unavoidable risk, and calculate risk/reward ratios. Taylor, time-and-motion experts like Frank Gilbreth, and Ford's assembly line made work routine and therefore predictable. Corporate R&D departments reduced the role of serendipity in invention. Budgeting made decision making more rational, and business units helped tame organizational politics. Tools such as Six Sigma (for processes) and insurance, hedging, and portfolio management (for finance) also promised to bring risk to heel.

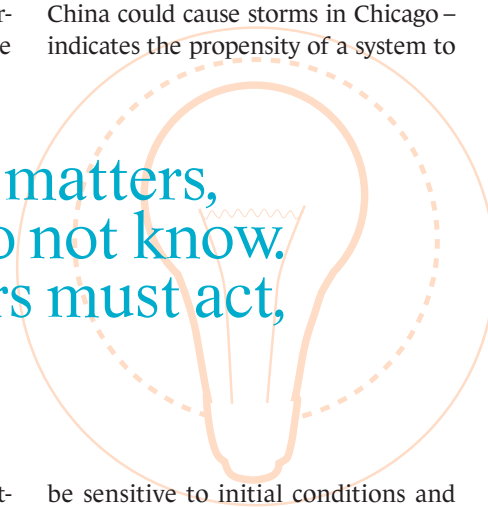
Management this century should take on two bigger fish: uncertainty and doubt. What do they mean? Risk is calculable; it can be expressed in terms of odds. Uncertainty is incalculable. A game of roulette is risky but not uncertain. As John Maynard Keynes said of uncertainty, "The sense in which I am using the term is that in which the prospect of a European war is uncertain, or the price of copper and the rate of interest 20 years hence…About these matters there is no scientific basis on which to form any calculable probability whatever. We simply do not know."

We simply do not know. Yet managers must act, regardless.

A growing proportion of business decisions must be made under conditions of intrinsic uncertainty, for the following reasons. First, we've emptied our in-boxes of many calculable decisions, leaving them to subordinates or to software. Second, behavioral research by Nobelist Daniel Kahneman, Amos Tversky, and others has fatally undermined the premise that economic behavior is rational. If buyers and sellers make unpredictable emotional choices, then of what value are probabilities? Third, the "butterfly effect"–the imagined possibility that a butterfly flapping its wings in China could cause storms in Chicago – indicates the propensity of a system to be sensitive to initial conditions and subsequent perturbations. It explains why complex systems, like markets, inevitably bubble and crash. Neoclassical economics had it wrong: A stable equilibrium is unnatural.

Finally, greater uncertainty is a result of greater ambiguity in business outcomes. Manufacturing efficiency is easy to measure, but effectiveness of services is not. All these factors obscure cause-

About some matters, we simply do not know. But managers must act, regardless.



and-effect relationships and make managing less subject to calculation.

Then there is doubt – perhaps the ultimate management frontier. Risk and uncertainty presuppose that you know what you want. We bet $100 on Secretariat or $100 million in China, calculating our odds. We hire a new CEO, uncertain whether he will succeed. In each case, we know what we want.

Doubt comes into play when there is no right outcome, when one must choose between two evils, or when good outcomes have bad side effects. An archetypal example of doubt was President Harry S. Truman's decision to use the atomic bomb. What made the decision vexing was the difficulty of weighing the calculable benefit of ending the war swiftly against the incalculable future dangers of nuclear warfare. Today, human cloning raises similar anxieties.

The flight from uncertainty and ambiguity is so motivated that we often create pseudocertainty.

Doubt also attends the largely ungoverned evolution of the Web. The technology risks may be manageable, the uncertainty of value migration may be inevitable, but the whole enterprise is dogged by doubt: The Internet's openness might be exploited by terrorists or used to deprive us of privacy and hence of liberty. Many tough business-ethics decisions involve doubt of a different sort. Imagine an executive, constrained by fiduciary duty, who knows that a soon-to-be-laid-off colleague is about to buy an expensive house. Should he warn his friend?

Uncertainty and doubt push the boundaries of management as we know it. The raison d'être for organizations and their leaders has long been to increase control and predictability. Dealing with uncertainty involves growing comfortable with ambiguity and trying to build robustness into choices. Tools such as scenario planning can help, but one must be careful not to assume away uncertainty or conclude that one of the imagined scenarios will play out. Indeed, the flight from uncertainty and ambiguity is so motivated, and the desire to reduce what is fundamentally unknowable to probabilities and risks so strong, that we often create pseudocertainty. For example, the models in hedge funds map correlations across investment opportunities – but fund managers sometimes forget that these models can't eliminate the propensity of markets to veer suddenly from past patterns.

Confronting doubt, by contrast, involves coming to terms with differences in values. How does one choose between two valued objectives: safety versus liberty, scientific discovery versus the sanctity of human life, individuals versus groups? Sometimes we overcome doubt with faith, sometimes we privilege one set of values over another. And sometimes we just live with the burden of making choices when there are no easy answers.

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5 Battle of the Networks

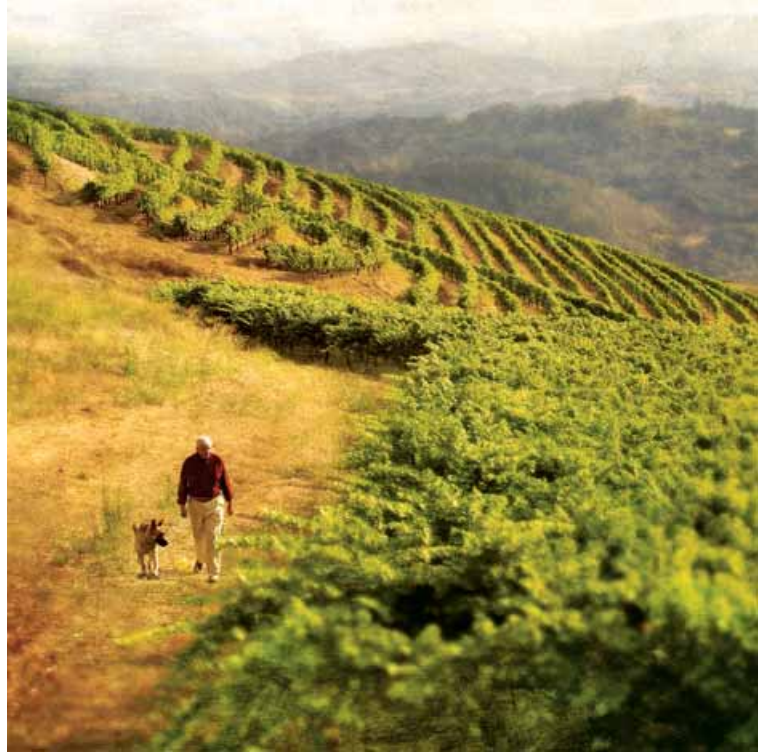
Companies have sought to exploit network effects since W. Brian Arthur dubbed them the competitive linchpin for information-age business. Many have used technology to tie together critical masses of customers and the most or best suppliers and so have gained an edge. But now enough companies derive competitive advantage from their networks that they are coming up against one another. That means we must learn a whole new set of principles: not how companies compete against networks but rather how networks compete against networks.

Companies that introduce new networked products or define the standards by which networked products interact can quickly dominate a market. That strategy is known as "lockout," and it's tough to beat. Companies seek lockout not just through product design but also through an advantageous arrangement of buyers or sellers, through ingenious feedback or feed-forward loops within supply chains, or through the exploitation of technology-enhanced social interactions within markets (think eBay and Friendster).

We now have techniques for evaluating some characteristics of networks, such as the distance between nodes, diffusion dynamics, and connectivity patterns. But we know almost nothing about how networks compete against each other. And since most of us think in linear, nonnetworked terms, our intuition provides little help.

One approach to studying this new dynamic is to redesign the boards of games like Battleship, checkers, and Go into complex networks and observe how players compete. These games are traditionally played on grids, which are very regular networks (nodes and links are evenly distributed across the board). The redesigned boards are modeled on the Internet and other real-world competitive networks whose link and node distributions are irregular because of "rich-get-richer" connection schemes identical to lockout in business. The boards comprise a small number of very well-connected nodes, a medium number of moderately connected nodes, and a large number of sparsely connected nodes. This connection pattern is a primary source of adaptation – and complexity – in networks.

Consider Go, an ancient Chinese game in which players capture stones and occupy territory. We found that when a Go board was redesigned for greater complexity, competitors could not visualize even basic patterns of play without such mathematical tools as a "connectivity matrix" (a map of who



Jess Jackson, Hawkeye Mountain Estate, Alexander Valley

KENDALL-JACKSON

The vine is a mountain animal. That's not just my opinion. It's a fact of nature. A result of Darwinian selection. In truth, growing grapes in high-elevation vineyards is extremely difficult for both the farmer and the vine. In the case of the vine, it's a matter of survival.

Our Hawkeye Mountain Estate vineyard sits at about 2,400 feet above sea level. At this elevation there is very little soil and, as a result of gravity, even less water. Grapes grown here are closer to the sun and are exposed to more severe weather conditions. In order to survive, the vines must put all their effort into the fruit. They will yield fewer grapes but the grapes will be of higher quality. This combination of elements produces tough little berries that are complex, intense and rich in character.

Dry farming at high elevation is far more challenging. But it always produces a better grape. The fact remains, you can't have a world-class wine without a world-class grape. When you try our mountain-grown Cabernet Sauvignon, I believe you'll agree.

I have been told that many of you enjoy the taste of our wines but you are not sure why. My goal is to help with **A Taste of the Truth.**

Jess S Jackson

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links to whom) at hand. (See the exhibit "The New Rules of the Game.")

Once armed with such tools, however, players began to invent entirely new strategies, even though the basic rules of play remained unchanged. For example, one classic Go strategy is to occupy territory (nodes and links) with large contiguous masses of stones. Occupying the nodes with the most links achieves this goal quickly, so the smart thing to do is seize those nodes first. Players using the redesigned board soon found that with this strategy, a first-mover advantage heavily influenced the outcome, and the winner was determined within several moves. After repeated play, however, participants discovered several ways to counter that advantage. For example, they distributed small clusters of stones around the board so they could keep their options open until much later and prevent competitors from guessing the specifics of their strategies. Players could win by rapidly amassing their stone clusters into a large group at the appropriate time, in effect unlocking the lockout achieved by the first mover.

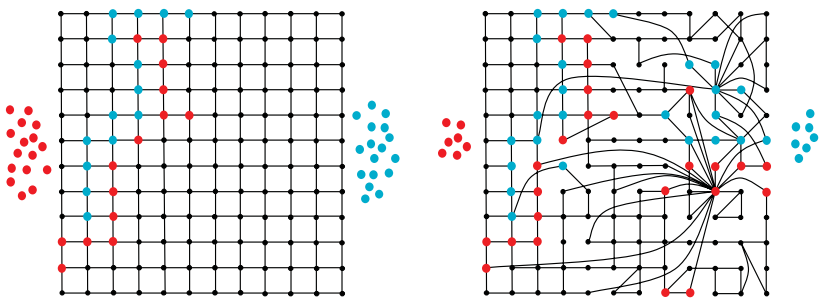
Such research has practical business applications. Consider, for example, the supply chains of competing companies. Suppose Company A operates an innovative vendor network that rearranges inputs to its production process according to the latest market data. Company B might build a similar network and compete with A on the basis of network efficiency, lower cost of inputs, or better market data. But it might be locked out because A has already climbed the learning curve (and perhaps invested its enhanced profits to further improve its innovative process). B might be able to overcome A's growing advantage with heroic efforts in traditional competitive competencies (for example, by recapitalizing plant production, tightening profit margins, or slashing transportation costs). Or it could go network a network, for example, by examining the structure of its emerging vendor network for undetected strengths, such as connections within vendor clusters that are even more advantageous than those in A's value chain.

Of course, once B has unlocked A's lockout, it will have to continually reexamine and, when warranted, reconfigure its network to fend off attacks by others. Close attention to competitive dynamics is the key to long-term survival in networked competition.

The New Rules of the Game

Companies don't just go head-to-head anymore; they go network-to-network. That makes strategy more complicated, as the ancient Chinese board game Go demonstrates.

The object of the game is to occupy territory and capture your opponent's stones by surrounding them and removing them from the board. The board on the left shows a traditional grid; the board on the right shows a grid hypothetically designed for a complex network, with large hubs, small clusters, and long-range links. On the left, traditional strategies call for economies of scale, or deriving advantage from a greater number of adjacent stones. On the right, new strategies call for economies of scale, or deriving advantage from long-range connections between cleverly placed clusters.



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6 Science in the Wild *

Scientific research is migrating from the sterile, controlled environment of the laboratory to the messy, disorderly world outside. In fields from biochemistry to astronomy, large segments of the population are becoming the source of hitherto undreamed-of quantities of data. This migration has interesting consequences for business and for society at large.

Edward Steinmueller, a professor at the University of Sussex, calls this phenomenon "science in the wild." He notes that the traditional wall between research and the rest of life, between scientists and the public, was erected centuries ago and has remained intact for a number of reasons. Scientists have sometimes needed to be protected from people who weren't ready to have their worldviews challenged – those who didn't like hearing that the Earth wasn't the center of the universe, for example. Society needed to be protected from the dangerous consequences of some research – for instance, the creation of radioactive material. And, while field research has always been a part of disciplines such as biology, much of the most exciting scientific work in areas such as physics and chemistry could be carried out only in the highly controlled

environment of the lab, where causes and effects could be pinpointed and proved.

But many of today's greatest scientific challenges, especially in computing and the life sciences, raise questions about the nature of sprawling and complex systems. Work in a lab – no matter how sophisticated the experiment or how big the number-crunching capability – often can't replicate such real-world systems or yield rules about how they function. So modern scientists, building on well-established physical and mathematical principles, many of them in fact established in formal scientific settings, must range widely in order to tackle the challenges.

Members of the public may even be enlisted as collaborators in the research. Amateur scientists, who in the past played an important role in astronomy, again are active in that field, contributing to experiments that require massive data-processing capabilities. Initiatives range from the well-known Search for Extraterrestrial Intelligence – which, through the SETI@home program, allows individuals to use spare capacity on their PCs to analyze radio signals from space – to a NASA project in which amateurs perform routine analysis of the Martian landscape.

The empowerment of amateurs extends to other scientific disciplines. Individuals also employ the collective number-crunching power of their home computers to simulate how molecules created to treat one disease might affect other illnesses. In a less technological vein, nonscientists contribute to ecologists' studies by tracking the spread of invasive plants and animals or by contributing local knowledge of flora and fauna that can help scientists spot patterns of disease.

More controversially, scientists are looking at ways in which the general population might be used as test subjects. In Iceland, with its relatively homogeneous genetic stock, some see an opportunity to learn how lifestyle and genetics intertwine to create diseases, though the project has sparked concerns about privacy and the commercial incentives driving the research. In the testing of new drugs, we may someday see clinical trials that extend across populations and long beyond the time of a medication's formal approval. Patients willing to continuously monitor themselves – or even be electronically monitored – for data on a drug's efficacy and side effects would receive in return the latest detailed information on the drug's benefits and risks for people like them. Such testing could generate currently unavailable information on a medication's safety over time or for particular individuals, as well as help identify unanticipated uses for a drug.

Flinging open long-sealed laboratory doors in this way, while spurring controversy in some instances, could quell it in others. For example, making research more transparent may well foster greater public trust in those pushing the boundaries of science, whether they are working on quarks or Quorn.

Today's greatest scientific challenges raise questions about the nature of complex systems, and work in a lab often can't replicate those systems.

Like scientists, managers must recognize that the complexity of their own R&D efforts often means that ideas can be truly tested only "in the wild" in which they will be used. Of course, customers have always taken part in market testing, and successful companies have always gathered continuous feedback about their products. But market testing is just that – a test of the views, values, and behavior of customers at a particular time and place. In order to create products whose revolutionary design grows out of scientific principles that hold true across time and space, companies quite simply (and not so simply) need to understand a bit better how the world works. Clever businesses, like clever scientists, know that they can't always find this out from behind the Bunsen burner.

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7 A Homestead Act for the Twenty-First Century

The United States owes much of its status as the first mass middle-class society to enlightened social policy designed to broaden asset ownership. To this day, a quarter of all adult Americans enjoy a legacy of asset ownership traceable to the Homestead Act of 1862, which awarded 160 acres of land in the American West to families who lived on the land for five years. Likewise, the GI Bill, the Federal Housing Administration, and mortgage deduction policies paved the way for one of the highest homeownership rates in the world.

But America's middle class has begun to atrophy. Poverty has grown over each of the last four years, and real wages are falling. Meanwhile, income inequality has reached an all-time high, and asset inequality is even more acute. Hurricane Katrina laid bare those stark realities.

The most promising way to revitalize America's middle class is to update old traditions. In the nineteenth century, the U.S. sought to broaden the ownership of land; in the twentieth, the ownership of homes. In this new century, the target should be the ownership of financial assets. The logic for such a course follows from the economic dy-

Endowing the next generation with resources to invest in its future would create a mass investor class.

namics that are widening the gap between today's haves and have-nots.

The historic correlation between economic growth and wage growth has broken down, largely because returns on human and financial capital are outpacing those on labor. As growth and productivity increase while real wages decline, it is not hard to understand why those who depend solely on wages fall behind, while those who benefit from returns on financial assets get ahead. The best way to break this cycle is to help far more Americans accumulate a sizable ownership stake in the most productive sectors of society.

Imagine if every newborn in America were to receive $6,000 at birth as a down payment on a productive life. With the magic of compound interest, that sum could grow to $20,000 or more by the time the child reaches 18. This young adult could then apply his or her nest egg toward various investments, such as college tuition, a down payment on a first home, seed money for a legitimate business, or retirement savings. Given the number of children born in America each year, the annual cost of such a program would be about $24 billion – roughly what the government squanders on farm subsidies. The benefits, however, would be immeasurable.

Endowing the next generation with resources to invest in its own human capital and financial future would create not only a much broader middle class but also a more self-sufficient, skilled, and entrepreneurial workforce. Gradually, the U.S. would witness the birth of a mass investor class, with ever more citizens deriving their income from returns on financial holdings as well as from wages. There would be less need for a generous welfare state, and the interests of workers and business would be better aligned.

A Homestead Act for the twenty-first century could also offer inner-city kids a new social contract: If they play by the rules and graduate from high school, then a pot of money will allow them to invest in their own futures. Paired with financial-literacy education in schools, such a policy could help turn a culture of poverty and dependency into one of hope and opportunity.

Those who doubt the political viability of such an idea should think again. Britain recently enacted its own version of accounts at birth and has already funded 2 million of them. In the United States, this is one of the few social policy innovations gaining bipartisan support in a deeply divided Congress. Last year, an odd-bedfellows alliance led by Senators Santorum, Corzine, Schumer, and DeMint introduced the Aspire Act, calling for deposits of $500 for every newborn, with an additional $500 for babies from low-income families. The policy's biggest advocate may turn out to be President Bush, who wants to make bipartisan headway on his "ownership society" agenda now that his Social Security plans have stalled.

Let us hope that historians looking back on twenty-first-century America will see the reemergence of a vibrant middle class. If they do, they will likely credit bold policies that enabled ever more citizens to enjoy the benefits of capital ownership.

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8 Customers Demand Their Slice of IP *

When widespread Internet access first brought companies and customers into unprecedented intimacy, businesses dreamed of transforming purchasers into zealots through personal interaction. The ne plus ultra of such engagement would be collaborative innovation: customers and product developers freely exchanging ideas, experiences, and constructive criticism online. Consumer cocreators would be motivated by a passion for the product. But as companies have increasingly profited from customer suggestions, that passion is being threatened by coolheaded questions about intellectual property rights.

Collaborative innovation bestows three advantages on companies. First, it gives R&D deeper insights into customer behavior and preferences. Second, it reduces the cost of concocting ideas for new and improved products. Third, it enhances loyalty as customers become emotionally invested in the products they help nurture. The practice has paid off handsomely for such industry leaders as BMW in automobiles,

Tiger Electronics in toys, Sony in consumer electronics, General Electric in medical equipment, and Electronic Arts in game software.

The payoff for customers is less clear. Intellectual property resulting from company-customer collaborations is typically owned by the company, and so are the profits generated by that IP. Back when opportunities to contribute to innovation were rare, remuneration mattered less. Today that novelty is wearing thin at the same time customers are discovering their own worth: The most creative innovators may find more than one company competing for their time and ideas. Meanwhile, public battles over file sharing and Chinese piracy have given the public a crash course in the value of IP. Not even the open-source software movement is likely to turn back the tide. Linux may mobilize thousands of developers, but the vast majority of open-source projects have difficulty attracting more than one innovator – the project's founder.

So customers, understandably, are starting to ask questions. If my ideas are incorporated into a product, why don't I get a piece of the intellectual property? If that product is profitable, why don't I share in those profits? What's in it for me?

Customer-collaborators are starting to ask, "What's in it for me?"

Companies that want to keep the ideas flowing must provide concrete incentives to their restive contributors. These five strategies can help:

Show preemptive generosity. Offer customers free trials of the service or samples of the product that incorporates their ideas; or award prizes for the best customer inventions. Where contributions are more significant, consider exchanging some intellectual property for customer engagement. IBM, for example, recently released 500 patents to the open-source community. Free access to those technologies will make it easier for developers to innovate, and IBM, in turn, can build on their advancements.

Create customer communities. If customers gain by learning from one another, help them do so. Provide physical or online sites where people can meet, and offer to set the agenda, moderate discussions, and establish communication platforms for follow-up. Customers will benefit immediately from the suggestions of their peers, while your company can pick up new ideas. Cadence, which builds design tools for integrated circuits and electronics, recently set up such a Web-based community. Both company and customers benefit from the free exchange of technical information, best practices in chip design and manufacturing, and suggestions for getting the most from Cadence technologies.

Leverage your brand. Customers who love your brand want to be associated with it. Celebrate their involvement by publishing their names and contributions on your Web site. You might even cobrand products with some customers, whose own brands would benefit from having contributed intellectual property to yours.

Encourage customers to set up shop. Sometimes customers can create their own businesses from engagement with your products. In the 1990s, a very active CompuServe forum developed around a personal information manager called Ecco. Customers shared ideas for new features and improvements, and several built on those ideas to create consultancies and add-on software firms that supported rather than cannibalized the vendor's business.

Pay them. A customer's contributions may prove so valuable that a company will pay to keep her involved. Assuming you can't hire her outright, you could negotiate a flat fee – or even a share of the royalties – in exchange for her time.

Of course, companies can also simply ask their customers, "What will it take to keep those great ideas coming?" In fact, the next fruitful target for cocreation may be strategies for parceling out cocreation's rewards.

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A Cartel for Oil Consumers *

Oil cartels were originally conceived of as *defensive* instruments, created by or on behalf of suppliers in a time of excess capacity, with the aim of stabilizing crude oil prices. The idea was that by maintaining sufficient spare production capacity, producers could influence market prices and minimize volatility – a boon not only to them but also to oil consumers (even if they preferred that such stability came at a lower cost). Today, though, with producers working pretty much at capacity and analysts talking of $100-a-barrel oil, it's consumers who feel a need to band together for mutual defense.

The Organization of the Petroleum Exporting Countries, established in 1960, wasn't the first cartel. In the 1930s, the somewhat incongruously named Texas Railroad Commission regulated the state's oil production to keep prices from plummeting. Around the same time, the big international oil companies sought to stabilize prices through the Achnacarry Agreement, in which they agreed to collaborate on the management of crude output. Both the Texas commission and the Achnacarry Agreement became obsolete in the early 1970s, when U.S. oil production was going full tilt and OPEC states had replaced the oil companies as the primary custodians of the oil spigot.

Of course, regulation of crude oil prices through the management of pro-

duction has its limits. It's easy to forget that during the 1998 Asian Crisis, oil prices plummeted to $10 a barrel because of the abrupt drop in demand. More recently, rising demand in Asia, along with growing concerns about oil supply security, have pushed prices above $70 a barrel.

And OPEC can do little about it. With crude production at capacity in most OPEC countries, the cartel is unable to rein in prices by increasing output. Indeed, despite the roughly 15% projected growth in worldwide production capacity over the next five years, output will only barely keep up with demand. Absent a cataclysmic economic downturn among oil-consuming nations, OPEC – or any other conceivable organization of oil producers – will no longer be able to manage the market.

Which raises a question: As excess capacity gives way to excess demand, will some institution replace OPEC as a controlling mechanism? The International Energy Agency currently monitors energy markets, coordinates oil stockpiling, and recommends options to consuming countries. Could the next step be a more active institution to manage the collective concerns of oil importers – an "OPIC" (Organization of the Petroleum Importing Countries) instead of an OPEC?

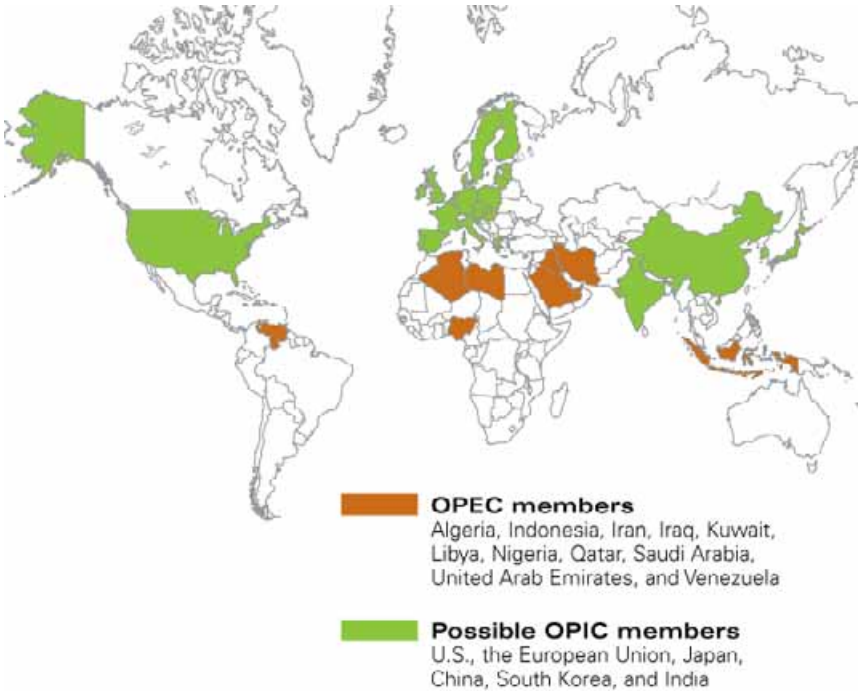
The organization's members would be the largest and fastest-growing energy users: the United States, the European Union, Japan, China, South Korea, and India. Its aim – a response to both oil supply constraints and the negative environmental consequences of fossil-fuel use – would be the management not of production but of consumption.

Such an organization's programs and policies would need to cover three time frames. In the long term – say, the next 50 years, during which oil consumption will certainly peak and then drop off as remaining reserves dwindle – the organization would need to promote the development of alternative energy sources, such as biofuels, and technologies to reduce energy use. In the medium term, roughly the next 20 years, the group would need to invest in new production facilities – and work to protect such investments by improving security in oil- and natural-gas-producing areas. In the short term (the next five years), the organization, its policy options constrained by existing capital stock and prior investments, would work to foster a closer coordination of members' energy policies. It would also need to encourage an active program of buying and selling crude from expanded stockpiles in order to maintain prices within an agreed band – even as it acknowledged the historical difficulties in trying to stabilize commodity prices through buffer stocks.

Could such an organization – an OPIC – actually work? Despite an array of conflicting interests, OPIC's members would share the strong desire to ensure continuity of oil supply at the lowest feasible price. Most of them would also see the benefits of addressing environmental issues and lessening their collective dependence on oil. Undoubtedly, there would be disagreements over whether to rely on market mechanisms or long-term purchase agreements with oil producers in order to achieve the group's goals – differences that would test members' policy-making and diplomacy skills. But the alternative to such an organization – an array of regional groups and large states pursuing their own energy interests in a form of energy mercantilism – wouldn't serve the interests of any of the big oil-consuming nations.

From OPEC to OPIC

As excess crude oil production capacity gives way to excess demand, OPEC (Organization of the Petroleum Exporting Countries) may be succeeded by an "OPIC" (Organization of the Petroleum Importing Countries), which would manage consumption, not production.



Ged Davis (ged.davis@weforum.org), a former vice president at Royal Dutch/Shell and a current member of the editorial board of Geopolitics of Energy, *is the managing director of the Centre for Strategic Insight at the World Economic Forum in Geneva.*

10

Seeing the "Health" in Health Care Costs

Amid corporate hand-wringing over rising health care spending, researchers – and a growing number of companies – are validating the truth of a well-known but often ignored principle: An ounce of health is worth a pound of health care. That is, businesses can reduce their overall health care costs through targeted spending to prevent illness and improve health among their employees.

The relationship between a healthy workforce and health care spending can be seen most easily in a company's medical and pharmaceutical claims: The healthier the workers, the lower the claims. It's becoming increasingly apparent, though, that many companies' greatest health-related expense is the almost invisible decline in productivity resulting from employee health problems, including common ailments such as allergies and headaches. Dow Chemical, which employs 43,000 people, estimates its annual employee health-related costs at $635 million, more than half of which can be attributed to the indirect costs associated with worker "presenteeism" – impaired performance on the job because of a medical condition.

Researchers are identifying promising opportunities for reducing both direct and indirect costs – for example, by monitoring and redirecting the course of lifestyle-related conditions, such as high blood pressure, in order to help employees avoid more serious and costly problems. And, increasingly, companies are able to calculate which programs designed to improve employee health will yield a positive return on investment.

Pitney Bowes analyzed its health care costs and found a link between increased costs for certain diseases, such as asthma and diabetes, and low employee use of drugs to treat those diseases. So the office-technology company altered its drug reimbursement benefit to make all asthma and diabetes medications available either for free or with a small co-payment. The move lowered Pitney Bowes's average annual health care costs for asthmatic employees by 15% and for diabetic employees by 6%, because the increased cost of providing the drugs to workers was offset by the lower costs of medical treatment. In fact, the company even reduced its average annual pharmacy costs for treatment of the two conditions, by 19% and 7%, respectively, because fewer prescriptions were written for the more expensive medications needed to treat complications of the two diseases.

International Truck and Engine is making creative use of health-risk assessments obtained from employees upon hiring and periodically thereafter. Employees voluntarily respond to questions about their health status, behavior, and risks; their responses are used to develop individual risk profiles and health self-management plans. In 2006, International Truck will be waiving a scheduled increase in the employee portion of health insurance premiums – resulting in an average savings to workers of some $20 a month – for those who can document that they are taking the health-related steps recommended for their risk category. The aim: keeping low-risk employees at that level while improving the profile of their higher-risk colleagues.

In some cases, top management is taking a leading role in promoting health-related programs. Every week, Johnson & Johnson CEO William Weldon invites employees to get out and "walk with Bill" for an hour in a highly visible statement of the company's priorities. On a less personal level, CEOs (including ten from *Fortune* 200 companies) are collaborating through Partnership for Prevention's "Leading by Example CEO-to-CEO" program to promote research and education on health promotion and disease prevention.

Targeted health programs like these exemplify a fundamental shift in attitude toward health care costs, one prompted by the growing realization among employers that smart investment in employee health not only is cost neutral but will more than pay for itself. Companies that take this approach gain some control over seemingly uncontrollable health care spending and create a win-win situation:

continued on page 56

The HBR List

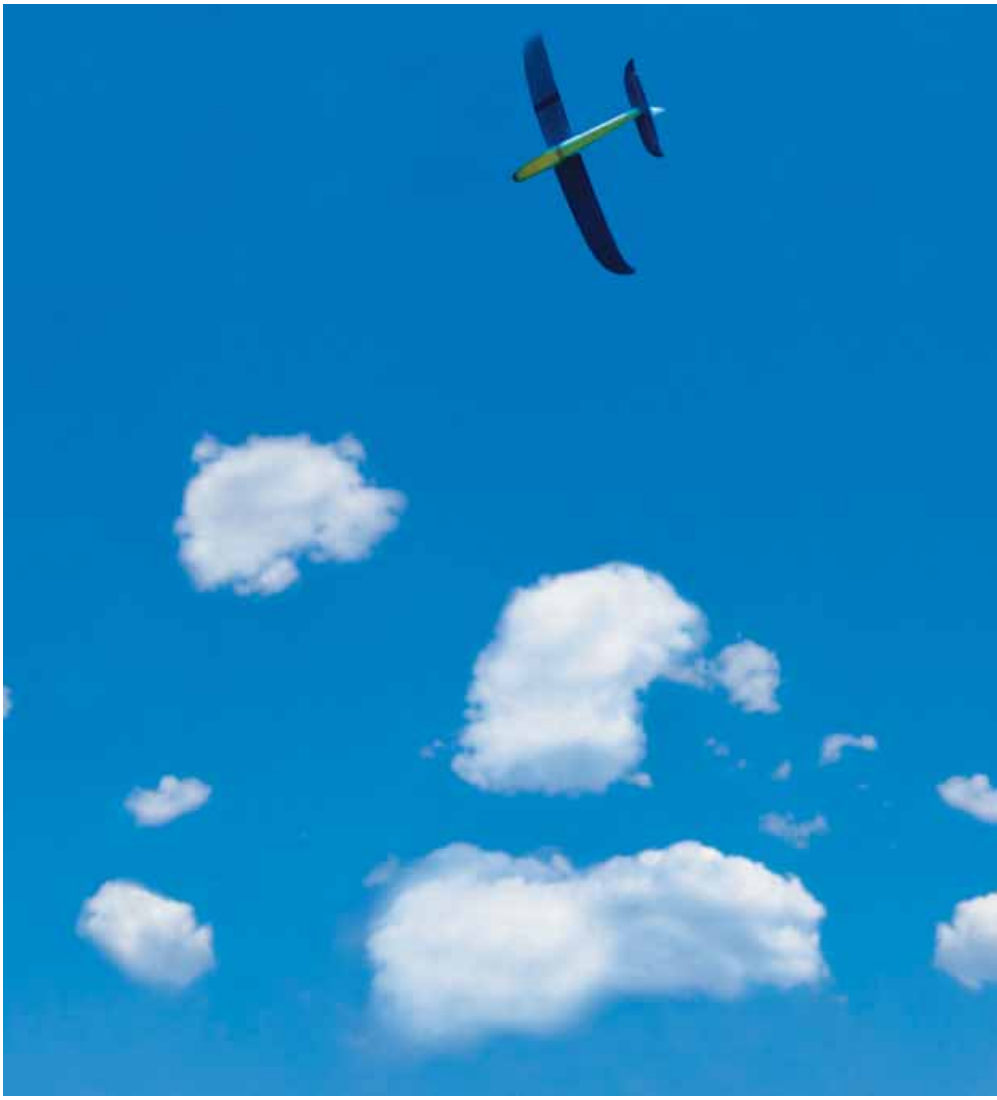
[Breakthrough Ideas for 2006]

Breakthroughs suggest new beginnings: the opening of avenues for inquiry and discovery. Every year *Harvard Business Review*, in conjunction with the World Economic Forum, scans diverse horizons for ideas that will launch provocative conversations in offices and boardrooms. What new skills are required of leaders in times of chaos and complexity? Which technologies promise to change our lives? Can we find novel solutions to the big, systemic problems that plague business and society?

These 20 ideas reflect the palette of concerns that will likely color managers' thinking in years ahead. They include intimations of both promise and peril. What they don't include are easy answers.

The HBR List in brief

REMEMBER WHEN TECHNOLOGY HAD THE POWER TO INSPIRE YOU?



The HBR List

[Breakthrough Ideas for 2006]

1
The Synthesizing Leader
Howard Gardner

The ability to decide which data to heed, which to ignore, and how to organize and communicate information will be among the most important traits of business executives in this century.

2
Can I Hear Me Now?
Dan Williams

Body area networks that can tell us things about our physiology – when our blood pressure is rising, when our blood sugar is falling, or when we're about to keel at the wheel – will help lower health care costs and improve public safety. Such networks give new meaning to the word "self-awareness."

3
China as a Green Lab*
William McDonough

The urgency of China's environmental problems – including an overreliance on fossil fuels and water shortages in many cities – will open up vast markets for forward-looking energy and technology companies and will offer the world a seedbed for new types of ecologically intelligent products, services, and technologies.

4
Risk, Uncertainty, and Doubt*
Nitin Nohria and Thomas A. Stewart

In the twentieth century, businesses concentrated on managing risk – developing assembly lines, budget tools, and organizational structures that, to varying degrees, made transactions and processes predictable. In this century, businesses will need to tame two more-amorphous foes: uncertainty and doubt.

5
Battle of the Networks
Jeff Cares

Companies are steadily mastering the art of networking their products, customers, and suppliers – some to the point of successfully locking out their more traditional rivals. The next challenge for these firms is to determine how to navigate network-to-network competition.

6
Science in the Wild*
Claire Craig

More and more, scientists are extinguishing their Bunsen burners, flinging open their lab doors, and using the messy world outside as their petri dish. Corporate R&D departments could benefit from similar forays into the wild, using segments of the general population as test subjects or as amateur collaborators in helping to process hitherto unimagined quantities of data.

7
A Homestead Act for the Twenty-First Century
Ted Halstead

What if every newborn in America received $6,000 as seed money for college, a first house, or a business? The nation would spawn a mass investor class, with ever more citizens deriving their income from returns on financial holdings as well as from wages; there would be less need for a generous welfare state; and the interests of workers and business would be better aligned.

8
Customers Demand Their Slice of IP*
Georg von Krogh

It used to be that your customer-collaborators were more than happy to leave their beta marks on your products or services; remuneration didn't matter. Now the novelty is wearing thin, and these enthusiasts are starting to ask, "What's in it for me?" How are you going to reward these people for their great ideas?

9
A Cartel for Oil Consumers*
Ged Davis

As worldwide oil consumption begins to overtake petroleum-producing nations' capacity to pump out black gold, governments may need to convene a controlling organization of petroleum-*importing* countries, or OPIC. Otherwise, regional groups and large states will pursue their own energy interests in a form of energy mercantilism – and that wouldn't serve anyone's interests.

*Codeveloped by *Harvard Business Review* and the World Economic Forum

Harvard Business Review

WORLD ECONOMIC FORUM

10
Seeing the "Health" in Health Care Costs
Harris Allen and Sean Sullivan
What company would willingly look for ways to increase its health care spending? Still, targeted investments in employees' health – covering the full cost of workers' diabetes or asthma drugs, for instance – can more than pay for themselves by reducing employees' treatment costs and improving workers' productivity.

11
Peer-to-Peer Leadership Development
Nancy M. Dixon
When it comes to training your next-generation executives, do you wonder about the effectiveness of conventional methods, in which senior leaders impart general, sometimes outdated, principles to junior managers? A U.S. Army intranet site offers a new model for leadership development, one that has advantages over both formal corporate training programs and informal watercooler-based networking.

12
Unstick Your Customers
David Weinberger
Physical stores are designed to "trap" customers – shepherding them past displays retailers want them to see on their way to the products they *really* want. But what if physical stores mirrored the Web's best practices for making information easily and always accessible? Customers would get out quickly with exactly what they needed, never forced to double back for forgotten items. The result would be increased loyalty.

13
Follow the Leader
Gerd Gigerenzer
The types of choices you make influence your employees' decision-making tendencies – and, consequently, the corporate culture. Think carefully about what values your decisions communicate, and, if necessary, revise your personal rules of thumb to get the desired results.

14
Wake Up and Smell the Performance Gap
Zachary Karabell
The gap between the economic performance of nations and that of companies is growing wider every month, made worse by offshoring and advances in technology. Yet both sides continue to play by the rules for a level field. As a result, states overreach while companies harbor unrealistic expectations about what governments can do for them.

15
The Avatar as Consumer
Paul Hemp
Millions upon millions of people have created avatars, personalized representations of themselves that they use in an array of online environments. These alternative selves represent a whole new set of "customers" that marketers can analyze, segment, and sell to – both in the virtual worlds in which avatars live and in the real worlds of their creators.

16
Befriending the Private Label
Philip Parker
In a variety of categories, including cellular phones, financial services, and packaged goods, suppliers are helping their retail customers become competitors through the retailers' use of their own branded products. This stimulates more than just low-price competition: Many private-label brands created and supported by large manufacturers are of equal or superior value to the manufacturers' regular brands.

17
A Critical Mass for the Long Term
Judith Samuelson and Claire Preisser
Hounded by pressure for short-term results, companies often find it tough to make the long-term decisions that are best for them. But while many CEOs fear bucking the status quo alone, a group of vanguard companies hopes, through its collective strength, to change the market's orientation for good.

18
The Costly Secret of China Sourcing
George Stalk, Jr.
Many companies aren't reaping the benefits they expected from sourcing their products in China. Physical, logistical, and political limitations – not to mention the inevitable supply chain bottlenecks – are making it difficult. To combat these obstacles, organizations must think flexibly and act aggressively, even using rivals' overseas-sourcing strategies against them.

19
The Brain as Boondoggle
Michael S. Gazzaniga
Despite the recent buzz around neuroscience, you aren't going to be able to use brain scans to choose the "perfect" CEO or the R&D scientist with the most "Eureka!" potential. Not next year. Not the year after. Not in this lifetime. Hiring will still require insightful, nuanced reading of people, not biological data.

20
Why They Call It Work
E.L. Kersten
Employees should not demand that their companies imbue their lives with meaning. If people's jobs are simply worth doing – that is, if the positions are commensurate with their skills, experiences, priorities, and goals – that should be meaningful enough.

Their workers enjoy better health and quality of life while they realize more productive employees and improved financial results.

Harris Allen (harris@harrisallengroup.com) is a principal of the Harris Allen Group, a consulting firm based in Brookline, Massachusetts. ***Sean Sullivan*** *(sean@ihpm.org) is the cofounder and CEO of the Institute for Health and Productivity Management, based in Scottsdale, Arizona.*

11

Peer-to-Peer Leadership Development

In 1995, two young U.S. Army officers who had been friends at West Point found themselves living down the street from each other at a base near Honolulu. Nate Allen and Tony Burgess were both in their first stints as company commanders, each responsible for three platoons, or about 120 soldiers. At the end of the day, after their kids were in bed, the two would get together on the lanai and talk through the challenges they faced in their new assignments.

Out of those back-porch bull sessions grew a venture called CompanyCommand, an internal Army Web site where junior officers facing professional challenges can seek advice from others who have been in similar situations. Launched as a low-budget Internet discussion group financed largely by its two founders, CompanyCommand was ultimately brought behind the Army firewall and, to encourage participation, provided with funding, technological support, and greater structure. Just as communities of practice help employees develop greater technical competence through the exchange of ideas among peers, so CompanyCommand is designed to help individuals improve their leadership skills through the sharing of experiences and advice. The program offers a new model for leadership development within an organization, one that has some advantages over both informal social networks (which often are formed by chance and function based on participants' geographic or organizational proximity) and structured company training programs.

Peer-to-peer leadership development challenges some traditional assumptions about the training of future leaders. Instead of drawing on the wisdom of anointed experts, CompanyCommand provides young officers with knowledge based on the daily struggles of frontline professionals like themselves. Why the emphasis on peers? Knowledge accumulated by experts over the years may no longer be relevant in a rapidly changing battle environment like Iraq. People have greater trust in, and therefore are more receptive to, advice from someone in their situation. Furthermore, peer conversations can provide emotional as well as practical support. When fellow officers respond to your query about handling the combat death of a soldier who was a galvanizing force in your unit, you don't just get useful tips – a sample letter of condolence written by another officer in a similar situation, for example, or suggestions on helping your unit members deal with the blow. You also get the reassurance that others have been through this before and that they care enough about you to respond.

Another difference from conventional leadership-development training is the focus on context-specific rather than broadly applicable advice. People go to CompanyCommand for help with a particular issue and draw on knowledge that has grown out of another individual's unique experience. Because users seek information to solve particular problems, the information must be available immediately – just in time, not just in case. When that soldier from your unit is lost in combat, you don't have the luxury of waiting for the next training course in personnel management, which wouldn't be tailored to the specifics of your situation anyway.

Finally, CompanyCommand replaces the one-way flow of information typical of training programs – the pour-and-snore approach – with fluid online conversations. This format means that questions can be refined, issues can be reframed, and a solution can be woven from several people's advice. Frequently, the conversation about a given topic – say, a changing security environment in Afghanistan's Shai'kot Valley – is taken off-line and expanded to include other participants, through conversations around a Humvee or, more formally, at occasional gatherings of CompanyCommand participants. In this off-line setting, CompanyCommand bears similarities to CEO roundtables and similar forums in which business leaders from different companies get together in person to learn from their experiences.

> Peer-to-peer leadership development challenges some traditional assumptions about the training of future leaders.

In adopting this kind of peer-to-peer approach, an organization gives up considerable control. Despite the Army's oversight of CompanyCommand, junior officers run the show, facilitating conversations and setting the agenda. Many organizations wouldn't feel comfortable placing this kind of trust in their people (who in turn would find it hard to develop the trust in the organization needed for candid conversations to occur). Those enterprises would begin to wonder if the program is worth it, both in money and in employee time.

And, it must be said, a program like CompanyCommand is designed to meet individual development needs rather than institutional objectives. But by creating a place where soldiers can freely and in their own way develop leadership skills, the Army is enhancing the quality of today's and tomorrow's leaders – certainly a primary goal of any organization.

Nancy M. Dixon *(nancydixon@commonknowledge.org) is the president of Common Knowledge Associates in Dallas and the coauthor of* CompanyCommand: Unleashing the Power of the Army Profession *(Center for the Advancement of Leader Development and Organizational Learning, 2005).*

Creating a real-world version of an online organization means treating retail space as though it were information space.

12 Unstick Your Customers

Paco Underhill's acclaimed 1999 book, *Why We Buy*, exposes how merchandisers get us to pile our shopping carts with items not on our lists. The most popular products are placed at the back of the store, and retailers fill the intervening space with tempting goods. Customers must walk by displays to get from the top of one escalator to the bottom of the next. The most appealing offers are positioned at eye level.

Physical space in stores is "sticky" – people *must* pass through it to get where they're going. The Web, by contrast, lacks natural stickiness. A profusion of links encourages users to leap from one "lily pad" to another, and it's as easy to leap from pad A to pad Z[10] as from pad A to pad B.

The ease of Web shopping is creating higher expectations among consumers. So imagine that you designed a physical store that mirrored the Web's best practices for getting customers to make purchases. Customers would get out quickly with exactly what they need, never forced to double back for forgotten items. The result would be increased loyalty and lifetime expenditures.

Creating a real-world version of an online organization means treating retail space as though it were information space. The first principle of Web design is that signage be clear, visible, and well thought-out, with logical and consistent naming and arrangement of product categories. So the same must be true of the signage in your physical environment.

Second, the Web makes it easy for shoppers to get as much product information as they want. Real-world stores can do something similar by, for example, placing detailed catalogs in the appropriate aisles, putting cards that highlight distinctive features on shelves, and positioning knowledgeable sales attendants around the floor. As on a well-designed Web site, however, all that information should never get in the way of customers who just want to come in, grab that DVD of *Look Who's Talking Too,* and get out.

Third, e-commerce sites serve both their own interests and their customers' by suggesting appropriate add-ons. A real-world store can do that by, for example, grouping stereo receivers with the corresponding set of cables, or using signage to indicate everything the consumer will need to use the product and exactly where to find it, even if that means pointing him to another store. For years, supermarkets have positioned the pasta sauce next to the noodles; an appropriate add-on here might be a lasagna recipe on the shelf along with the aisle number for ground beef and the address of a nearby wine merchant where customers can buy a nice bottle of Chianti.

Finally, Web sites draw on customers' past purchasing behavior to present clusters of products they buy frequently. Real-world stores can't customize offerings for each customer, but they can make it easier to find the most sought-after goods overall. Move the milk to the front.

Some of these practices are being tested at the Staples Prototype Lab, located down the street from the company's headquarters in Framingham, Massachusetts. Every day, vice president of visual merchandising Bob Madill and his staff work to overcome the limitations of atoms and space so customers can navigate a Staples store as if it were pure information.

As a result of the lab's research, Staples stores are laid out in arcs composed of "destination categories" – the classes of items most in demand – in the manner of home pages that present top-level categories for visitors to explore. Large signs hang over each area; smaller signs below designate subcategories. Staples used to disrupt the informational mapping of stores with signs announcing unrelated special offers. Those "focals" might have moved more of a specific product, but they're the real-world equivalent of pop-up ads, so Staples dropped them.

Customers' informational needs also determine shelf height and, thus, the number of items a store can stock. "By having a store that's mostly low, it's easily scannable" by human eyes, Madill says. Higher shelves would accommodate more items, but customers wouldn't be able to see the signs.

And Staples has responded to customers' desire for product information by, for example, breaking up the single, unified listing of printer inks, formerly kept at the corner of that destination category. The company now distributes information about inks in smaller catalogs kept next to the specific brands they cover. In-store catalog use has risen from 7% to 20%, increasing customer satisfaction and decreasing the need for intervention by store assistants.

Shaping space around information is becoming a priority for every business trying to meet customer expectations in a physical setting. The Web has made customers the masters of their own attention. Try making them stick, and they won't stick around.

David Weinberger (self@evident.com) is a marketing consultant and a coauthor of The Cluetrain Manifesto: The End of Business as Usual *(Perseus Publishing, 2000). He is also a fellow at Harvard Law School's Berkman Center for Internet and Society in Cambridge, Massachusetts.*

13 Follow the Leader

New leaders galvanize companies with inspiring themes and ambitious plans, but they also influence corporate culture in simpler ways. All have their own personal "heuristics" – rules of thumb – that they develop, often unconsciously, to help them make quick decisions. While leaders may not intentionally impose their heuristics on the workplace, these rules are nonetheless noted and followed by most employees. Soon, the heuristics are absorbed into the organization, where they may linger long after the leader has moved on.

For example, if an executive makes it clear that excessive e-mail irritates her, employees – unsure whether to include her in a message – will simply opt not to. A leader who appears suspicious of employee absences discourages people from even thinking about conferences or outside educational opportunities. Employees may be grateful that such conditions help them avoid protracted internal debate over whether or not to take a particular course of action. But as everyone adopts the same heuristics, the culture shifts, becoming more or less open, more or less inclusive, more or less formal. Because such behavior is difficult to change, leaders should think carefully about what values their rules communicate. They may even want to create new rules to shape the organization to their liking.

That's what I did ten years ago when the Max Planck Society hired me as a director to found my own research group at the Institute. Each new director gets to build his staff from scratch, and I wanted to create an interdisciplinary group whose members actually talked to one another and worked and published together (a difficult thing to do because researchers tend to look down on those in other fields). First I considered the question of what values should inform researchers' day-to-day decisions. Then I came up with a set of rules – not verbalized but acted upon – that would create the kind of culture I desired:

It is right to interact as equals. Clearly, issues of performance, role, and circumstance make total equality impossible. But to ensure a level playing field at the beginning, I hired all the researchers at once and had them start simultaneously. That way, no one knew more than anyone else, and no one was patronized as a younger sibling.

It is right to interact often. Research shows that employees who work on different floors interact 50% less than those who work on the same floor, and the difference is even greater for those working in different buildings. So when my growing group needed an additional 2,000 square feet, I vetoed the architect's proposal that we construct a new building and instead extended our existing offices horizontally.

As everyone adopts the same rules of thumb, the culture shifts, becoming more or less open, more or less inclusive, more or less formal.

It is right to interact socially. Informal interaction greases the wheels of formal collaboration. To ensure a minimum daily requirement of chat, I created a custom: Every day at 4 PM, someone in the group prepares coffee and tea, and everyone gathers for caffeine and conversation.

It is right to interact with everyone. As director, I try to make myself available for discussion at any time. That sets the example for other leaders, who will make themselves equally available.

These rules have become an indelible part of who we are at the Max Planck Institute and a key to our successful collaboration. I would advise all leaders to conduct a mental inventory of their own rules of thumb and to decide whether they want employees to be guided by the same heuristics. If not, they should change their actions accordingly. As the boss decides, so the organization decides.

Gerd Gigerenzer (gigerenzer@mpib-berlin.mpg.de) is the director of the Max Planck Institute for Human Development in Berlin and a coauthor of Simple Heuristics That Make Us Smart *(Oxford University Press, 2000).*

14

Wake Up and Smell the Performance Gap

Since the bubble burst in 2000, we have been obsessed with economic imbalances: low levels of savings and high levels of debt, America's trade deficit, the rise of China and its challenge to developed economies. But one imbalance has received far fewer headlines – the gap between the economic performance of nations and of companies. That gap yawns wider every month, yet both sides continue to act as if the playing field were still level. As a result, states overreach while companies harbor unrealistic expectations about what governments can do for them.

Of course, the idea that global capitalism would erode state power dates back to Karl Marx. Twenty years ago, then–Citibank chairman Walter Wriston and others were talking about the decline of nations and the rise of multinationals. But states have continued to command a large share of economic output, and 9/11 and its aftermath have only strengthened the perception that nations, with their near monopoly on military might, are the world's driving force. Today, however, a comparison of GDP growth with corporate profits reveals that, the war on terror notwithstanding, companies are outpacing even the best-performing states, and nations continue to lose ground. (See the exhibit "Companies Widen Their Lead.")

In 2005, global GDP growth was approximately 3.2%, according to the IMF, and should be about the same in 2006. That is the aggregate of nearly 200 national economies, and it reflects both China (9.5%) at one extreme and Zimbabwe (–7.1%) at the other. The United States, which represents nearly a third of the global economy, has been registering steady growth of 3.5% to 4% a year.

Now look at companies. In 2004, earnings for the S&P 500 grew 22%, with revenue growth exceeding 10%. Coming off the high base of 2004, earnings in 2005 will be in the 13% to 15% range. Companies with global reach have done even better. For example, in 2004, 101 S&P 500 companies derived between 20% and 40% of their revenue outside the United States and registered a staggering 42% growth in earnings.

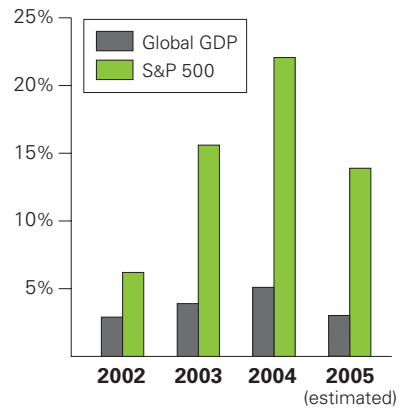
The performance gap will likely widen as offshoring and advancements in information technology diminish corporations' loyalty to their home countries. A decade ago, Mercedes-Benz was still a "German" company, General Electric was "American," and Sony was "Japanese." Today, these companies are global not only in reach but also in identity, mission, and outlook. Companies are freer than ever to move capital and human resources in order to maximize returns, arbitraging the world. States, by contrast, are more or less stuck with the resources they have.

Yet despite those changes, states continue to behave as though they were ascendant. Consider their approach to taxation, even in the face of the World Trade Organization's successful erosion of trade barriers, which significantly undermines the right of governments to collect revenue. The European Union's attempt to slap tariffs on bras made in China was laughable, as was the ill-named American Jobs Creation Act of 2004, which gave U.S.-domiciled companies a onetime exemption to repatriate profits from abroad. Meanwhile, central banks maintain the conceit that interest rates are best regulated by the state, even as evidence piles up that global flows of capital exert more influence on rates than any one bank – including the Federal Reserve – could hope to. The result: Governments keep spending and borrowing even as most face shrinking or stagnant revenues.

For the moment, the rise of companies is greeted by applause on the right and dismay on the left. However, everyone is at risk if states and corporations fail to recognize their altered status. States can't turn back the tide, but they can still create obstacles. Government leaders must accept their diminished influence and not try to create regulatory hurdles for errant companies or waste resources prosecuting a random few. Instead, states should look for ways to channel the activities of global compa-

Companies Widen Their Lead

The gap between growth rates of global GDP and profits of the S&P 500 has widened for most of the past few years.



nies in constructive directions and create incentives for them to change their behavior.

Corporations, for their part, face the opposite challenge. Attend any conclave of business leaders, and you still hear CEOs blaming government for its incompetence or for acting without first consulting industry. But competence and consultation aren't the issues; the decline of government power is. So companies themselves must shoulder a heavier burden in matters of economic and environmental policy, intellectual property rights, and even security.

If states and corporations don't recognize their changed status, others will. Those others will include religious ideologues, and they will condemn both for failing to address the needs of billions of people. The old cliché holds that with power comes responsibility. The old cliché is right.

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15

The Avatar as Consumer

Advertising has always targeted a powerful consumer alter ego: that hip, attractive, incredibly popular person just waiting to emerge, with the help of the advertised product, from an all-too-normal self. Now, in cyberspace, consumers are taking the initiative and adopting alter egos that are anything but under wraps. These online personae – from suggestive chat-room user names to fully developed characters in virtual worlds – represent a huge population of shadow customers. The message for marketers: Why simply sell to a single (real) individual when you can simultaneously sell to multiple (virtual) ones?

One of the most conspicuous manifestations of people's desire to try on alternative identities is the avatar, a being created by a user as a representation of himself in an online environment. More than 7 million people have created Yahoo avatars, personalized cartoonlike characters used as pictorial signatures in activities ranging from instant messaging to fantasy sports. But the experience of living through another self is most powerful in so-called massively multiplayer online role-playing games, which enable thousands of players to interact within the same three-dimensional virtual world.

Marketers have barely begun to explore the opportunities of marketing to avatars rather than to their creators.

In such settings – fantasy environments, such as World of Warcraft, and tamer venues like Second Life, where residents set up households, find jobs, and establish personal relationships – you effectively become your avatar, looking out through its eyes and engaging with other beings, themselves avatars of flesh-and-blood individuals. The intensity of the experience makes an avatar "not a puppet but a projection" of some aspect of the creator's self, says Philip Rosedale, the founder and CEO of Linden Lab, the company that produces Second Life.

These virtual worlds have become a big business. As many as 10 million people spend $10 to $15 a month to subscribe to online role-playing games. Players lay out upwards of $100 million a year on auction sites like eBay simply for accessories – for example, digital weapons earned or crafted by others in a virtual world – that can enhance their avatars' presence and performance.

But marketers have barely begun to explore what may be the real opportunity: marketing to avatars rather than to their creators. Sure, the creator, however strong an avatar's identity, retains control of the real-world wallet. But avatars can influence purchasing decisions or, at the very least, offer insights into their creators' tastes. Simply observing how inhabitants of a virtual world use a particular type of product or choose, say, their virtual vacation destinations can generate valuable information. "Marketing depends on soliciting people's dreams," says Henry Jenkins, the head of the Comparative Media Studies Program at MIT. "And here those dreams are on overt display."

Companies may also be able to market directly to avatars in their virtual worlds, persuading them to, in effect, purchase real-world goods for their creators, just as those creators buy virtual-world paraphernalia for them. Of

course, this can be tricky: McDonald's is still smarting from the uproar in cyberspace several years ago when it set up a fast-food kiosk in the Sims Online game. But marketing that is consistent with the virtual environment – no Pepsi cans littering the banquet table in a medieval fantasy game – and that enhances the experience of participants could bear fruit. In the shopping mall of a virtual world, for example, an avatar could try on – and try out in front of virtual friends – real-world clothing brands or styles her creator wouldn't dare to wear. If she got rave reviews from her pals and became comfortable with the idea of wearing a particular outfit, a purchase in the real world might follow.

Marketers may even discover ways to sell to avatars after they accompany their creators back to the real world. A company might, for instance, create an advertising campaign aimed at "furries," a class of genderless beings that enjoy a Beanie Baby–like popularity in many corners of cyberspace, including Second Life, where they have proliferated as, essentially, avatars' avatars. Or it might offer a distinctive clothing line only to people whose avatars have, through achievements in an online world, earned their creators the right to wear the gear. Marketers could thus "tie products to the game without busting the fantasy of the game itself," says Edward Castronova, a professor of telecommunications at Indiana University and the author of *Synthetic Worlds: The Business and Culture of Online Games.*

This is virtually unexplored marketing territory. But conceiving of avatars and other online personae as a new set of potential customers, one that can be analyzed and segmented, provides a useful lens for identifying marketing opportunities. Indeed, the day may not be far off when someone says to a store clerk, "Wait a minute, give me one of those as well. After all," the customer will add, in a near-echo of pregnant women's perennial refrain, "I'm buying for two."

Paul Hemp *(phemp@hbsp.harvard.edu) is a senior editor at HBR.*

16

Befriending the Private Label

On a recent visit with retailers in the Middle East, a Sony sales representative astonished his hosts by offering to manufacture knockoffs of some of Sony's products and brand them with trade names of the retailers' choosing.

They shouldn't have been so surprised. Although the practice of creating private labels for retailers has long been considered a suicide strategy, national and global brands such as R.J. Reynolds, Nabisco, Panasonic, and Siemens are embracing it. Corporations are helping retail customers compete with their own branded products in categories that include cellular phones, financial services, packaged goods, and clothing. And they are doing more than just stimulating low-price competition. Many private-label brands created and supported by large manufacturers are of equal or superior value to the manufacturers' own.

Why are so many companies doing this? Research that David Soberman of Insead, Namwoon Kim of Hong Kong Polytechnic University, and I have conducted points to a seeming paradox: An effective way to grow profits as a manufacturer is to advertise your best-selling or premium-priced products like crazy while encouraging private-label versions of them.

We all know why private-label brands have become so powerful. As product markets matured and the retail industry consolidated, a growing percentage of sales was controlled by a shrinking number of retailers. That shift considerably strengthened the power of retailers relative to both manufacturers and consumers. Retailers exploited this power by replacing generic product offerings with their own store brands, which were manufactured by the former suppliers of generic goods. That process helped drive a number of relatively down-market national brands from retailers' shelves. (Remember Royal Crown Cola?)

Inevitably, many strategists reckoned, premium national and global brands would also feel the squeeze. But that hasn't happened. Our empirical studies across hundreds of categories show that the price differential between big brands and private-label brands has remained steady or even widened. The big brands have maintained or improved their margins even as private labels have proliferated.

That has happened because consumers can be divided into two basic categories. "Brand seekers" buy only branded products. "Private-label seekers" prefer the store label. The more (and more effectively) a manufacturer uses advertising to enhance the perceived value of its premium brand, the more the brand seeker is willing to pay for it. That, in turn, allows the retailer to mark up its private-label prices without having to narrow the differential between its brand and the premium one (the differential, of course, is what makes the store brand look like a bargain to private-label seekers). Heavy advertising by the manufacturer increases the perceived

Although the practice of creating private labels for retailers has long been considered a suicide strategy, many national and global brands are now embracing it.

value of the product category as a whole. Both manufacturer and retailer benefit.

That dynamic means that retailers have every reason to stock the heavily marketed big brands, whose price differential with their own brands is largest and whose customers will never buy private labels anyway. At the same time, premium-brand manufacturers have every reason to encourage retailers to launch private labels rather than carry cheaper national-brand products that might compete for brand-seeker customers. And by actually manufacturing private-label products for retailers, a big brand manufacturer further weakens direct competitors while retaining a bit more power in the value chain.

Last October, ACNielsen announced the results of its global study "The Power of Private Labels 2005." According to Hubert Lobo, the head of ACNielsen's Retailer Services, "private labels will give global brands a run for their money in the next two years." The money may, in fact, be for those global brand managers who are courageous enough to exploit the upside economies of the private-label market.

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17

A Critical Mass for the Long Term

In an open letter filed with Google's 2004 prospectus, founders Larry Page and Sergey Brin promised to pursue high-risk, high-reward projects, despite the intense short-term earnings pressure they expected as a public company. They wrote of the "fortitude" such actions required and asked shareholders to take a long-term view. Their tone conveyed a message: This would not be business as usual.

Now, if a vanguard group of corporations has its way, the Google guys won't feel so lonely. A number of companies have banded together to see if they can orient markets toward the long term.

Corporate leaders are expected to base decisions – about outsourcing, for instance, or employee benefits, or investment in new markets – on those decisions' medium- or long-term implications. But only 59% of financial executives say they would pursue a *positive* net present value project if it meant missing the consensus earnings-per-share estimate for the quarter, according to a recent study by Fuqua's Campbell Harvey and John Graham and the University of Washington's Shiva Rajgopal. Worse, 78% say they would sacrifice value – in some cases a lot of value – to smooth earnings. Similarly, research by Wharton's Brian Bushee shows that managers are more likely to cut R&D to reverse an earnings decline if a significant amount of the company's equity is owned by institutions with high portfolio turnover. Many companies have the same philosophy about such long-term investments as infrastructure and employee training.

The harmful effects of short-term thinking aren't limited to companies' investment decisions. Calling for extended corporate time horizons, the Conference Board's Blue Ribbon Commission on Restoring Public Trust blamed "short-termism" for contributing to business malfeasance. It also creates a formidable obstacle to corporate involvement in social problems like global warming.

CEOs consider reducing short-term market pressure to be outside their purview. Certainly, one company by itself can do little. But history shows that the right people, working in concert, can alter markets for good.

In 1950, the right people were the 21 leaders of Japan's most important industries, who attended a dinner party in Tokyo with the American statistician W. Edwards Deming. Deming persuaded his dining companions that quality was the answer to the country's woes. Collectively, and without regulatory or legislative goads, those leaders adopted his recommendations, kicking off what ended up being a manufacturing and economic renaissance.

Lengthening corporate perspectives will require a similar critical mass. The

Where we go when we go back to the drawing board.

AUTOMOTIVE DESIGN IS A FIELD FOR DREAMERS. Eventually, the best dreams become real. The project ends, a new one begins, and back to the drawing board the designers go. Our Calty Design Research centers are full of such inspired dreamers. Together with the talented engineers at Toyota Technical Center (TTC), they bring these dreams to life. Yet Calty and TTC may be two of Toyota's best kept secrets.

By now, most people know that we build vehicles in the U.S.** But what they might not know is just how much we rely on Calty and TTC. They're an integral part of our investment in America, and we can't wait to see what they draw up next.

Toyota U.S. Operations
Total Jobs 386,000*
Total Investment ..... $13 B

TOYOTA
toyota.com/usa

*2005 Center for Automotive Research study. Includes direct, dealer and supplier employees, and jobs created through their spending. **Toyota vehicles and components are built using many U.S. sourced parts. ©2005

effort to build one began in 2004, when Bill McDonough, then-chairman of the Public Company Accounting Oversight Board (created as part of the Sarbanes-Oxley Act to oversee the auditors of public companies), suggested assembling 20 "vanguard" companies – organizations with a collective market cap big enough (approximately $1 trillion) to move the market. They would become champions of the long-term perspective: evangelizing for it, adopting policies and practices that promote it, and openly communicating their successes and failures. Last year, the first of those 20 – blue-chip corporations including General Electric, IBM, and PepsiCo – started meeting with other companies that support taking a long-term view. Together with institutional investors and professional service firms, these organizations are exploring principles and designing or bolstering practices that promote long-term competitiveness.

The group identified four areas in which to pilot practices, beginning with compensation and incentives. Research by Michael Jensen of Harvard Business School and Kevin Murphy of the Marshall School of Business, among others, has carefully examined why maximizing the total long-run value of the firm is separate and distinct from maximizing shareholder value. Now several companies are testing ways to realign incentives with long-run value. GE's CEO Jeffrey Immelt, for example, is receiving performance shares instead of typically structured options. The shares vest only if GE meets or exceeds share-owner return and cash-flow benchmarks measured over five years. Citigroup, meanwhile, has remodeled its incentives so that performance evaluations of its 30,000 managers consider individual efforts to promote the company's long-term interests.

The group also wants boards to refocus on long-term issues. Tyco's board, for example, is devoting five days each year to detailed reviews of the long-term implications of corporate strategies and their inherent risks, working closely with leaders of each business unit. In another area – metrics – participating firms are testing prototypes of tools for tracking early indicators of an organization's long-term health. The final area is investor communications. IBM took the lead by issuing a companion "prospectus" to its annual report – not an offer of stock but an in-depth discussion of the company's business model, talent base, management systems, and quality of customer relationships, with an eye toward long-term prospects.

Lengthening corporate perspectives will require effort by a critical mass of vanguard companies.

Reintroducing long-term bias is itself a long-term proposition, and participating companies are actively recruiting others. The group hopes that members' innovations, paired with ongoing investor dialogue, will produce a meaningful response from the market in three to five years. Its initiative has a better chance than the usual ephemeral passes at reform because it starts with – rather than builds to – critical mass. The actions of a few minor players can change who wins one contest. The collective action of major players can change the rules of the game.

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18 The Costly Secret of China Sourcing

Companies' rush to China hasn't overturned a basic fact, true since Napoléon invaded Russia: The longer your supply line, the greater your risk. Sure, the Internet, better ships, and more sophisticated logistics systems have reduced the vulnerabilities, but they are still there. And in those vulnerabilities lurk danger for companies with a sourcing strategy that's anchored in China – but also the opportunity for other companies to use rivals' China sourcing strategies against them.

As more and more companies are learning, a supply chain stretched to reach one-third of the way around the world requires increasingly expensive management oversight. It also has additional places where unexpected delays can occur, extending an already time-consuming trip from the factory to the showroom floor. While managers increasingly appreciate many of the costs of such delays, they often fail to take into account the loss of gross margins when you don't adhere to a basic business formula: Have on hand what's selling, and don't have what isn't.

Hidden expenses like this can more than offset the benefits of low Chinese manufacturing costs and ruin a China sourcing strategy. As the time to order and receive goods from China increases, so do these costs. At the very least, the supply chain glitches and bottlenecks are likely to result in profit returns that are lower than those anticipated when the decision was made to source in China. Furthermore, the difficulties in managing supply chains to China are likely to increase significantly, particularly for U.S. companies – and for reasons that have nothing to do with the politics of import restrictions.

The demand for freight-handling capacity on the West Coast has been growing at the rate of one Port of Vancouver a year, but increasing the supply is going

to be difficult given security concerns, NIMBY-related political pressures, and formidable environmental resistance. (See the exhibit "The West Coast Bottleneck.") If the West Coast ports can expand in size or overcome their long history of management and union discord to significantly improve productivity, the day of reckoning can be delayed, but only by several years. And the problem is bigger than the ports. The rail infrastructure to disperse the flood of goods from China around the United States is also being strained, with freight out of Los Angeles and Long Beach already very near capacity and out of Oakland, Seattle, and Tacoma expected to reach capacity in 2007 or 2008.

So what can you do? First and foremost, you need to be unusually aggressive in managing your China-based supply chain, looking for ways to squeeze time from it that competitors haven't identified. This could involve analyzing the costs, direct and indirect, of air freight as a possible way to avoid the West Coast ports. It could mean paying shippers for preferential treatment such as "hot hatching"–loading your goods onto a vessel last and unloading them first. It could involve working with the few shipping companies able to off-load containers directly onto rail cars that are then express-shipped to Memphis, Chicago, or New York–cutting days and sometimes even weeks out of the supply chain.

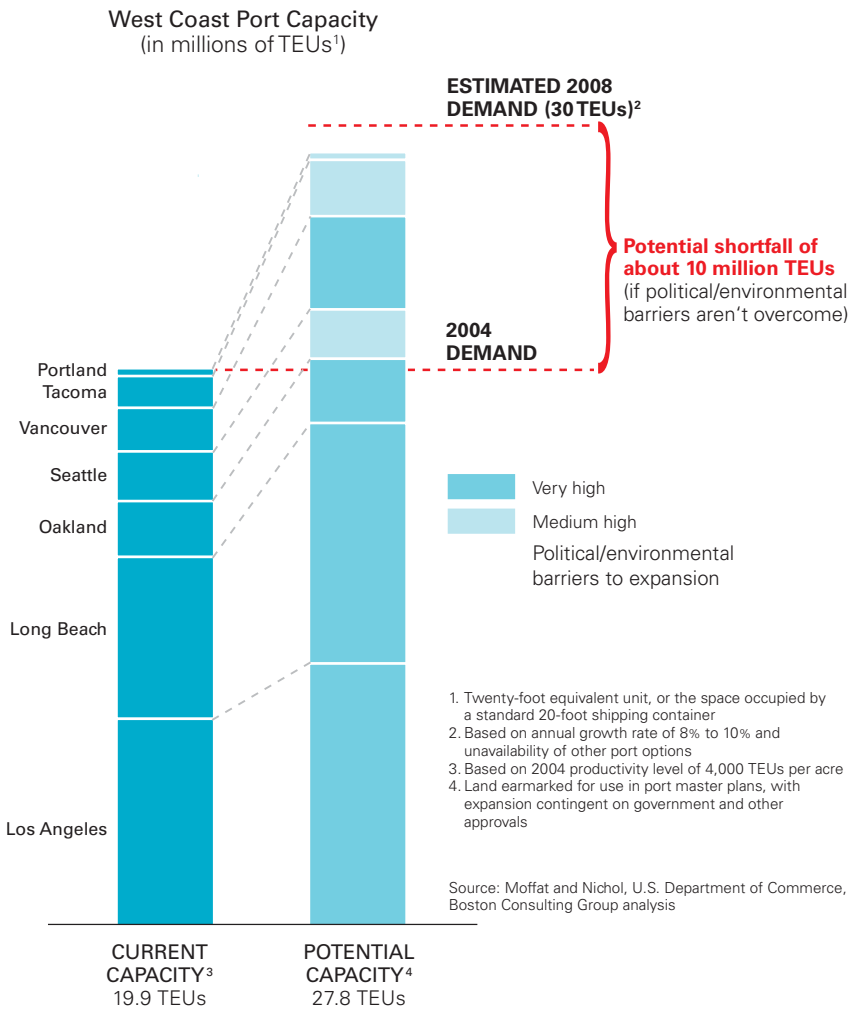
And if you decide not to source goods in China while a competitor does, you may be able to override your rival's direct cost advantage by heightening its logistical disadvantage. For example, if you are able to raise the fashion quotient in some category of your business, thereby increasing the demand volatility for certain products, your China-anchored competitor, with its long lead times, could find its logistical problems aggravated. You might also consider consignment pricing, requiring your customers to pay only when they sell your product. To match this appealing offer to customers, your competitor will have to incur much higher carrying costs for the greater inventory in its much longer supply chain.

The current problems of sourcing in China represent a giant nontariff trade barrier. (In fact, the best strategy for U.S. protectionists may lie not in quotas but in the active backing of efforts to hinder port expansion!) And the situation is likely to get worse before it gets better. Politicians throughout the U.S. and Canada will dither and debate until the options for alleviating the port bottlenecks disappear. Companies will do what they can–I've suggested a number of competitive tactics–but a single corporation can do little to solve the broader problem. An increasingly frustrated China, which has the most to lose from this de facto trade barrier, may undertake a major initiative, such as developing an all-new West Coast port in Mexico, though any such effort would take years to have an effect because road and rail infrastructures would have to be developed, too.

As the flow of goods slows and the cost of products made in China becomes

The West Coast Bottleneck

Ports on the West Coast of North America, already operating at near capacity, have limited room to expand and will face major political and environmental opposition if they try to. This bottleneck creates problems for U.S. and Canadian companies sourcing in China but also offers competitive opportunities for those who find ways around it.



1. Twenty-foot equivalent unit, or the space occupied by a standard 20-foot shipping container
2. Based on annual growth rate of 8% to 10% and unavailability of other port options
3. Based on 2004 productivity level of 4,000 TEUs per acre
4. Land earmarked for use in port master plans, with expansion contingent on government and other approvals

Source: Moffat and Nichol, U.S. Department of Commerce, Boston Consulting Group analysis

less competitive, current China sourcing strategies may soon seem like yesterday's good ideas.

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19 The Brain as Boondoggle

Neuroscience has been the next big thing in business for some time now–almost as long as nanotech and maglev trains. And there's no question that neuroscientists know more and more about the automatic ways in which the brain does all kinds of things. For example, we know that when you have a strong emotional response, one part of your brain tends to light up more than others. Such a finding has potentially useful applications in areas like marketing, offering practitioners a clearer picture of the physiology of customers' desires.

But these very real advances have led to inflated expectations about what neuroscience can do. Several years ago, for example, as part of an article on the nature of innovation, a business magazine published a scanned image of the brain of businessman and inventor Ray Kurzweil while he was engaged in creative tasks. The implication: Such scans may soon help us to unravel the secrets of creative genius.

It's the sort of science fiction that I've found business leaders extraordinarily susceptible to. I can imagine 20 CEOs meeting for dinner and one of them saying, "Hey, did you hear that Harry's company now has consultants using brain science to help pick managers? We've got to do that, too!"

Unfortunately, as a scientist working in this field, I have to tell you that neuroscience isn't the panacea it may appear to be. You won't be able to use brain scanning to help you tell whether your leading R&D scientist has had a genuine eureka moment. Nor will you be able to use a scanner to choose the right CEO to turn your struggling company around. Not next year. Not the year after. Not in our lifetimes.

To understand the scale of the scientific challenge that scanning still poses, just consider what would be involved in using imaging techniques to spot the next Lou Gerstner. Your first problem is that Gerstner wasn't the only person involved in his success. He had a team of hundreds of people who figured things out with him and helped implement the business choices he made. It's impossible, therefore, to say that this or that person will be the next Lou Gerstner on the basis of a bunch of individual brain scans. You'd somehow have to figure out how the person interacts with his or her social group, and scanning is a long way from being able to capture that.

> It's impossible to say that this or that person will be the next Lou Gerstner on the basis of a bunch of individual brain scans.

Another problem is that people can do the exact same things but have their actions expressed in different areas of the brain. Mr. Smith may have L, M, and N areas in his brain light up when he does a certain task, while Mr. Jones may have X, Y, and Z light up when he does the same task to the same effect. But this only tells us that Jones's brain is organized a little bit differently from Smith's.

The hype about neuroscience we're now seeing has happened before, with the original left brain/right brain research, which I helped pioneer. Our work got hugely distorted in the popular press, and it was impossible to find hard data for most of the claims that were being made. The failure to live up to the hype arguably obscured the real advances we did make.

At the end of the day, there *will* be positive gains from neuroscience, ranging from the development of drugs that can help failing memories to a better understanding of which neural networks are active in moral behavior. Yet no one gains from a pseudoscientific approach to business, least of all managers. While I understand the appeal of bringing scientific rigor to this area of management, the quest for certainty could well devalue the intuition that managers traditionally rely on. In the end, investors pay managers to exercise good judgment, not to read scanner printouts.

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20 Why They Call It Work

The halls are alive with the sound of carping. Last year, only 50% of U.S. workers were satisfied with their jobs, the lowest point yet in a steady decline that began in 1995, reports the Conference Board. And with the exception of a few anomalous years, job satisfaction in the United Kingdom has been dropping since 1991, according to research done at the University of Kent. Participants in these studies complained, among other things, about lack of personal fulfillment; "robotic," meaningless work; work/life imbalance; insufficient acknowledgment of efforts; and lack of influence with supervisors.

Conventional wisdom blames such pervasive disgruntlement on poor leadership and lousy work environments. But have working conditions in the past decade really degenerated so much for so many? The decline in satisfaction has persisted in periods when employees have had tremendous leverage and when they've been lucky to have jobs at all. Moreover, the average worker spends more than two hours of each eight-hour workday surfing the Internet, conducting personal business, or just "spacing out." That suggests many employees have autonomy and a manageable workload.

Maybe employees are dissatisfied because they have been taught to expect too much from their jobs. In the mid-1900s, organizational behaviorists concluded that great work environments would produce happy, productive workers. At the same time, humanists began arguing that work should be a vehicle for growth and self-expression. Those ideas became part of the conversation for companies and observers of companies, including management consultants and the business press. Employees, as a result, came to expect that their jobs would be satisfying and meaningful and that their employers would help them grow professionally and develop their "true potential."

Such expectations represent a corporate ideal akin to the romantic ideal that guides some people in their quest for a mate. Those animated by the romantic ideal believe that they will someday find "the one" and embark upon a life of bliss untroubled by personal faults, limitations, and weaknesses. Fortunately, most mature adults eventually abandon that myth. Those who don't not only are doomed to disappointment but make life miserable for their mates.

Employees may be dissatisfied because they have been taught to expect too much from their jobs.

Similarly, employees animated by the corporate ideal believe in the existence of a "right" job that meets all the needs on their own, personalized versions of Maslow's hierarchy. But even a good job in a good company is bound to produce disappointment. In time, these deluded souls will realize that the business is more interested in what they do than in who they are. They will be required to perform tasks they consider tedious or misconceived. They will find that their input is not always welcome. As a result, they will feel frustrated, disappointed, and demeaned.

Much misery could be avoided if employees held less-exalted ideals about work. Why does a job have to be meaningful and fulfilling? Isn't it enough that work is simply worthwhile – which is to say worth the employee's time, considering his or her circumstances? A former student of mine sells a remedy for irritable bowel syndrome, a job she doesn't find particularly meaningful. But she does believe that for someone with her skills, experience, priorities, and goals, selling this product for this company is certainly worthwhile. Consequently, she believes that she has a good job. And she does. The pharmaceutical company she works for pays her a decent wage, provides good working conditions, and does not waste her time. That should be enough.

Employees should not demand that companies imbue their lives with meaning. Employers and employees have something the other needs. One of the keys to a mutually beneficial relationship is a realistic understanding of what that something is.

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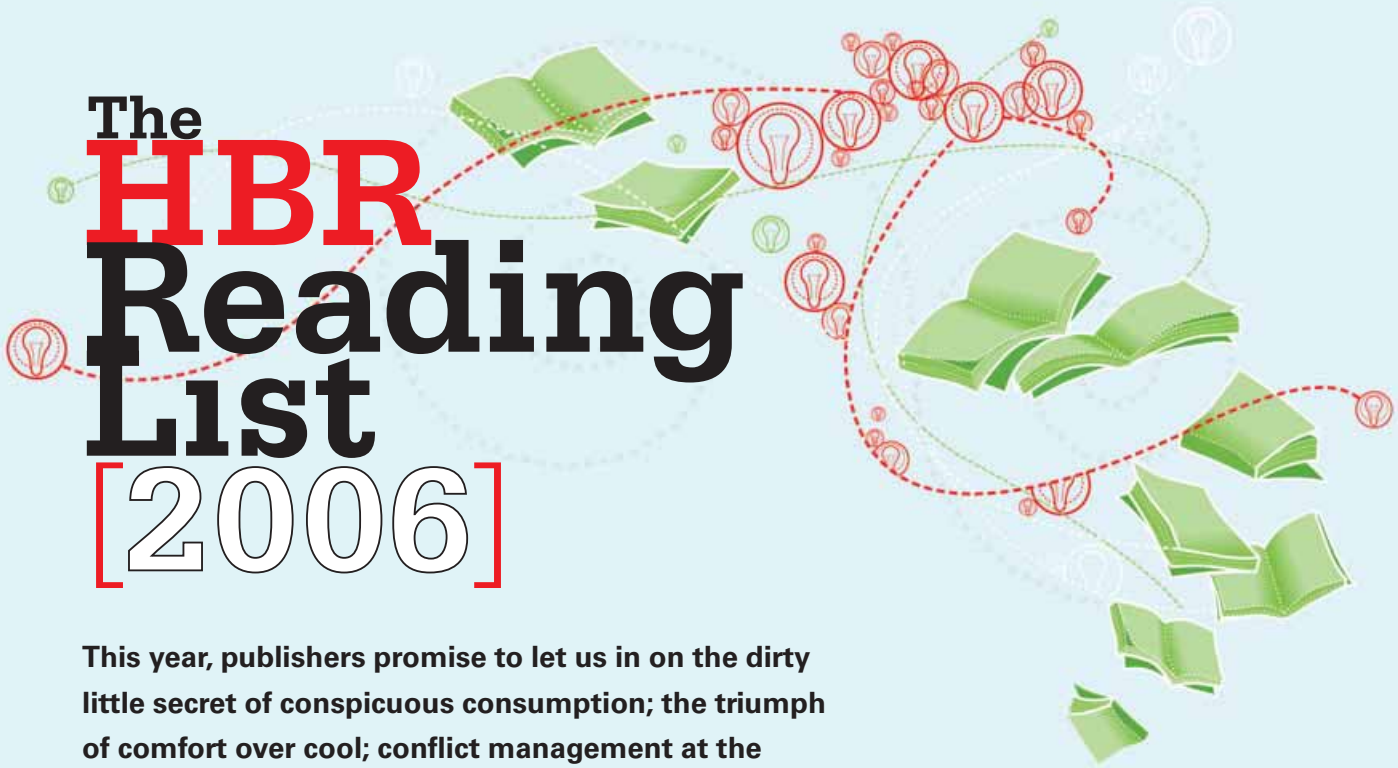
Reprint R0602B
To order, see page 167.

The HBR Reading List [2006]



This year, publishers promise to let us in on the dirty little secret of conspicuous consumption; the triumph of comfort over cool; conflict management at the United Nations; and a fertile but underserved market in their own backyards.

by John T. Landry

The Elephant in the Room
Silence and Denial in Everyday Life

Eviatar Zerubavel
(Oxford University Press, March)

How do "open secrets," as the author calls them, survive in organizations and the world at large? Drawing from sources as diverse as children's stories and historical events, sociologist Zerubavel finds that the same power differentials sustain hierarchies and conspiracies of silence.

Working with You Is Killing Me
Freeing Yourself from Emotional Traps at Work

Katherine Crowley and Kathi Elster
(Warner Business Books, March)

Workplace conflicts are bad; the unhealthy emotional cycles they trigger are worse. A consultant and a psychotherapist help employees control their responses before a brief, hot battle can become an enduring cold war.

Family Capitalism
Wendels, Haniels, Falcks, and the Continental European Model

Harold James
(Harvard University Press, March)

Conventional wisdom holds that family businesses perform poorly once they grow beyond a certain size. This generation-spanning chronicle of European steel and engineering dynasties suggests otherwise.

Silos, Politics, and Turf Wars
A Leadership Fable

Patrick Lencioni
(Jossey-Bass, March)

Consultant Lencioni applies his practiced fictional technique to the long-standing problem of functional silos, digging into the conflicts that erect these efficiency-impeding structures.

The New Argonauts
Regional Advantage in a Global Economy

AnnaLee Saxenian
(Harvard University Press, April)

Silicon Valley teems with immigrant engineers and entrepreneurs, but that doesn't mean it's draining other countries' brains. Instead, resources, energy, and ideas move back and forth between high-tech talents and their home nations in what economist Saxenian calls "brain circulation."

Questions of Character
Illuminating the Heart of Leadership Through Literature

Joseph L. Badaracco, Jr.
(Harvard Business School Press, April)

Management writers have been mining fiction since someone figured out that *King Lear* is really a story about family business. Now professor Badaracco uses characters from *Death of a Salesman*, *The Last Tycoon*, and other works to examine such leadership challenges as forging a sound vision and managing success.

continued on page 70

The HBR Reading List [2006]

Guanxi (The Art of Relationships)
Microsoft, China, and Bill Gates's Plan to Win the Road Ahead

Robert Buderi and Gregory T. Huang
(Simon & Schuster, May)

Personal relationships are critical to business relationships in places as networked as China – a lesson Microsoft learned while managing a large laboratory in Beijing. Technology writers Buderi and Huang show what happens when companies pursue their most sophisticated activities in developing nations.

Leading Through Conflict
How Successful Leaders Transform Differences into Opportunities

Mark Gerzon
(Harvard Business School Press, May)

Does your organization sometimes feel like the United Nations, in turmoil from conflicting agendas and discordant views? Gerzon, a mediator who has run training programs at the UN, offers management tools adapted from cross-border conflicts.

The Managerial Moment of Truth
The Essential Step in Helping People Improve Performance

Bruce Bodaken and Robert Fritz
(Free Press, May)

One reason supervisors struggle to deliver critical feedback is that they put off the unpleasant task until problems become serious. Consultant Fritz worked with Bodaken, the CEO of Blue Shield of California, to help his managers intervene when problems were still small.

Treasure Hunt

Michael J. Silverstein with John Butman
(Portfolio, May)

In an earlier book, Silverstein explored middle-class consumption of luxury items. Now the consultant explains how average Joes can afford to splurge: They pinch pennies on basic goods. For companies like Sears, that's bad news.

Appreciative Intelligence
Seeing the Mighty Oak in the Acorn

Tojo Thatchenkery and Carol Metzker
(Berrett-Koehler, May)

You know an idea has gained traction when someone creates a category of "intelligence" for it. A professor and a consultant explain how to accentuate the positive when dealing with employees.

The G-Quotient
How Gay Men Are Changing the Face of Leadership

Kirk Snyder
(Jossey-Bass, June)

Snyder has advised gay executives on ascending the corporate ladder. Now that many more have achieved executive positions, the consultant turns his attention to their effect on perceptions of leadership.

Untapped
Creating Value in Underserved Markets

John Weiser et al.
(Berrett-Koehler, June)

The "fortune at the bottom of the pyramid" refers to profit opportunities in developing countries. But plenty of low-income communities in North America could do with some of that attention, points out a group of thinkers from the nonprofit world.

Shopportunity! A Manifesto for Retail Revolution

Kate Newlin
(Collins Business, August)

Has discounting gone too far? Consultant Newlin says the "tyranny of the cheap" has undermined the fun of shopping – not to mention the power of brands. She urges companies to research retail presentation as intensively as they study product development and advertising.

CEO Pay and What to Do About It
Restoring Integrity to Both Executive Compensation and Capital Market Relations

Michael C. Jensen and Kevin J. Murphy
(Harvard Business School Press, August)

Professor Jensen helped develop the theory that executive compensation should be linked to stock options, arguing along the way that talented CEOs were underpaid. Now he holds that option plans are too generous and should be tied more closely to long-term value.

Applebee's America
What Political, Business, and Religious Leaders Can Learn from Each Other

Ron Fournier, Douglas B. Sosnik, and Matthew Dowd
(Simon & Schuster, September)

Forget fast, mobile, ironic, and all those other qualities that define hotness. Companies like Applebee's are thriving with a strategy of "reassurance," characterized by communal values, family life, and faith in established brands, say the authors, a writer for the Associated Press and two political strategists.

The J Curve
The Shape of the World

Ian Bremmer
(Simon & Schuster, September)

Companies that invest in emerging markets must understand the process by which nations become more or less stable. Consultant Bremmer focuses on the stage in a country's development in which injecting openness and flexibility – necessary for long-term resilience – causes short-term chaos.

The High-Purpose Company
Why It Wins, How It Grows, and What Sets It Apart from the Fakes

Christine Arena
(Collins Business, September)

It looks good to do good, and many companies have spun marketing gold out of social responsibility. But some firms are more virtuous than others. Arena, a researcher in the field, explains how to spot the phonies and why genuine responsibility pays off.

THE WHY,

WHAT,

AND HOW OF

MANAGEMENT INNOVATION

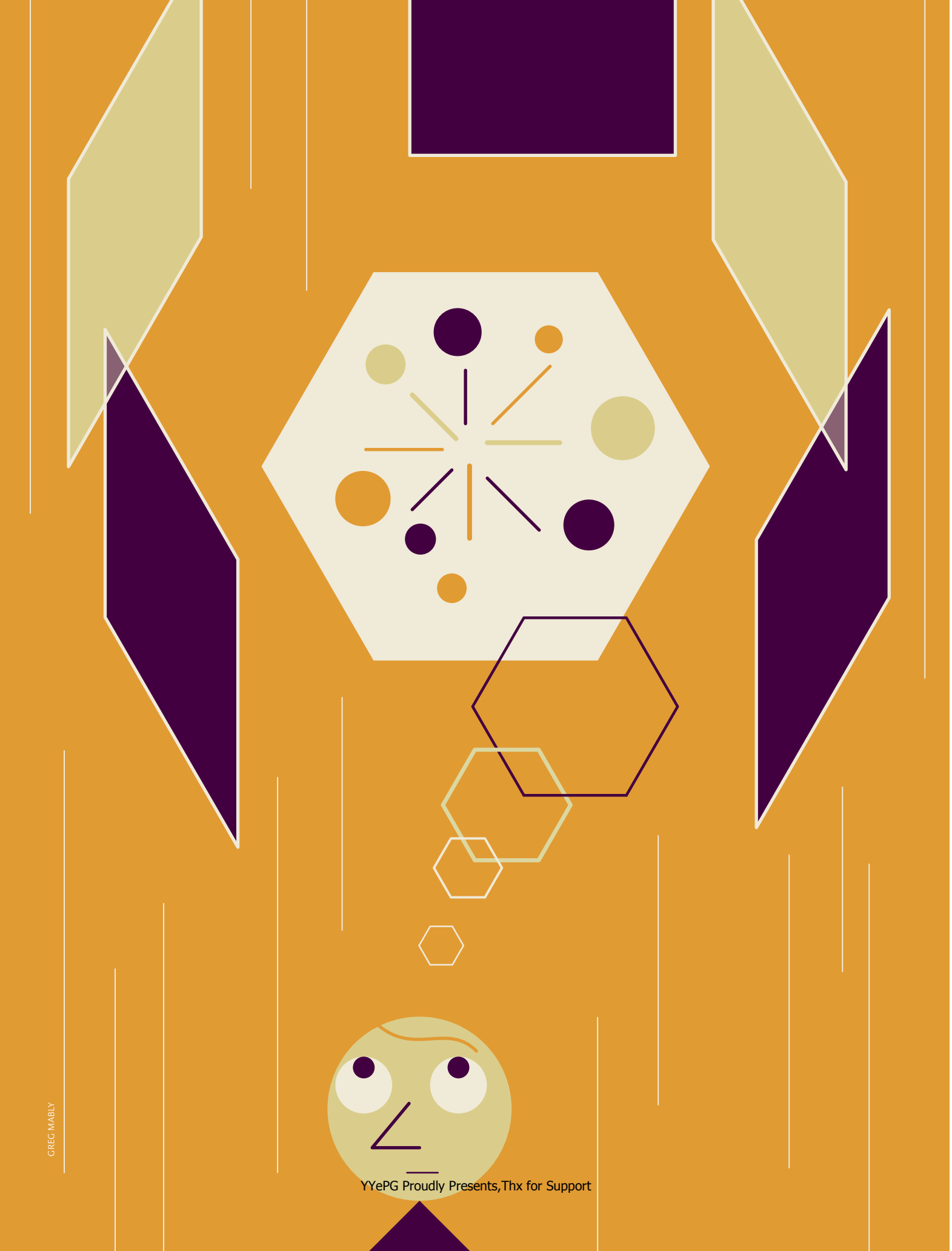
Over the past century, breakthroughs such as brand management and the divisionalized organization structure have created more sustained competitive advantage than anything that came out of a lab or focus group. Here's how you can make your company a serial management innovator.

by Gary Hamel

ARE YOU A MANAGEMENT INNOVATOR? Have you discovered entirely new ways to organize, lead, coordinate, or motivate? Is your company a management pioneer? Has it invented novel approaches to management that are the envy of its competitors?

Does it matter? It sure does. Innovation in management principles and processes can create long-lasting advantage and produce dramatic shifts in competitive position. Over the past 100 years, management innovation, more than any other kind of innovation, has allowed companies to cross new performance thresholds.

Yet strangely enough, few companies have a well-honed process for continuous management innovation.



Most businesses have a formal methodology for product innovation, and many have R&D groups that explore the frontiers of science. Virtually every organization on the planet has in recent years worked systematically to reinvent its business processes for the sake of speed and efficiency. How odd, then, that so few companies apply a similar degree of diligence to the kind of innovation that matters most: management innovation.

Why is management innovation so vital? What makes it different from other kinds of innovation? How can you and your company become blue-ribbon management innovators? Let's start with the why.

Why Management Innovation Matters

General Electric. DuPont. Procter & Gamble. Visa. Linux. What makes them stand out? Great products? Yes. Great people? Sure. Great leaders? Usually. But if you dig deeper, you will find another, more fundamental reason for their success: management innovation.

• In the early 1900s, General Electric perfected Thomas Edison's most notable invention, the industrial research laboratory. GE brought management discipline to the chaotic process of scientific discovery and, over the next 50 years, won more patents than any other company in America. Much of GE's current competitive prowess can be traced to that extraordinary accomplishment.

• DuPont played a pioneering role in the development of capital-budgeting techniques when it initiated the use of return on investment calculations in 1903. A few years later, the company also developed a standardized way of comparing the performance of its numerous product departments. These innovations, among others, helped DuPont become one of America's industrial giants.

• Procter & Gamble's preeminence in the packaged goods industry has its roots in the early 1930s, when the company began to formalize its approach to brand management. In the decades since, P&G has steadily built upon its early success in creating value out of intangible assets. P&G's product portfolio includes 16 brands that have produced $1 billion-plus in sales every year.

• Visa, the world's first near-virtual company, owes its success to organizational innovation. When Visa's founder banks formed a consortium in the United States in the early 1970s, they laid the groundwork for one of the world's most ubiquitous brands. Today, Visa is a global financial web that links more than 21,000 financial institutions and more than 1.3 billion cardholders.

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• Linux, the computer operating system, is the best-known example of a recent management innovation: open source development. Based on other innovations like the general public license and online collaboration tools, open source development has proved to be a highly effective mechanism for eliciting and coordinating the efforts of geographically dispersed individuals.

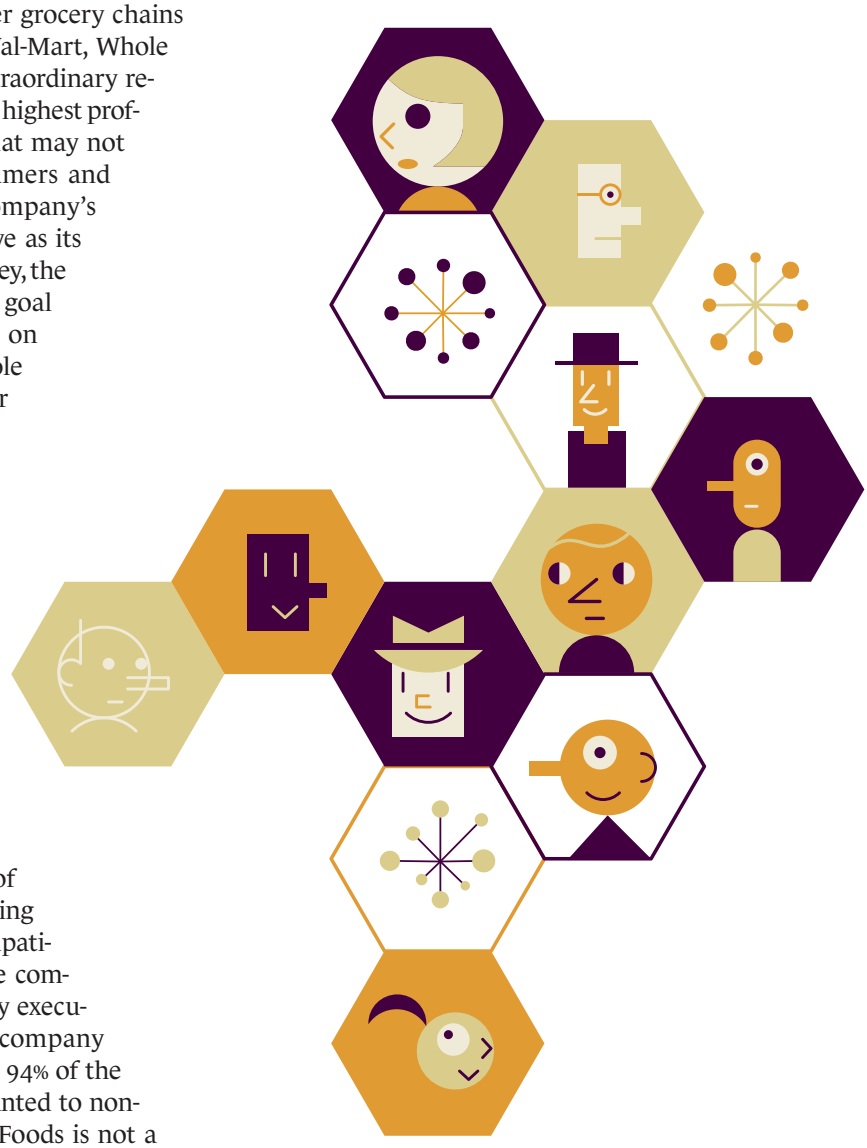
As these examples show, a management breakthrough can deliver a potent advantage to the innovating company and produce a seismic shift in industry leadership. Technology and product innovation, by comparison, tend to deliver small-caliber advantages.

A management innovation creates long-lasting advantage when it meets one or more of three conditions: The innovation is based on a novel principle that challenges management orthodoxy; it is systemic, encompassing a range of processes and methods; and it is part of an ongoing program of invention, where progress compounds over time. Three brief cases illustrate the ways in which management innovation can create enduring success.

Harnessing employee intellect at Toyota. Why has it taken America's automobile manufacturers so long to narrow their efficiency gap with Toyota? In large part, because it took Detroit more than 20 years to ferret out the radical management principle at the heart of Toyota's capacity for relentless improvement. Unlike its Western rivals, Toyota has long believed that first-line employees can be more than cogs in a soulless manufacturing machine; they can be problem solvers, innovators, and change agents. While American companies relied on staff experts to come up with process improvements, Toyota gave every employee the skills, the tools, and the permission to solve problems as they arose and to head off new problems before they occurred. The result: Year after year, Toyota has been able to get more out of its people than its competitors have been able to get out of theirs. Such is the power of management orthodoxy that it was only after American carmakers had exhausted every other explanation for Toyota's success – an undervalued yen, a docile workforce, Japanese culture, superior automation – that they were finally able to admit that Toyota's real advantage was its ability to harness the intellect of "ordinary" employees. As this example illustrates, management orthodoxies are often so deeply ingrained in executive thinking that they are nearly invisible and are so devoutly held that they are practically unassailable. The more unconventional the principle underlying a management innovation, the longer it will take competitors to respond. In some cases, the head-scratching can go on for decades.

Building a community at Whole Foods. It's tough for rivals to replicate advantages based on a web of individual innovations spanning many management processes and practices. That's one reason why no competitor has matched the performance of Whole Foods Market, which

has grown during the past 25 years to 161 stores and $3.8 billion in annual sales. While other grocery chains have been slashing costs to fend off Wal-Mart, Whole Foods has been rapidly evolving an extraordinary retail model–one that already delivers the highest profits per square foot in the industry. What may not be obvious to health-conscious consumers and growth-loving investors is that the company's management model is just as distinctive as its high-margin business model. John Mackey, the company's founder and CEO, says his goal was to "create an organization based on love instead of fear" and describes Whole Foods as a "community working together to create value for other people." At Whole Foods, the basic organizational unit isn't the store but small teams that manage departments such as fresh produce, prepared foods, and seafood. Managers consult teams on all store-level decisions and grant them a degree of autonomy that is nearly unprecedented in retailing. Each team decides what to stock and can veto new hires. Bonuses are paid to teams, not to individuals, and team members have access to comprehensive financial data, including the details of every coworker's compensation. Believing that 100:1 salary differentials are incompatible with the ethos of a community, the company has set a salary cap that limits any executive's compensation to 14 times the company average. Just as startling is the fact that 94% of the company's stock options have been granted to nonexecutives. What differentiates Whole Foods is not a single management process but a distinctive management system. Confronted by management innovation this comprehensive, rivals can do little more than shake their heads in wonder.



Growing great leaders at GE. Sometimes a company can create a sizable management advantage simply by being persistent. No company in the world is better at developing great managers than GE, even though many businesses have imitated elements of the company's leadership development system, such as its dedicated training facility in Crotonville, New York, or its 360-degree feedback process. GE's leadership advantage isn't the product of a single breakthrough but the result of a long-standing and unflagging commitment to improving the quality of the company's management stock–a commitment that regularly spawns new management approaches and methods.

Not every management innovation creates competitive advantage, however. Innovation in whatever form follows a power law: For every truly radical idea that delivers a big dollop of competitive advantage, there will be dozens of other ideas that prove to be less valuable. But that's no excuse not to innovate. Innovation is always a numbers game; the more of it you do, the better your chances of reaping a fat payoff.

What Is Management Innovation?

A management innovation can be defined as a marked departure from traditional management principles, processes, and practices or a departure from customary organizational forms that significantly alters the way the work of management is performed. Put simply, management innovation changes how managers do what they

do. And what do managers do? Typically, managerial work includes

- Setting goals and laying out plans;
- Motivating and aligning effort;
- Coordinating and controlling activities;
- Accumulating and allocating resources;
- Acquiring and applying knowledge;
- Building and nurturing relationships;
- Identifying and developing talent;
- Understanding and balancing the demands of outside constituencies.

In a big organization, the only way to change how managers work is to reinvent the processes that govern that work. Management processes such as strategic planning, capital budgeting, project management, hiring and promotion, employee assessment, executive development, internal communications, and knowledge management are the gears that turn management principles into everyday practices. They establish the recipes and rituals that govern the work of managers. While operational innovation focuses on a company's business processes (procurement, logistics, customer support, and so on), management innovation targets a company's management processes.

Whirlpool, the world's largest manufacturer of household appliances, is one company that has turned itself into a serial management innovator. In 1999, frustrated by chronically low levels of brand loyalty among appliance buyers, Dave Whitwam, Whirlpool's then chairman and CEO, issued a challenge to his leadership team: Turn Whirlpool into a font of rule-breaking, customer-pleasing innovation. From the outset, it was clear that Whitwam's goal of "innovation from everyone, everywhere" would require major changes in the company's management processes, which had been designed to drive operational efficiency. Appointed Whirlpool's first innovation czar, Nancy Snyder, a corporate vice president, rallied her colleagues around what would become a five-year quest to reinvent the company's management processes. Key changes included

- Making innovation a central topic in Whirlpool's leadership development programs;
- Setting aside a substantial share of capital spending every year for projects that meet a certain tough standard of innovativeness;
- Requiring every product development plan to contain a sizable component of new-to-market innovation;
- Training more than 600 innovation mentors charged with encouraging innovation throughout the company;
- Enrolling every salaried employee in an online course on business innovation;
- Establishing innovation as a large part of top management's long-term bonus plan;
- Setting aside time in quarterly business review meetings for an in-depth discussion of each unit's innovation performance;
- Building an innovation portal that grants Whirlpool's employees all over the world access to a compendium of innovation tools and data on the company's global innovation pipeline;
- Developing a set of metrics to track innovation inputs (such as the number of engineering hours devoted to innovative projects), throughputs (such as the number of new ideas entering the company's innovation pipeline), and outputs (such as the pricing advantages gained from more-distinctive products and higher customer loyalty).

Whirlpool didn't make all these changes at once, and there were plenty of false starts and detours along the way. (For more on how Whirlpool built its innovation engine, see "Change at Whirlpool Corporation," Harvard Business School case nos. 705-462, 705-463, and 705-464.) Translating a novel management idea (like innovation from everyone, everywhere) into new and deeply rooted management practices requires a sustained and broad-based effort, but the payoff can be substantial. Jeff Fettig, Whirlpool's current chairman, estimates that by 2007, the innovation program will add more than $500 million a year to the company's top line.

How to Become a Management Innovator

I have yet to meet a senior executive who claims that his or her company has a praiseworthy process for management innovation. What's missing, it seems, is a practical methodology. As with other types of innovation, the biggest challenge is generating truly novel ideas. While there is no sausage crank for innovation, it's possible to increase the odds of a "Eureka!" moment by assembling the right ingredients. Some of the essential components are

- A bewitching problem that demands fresh thinking;
- Novel principles or paradigms that have the power to illuminate new approaches;
- A careful deconstruction of the conventions and dogma that constrain creative thinking;
- Examples and analogies that help redefine what's possible.

Chunky problems. Fresh principles. Unorthodox thinking. Wisdom from the fringe. These multipliers of human creativity are as pivotal to management innovation as they are to every other kind of innovation. If you want to turn your company into a perpetual management innovator, here's how you can get started.

Commit to a big problem. The bigger the problem, the bigger the opportunity for innovation. While big problems don't always produce big breakthroughs, little problems never do. Nearly 80 years ago, General Motors invented the divisionalized organization structure in response to a seemingly intractable problem: how to bring

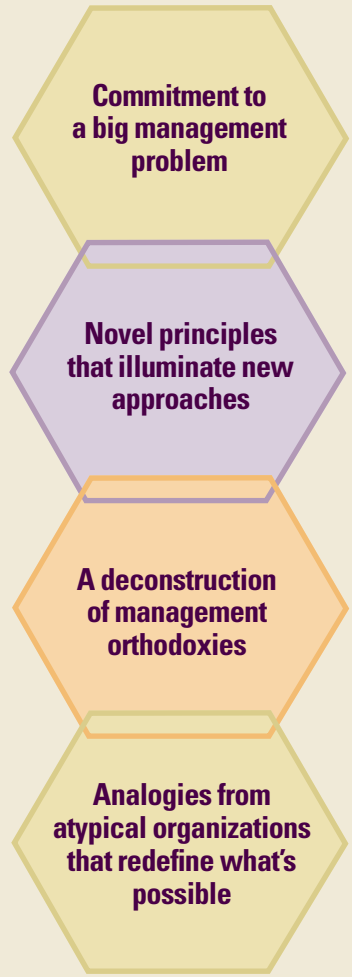
order to the sprawling family of companies that had been assembled by William C. Durant, GM's first president. Durant's successor, Pierre Du Pont, who took charge in 1920, asked one of his senior associates, Alfred P. Sloan, Jr., to help simplify GM's dysfunctional empire. Sloan's solution: Establish a central executive committee charged with setting policy and exercising financial control, and set up operating divisions organized by products and brands, with responsibility for day-to-day operations. Thanks to this management innovation, GM was able to take advantage of its scale and scope. In 1931, with Sloan at the helm, GM finally overtook Ford to become the world's largest carmaker.

It takes fortitude and perseverance, as well as imagination, to solve big problems. These qualities are most abundant when a problem is not only important but also inspiring. Frederick Winslow Taylor, arguably the most important management innovator of the twentieth century, is usually portrayed as a hard-nosed engineer, intent on mechanizing work and pushing employees to the max. Stern he may have been, but Taylor's single-minded devotion to efficiency stemmed from his conviction that it was iniquitous to waste an hour of human labor when a task could be redesigned to be performed with less effort.

This passion for multiplying the impact of human endeavor shines through in Taylor's introduction to his 1911 opus, *The Principles of Scientific Management:* "We can see and feel the waste of material things. Awkward, inefficient, or ill-directed movements of men, however, leave nothing visible or tangible behind them. Their appreciation calls for an act of memory, an effort of the imagination. And for this reason, even though our daily loss from this source is greater than from our waste of material things, the one has stirred us deeply, while the other has moved us but little."

THE ELEMENTS OF MANAGEMENT INNOVATION

In most companies, management innovation is ad hoc and incremental. A systematic process for producing bold management breakthroughs must include



To maximize the chances of a management breakthrough, you need to start with a problem that is both consequential and soul stirring. If you don't have such a problem in mind, here are three leading questions that will stimulate your imagination.

First, what are the tough trade-offs that your company never seems to get right? Management innovation is often driven by the desire to transcend such trade-offs, which can appear to be irreconcilable. Open source development, for example, encompasses two antithetical ideas: radical decentralization and disciplined, large-scale project management. Perhaps you feel that the obsessive pursuit of short-term earnings undermines your company's willingness to invest in new ideas. Maybe you believe that your organization has become less and less agile as it has pursued the advantages of size and scale. Your challenge is to find an opportunity to turn an "either/or" into an "and."

Second, what are big organizations bad at? This question should produce a long list of incompetencies. Big companies aren't very good at changing before they have to or responding to nimble upstarts. Most fail miserably when it comes to unleashing the imagination of first-line employees, creating an inspiring work environment, or ensuring that the blanket of bureaucracy doesn't smother the flames of innovation. Push yourself to imagine a company can't-do that you and your colleagues could turn into a can-do.

Third, what are the emerging challenges the future has in store for your company? Try to imagine them: An ever-accelerating pace of change. Rapidly escalating customer power. Near instant commoditization of products and services. Ultra-low-cost competitors. A new generation of consumers that is hype resistant and deeply cynical about big business. These discontinuities will demand management innovation

THERE IS NO SAUSAGE CRANK FOR INNOVATION, BUT IT'S POSSIBLE TO INCREASE THE ODDS OF A "EUREKA!" MOMENT BY **ASSEMBLING THE RIGHT INGREDIENTS.**

as well as business model innovation. If you scan the horizon, you're sure to see a tomorrow problem that your company should start tackling today.

Search for new principles. Any problem that is pervasive, persistent, or unprecedented is unlikely to be solved with hand-me-down principles. The pursuit of human liberty required America's founders to embrace a new principle: representational democracy. More recently, scientists eager to understand the subatomic world have been forced to abandon the certainties of Newtonian physics for the more ambiguous principles of quantum mechanics. It's no different with management innovation: Novel problems demand novel principles.

That was certainly true for Visa. By 1968, America's credit card industry had splintered into a number of incompatible, bank-specific franchising systems. The ensuing chaos threatened the viability of the fledgling business. It was at a meeting to discuss this knotty problem that Dee Hock, a 38-year-old banker from Seattle, volunteered to lead an effort to resolve the industry's biggest conundrum: how to build a system that would allow banks to cooperate in credit card branding and billing while still competing fiercely for consumers. Faced with this unprecedented challenge, Hock's small team spent months coming up with a set of radical principles to guide their work:

- Power and function in the system must be distributed to the maximum degree possible.
- The system must be self-organizing.
- Governance must be distributed.
- The system must seamlessly blend both collaboration and competition.
- The system must be infinitely malleable, yet extremely durable.
- The system must be owned cooperatively and equitably.

These principles owed more to Hock's fascination with Jeffersonian democracy and biological systems than to any management textbook. After two years of inventing, designing, and testing, Hock's team brought forth Visa, the world's first nonstock, for-profit membership organization – or, as Hock put it, an "organization whose product was coordination."

It's hard to know if a management principle is really new unless you know which ones are strictly vintage. Modern management practice is based on a set of principles whose origins date back a century or more: specialization, standardization, planning and control, hierarchy, and the primacy of extrinsic rewards. Generations of managers have mined these principles for competitive advantage, and they have much to show for their efforts. But after decades of digging, the chance of discovering a gleaming nugget of new management wisdom in these well-explored caverns is remote. Your challenge is to uncover unconventional principles that open up new seams of management innovation. Your quest should begin with two simple questions: What things exhibit the attributes or capabilities that you'd like to build into your organization? And what is it that imbues those exemplars with their enviable qualities?

Let's suppose your goal is to make your company as nimble as change itself. You know that in a world of accelerating change, continuous strategic renewal is the only insurance against irrelevance. Moreover, you realize that all those management principles you've inherited from the Industrial Age make your company less, rather than more, adaptable. Specialization, for all its benefits, limits the kind of cross-boundary learning that generates breakthrough ideas. The quest for greater standardization often leads to an unhealthy affection for conformance; the new and the wacky are seen as dangerous deviations from the norm. Elaborate planning-and-control systems lull executives into believing the environment is more predictable than it is. A disproportionate emphasis on monetary rewards leads managers to discount the power of volunteerism and self-organization as mechanisms for aligning individual effort. Deference to hierarchy and positional power tends to reinforce outmoded belief systems.

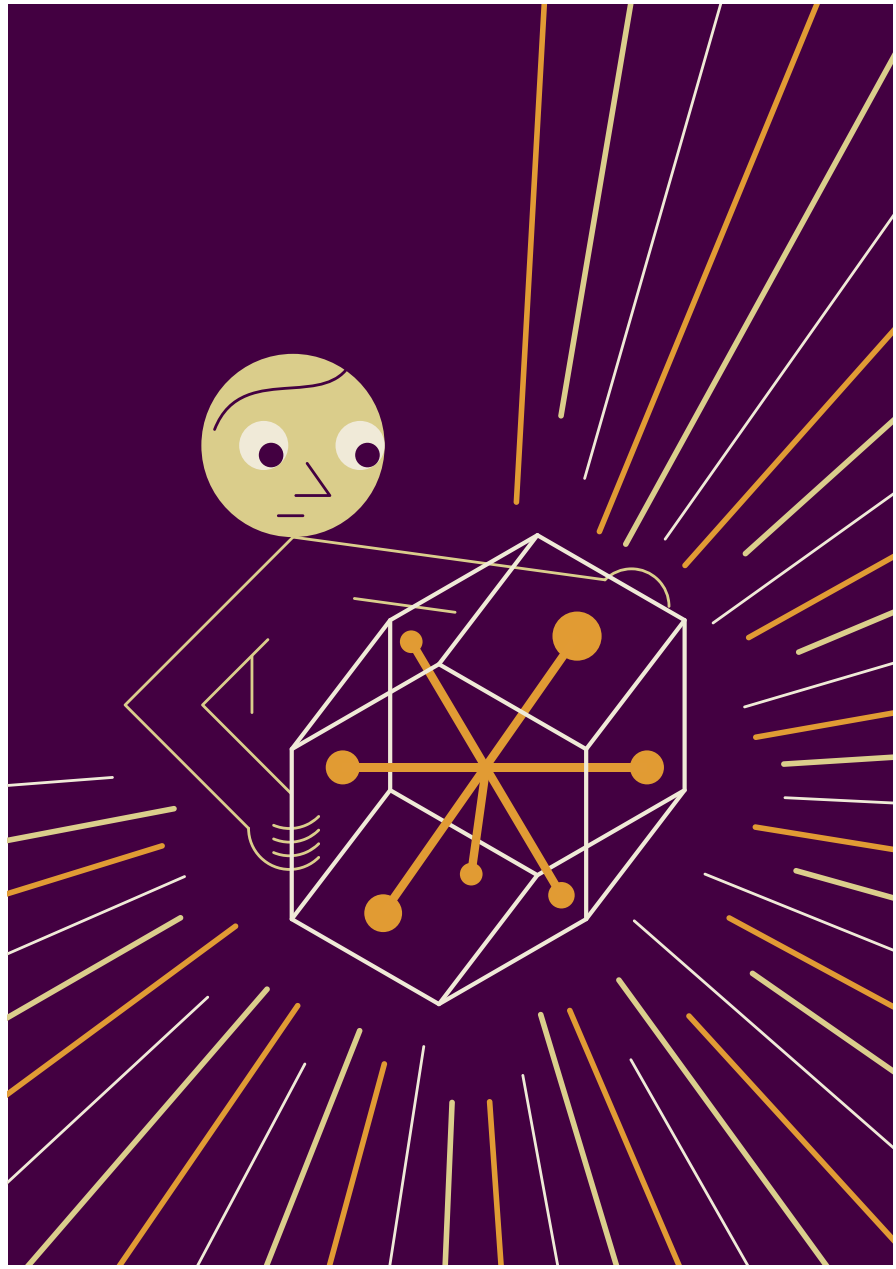
So where do you look to find the design principles for building a highly adaptable organization? You look to systems that have demonstrated their adaptability over decades, centuries, even aeons.

For more than 4 billion years, life has evolved at least as fast as its environment. That's quite a track record. Nature inoculates itself against the risks of environmental change by constantly creating new genetic material through sexual recombination and mutation. This bubbling fountain of genetic innovation is the key to nature's capacity for adaptation: The greater the diversity of the gene pool, the more likely it is that at least a few organisms will be able to survive in a dramatically altered landscape. Variety is one essential principle of adaptability.

Markets, too, are adaptable. Over the past 50 years, the New York Stock Exchange has outperformed virtually every one of its member companies. Competition is a hallmark of both markets and evolutionary biology. On the NYSE, companies compete to attract funds, and investors are free to place their bets as they see fit. Decision making is highly distributed, and investors are mostly unsentimental. As a result, markets are very efficient at reallocating resources from opportunities that are less promising to those that are more so. In most companies, however, there are rigidities that tend to perpetuate historical patterns of resource allocation. Executives, eager to defend their power, hoard capital and talent even when those resources could be better used elsewhere. Legacy programs seldom have to compete for resources against a plethora of exciting alternatives. The net result is that companies tend to overinvest in the past and underinvest in the future. Hence, competition and allocation flexibility are also important design principles if the goal is to build a highly adaptive organization.

Constitutional democracies rank high on any scale of evolvability. In a democracy, there is no monopoly on political action. Social campaigners, interest groups, think tanks, and ordinary citizens all have the chance to shape the legislative agenda and influence government policy. Whereas change in an autocratic regime comes in violent convulsions, change in a democracy is the product of many small, relatively gentle adjustments. If the goal is continuous, trauma-free renewal, most large corporations are still too much like monarchies and too little like democracies. With political power concentrated in the hands of a few dozen senior executives, and with little latitude for local experimentation, it's no wonder that big companies so often find themselves caught behind the change curve. To reduce the costs of change in your organization, you must embrace the principles of devolution and activism.

These management principles – variety, competition, allocation flexibility, devolution, and activism – stand in marked contrast to those we've inherited from the early decades of the Industrial Revolution. That doesn't make the old principles wrong, but they are inadequate if the goal is continuous, preemptive strategic renewal.



Whatever big management challenge you choose to tackle, let it guide your search for new principles. For example, maybe your goal is to build a company that can prevail against the steadily strengthening forces of commoditization – a problem that certainly demands management innovation. It isn't just products and services that are rapidly becoming commodities today but also broad business capabilities like low-cost manufacturing, customer support, product design, and human resource planning. Around the world, companies are outsourcing and offshoring business processes to vendors that provide more or less the same service to a number of competing firms. Businesses are collaborating across big chunks of the value chain, forming partnerships and joining industrywide consortia to share risks and reduce capital outlays. Add to this a worldwide army of consultants that has been working overtime to transfer best practices from the fast to the slow and from the smart to the not so clever. As once-distinctive capabilities become commodities, companies will have to wring a whole lot of competitive differentiation out of their ever-shrinking wedge of the overall business system.

Here's the rub: It's tough to build eye-popping differentiation out of lower-order human capabilities like obedience, diligence, and raw intelligence – things that are themselves becoming global commodities, available for next to nothing in places like Guangzhou, Bangalore, and Manila. To beat back the forces of commoditization, a company must be able to deliver the kind of unique customer value that can only be created by employees who bring a full measure of their initiative, imagination, and zeal to work every day. You can glimpse those higher-order capabilities in Apple's sleek and sexy iPods, in IKEA's cheap and cheerful furniture, in Porsche's iconic sports cars, and in Pixar's magical movies. The problem is, there's little room in bureaucratic organizations for passion, ingenuity, and self-direction. The machinery of bureaucracy was invented in an age when human beings were seen as little more than semiprogrammable robots. Bureaucracy puts an upper limit on what individuals are allowed to bring to their jobs. If you want to build an organization that unshackles the human spirit, you're going to need some decidedly unbureaucratic management principles.

Where do you find organizations in which people give all of themselves? You might start with Habitat for Humanity, which has built more than 150,000 homes for low-income families since 1976. Talk to some of the folks who've given up a weekend to pound nails and hang drywall. Share a beer with a few of the part-time hackers who have churned out millions of lines of code for the Linux operating system. Or consider all those volunteers who've helped make Wikipedia the world's largest encyclope-

TWELVE INNOVATIONS THAT SHAPED MODERN MANAGEMENT

Surprisingly, scholars have paid little attention to the process of management innovation. Seeking to correct this oversight, I have been working with Julian Birkinshaw and Michael Mol, both of the London Business School, to better understand the genesis of the twentieth century's most important management innovations. First we identified 175 significant management innovations from 1900 to 2000. To whittle this list down to the most important advances, we evaluated each innovation along three dimensions: Was it a marked departure from previous management practices? Did it confer a competitive advantage on the pioneering company or companies? And could it be found in some form in organizations today? In light of these criteria, here are a dozen of the most noteworthy innovations.

1. **Scientific management (time and motion studies)**
2. **Cost accounting and variance analysis**
3. **The commercial research laboratory (the industrialization of science)**
4. **ROI analysis and capital budgeting**
5. **Brand management**
6. **Large-scale project management**
7. **Divisionalization**
8. **Leadership development**
9. **Industry consortia (multicompany collaborative structures)**
10. **Radical decentralization (self-organization)**
11. **Formalized strategic analysis**
12. **Employee-driven problem solving**

Important innovations that didn't quite make this list include Skunk Works, account management, business process reengineering, and employee stock ownership plans. There are more recent innovations that appear quite promising, such as knowledge management, open source development, and internal markets, but it's too early to assess their lasting impact on the practice of management.

IF YOU WANT TO BUILD AN ORGANIZATION THAT UNSHACKLES THE HUMAN SPIRIT, YOU'RE GOING TO NEED SOME DECIDEDLY

UNBUREAUCRATIC MANAGEMENT PRINCIPLES.

dia, with more than 1.8 million articles. Each of these organizations is more of a community than a hierarchy. People are drawn to a community by a sense of shared purpose, not by economic need. In a community, the opportunity to contribute isn't bounded by narrow job descriptions. Control is more peer based than boss based. Emotional satisfaction, rather than financial gain, drives commitment. For all those reasons, communities are amplifiers of human capability.

Whole Foods, you will remember, long ago embraced the notion of community as an overarching management principle. The company's stores, sparkling temples of guilt-free gastronomy, are about as unlike the average Kroger or Safeway as one could imagine. That's the kind of differentiation you get when your management system encourages team members to bring all their wonderful human qualities to work – and when your competitors' management systems don't.

Deconstruct your management orthodoxies. To fully appreciate the power of a new management principle, you must loosen the grip that precedent has on your imagination. While some of what you believe may be scientific certainty, much of it isn't. Painful as it is to admit, a lot of what passes for management wisdom is unquestioned dogma masquerading as unquestionable truth.

How do you uncover management orthodoxy? Pull together a group of colleagues, and ask them what they believe about some critical management issue like change, leadership, or employee engagement. Once everyone's beliefs are out on the table, identify those that are held in common. (More tools for identifying and challenging management orthodoxies are available at www.hamelfeb06.hbr.org.) For example, if the issue is strategic change, you may find that most of your colleagues believe that

- Change must start at the top;
- It takes a crisis to provoke change;
- It takes a strong leader to change a big company;
- To lead change, you need a very clear agenda;
- People are mostly against change;
- With any change, there will always be winners and losers;
- You have to make change safe for people;
- Organizations can cope with only so much change.

Empirically, these beliefs seem true enough, but as a management innovator, you must be able to distinguish between what is apparently true and what is eternally true. Yes, big change initiatives like GE's Six Sigma program typically require the support of an impassioned CEO. Yes, right-angle shifts in strategic direction, like Kodak's embrace of all things digital, are usually precipitated by an earnings meltdown. And yes, just about every story of corporate renewal is a turnaround epic with the new CEO cast as corporate savior. But is this the only way the world can work? Why, you should ask, does it take a crisis to provoke deep change? For the simple reason that in most companies, a few senior executives have the first and last word on shifts in strategic direction. Hence, a tradition-bound management team, unwilling to surrender yesterday's certainties, can hold hostage an entire organization's capacity to embrace the future. So while it is true that it usually takes a crisis to motivate deep change, that isn't some law of nature; it's merely an artifact of a top-heavy distribution of political power.

As a management innovator, you must subject every management belief to two questions. First, is the belief toxic to the ultimate goal you're trying to achieve? Second, can you imagine an alternative to the reality the belief reflects? Take the typical assumption that the CEO is responsible for setting strategy. While this seems a reasonable point of view, it may lull employees into believing that they can do little to influence their company's strategic direction or to reshape its business model – that they are the implementers, rather than the creators, of strategy. Yet, if the goal is to accelerate the pace of strategic renewal or to fully engage the imagination and passion of every employee, a CEO-centric view of strategy formulation is unhelpful at best and dangerous at worst.

Is there any reason to believe we can challenge this well-entrenched orthodoxy? Sure. Look at Google. Its top team doesn't spend a lot of time trying to cook up grand strategies. Instead, it works to create an environment that

IT USUALLY TAKES A CRISIS TO MOTIVATE DEEP CHANGE. BUT THAT ISN'T SOME LAW OF NATURE; IT'S MERELY AN ARTIFACT OF A **TOP-HEAVY DISTRIBUTION OF POWER.**

spawns lots of "Googlettes": small, grassroots projects that may one day grow into valuable new products and services. Google looks for recruits who have off-the-wall hobbies and unconventional interests–people who aren't afraid to defy conventional wisdom – and, after it hires them, encourages them to spend up to 20% of their time working on whatever they feel will benefit Google's users and advertisers. The company organizes much of its workforce into small, project-focused teams with only a modicum of supervision (one Google manager claimed to have 160 direct reports!) but with a lot of lateral communication and intramural competition. Its developers post their most-promising inventions on the Google Labs Web site, which gives adventurous users the chance to evaluate new concepts.

Few companies have worked as systematically as Google to broadly distribute the responsibility for strategic innovation. Its experience suggests that the conventional view of the CEO as the strategist in chief is just that: a convention. It's not entirely wrong, but it's a long way from being totally right. And when you hold other management maxims up to the bright light of critical examination, you are likely to find that many are equally flimsy. As old certainties crumble, the space for management innovation grows.

Exploit the power of analogy. Servant leadership. The power of diversity. Self-organizing teams. These are newfangled notions, right? Wrong. Each of those important management ideas was foreshadowed in the writings of Mary Parker Follett, a management innovator whose life was bracketed by the American Civil War and the Great Depression. Consider a few of the farsighted management tenets in Follett's book, *Creative Experience,* first published in 1924:

- Leadership is not defined by the exercise of power but by the capacity to increase the sense of power among those who are led. The most essential work of the leader is to create more leaders.
- Adversarial, win-lose decision making is debilitating for all concerned. Contentious problems are best solved not by imposing a single point of view at the expense of all others but by striving for a higher-order solution that integrates the diverse perspectives of all relevant constituents.
- A large organization is a collection of local communities. Individual and institutional growth are maximized when those communities are self-governing.

Follett's heretical insights didn't come from a survey of industrial best practice; they grew out of her experience in building and running Boston-based community associations. Vested with little formal authority and faced with the challenge of melding the competing interests of several fractious constituencies, Follett developed a set of beliefs about management that were starkly different from those that prevailed at the time. As is so often the case with innovation, a unique vantage point yielded unique insights.

If your goal is to escape the straitjacket of conventional management thinking, it helps to study the practices of organizations that are decidedly unconventional. With a bit of digging, you can unearth a menagerie of exotic organizational life-forms that look nothing like the usual doyens of best practice. Imagine, for instance, an enterprise that has more than 2 million members and only one criterion for joining: You have to want in. It has virtually no hierarchy, yet it spans the globe. Its world headquarters has fewer than 100 employees. Local leaders are elected, not appointed. There are neither plans nor budgets. There is a corporate mission but no detailed strategy or operating plans. Yet this organization delivers a complex service to millions of people and has thrived for more than 60 years. What is it? Alcoholics Anonymous. AA consists of thousands of small, self-organizing groups. Two simple admonitions inspire AA's members: "Get sober" and "Help others." Organizational cohesion comes from adherence to the 12-step program and observance of the 12 traditions that are outlined in the group's operating principles. AA may have been around for decades, but it is still in the management vanguard.

Just how far can you push autonomy and self-direction in your company? Is there some set of simple rules that

could simultaneously unleash local initiative and provide focus and discipline? Is there some meritorious goal that could spur volunteerism?

The example of Bangladesh's Grameen Bank is another spur to inventive management thinking. The bank's mission is to turn the poorest of the poor into entrepreneurs. To that end, it makes microloans to five-person syndicates with no requirement for collateral and little in the way of paperwork. Borrowers use the funds to start small businesses such as basket weaving, embroidery, transportation services, and poultry breeding. Ninety-five percent of the bank's loans go to women, who have proven to be both creditworthy borrowers and astute businesspeople. Microcredit gives these women the chance to improve their families' well-being and their own social standing. As of 2004, Grameen Bank had provided funds to more than 4 million borrowers. Isn't it a bit odd that a desperately poor woman in a developing country has an easier time getting capital to fund an idea than a first-level associate in your company? If Grameen Bank can make millions of unsecured loans to individuals who have no banking history, shouldn't your company be able to find a way to fund the glimmer-in-the-eye projects of ordinary employees? Now, that would be a management innovation!

A final analogy: As I'm writing this, William Hill, one of the UK's leading bookmakers, is offering odds of 3.5:1 "off" on Tiger Woods in the 2006 Masters golf tournament. That is, Woods is estimated to be three-and-a-half more times likely to lose than to win. The odds on Phil Mickelson are rather longer at 10:1, while Sergio Garcia's chances are rated at 26:1. The odds are probability estimates based on two kinds of data: the expert judgment of odds compilers and the collective opinion of sports-mad punters laying down their bets. Having set an initial price on a particular outcome, bookmakers adjust the odds over time as people place additional bets and the wisdom of the crowd becomes more apparent.

What's the lesson for would-be management innovators? Every day, companies bet millions of dollars on risky initiatives: new products, new ad campaigns, new factories, big mergers, and so on. History suggests that many projects will fail to deliver their expected returns. Is there a way of guarding against the hubris and optimism that so often inflate investment expectations? One potential solution would be to create a market for judgment that harnesses the wisdom of a broad cross section of employees to set the odds on a project's anticipated returns. An executive sponsor would set the initial odds for a project to achieve a particular rate of return within a specific time frame. Let's say those odds get set at 5:1 "on," meaning that the sponsor believes there's a five-to-one chance that the project will deliver the anticipated return. Employees would then be able to bet for or against that outcome. If many more employees bet against the project than for it, the sponsor would have to readjust the odds. While a CEO could still back a long-shot project, the transparency of the process would reduce the chance of investment decisions being overly influenced by the sponsor's power or personal persuasiveness. Who would have thought that bookies could inspire management innovation? Your challenge is to hunt down equally unlikely analogies that suggest new ways of tackling thorny management problems.

Get the Rubber on the Road

OK, you're inspired! You have some great ideas for management innovation. To turn your precedent-busting theories into reality, you need to understand exactly how your company's existing management processes exacerbate that big problem you're hoping to solve. Start by answering the following questions for each relevant management process:

- Who owns the process?
- Who has the power to change it?
- What are its objectives?
- What are the success metrics?
- Who are the customers of this process?
- Who gets to participate?
- What are the data or information inputs for this process?
- What analytical tools are used?
- What events and milestones drive this process?
- What kind of decisions does this process generate?
- What are the decision-making criteria?
- How are decisions communicated, and to whom?
- How does this process link to other management systems?

After documenting the details of each process, assemble a cross section of interested parties such as the process owner, regular participants, and anyone else who might have a relevant point of view. Ask them to assess the process in terms of its impact on the management challenge you're seeking to address. For example, if the goal is to accelerate your company's pace of strategic renewal, you may conclude that the existing capital approval process demands an unreasonably high degree of certainty about future returns even when the initial investment is very small. This frustrates the flexible reallocation of resources to new opportunities. You may find that your company's strategic planning process is elitist in that it gives a disproportionate share of voice to senior executives at the expense of new ideas from people on the front lines. This severely limits the variety of strategic options your company considers. Perhaps the hiring process overweights technical competence and industry experience compared with lateral thinking and creativity. Other human resource processes may be too focused on ensuring compliance and not focused enough on emancipating employee initiative. The net result? Your company is earning

a paltry return on its investment in human capital. A deep and systematic review of your firm's management processes will reveal opportunities to reinvent them in ways that further your bold objectives.

Of course, you are unlikely to get permission to reinvent a core management process at one go, however toxic it may be. Like renowned social psychologist Elton Mayo, who some 80 years ago conducted human behavior experiments in the Hawthorne Works of the Western Electric Company, you'll have to design low-risk trials that let you test your management innovations without disrupting the entire organization. That may mean designing a simulation, where you run a critical strategic issue through a novel decision-making process to see whether it produces a different decision. It may mean operating a new management process in parallel with the old process for a time. Maybe you'll want to post your innovation on an internal Web site and invite people from across the company to evaluate and comment on your ideas before they're put into practice. The goal is to build a portfolio of bold new management experiments that has the power to lift the performance of your company ever higher above its peers.

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Most organizations around the world have been built on the same handful of time-tested management principles. Given that, it's hardly surprising that core management processes like capital budgeting, strategic planning, and leadership development vary only slightly from one company to another. Although we sometimes affix the "dinosaur" label to chronically underperforming companies, the truth is that every organization has more than a bit of dinosaur DNA lurking in its management processes and practices. In the corporate ecosphere, there are little dinosaurs and big dinosaurs, rambunctious toddlers and tottering oldsters. But no company can escape the fact that with each passing year, the present is becoming a less reliable guide to the future. While there is much in the current management genome that will undoubtedly be valuable in the years ahead, there is also a great deal that will need to change. So far, management in the twenty-first century isn't much different from management in the twentieth century. Therein lies the opportunity. You can wait for a competitor to stumble upon the next great management breakthrough, or you can become a management innovator right now. In a world swarming with new management challenges, you'll need to be even more inventive and less tradition bound than all those management pioneers who came before you. If you succeed, your legacy of management innovation will be no less illustrious than theirs.

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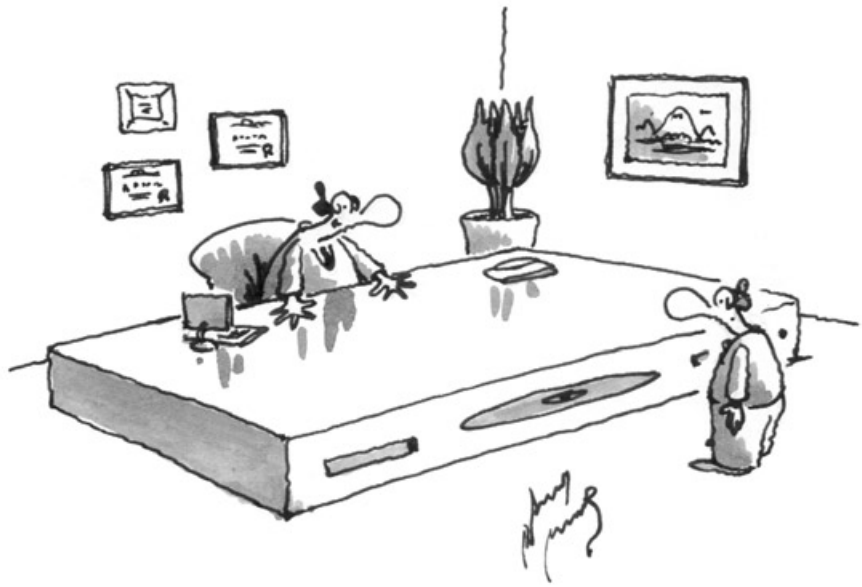

"Deskwise, I've been very blessed."

SCOTT ARTHUR MASEAR

We hear a lot of praise for emotionally intelligent, even humble leaders. But change is scary, and you sometimes need scary leaders to steer you through. Those with bold political intelligence can creatively push followers to overperform.

THE GREAT INTIMIDATORS

BY RODERICK M. KRAMER

"SINCE WHEN HAS BEING A DIFFICULT BOSS BEEN A DISQUALIFIER for a job?" asked *Nightline*'s Ted Koppel after several abrasive, intimidating leaders of major corporations – Disney's Michael Eisner, Miramax's Harvey Weinstein, and Hewlett-Packard's Carly Fiorina – fell from their heights of power. Picking up on what seemed to be a new trend in the workplace, the business media quickly proclaimed that the reign of such leaders was over. From now on, the *Wall Street Journal* predicted, "tough guys will finish last."

But wait a minute, you might think. If they're just plain bad for their organizations, why have so many of these leaders made it to the top in the first place? Wouldn't the ones who've wreaked nothing but havoc have plateaued or been weeded out long before they could inflict too much damage? Yet many leaders who rule through intimidation have

BRIAN STAUFFER

been doing just fine for a very long time. Before we proclaim their extinction, then, it's worth taking a close look at the pros as well as the cons of their tough-minded approach. Doing so might cast light on some subtle dimensions of effective leadership, especially in organizations or industries that were once rigid or unruly, stagnant or drifting – places where it took an abrasive leader to shake things up a little and provide redirection.

Consider Ed Zander, who's been hailed as "Motorola's modernizer." When Zander took over as CEO of Motorola in January 2004, the company was in steep decline. After being in the high-velocity world of Silicon Valley, Zander found himself at the helm of a company that seemed to be running, in his words, "on autopilot." In taking on the challenge of turning Motorola around, Zander described his guiding philosophy as, "Whack yourself before somebody whacks you." He observed, "A lot of companies have clogged arteries." In Motorola's case, Zander found that much of the problem was at the VP level. "I don't know how many dozens of VPs are no longer with us," he reported in one interview. "Some have left on their own accord, some have not." The transformation at Motorola is far from complete, but it is off to a good start. In the third quarter of 2004, the company posted sales of $8.62 billion (a 26% increase from the third quarter of 2003). Moreover, shipments of its handsets were up 15% from the previous year.

A similar story can be told about Harvey Weinstein, also notorious for his abrasiveness. When he entered the Hollywood scene, a handful of major studios dominated the landscape. Independent picture producers limped along on the margins of power and influence. Weinstein almost single-handedly pulled the independent film industry out of the doldrums, in the process making Miramax one of the few widely recognized industry brand names. He didn't make a lot of friends over the years, and people who have worked with him often say that they find him hard to take. At the same time, they know that his high-pressure tactics have pushed them to the apex of their professional talents. One former Miramax executive noted appreciatively, "You learned to anticipate…the direction Harvey was going or wanted to go, because most of the time he was right." And there is no contending with Weinstein's success: more than 240 Academy Award nominations and 60 wins.

Zander and Weinstein are examples of what I call *great intimidators.* They are not averse to causing a ruckus, nor are they above using a few public whippings and ceremonial hangings to get attention. And they're in good company. A list of great intimidators would read a bit like a business leadership hall of fame: Sandy Weill, Rupert Murdoch, Andy Grove, Carly Fiorina, Larry Ellison, and Steve Jobs would be just a few of the names on it. These leaders seem to relish the chaos they create because, in their minds, it's constructive. Time is short, the stakes are high, and the measures required are draconian.

But make no mistake – the great intimidators are not your typical bullies. If you're just a bully, it's all about humiliating others in an effort to make yourself feel good. Something very different is going on with the great intimidators. To be sure, they aren't above engaging in a little bullying to get their way. With them, however, the motivating factor isn't ego or gratuitous humiliation; it's vision. The great intimidators see a possible path through the thicket, and they're impatient to clear it. They chafe at impediments, even those that are human. They don't suffer from doubt or timidity. They've got a disdain for constraints imposed by others.

The modus operandi of great intimidators runs counter to a lot of our most deeply entrenched preconceptions about what it means to be a good leader these days. We've all read the books and articles describing people who lead quietly and with great empathy and humility. But as you'll see, the leaders I've been studying think and work in an entirely different way: They're rough, loud, and in your face.

Beneath their tough exteriors and sharp edges, however, are some genuine, deep insights into human motivation and organizational behavior. Indeed, these leaders possess what I call *political intelligence,* a distinctive and powerful form of leader intelligence that's been largely ignored by management theorists and practitioners. In all our recent enchantment with social intelligence and soft power, we've overlooked the kinds of skills leaders need to bring about transformation in cases of tremendous resistance or inertia. It's precisely in such situations, I'd like to propose, that the political intelligence of the intimidating leader is called for.

Political Intelligence at Work

What exactly is so special about political intelligence? And how does it help set the great intimidators apart from other kinds of effective leaders? To answer these questions, we need to start by looking at conventional conceptions of leader intelligence.

Over the past decade, management theorists and practitioners alike have come to appreciate the roles that different forms of human intelligence play in effective leadership. Psychologist Howard Gardner – who first articulated the theory of multiple intelligences – suggested, for example, that social intelligence is what makes some leaders so adept at getting others to follow them and at

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extracting maximum performance from subordinates. Gardner defined social intelligence in terms of leaders' interpersonal skills, such as empathy and the ability to influence others on the basis of that understanding.

There's no question that it's important for all leaders to have these skills. Indeed, social intelligence is the sort of competency leaders rely on every day to accomplish the routine work of an organization. However, it's not the *only* kind of intelligence they need. What's more, in some settings (a rigidly hierarchical organization, for example), other forms of intelligence may be more useful. That's when the application of political intelligence, the hallmark of great intimidators, can make the difference between paralysis and successful – if sometimes wrenching – organizational change.

In understanding the distinction between socially intelligent and politically intelligent leaders, it's important to realize that they share certain skills. Both types of leaders are adept at sizing up other people. Both possess keen, discriminating eyes – but they notice different things. For instance, socially intelligent leaders assess people's strengths and figure out how to leverage them, while politically intelligent leaders focus on people's weaknesses and insecurities. Speaking of President Lyndon B. Johnson, one of history's truly great intimidators, former press secretary Bill Moyers noted that he possessed "an animal sense of weakness in other men." As one political scientist elaborated, Johnson "studied, analyzed, catalogued, and remembered the strengths and weaknesses, the likes and dislikes, of fellow politicians as some men do stock prices, batting averages, and musical compositions. He knew who drank Scotch and who bourbon, whose wife was sick…who was in trouble…and who owed him."

Not only do socially intelligent and politically intelligent leaders notice different things; they also *act* differently on the basis of their divergent perceptions. While leaders with social intelligence use empathy and soft power to build bridges, politically intelligent leaders use intimidation and hard power to exploit the anxieties and vulnerabilities they detect. Both kinds of leaders are good judges of character. But instead of having empathy for others, the politically intelligent leader adopts a dispassionate, clinical, even instrumental view of people as resources for getting things done. This absence of empathy opens up branches of the decision tree, exposing options that other leaders might reject.

Perhaps the starkest point of contrast between these two kinds of leaders is how willing they are to use hard power. Politically intelligent leaders appreciate the power of fear and its close relation, anxiety. As Harvard University's president, Larry Summers, once observed: "Sometimes fear does the work of reason." He went to Harvard determined to shake up the institution – and whatever else may be said about him, he has succeeded in doing just that. Interviews with faculty, staff, and students at Harvard who've had close encounters with Summers reveal a common pattern in his interactions: initial confrontation, followed by skeptical and hard questioning. "Perhaps we don't really even need a department like this at Harvard," he is said to have told one group of faculty at a "let's get acquainted" session.

SOMETIMES FEAR WORKS

The findings and observations reported in this article are part of a larger, ongoing research program on what I call the genius-to-folly syndrome. That research focuses on why some leaders wield their power so effectively, while others overplay their hand and lose the game (see Roderick M. Kramer, "The Harder They Fall," HBR October 2003). Initially, I was interested in documenting people's negative experiences working under abusive, demanding leaders. Counter to my preconceptions, however, a fair number of individuals reported having *positive* relationships with intimidating leaders. In fact, some of these relationships were described as profoundly educational and even transformational. To be sure, the people I interviewed recognized the downsides of working under intimidating leaders – the anxiety, the trepidation. Yet many of them had no regrets and indicated that they would happily do it again.

The more I probed, the clearer it became that these leaders possessed something different from the social and emotional intelligence touted by management theorists. They had political intelligence. They used coercion, but they did so creatively and strategically.

It turned out that many of the truly great intimidators were concentrated in a few domains, including Hollywood, the high-tech world, and Washington, DC. In some ways, that pattern isn't altogether surprising. All of these places are famous for the bad behavior they elicit. Woody Allen once said about Hollywood bullying, "It's dog-eat-dog. No, it's worse than dog-eat-dog. It's dog-doesn't-return-other-dog's-phone-calls." I think we see a lot of such behavior in these select domains because the rewards are potentially huge and the competition for them is intense.

Political intelligence can be just as important as emotional and social intelligence in helping leaders achieve the results they desire, especially in highly competitive, contentious, or political environments. There is a sort of Darwinian logic to the efficacy of intimidation. It can give an edge in situations where any advantage, no matter how small, might make the difference between success and failure.

Such questions may not make a leader popular, but they certainly wake people up. And they sometimes compel people to think more deeply about their purpose in an organization and the value they add to it. In asking them to justify their existence, for instance, Summers has forced professors and administrators at Harvard to become more thoughtful about what they do. So though it can be painful, that exercise in justification leads to greater clarity about purpose and strategy. As Harvard Law School professor Alan Dershowitz bluntly pointed out in a television interview, "Most [university] presidents are too careful, too cautious, too frightened, too worried about tipping the boat, too worried about alienating anybody, too worried about offending anybody." Dershowitz went on to add that Summers "*is* a provocative president. I think in my 41 years at Harvard I have never seen a more exciting time, more diversity of views…and I think Harvard is a better place for it."

Summers's sentiments regarding the virtues of inculcating a little fear echo one of President Richard Nixon's convictions: "People react to fear, not love – they don't teach that in Sunday school, but it's true." For Nixon, leadership wasn't about inspiring others or being liked; it was about producing tangible results. And although too much fear or anxiety may induce trepidation and paralysis, too little may result in lackluster effort and complacency.

The great intimidators force people to review how strongly they feel about an issue. Are they really willing to go to the mat for it? If so, then they had better have a strong argument. It's then that the debate gets interesting, both for the individuals involved and for the organization. One Microsoft manager told me, "Bill Gates relishes intellectual combat. He hires the best and brightest – and most articulate – individuals because he wants the conversation to be at the highest possible level."

The Intimidator's Tactics

When it comes to understanding how politically intelligent leaders achieve such stunning results, the devil is in the details, and the details are to be found in the effective – but sometimes extreme – tactics these leaders use to coerce their subordinates to overperform.

Get up close and personal. Many intimidators operate through direct confrontation. At times, they will even invade the personal space of the people they want to control. This mode of intimidation fits our stereotype of the hulking organizational bully.

Universal Pictures chair Stacey Snider found herself on the receiving end of this sort of treatment during an unexpected confrontation with Miramax's Harvey Weinstein at a cocktail party. Weinstein was upset because of rumors circulating throughout Hollywood that he had started a whispering campaign to discredit Universal's film *A Beautiful Mind.* At a celebratory dinner following the Golden Globes, at which *A Beautiful Mind* won several awards, including best drama, Weinstein cornered Snider. In a *New Yorker* article, Ken Auletta described their close encounter this way: "To the petite Snider, [Weinstein] was a fearsome sight – his eyes dark and glowering, his fleshy face unshaved, his belly jutting forward half a foot or so ahead of his body. He jabbed a finger at Snider's face and screamed, 'You're going to go down for this!'" This was the calculated sound and fury of a skillful intimidator. Snider understood that, and she held her ground with Weinstein.

A sure sign of the extent to which truly great intimidators are putting on an act is the fact that many of them work on their tactics when alone. General George Patton used to practice his scowl in front of his mirror. He called it his "general's face," and he wanted it to be as terrifying and menacing a countenance as he could make it. Entrepreneur Reggie Lewis also admitted that he spent time in front of his mirror perfecting what became his trademark frown. He believed that to really excel at hardball, it helped to have a face that fit the part.

In addition to aggressive physical demeanors, intimidators routinely use the weapons of language – taunts and slurs – to provoke their victims. This behavior is designed to throw others off balance. It's hard to think clearly and follow your own game plan when your buttons are being pushed. Clarence Thomas, associate justice of the U.S. Supreme Court, used this tactic to browbeat his Democratic opponents on the Senate judiciary committee during his nomination hearings. When accused by Anita Hill of sexual harassment, he asked the members of the committee how they would like to be so accused. The discomfort of the committee (which included an understandably subdued Ted Kennedy) was palpable. To complete the trick, he threw the race card down on the table, calling the procedure "a high-tech lynching for uppity blacks who in any way deign to think for themselves…[and don't] kowtow to an old order." By putting the committee on the defensive, Thomas pulled the moral high ground right out from under their feet.

Be angry. Most intimidators use anger and rage to get their way. A calculated "loss of temper" does more than help intimidators prevail in the heat of the moment, though. It also serves as a chilling deterrent for potential challengers. While in some instances they are clearly putting on an act, intimidators aren't always in full control of their emotions when they go off on tirades. But even then a loss of control can be useful. As political pundit Chris Matthews once said, "Don't have a reputation for being a nice guy – that won't do you any good." He cited his experience working with former Maine senator Ed Muskie: "Muskie was the best of them all, the absolute best, because nobody wanted to tangle with the guy. You know, why tangle with the guy? Why ruin your day? A bad temper is a very powerful political tool because most people don't like confrontation." People will think twice before

MANAGING GREAT INTIMIDATORS

To be on the receiving end of an intimidating leader's unreasonable behavior is never easy. Legend has it that film producer Scott Rudin has gone through more than 250 assistants over the past five years. (Rudin says that he fired only 119, but that doesn't include people who didn't make it past his two-week trial period.) As we've seen, though, the payoff is big for those individuals with staying power. As film producer Craig Perry, Rudin's protégé, has acknowledged, "I attribute an enormous amount of whatever success I've been able to attain directly…[to] how I saw [Rudin] operate."

The trick for reaping those big benefits is to find a way to work effectively with the great intimidators and get them to want to mentor you. Here are a few suggestions that may help:

Do your homework. It pays to check out the great intimidator's past. Find out which people have managed to work effectively with him or her. Learn what worked well for them. For every great intimidator I've studied, there have always been a few individuals who've discovered a way to work successfully with him or her. Before becoming Secretary of State, notes biographer Ann Blackman, Madeleine Albright managed to collaborate with Ed Muskie because "she wasn't cowed by him. She actually *liked* going into his office, which they called 'The Lion's Den.'" Muskie would rant, and Albright would push back. As a result, he respected her quite a lot. And that became the basis of one of her early and most important mentoring relationships. Muskie also taught her more than a little bit about dealing with intimidators.

Work harder. The saying "Work smarter, not harder" is popular for a reason. There's a lot of wisdom behind the notion that being efficient and clever with one's time and effort is important. But putting in the time may impress great intimidators even more. Matching their energy and drive is one way to get their attention. Back when he was a newcomer to the Creative Artists Agency mail room, Stuart Griffen used this strategy to secure the coveted spot as Michael Ovitz's assistant. "He knew I worked hard. He'd come back to the office at eleven o'clock at night, and I'd still be there. He'd come in on a Sunday, and I'd be there. I was in, both feet, plus 200%. I remember writing a note to myself: 'Get anything, anywhere, anytime.'" It took months of sustained effort, but eventually, Griffen got the job.

Laugh at their antics – and earn their respect. President Lyndon Johnson was famous for trying to intimidate aides by asking them to meet with him while he was using the toilet. "Come closer! I can't hear you!" he would yell at them while dictating memos and giving orders from the commode. But film industry magnate Jack Valenti, who was Johnson's special assistant back in the day, has noted that Johnson did this primarily to see how much aides would bend to his will. One aide used humor to show that he wasn't easily flustered or dominated. He extracted a laugh from Johnson by calmly responding, "I'd be happy to move closer, Mr. President. But it seems you have the only seat in the room." Proving yourself unflappable is a terrific way to impress a great intimidator.

Call their bluff. When dealing with great intimidators, it can help to simply call their bluff. This tactic is particularly effective when you're dealing with an informational intimidator, especially when you suspect that he or she is mixing truth and fiction. Just saying, "I don't believe it" will buy you time. This puts the ball right back into the intimidator's court, and it shows that you aren't a pushover. Displaying a toughness under pressure often impresses great intimidators, who are looking for people whose inner steel matches their own.

Keep your perspective. Don't take things too seriously. David O'Connor, another young and ambitious CAA agent determined to become Ovitz's right-hand man, described what it was like interviewing for the position:

> When I walked in, Ovitz was behind his desk, on the phone. He said, "Sit down – over there," pointing to the couch. Ovitz's office got pretty heavy afternoon sun…so I couldn't see his face, only his shadow, which I later learned was intentional. He also kept interrupting our conversation. He'd tap a phone next to him, and moments later [his secretary] would come in. He'd say a few things, then she'd go. Then she'd come back. I later learned he was buzzing her in, for no real good reason other than to shake me up. He wanted to see if I could handle the distractions. He wanted to keep me on edge.

O'Connor did handle the distractions, and he won the job.

Stick around. Too often, we are tempted to pack our bags and find an easier job. That instinct is understandable – an early exit can look awfully attractive. But remember why you wanted to work for the intimidator in the first place: to learn. If he is just sometimes unreasonable in his demands, take comfort in the fact that in the process of working with him you can sharpen your own negotiation skills. As Columbia Pictures' Dawn Steel, the first woman to run a major movie studio, put it: "Barry Diller taught his protégés to bite, kick, and yell. Now they're running Hollywood." You can go the distance if you can learn how to appreciate genius at work.

confronting you if you've got a reputation for being willing to scorch a little earth rather than back down.

This point may seem simple and obvious, but it's worth emphasizing because people often don't fully appreciate how much ground they may yield simply to keep intimidating leaders from getting in their face or ruining their day. Without consciously or completely realizing it, they may even leave the playing field in order to avoid an unpleasant encounter. Or they may hold back in the hope that someone else will stand up to the great intimidator. Either way, intimidators end up getting what they want. Contrived anger of this type is especially prevalent among politicians. Indeed, Pulitzer-winning journalist Hedrick Smith has even given a name to it: porcupine power.

Keep them guessing. Many leadership books these days tout the importance of transparency. We trust leaders when we feel we know their intentions and motives, a lot of authors say. According to this view, leaders must take great pains to be sure other people understand them and why they are doing what they're doing. Intimidators don't buy into this idea at all. They prefer to remain unfathomable because this keeps subordinates on their toes and makes it easier to change direction without losing credibility. If people don't know where you're coming from or where you're going, it's easier to catch them by surprise.

Some leaders preserve their mystery through deliberate distance; many of the great intimidators I've studied cultivated an aloof demeanor with subordinates. When he was U.S. Secretary of Defense, Robert McNamara was especially famous for his cold and distant style. As journalist and historian David Halberstam noted in *The Reckoning,* "He shunned small talk. Small talk wasted time and encouraged intimacies. Intimacies were unwanted, at least with employees." McNamara's intimidating demeanor with subordinates and rivals *was* an act. He had no trouble turning on the charm with those he wanted to please. With presidents Kennedy and Johnson – the men he had chosen to serve – he was uniformly described as warm, witty, and attentive. He was such an interesting and pleasant conversationalist that his presence was enthusiastically sought at Washington cocktail parties. As McNamara's behavior illustrates, great intimidators can also be great ingratiators and seem to be able to change their demeanor in a chameleon-like way to suit their needs.

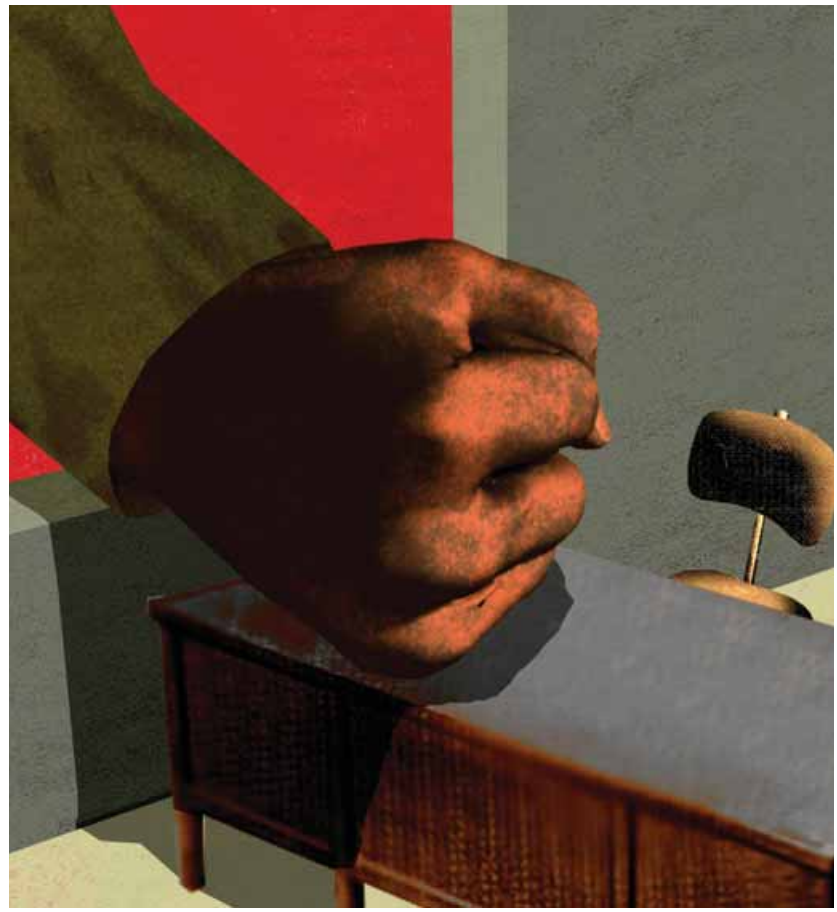
Silence and sullenness are also powerful tools. "You're not sure why the person is displeased with you, but you sure sense it," one former HP employee told me when describing a meeting she'd had with Carly Fiorina. Subordinates of silent, sullen intimidators end up spending a lot of time huddled around the watercooler trying to figure out whether they're in or out – and then go and sit in their offices and dream up ways of pleasing the boss. The really skillful silent intimidators even make it hard for followers to know for certain that they are even intimidating you. If confronted about their behavior, they are likely to protest innocence, claiming you've got them all wrong: "Who, me? You're just being paranoid!" Many subordinates have accused Disney's Eisner of this kind of behavior.

Know it all. Mastery of the facts – or at least the appearance of it – can also be hugely intimidating. "Informational intimidators" always have facts and figures at their fingertips, while their opponents are still trying to formulate an argument or retrieve something from memory. British prime minister Margaret Thatcher was legendary for her ability to silence or paralyze her opponents with her superior command of whatever topic was being debated. As one observer noted, Thatcher was a "demon for information, for research, for numbers. She devoured them, [and] she remembered them….No one could outstudy or out-prepare her." In one famous confrontation in the House of Commons, Thatcher took on and "battered into submission" the able and respected Richard Crossman. "It was obvious," recalled John Boyd-Carpenter, the cabinet minister in charge at the time. "She had done her homework, and he had not done his."

Often, it doesn't even matter all that much whether the "facts" are right. When it comes to making a good impression or anchoring an argument, the truly great intimidator seizes the advantage. Even the misleading or inaccurate factoid – when uttered with complete confidence and injected into a discussion with perfect timing and precision – can carry the day. In a negotiation or board meeting, less confident individuals are likely to remain silent and avoid challenging someone presenting her case with assurance. It's only later, when there might be time to check out the accuracy of a statement, that people realize they've been hoodwinked. By then, however, it's too late: The moment is gone, and the informational intimidator has walked away with all the marbles.

While leaders with social intelligence use empathy and soft power to build bridges, politically intelligent leaders use intimidation and hard power to exploit **THE ANXIETIES AND VULNERABILITIES THEY DETECT.**

Robert McNamara raised this technique to the level of an art. When he and Lee Iacocca were at Ford, Iacocca once commented to another executive, "That son of a bitch [McNamara] always has an answer, and it always sounds good. But you know," he added, "I checked some of it out after a meeting, and some of it is really bullshit. Stuff he just made up."



The Intimidator's Magnetism

At this point, you might be wondering just what the draw is. Great intimidators trample on people's feelings and set impossible standards. Even when others meet those standards, they're given little if any credit.

But despite all the drawbacks, my research shows, great intimidators are often magnets for the best and brightest. Consider the brilliant Nobelist James Watson, one of the scientists who discovered the helical structure of DNA. Edward O. Wilson, the famous Harvard sociobiologist, recounted what it was like to be a colleague of Watson's: "He arrived with such a conviction that biology must be transformed....[He felt that] what had gone before was infested by stamp collectors who lacked the wit to transform their subject into a modern science." Wilson continued, "At department meetings Watson radiated contempt in all directions. He shunned ordinary courtesy and polite conversation, evidently in the belief that they would encourage the traditionalists to stay around...[and he spoke] with casual and brutal offhandedness." Not surprisingly, few dared call Watson on the carpet. But Watson's students – many of whom achieved their own eminence – pointed out that he was inspiring as well as demanding. As one put it, Watson "always introduced the right mixture of fear and paranoia so that we worked our asses off."

There are many such stories in business. A former executive of Martha Stewart's told me what it was like to work with Stewart on a project:

> She had the most amazingly well-organized and disciplined mind I've ever known. She grasped things instantly, and she had the ability to direct your attention to the single most important thing you should be thinking about or doing at that particular moment. She could be incredibly impatient and brusque if you were slow on the uptake – but if you could keep up with her, and perform to her standard, it was tremendously satisfying.

A former Apple executive who had been involved with the launch of the original Macintosh computer in 1984 had similar things to say about Steve Jobs: "[He] was the most difficult human being I've ever worked for – but he was also the most technologically brilliant. No one knew technology better than he did, and no one had a clearer sense of where it was going."

Intimidators instill fear in their employees, but the really great ones instill something else as well – and that's another way in which they are different from your run-of-the-mill organizational bully. As one former aide of legendary tough guy Admiral Hyman Rickover told me, "Not measuring up in his eyes meant more to me than anything else – even my father's." In a similar vein, a former Pixar employee said of his time working under Steve Jobs, "You just dreaded letting him down. He believed in you so strongly that the thought of disappointing him just killed you."

As these quotes make clear, people like to work for great intimidators because of what can be learned from them and because they inspire great performance. Many of the people I spoke with said they did their best work ever when working for a great intimidator. But the appeal goes beyond that. A lot of people are fascinated by difficult leaders because they want to possess a little "inner

WHEN ARE THEY TOO TOUGH?

Using intimidation to maximum effect hinges, as we've seen, upon the politically intelligent leader's shrewd appraisal and manipulation of others' weaknesses and insecurities. Unfortunately, it's all too easy for great intimidators to cross the line between demanding and abusive. Indeed, many intimidators walk so far past that line that they're heading out the door before they know it, as evidenced by the recent fates of several leaders mentioned in this article.

So what causes great intimidators to drift from creative coercion and effective manipulation into unchecked arrogance and self-destructive folly? There seem to be several factors. First, many intimidators who set themselves up for a fall tend, ironically, to be *too good* at what they do. Because they are so adept at bending others to their will, they win even the arguments they should lose.

Relatedly, the more effective and successful they become, the more these intimidating leaders risk isolating themselves from critical or dissenting views. Because they tend to push away anyone who disagrees with them, great intimidators often end up surrounded by sycophants who parrot back only what the intimidator wants to hear, singing his every tune. Everyone needs checks and balances to make good decisions. It was after Disney president and COO Frank Wells's tragic death in a helicopter accident that Michael Eisner began to get into trouble.

In some instances, the great intimidator just stops listening. "Often wrong, never in doubt," people often said of Carly Fiorina. Indeed, Fiorina rejected her board's advice that she bring in a COO to help her manage some of the problems HP was having. Although perhaps not the final straw, her refusal to bend helped bring about her forced exit.

Finally, the great intimidators often simply fail to keep track of the number of enemies they are accumulating. They also underestimate the power of those who are starting to line up against them.

Not all of the great intimidators, I should emphasize, follow in the footsteps of Fiorina. Some avoid being ousted by gaining perspective, especially from earlier stumbles. They display a willingness to learn from experience and change their ways even when they are at the top.

One legendary intimidator in particular, Bill Gates, has done a remarkably good job of staying on the right side of the line. Is he just lucky? "The genius of Bill Gates is that he listens," one former Microsoft employee commented to me. And to improve the quality of what he listens to, he surrounds himself with people who are willing to engage in all-out intellectual combat with him. He's also created an advisory system that keeps him in touch.

intimidator" of their own. During a senior executive education program on power and leadership that I teach every year at Stanford University, I once asked participants to indicate which leadership qualities they felt they most lacked and which ones they wished they possessed more of. I fully expected them to cite the sorts of qualities associated with social and emotional intelligence, celebrated by Daniel Goleman and others. Yet, surprisingly, a large number of these accomplished executives named attributes like toughness and forcefulness. Despite their proven success, these leaders felt they were still *too nice* and too concerned about what their employees thought of them.

All the program participants considered themselves strong on people skills – they generally thought they had social intelligence in abundance and knew how to wield soft power to great effect. Yet they felt that their socially intelligent selves sometimes got in the way of their ability to do the dirty work needed to raise their organizations to the next level of performance. Being sufficiently tough, they seemed to sense, required something that didn't come so naturally or easily to them (and perhaps to most of us). One executive, for instance, told me that he yearned to possess more of a command presence when dealing with his board. Another said, "I would love to have Carly [Fiorina]'s ability to stare down her opponents." The participants felt that they had achieved less than they might have, and they attributed the shortfall in performance to their failure to fully and effectively use their positional power. To put it another way, they believed that they could stand to be a little less socially intelligent and a little more politically intelligent.

• • •

People may not like intimidators, but they do respect the truly great ones. The political intelligence of the great intimidator may have its downsides, but it can also be used creatively and toward great purpose, just like any other form of influence. One observer of Michael Eisner's recent travails at Disney had this to relate:

> What is lost in the stories about Mr. Eisner's arrogance, greed, and insensitivity is the more illuminating tale of how he transformed a faltering animation and amusement park company into one of the world's most successful entertainment companies. When he assumed command in 1984, Disney had a market value of $1.8 billion. Today its market value is $57.1 billion.

So before we throw out all the great intimidators – and turn the organizational helm over to those gentle, humble, self-effacing leaders who've apparently been waiting in the wings – we might stop to consider what we would lose. Great intimidators may create disharmony, but they also can create value.

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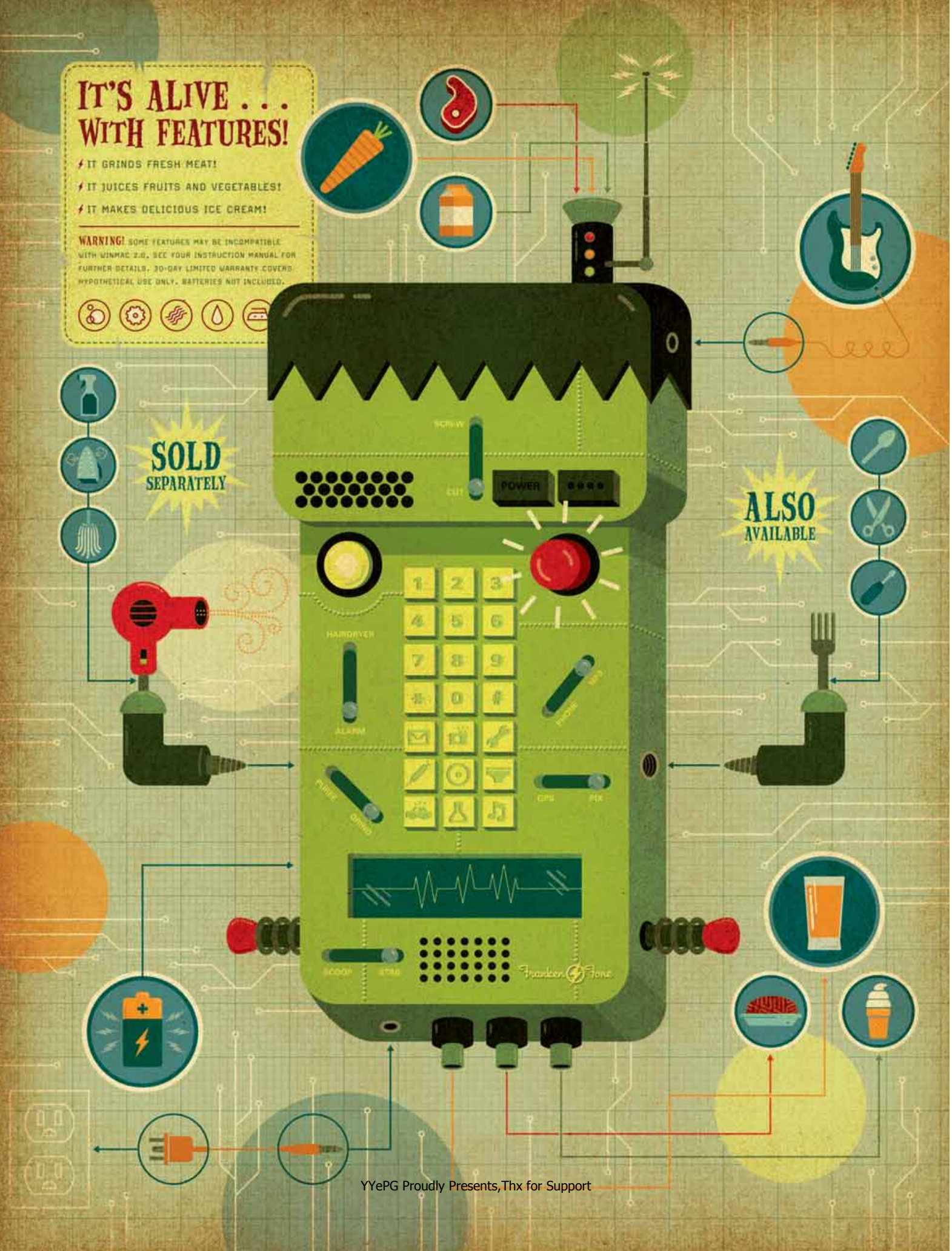
Defeating Feature Fatigue

And that's not all…

by Roland T. Rust, Debora Viana Thompson, and Rebecca W. Hamilton

A MOUSE PAD IS A SIMPLE THING. Essentially an oversized coaster, it keeps the incessant scooting of a computer mouse from destroying a desktop's finish. Beyond that, the most it might do is amuse, soothe, or advertise with the artwork imprinted on it. Or so we thought. Enter the mouse pad/clock/calculator/FM radio. Recently, one of us was the reluctant recipient of this innovation in office equipment. Thoughtfully, it featured a pair of earphones. Less thoughtfully, it did not include the two batteries required to operate it. A glance at the

HEADCASE DESIGN



two closely printed pages of instructions indicated the learning curve involved. Our new mouse pad soon found its true calling: gathering dust in a bottom drawer.

It's a story that's playing out in homes and offices around the world. Consumers can now purchase a single product that functions as a cell phone, game console, calculator, text messaging device, wireless Internet connection, PDA, digital camera, MP3 player, and GPS. The BMW 745's dashboard alone has more than 700 features. Appliance maker LG Electronics sells a refrigerator with a TV in the door. (The ad copy on one retailer's Web site sums up the value proposition: "Why integrate a TV into an LG refrigerator? Why not?") People in the software business like to refer to this phenomenon as "feature bloat"; other terms are "featuritis" and "feature creep." It's a kind of arms race to escalate the functionality of formerly single-minded devices.

The problem is that tacking features on to products makes them harder to use. Even when the extra bells and whistles don't add wholly different realms of functionality (such as phones that are also cameras), the complexity they introduce to the task at hand can be mind-boggling. The Bosch Benvenuto B30 espresso and coffee machine, for instance, doesn't stop at delivering a demitasse; its digital screen asks the user to select from 12 drink options and to make myriad decisions about energy-saving modes, timer programming, and water hardness settings. Every additional feature, to quote usability expert Jakob Nielsen, is "one more thing to learn, one more thing to possibly misunderstand, and one more thing to search through when looking for the thing you want." It makes sense intuitively that an overload of features detracts from a product's usability; it's also been proven over and over again in research. Recently, for example, the research and design firm Usable Products Company compared cell phones and found that it took twice as long (about 12 minutes, instead of six) to download and install a ring tone on Cingular's Nokia 6620 as it did on Sprint's Samsung SPH-A680. For a ring-tone-addicted public, this is a serious shortfall. And it has everything to do with Nokia's inclusion of ringer profiles, picture messaging, MP4 playback, and RealPlayer – all features absent from the Samsung model.

Now, don't get us wrong. Ringer profiles are definitely cool. The ability to have calls from your brother announced by the tune to "He ain't heavy…" or to hear the refrain from Chris Rea's 1978 hit "Fool (If You Think It's Over)" and know your divorce lawyer is on the line constitutes a breakthrough in ironic living. For the customer who wants all the additional functions, and is willing to learn how to use them, an extra six minutes here and there may be bearable. But the reality is that most customers don't use anything close to the full functionality of a highly complex product. For them, more functions translate to lower value in use.

Our recent research, funded by the Marketing Science Institute, has focused on the trade-off companies must face between making their products more capable – that is, increasing the number of useful functions they can perform – and making them more usable. Our findings demonstrate that managers struggling to achieve the right balance are forced to choose between maximizing initial sales and maximizing long-term customer satisfaction. For reasons we will explain, the usual market-research techniques don't provide a solution to this dilemma. Managers committed to winning repeat business and growing the lifetime value of their customers need a new model.

It Slices, It Dices

Why do manufacturers persist in making monstrosities of their products? One reason is to serve their own efficiency goals. To begin with, adding features costs next to nothing. As faster and faster chips offer ever-increasing memory capacity – at a lower cost – engineers can't resist the temptation to equip existing electronic components with more functions. Of course, they are not looking at the whole equation, which includes the intangible costs of reduced usability.

It's also cheaper to produce feature-rich products that can satisfy the needs of heterogeneous consumers than to produce targeted products with fewer features. For instance, a company that designed a calculator with financial analysis functions might add a set of functions useful to biochemists, aiming to hit two birds with one stone.

Often, companies don't nip the efflorescence of features in the bud because engineers and early adopters don't see the problem. Consider one lead user's opinion, posted on a consumer feedback site:

> I was stuck between the T610 and the P800. Having gotten used to the A830 for about four months, I preferred to have a phone with similar features (MP3 player, Bluetooth, Triband, organizer, etc.) so in the end, I went with my instincts and went for this beauty – P800. And boy, am I glad I did. All I can say to those who gave the P800 bad reviews is "bad luck." But then again, I would think that for some of you,

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> the P800 just simply had too many features for you to handle....

As hinted in this individual's posting, his was a minority view. But it's clear that he was a highly knowledgeable and opinionated reviewer who had considerable experience with the product and its competitors. Whose favor do you think product engineers court more: lead users like this one or the easily flummoxed masses?

Even marketers, who are trained and paid to understand the majority of consumers, are led to believe that more is better by economic theory and standard market-research techniques – both of which use models that predict that increasing the number of positively valued features makes products more appealing. At least since Kelvin Lancaster's work in the early 1970s, economists have recognized that consumers choose not so much between goods as between their characteristics; economic theory models consumers' preferences using an additive utility function to link product attributes to consumer demand. In other words, each positively valued attribute is assumed to increase the net utility to the consumer, no matter how many other attributes already exist. Similarly, market research techniques such as conjoint analysis and discrete choice analysis view products as bundles of attributes and estimate part-worths for each attribute. According to these models' predictions, each positively valued feature will increase a product's market share relative to products without that feature. At the very least, marketers see every new feature their company dreams up as a point of differentiation (however fleeting) and every feature competitors dream up as a necessary parity point.

A friend of ours uses a phrase to describe the products that grow out of such thinking, things like combination telescope/microscopes and wristwatch/metronome/tuners. She calls them "the answer to the question that nobody asked." But that's not entirely true. So far, we've been reviewing the supply-side explanations for the proliferation of product features, but there's also a demand side to consider.

It Engages, It Enrages

We conducted three studies to gain a better understanding of why consumers keep buying products they will live to curse. (See the sidebar "You Made Your Remote-Control-Adjustable, Dual-Firmness Mattress, Convertible Bunk and Trundle Bed – Now Lie in It" for a closer look at our research. Additional details can be found in our November 2005 article in the *Journal of Marketing Research,* "Feature Fatigue: When Product Capabilities Become Too Much of a Good Thing.") First, we wanted to know how additional features affect consumers' perceptions of

You Made Your Remote-Control-Adjustable, Dual-Firmness Mattress, Convertible Bunk and Trundle Bed – Now Lie in It

We ran three studies to examine consumers' intuitions about how adding features to products would affect the products' capability (what they could do) and their usability (how easy it was to use the products effectively). In particular, we wanted to determine whether participants would weigh those two factors differently before and after they'd used the products.

In all three studies, we presented our participants, undergraduate students, with two kinds of devices they were already familiar with and valued: digital audio players and digital video players. This ensured their high level of involvement in the tasks we gave them and their ability to make reasonable judgments about the products' capability and usability.

What Appeals to Consumers

We simulated an in-store experience and presented participants with three models of either a digital video player or audio player. Each model differed only in its number of features (seven, 14, or 21).

We asked the 130 participants (50.8% females, average age 20.5 years) to perform the following tasks:

- Rate their expertise with digital video and audio players in general.
- View the user interface and the list of features for each of our three models.
- Rate their perceptions of each model's capability and usability. Regarding capability, we asked whether the products were likely to perform poorly or well, offer few or many advantages, and add little or much value. We measured usability by asking participants to agree or disagree with eight statements, such as, "Learning to use this product will be easy for me," "Interacting with this product will not require a lot of mental effort," and "It will be easy to get this product to do what I want it to do."
- Provide their overall evaluation of each model's utility according to six measures (bad/good, unlikable/likable, not useful/useful, low/high quality, undesirable/desirable, unfavorable/favorable).
- Choose one of the models, indicating how confident they were about their decision and how difficult it was to make the decision.

Participants who chose more features perceived their products to have more capability but less usability than the products with fewer features. But in the end, most participants (62.3%) chose high-feature models.

Consumers know that products with more features are harder to use, but before they purchase a product they value its capability more than its usability.

What They Choose to Add On

We asked the 141 participants (55.3% females, average age 21.1 years) to perform the following tasks:

- Imagine that they were about to subscribe to and download a new digital audio player or digital video player.
- Choose the features they wanted from a list of 25 features that had been identified as ones that offer positive value.
- Rate their familiarity with each feature and its importance.
- Rate the perceived capability and usability of their customized product.

Of the 25 features, participants chose an average of 19.6 for their customized products – nearly as many as were included in the first study's high-feature product. Approximately half of the participants chose more than 80% of the available features.

The number of features participants selected increased perceived product capability for both products and decreased perceived product usability for one of the products. The connection between adding product features and decreasing usability seems to hold even when the consumer is able to select each feature. And because participants nevertheless chose high-feature instead of low-feature products, it seems clear that, prior to purchase, the desire for capability drives decisions more than the desire for usability.

Even when consumers are allowed to customize a product, they load on the features, worrying little about the learning curve they are setting for themselves.

a product and their purchase decisions. Do they perceive that a product with more features truly has more capabilities? Do they suspect it will be harder to use? Second, we wondered what weight consumers place on usability relative to capability when given the opportunity to customize a product for their own use. Third, we wanted to find out if consumers judge the overall utility of a product differently once they've used it. If capability counts for more than usability in "expected utility" (evaluated before use), does the same equation hold for "experienced utility" (evaluated after use)? Or does usability become more important?

Our first study proved that consumers know full well what they're getting into. In fact, people have a good understanding of the double-edged sword that features present. They expect features, reasonably, to add valuable capabilities to a product. They also expect them to make the product more complicated and difficult to use. In our laboratory, just as in life, people balance the upside and the downside before making a decision.

When it's time to choose, however, capability wins. In a simulated store setting, we presented our study participants, undergraduate students, with models of digital audio and video players that differed only in the number of features. The findings were clear: As the number of features grew, perceived capability increased and perceived usability decreased. And overwhelmingly, participants thought the high-feature model offered the highest overall utility. It was the one they would choose to own.

Clearly, capability has a stronger effect on expected utility than usability does. And, as our research shows, this isn't true only–or even particularly–for highly knowledgeable customers. We distinguished between participants who were experts in using digital audio and video players and those who were novices. There was a difference in how the two groups perceived the products' usability; not surprisingly, novices expected a bigger usability penalty from additional features than experts did. But both groups preferred the high-feature model in the end.

Our second study pursued that finding. Plenty of anecdotal evidence suggests that consumers do not use all the features of the products they buy. We wondered if, given the opportunity to customize a product to fit their own interests and needs, consumers would limit the number of features. We presented participants with a list of 25 features and told them to create the digital audio or video player they would prefer to own if the incremental price of features were no object. In theory, this meant that each feature had to pass a simple test in which the capability gain would exceed the usability pain. In fact, the typical customizer was like the proverbial kid in a candy store. Participants saw very little they objected to and piled on the extras, creating products with an average of 19.6 features–virtually the same number included in the

What Makes Them Happy in the End

We created two working models of the digital video player–one with seven features and one with 21–and allowed some participants (the "after use" group) to use one of the models; they consulted a user's manual and performed a series of four tasks with the product. The other participants (the "before use" group) only considered features on a virtual product.

We then asked the 190 participants (52.1% males, average age 20.5 years) to perform the following tasks:

- Evaluate the product's capability and usability.
- Provide an overall evaluation of the product.
- View the user interface and the list of features for two other models (for instance, those who had used the high-feature model were shown the low- and medium-feature versions) and rate their capability and usability.
- Provide an overall evaluation of each model's utility using the six-item measure in the first study and one item about product satisfaction.
- Choose one of the models, indicating how confident they were about their decision and how difficult it was to make the decision.

Participants' choices of players before and after use suggest a substantial decrease in the share of the high-feature model. The majority (66%) of participants in the before use group chose the high-feature model. But only 44% of the participants in the after use group who had used the high-feature model chose it–even though they had already invested time learning how to use it. Those who used the high-feature model were less confident in their choices and rated the choice as more difficult than those who used the low-feature model.

Once consumers have used a product, their preferences change. Suddenly, usability matters very much.

As faster and faster chips offer ever-increasing memory capacity – at a lower cost – engineers can't resist the temptation to equip existing electronic components with more functions.

high-feature model in our first study. As in that earlier study, we asked participants to evaluate the products they had created in terms of capability and usability, and again, they clearly understood that adding capabilities would increase the usability penalty they'd end up paying. But they also foresaw greater capabilities in the feature-rich products, and that carried the day in their impressions of their products' overall utility.

While the first two studies examined consumers' intuitions before using products about how adding features to them would affect their capability and usability, the third study directly compared consumers' ratings of capability and usability and their overall product evaluations before and after using products.

What came to light in the findings was a significant and interesting shift. Before use, capability mattered more to the participants than usability, but after use, usability drove satisfaction rates. As a result, satisfaction was higher with the simpler version of the product, and in a complete reversal from the earlier studies, the high-feature model was now rejected by most participants.

This, then, is what lies behind the pervasive problem of feature fatigue: The experience of using a product changes the equation underlying consumers' preferences. People initially choose products that do not maximize their long-term satisfaction because different considerations are salient in expected and experienced utility. Put simply, what looks attractive in prospect does not necessarily look good in practice. Consumers often become frustrated and dissatisfied with the very cornucopia of features they originally desired and chose. This explains a recent nationwide survey that found that after buying a high-tech product, 56% of consumers feel overwhelmed by its complexity.

Even experts – people who are highly product literate – don't escape the effects of feature fatigue. In our study, the shift in preferences before and after use occurred just as strongly for experts as for novices. If anything, our studies might understate the truth. First, our sample represented a segment – college students – that tends to be more open to new technology and new features than other segments. Second, our high-feature product had only 21 features, a relatively low number in some product categories. Finally, our studies considered only features that added functionality to the product and were reasonably familiar to the participants. The negative effect of unimportant or highly complex features may be even stronger. To underscore the depth of feeling that featuritis elicits, let us refer you to the World Wide Web, home to highly informed consumer reviews of thousands of complex products. One blogger on topics of product design, Kathy Sierra, expresses her frustration this way:

> My new Subaru-factory-supplied car stereo uses that most evil of designs – modes. With so many features to support, they ran out of controls…so every control does multiple things depending on which mode you're in. None of it is intuitive or natural. Lose the manual and I'm screwed. Ten years ago, if you'd told me I'd one day need a manual to use my car radio, that would have been inconceivable. All I want to do is find a frickin' radio station!

Products That Do Too Much

If you are a manager in a consumer products company, our research presents you with a dilemma. Adding features improves the initial attractiveness of a product but ultimately decreases customers' satisfaction with it. So, what should you do? If you give people what they want, they will suffer for it later, and that has three follow-on effects.

First, many of them will return the product. Recently the Consumer Electronics Association, a U.S. trade association, commissioned a survey on consumers' experiences in a complicated new product realm: home networking. The survey found that 9% of consumers had returned a home networking product (for example, a hub, router, bridge, adapter, or modem) within the previous year. Only 15% of the returns were the result of broken or defective products; most of the remaining returns were simply because people couldn't get the equipment to work.

Second, consumers who are dissatisfied with a product after using it will take their business elsewhere in the future. Certainly, it's true that you can't satisfy a customer

Before You Add That Next Feature, Do the Math

How many features should a product include to contribute most to the bottom line? A fairly straightforward model, applied to data any company can collect, provides the answer.

First, to simplify matters, let's assume that adding features costs nothing (as is the case with many information-based products, such as software), so that increasing profitability is purely a matter of increasing revenue. In our model, we'll call the incremental revenue created by adding new features R. And, as we discuss in the article, we know that R is actually the net of two perceived effects: a capability bonus (C) and a usability penalty (D). Stated as an equation, $R=C-D$.

But recall from our research that adding features has a less positive impact on perceived capability after use than before use. The capability value of features, in other words, is not static. So let's distinguish between C_1 and C_2 – capability as perceived before and after use. C_1 is one multiple (d) of the features (F) we added, and C_2 is another, lesser, multiple (e) of those same features.

$$C_1=dF$$
$$C_2=eF \qquad C,d,e>0 \text{ and } d>e$$

Also recall that usability is perceived to decline with the number of features, and this decline appears to accelerate as more features are added. So the total usability penalty consists of the negative effect (a) of the first set of features plus the even greater negative effect (b) of the next set of features:

$$D=aF+bF^2 \qquad a,b>0$$

We can now create the basic equations required to think about long-term profit impact – one for the first period's revenues (R_1) and one for revenues from subsequent periods, which for now we will limit to one subsequent period, R_2.

$$R_1=C_1-D=(d-a)F-bF^2$$
$$R_2=C_2-D=(e-a)F-bF^2$$

But arriving at total revenues, stated at their net present value (R_{tot}), isn't quite as simple as adding R_1 and R_2. There's one more variable we must introduce. In some companies, subsequent purchases matter more to the lifetime value of the typical customer than they do in other companies. One reason for this variability is that some product categories are more conducive to repeat sales than others. (Other reasons include differences in companies' discount rates, the typical duration of customer relationships, and the lengths of planning horizons.) To recognize that variability, we need to add a weighting factor (w) to the second period.

$$R_{tot}=R_1+wR_2$$

We now have all the variables in place to discover how to choose a feature set that will maximize long-term revenues and profits. Put together and stated in the most mathematically efficient form, the equation takes shape as follows:

$$R_{tot}=R_1+wR_2=[(d-a)+w(e-a)]F-(1+w)bF^2$$

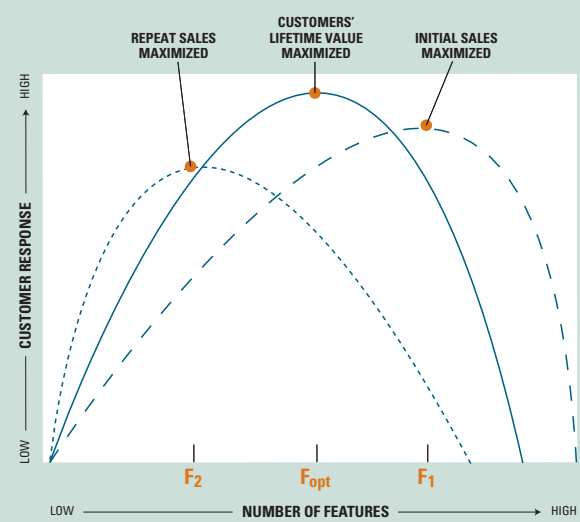
Now, let's say a company is hoping to find the number of features that will initially attract the most customers and will therefore maximize short-term, first-period profits. This amounts to maximizing R_1 with respect to F. It is easily shown that R_1 is maximized when $F_1=(d-a)\div 2b$. In the chart below, this is the curve that peaks farthest to the right. But if the company is hoping to maximize repeat sales (and hence second-period profits), that means maximizing R_2 with respect to F, leading to the optimal value of $F_2=(e-a)\div 2b$. This curve peaks farthest to the left in the chart.

There is, however, a middle ground. If the company focuses neither on initial nor on longer-term profits but on maximizing the net present value of the customer's profit stream, which financial analysts would consider optimal, they must maximize R_{tot} with respect to F. The optimal value can be found through the following equation:

$$F_{opt}=[(d-a)+w(e-a)]\div[2b(1+w)]$$

To achieve this happy medium, as we can see in the chart, companies must take care not to include too many features in their products in an attempt to maximize initial sales, or to include too few features, as they might if they focused strictly on maximizing repurchases.

Further implications of the model are noted in our November 2005 *Journal of Marketing Research* article, from which the chart is also adapted. The key point here is that companies can discover the optimal number of features for their products, and that number depends on their goals.



The first step for many companies may simply be to take stock of the complexity they have built into their products and the toll it is taking on their customers.

you've never won in the first place. Many companies may believe 'tis better to have sold and lost than never to have sold at all. But that's a dangerous attitude for any company focused on growing customer equity – the lifetime value of their customers. A company looking for repeat business should hesitate to pit its features against its future.

Finally, frustrated product owners, like the blogger we quoted above, will spread the word of their dissatisfaction. This appears to be the case with BMW, whose 7 Series cars feature the complicated iDrive system, which, as we said, offers about 700 capabilities requiring multifunction displays and multistep operations – even for functions that formerly required the twist of a knob or the flick of a switch. BMW included instruction sheets in the glove compartment because it is almost impossible to give the car to a valet parker without an impromptu lecture. According to industry news reports, sales of the 7 Series in the United States in the first half of 2005 were down about 10% relative to the same period in 2004. Past studies have established the power of positive word of mouth and the much greater prevalence of its negative form – and most of those studies were conducted before the Internet gave every dissatisfied party a global sphere of influence.

In light of these long-term consequences, how should companies today be designing products ? It's undeniable that, in a store setting, consumers reach for the product that boasts the most features. But how much of a good thing is too much?

Finding the Happy Medium

To achieve lasting prosperity, companies must find a way to resolve the dilemma we've described. The first step for many companies may simply be to take stock of the complexity they have built into their products and the toll it is taking on their customers. Executives at Mercedes-Benz recently did just that and, as a result, removed more than 600 functions from its cars. In 2004, Stephan Wolfsried, vice president for electrical and electronic systems and chassis unit at DaimlerChrysler's Mercedes Car Group, said that integrating all those functions caused truly important electronic parts to malfunction occasionally and made testing the system more expensive. Moreover, Wolfsried said, the functions were ones that "no one really needed and no one knew how to use." One example he noted was the storage of a driver's personal seat position in the car key. "It was done with good intentions, but if I take my wife's key at some point and can't find my own seat position any more, that tends to be annoying for me instead of comfortable." We suspect that in many companies, simply gaining this kind of heightened awareness of customer impact would help contain feature bloat. Beyond that, we offer five other pieces of advice.

Consider long-term customer equity and not just customers' initial choices. To get the right mix of capability and usability in a product, managers need much more guidance than the general advice that "less is more." On the basis of our results, we developed an analytical model to help managers balance the sales benefits of adding features against the customer equity costs of feature fatigue. The model steers decision makers away from the extremes – too few features to capture initial sales or too many features to ensure ease of use – and toward a middle ground that maximizes the net present value of the typical customer's profit stream. The model also demonstrates that the optimal number of features depends on a company's objectives. (See the sidebar "Before You Add That Next Feature, Do the Math.")

Build simpler products. In general, our results suggest that managers should consider offering a wider assortment of simpler products instead of all-purpose, feature-rich products. Perhaps this is the intent behind electronics giant Koninklijke Philips Electronics' new brand promise: sense and simplicity. The concept is that products should be easy to use and should improve the quality of people's lives. The company apparently wants to take this idea beyond sloganeering: It created a Simplicity Advisory Board, a think tank consisting of designers, health care specialists, and technology experts, to help translate the message into new products. Meanwhile, we like the salute to simplicity offered by Adam Baker, a Web-based commentator:

> I have an electronic garage door opener. It works perfectly: I just push a big, obvious button on a simple, single-function control, and the garage door opens (or closes, depending on whether it was open or closed to begin with). I only needed to use the device once before I understood how it worked. It doesn't do anything else, and it doesn't have any fancy gimmicks.

Particularly in cases where a company has packed one model with many features to address market heterogeneity, consumer satisfaction might be greatly enhanced by tailoring products with limited sets of capabilities for various segments.

Give consumers decision aids. We've just suggested creating and marketing more narrowly targeted products. Admittedly, this makes the decision process more difficult for consumers, forcing them to think carefully about which features they actually need. Moreover, our empirical results suggest that people will be tempted by products that offer greater capability. To help consumers learn which products best suit their needs, managers should consider designing decision aids, such as recommendation agents that "interview" buyers about their requirements, or offering extended product trials–two techniques that can increase the salience of usability in the purchase decision. For example, the companies that sell digital media players RealPlayer and Winamp offer evaluation versions, which give people the opportunity to fiddle with a working model of the product, sometimes with limited functionality and sometimes with full functionality for a limited time. By decreasing the gap between consumers' preferences during choice and use, such strategies may increase customers' satisfaction and their lifetime value.

Design products that do one thing very well. Perhaps the worst outcome of feature creep is the one captured in a *New Yorker* cartoon that shows a man arriving in a store with a simple question: "Do you have any phones that make phone calls?" Too often, in their eagerness to layer on additional functionality, developers lose sight of the product's basic function – the one thing it must do extremely well. Examples abound of products that have captured their owners' hearts by performing their central task admirably. The phenomenally popular iPod, Apple's personal music player, shows how effectively a company can make sales and satisfy customers with a tightly focused solution. As a new digital product, the iPod could have combined numerous features at extremely low incremental cost. Instead, it aimed to be a single-purpose tool that performed so well and so simply that everyone had to have one.

Use prototypes and product-in-use research. One way or another, managers must correct for the misleading information that many market-research techniques deliver. As noted, our findings call into question the predictive power of attribute-based models for determining the optimal number of features. If companies conduct market research by asking consumers to evaluate products without using them, too much weight will be given to capability, and the result will likely be products with too many features. Instead, designing research that gives consumers an opportunity to use actual products or prototypes may increase the importance of usability so that its relevance in choice approaches its relevance in use.

Only You Can Fight Feature Fatigue

You probably know someone who owns a Swiss Army knife. They are undeniably useful tools; maybe you carry one yourself. But do you know anyone who owns the WorkChamp XL model? Retailing at $188, it bristles with more than 20 special-purpose appendages (although it lacks the 13 different screwdrivers of the CyberTool). Victorinox, the company that makes the knife, hardly expects it to be the top seller. The company's most popular offering, however, is no simple, one-bladed pocketknife. It has more features than a single blade – but not many more. And the utility of that classic multipurpose tool has been the foundation of the company's brand image for decades. Victorinox's experience is in line with our findings: The best way to build customer equity is to design products with just enough features to make the first sale and still be highly usable.

Too many companies today are endangering their brands, and their customer relationships, by adding features upon features to their products. They are increasing product capability at the expense of product usability and failing to strike the optimal balance between those two important considerations. The situation threatens to get worse as the marginal cost of adding features continues to decrease, even approaching zero for information-based products like software.

In an interview with the electronics trade magazine *EE Times,* David Hytha, executive vice president of international terminal management at T-Mobile, had this to say: "We spent billions of euros as an industry on advanced-feature phones…Not only have we not gotten any good money back from our investment, but we've even hurt our investment." What was the problem? Insufficient attention to usability. Hytha went on to admit, "There are so many different features that even able users find it difficult to use the phone." The market, he concluded, "truly is choking on technology."

What happened to T-Mobile's market may well be happening to yours. If you care about making your customers happy and maximizing their value to you over the long term, stop exposing them to feature fatigue.

Reprint R0602E; HBR OnPoint 3439
To order, see page 167.

Reading the Signs

"Images, setting, and body language are not just adjuncts to communication. They carry the messages; and indeed, in some cases, they *are* the messages.…The gift is in knowing *what* is being communicated."

Michael B. McCaskey
"The Hidden Messages Managers Send"
Harvard Business Review
November–December 1979

"Judy, can you call maintenance? Someone moved my pens again."

"Ed, we need to talk about your productivity."

DAVE CARPENTER, ROY DELGADO, SCOTT ARTHUR MASEAR, AND ROD ROSSI

"Of course I'm a micromanager. I'd have thought the glass cubicles were a giveaway."

"Never, EVER purr during the negotiating process, Derwood!"

"That's a fax machine. The older guys use it to send messages."

New research shows that senior managers analyze and act on problems far differently than their more junior colleagues do. Those whose thinking does not evolve may not advance.

BY KENNETH R. BROUSSEAU, MICHAEL J. DRIVER, GARY HOURIHAN, AND RIKARD LARSSON

THE SEASONED EXECUTIVE'S DECISION-MAKING STYLE

THE JOB OF A MANAGER IS, above all, to make decisions. At any moment in any day, most executives are engaged in some aspect of decision making: exchanging information, reviewing data, coming up with ideas, evaluating alternatives, implementing directives, following up. But while managers at all levels must play the role of decision maker, the way a successful manager approaches the decision-making process changes as he or she moves up in the organization. At lower levels, the job is to get widgets out the door (or, in the case of services, to solve glitches on the spot). Action is at a premium. At higher levels, the job involves making decisions about which widgets or services to offer and how to develop them. To climb the corporate ladder and be effective in new roles, managers need to learn new skills and behaviors – to change the way they use information and the

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way they create and evaluate options. In fact, we've seen in our executive coaching that making decisions like a full-fledged senior executive too soon can hurl an ambitious middle manager right off the fast track. It's just as destructive to act like a first-line supervisor after being bumped up to senior management.

Our in-depth research into the reasons behind executive success and failure confirms just how consistently decision-making styles change over the course of successful executives' careers. We scoured a database of more than 120,000 people to identify the decision-making qualities and behaviors associated with executive success and found that good managers' decision styles evolve in a predictable pattern. Fortunately, struggling managers can often get back on track just by recognizing that they've failed to let go of old habits or that they've jumped too quickly into executive mode.

Defining Decision Styles

Before we look at the patterns, it's helpful to define the decision styles. We have observed that decision styles differ in two fundamental ways: how information is used and how options are created. When it comes to information use, some people want to mull over reams of data before they make any decision. In the management literature, such people are called "maximizers." Maximizers can't rest until they are certain they've found the very best answer. The result is a well-informed decision, but it may come at a cost in terms of time and efficiency. Other managers just want the key facts – they're apt to leap to hypotheses and then test them as they go. Here, the literature borrows a term from behavioral economist Herbert Simon: "Satisficers" are ready to act as soon as they have enough information to satisfy their requirements.

As for creating options, "single focus" decision makers strongly believe in taking one course of action, while their "multifocused" counterparts generate lists of possible options and may pursue multiple courses. Single-focus people put their energy into making things come out as they believe they should, multifocus people into adapting to circumstances.

Using the two dimensions of information use and focus, we've created a matrix that identifies four styles of decision making: decisive (little information, one course of action); flexible (little information, many options); hierarchic (lots of data, one course of action); and integrative (lots of data, many options). (See the exhibit "Four Styles of Decision Making.")

Decisive. People using the decisive style value action, speed, efficiency, and consistency. Once a plan is in place, they stick to it and move on to the next decision. In dealing with other people, they value honesty, clarity, loyalty, and, especially, brevity. Time is precious in this mode.

Flexible. Like the decisive style, the flexible style focuses on speed, but here the emphasis is on adaptability. Faced with a problem, a person working in the flexible mode will get just enough data to choose a line of attack – and quickly change course if need be.

Hierarchic. People in the hierarchic mode do not rush to judgment. Instead, they analyze a great deal of information and expect others to contribute – and will readily challenge others' views, analyses, and decisions. From the hierarchic perspective, decisions should stand the test of time.

Integrative. People using the integrative style don't necessarily look for a single best solution. Their tendency is to frame any situation very broadly, taking into account multiple elements that may overlap with other, related situations. Consequently, they make decisions that are broadly defined and consist of multiple courses of action. When working with others, integrative decision makers like lots of input and are happy to explore a wide range of viewpoints, including those that conflict with their own, before arriving at any conclusion. Decision making for the integrative is not an event, but a process.

It turns out that people don't necessarily lead the way they think; they decide differently in front of a crowd than they do in front of a mirror.

__Kenneth R. Brousseau__ is the CEO of Decision Dynamics, a firm specializing in the development and application of behavioral assessment technology, based in Thousand Oaks, California. The late __Michael J. Driver__ was a cofounder of Decision Dynamics and a professor of management at the University of Southern California's Marshall School of Business in Los Angeles. __Gary Hourihan__ is the global president of Korn/Ferry International's Leadership Consulting Business in Los Angeles. __Rikard Larsson__ is a cofounder of Decision Dynamics AB, based in Lund, Sweden, and a professor at Lund University's School of Management and Economics.

Four Styles of Decision Making

Approaches to decision making differ in two ways: in the way that people use information and in the number of options they generate. This chart identifies four decision-making styles by mapping low and high use of information against single versus multiple options. Our research shows that most people use different styles in public than they do in private. For example, a manager may come across as quite task-oriented (decisive) in public, yet use the more creative integrative style when working in private or with close associates.

INFORMATION USE

NUMBER OF OPTIONS	Satisficing (less information)	Maximizing (more information)
Single focus (one option)	**DECISIVE** This decision style is direct, efficient, fast and firm. In public, this *action-focused* style comes across as *task oriented.*	**HIERARCHIC** People using this highly analytical and focused style expect their decisions, once taken, to be final and to stand the test of time. In public, this *complex* style comes across as highly *intellectual.*
Multifocus (many options)	**FLEXIBLE** This style is about speed and adaptability. Managers make decisions quickly and change course just as quickly to keep abreast of immediate, shifting situations. In public, this *flexible* style comes across as highly *social* and *responsive.*	**INTEGRATIVE** In integrative mode, people frame problems broadly, using input from many sources, and make decisions involving multiple courses of action that may evolve over time as circumstances change. In public, this *creative* style comes across as highly *participative.*

Of course, people don't fall neatly into little boxes. Circumstances also influence the appropriate decision style, and so a manager needs to have the ability to call on all four styles. For example, in an entrepreneurial environment there may not be enough history or time to permit lengthy analyses and deliberation. And while periods of relative uncertainty may call for the multifocus styles, in stable environments the single-focus styles tend to prevail.

What's more, our research reveals that managers make decisions differently in public settings, where they know they are being observed, than they do in private settings, where there is no need to explain or justify their process. In executives, we call the public mode "leadership style" and the private mode "thinking style." It turns out that people don't necessarily lead the way they think. The decision process is different in front of a crowd than it is in front of a mirror. This distinction applies to all aspects of decision making, whether the person is gathering information, evaluating or presenting options, or making a final choice.

How Managers' Styles Evolve

When we began our research, we expected to find that managers' predominant decision-making styles would change as they progressed through their careers. But the patterns that jumped right out of the data were even more sharply defined than we could have imagined. We found that decision-making profiles do a complete flip over the course of a career: That is, the decision style of a successful CEO is the opposite of a successful first-line supervisor's. In the leadership (or public) mode, we see a steady progression as managers move up in the ranks toward openness, diversity of opinion, and participative decision making, matched by a step-by-step drop in the more directive, command-oriented styles. In the thinking (or private) mode, we see a progression toward the maximizing styles – where an executive prefers to gather a lot of information and think things through – and, at the highest executive levels, an uptick in the styles favoring

one course of action. (See the exhibit "Charting Decision Styles.")

There's a logic as well as an interdependence to the way the two aspects of decision making evolve. As you move up the ladder, you move further and further away from where the action takes place, so it is easy to lose touch with what's really going on in the organization. It's essential to use a leadership style that keeps the information pipeline open and the data flowing freely, so you have access to the best information and analysis. That's why the flexible and integrative styles dominate at the senior executive level. The open pipeline in turn feeds the evolving thinking style, where the ever more analytic, information-hungry senior executive is focused on finding the single right answer. In public, the senior executive presents a willingness to consider options so as to encourage people to offer information. In private, he or she uses that information to zero in on a single option or, at a minimum, to narrow the options down to a workable strategy. These patterns in both public and private decision styles become even more pronounced when you isolate the most successful managers, who become even more open and interactive in their leadership styles and even more analytic in their thinking styles as they progress in their careers. (See Figures 2 and 5 in "Charting Decision Styles.")

So when does the major shift in styles occur? Our data show that in both the public and the private modes, decision styles tend to cluster early in the management hierarchy. Somewhere between the manager and director levels, executives find that approaches that used to work are no longer so effective. At this point, we see managers' styles falling into a "convergence zone," where no one style stands out as being used more or less than the others. From then on, decision styles fan out again, though in the opposite direction, with different styles prevailing. (See Figures 1 and 4.)

The most successful managers come to the convergence zone more quickly than the least successful, our research reveals, and continue to adjust their styles as their careers progress. The least successful seem to stagnate once they hit the convergence zone; their styles remain clustered rather than evolving in new directions. It appears that even though the least successful people do notice, at around the director level, that something has changed, they can't figure out what they should do differently. So they try a little of everything: Their styles are directive yet participative, action focused yet open to alternatives. The bottom 20% of managers get stuck in this "uncertainty zone," where they often remain for the rest of their careers. (See Figures 3 and 6.)

The second level of management is a key transition point in an up-and-coming executive's career. At lower levels, the priority is to keep everyone focused on immediate tasks and getting the work done. At higher levels, that doesn't work anymore. Decision styles become more about listening than telling, more about understanding than directing. Managers must drop the attachment to the hard-edged decisive and hierarchic modes of leadership in favor of the more inclusive flexible and integrative styles. This is a perilous time, a point where many otherwise talented managers crash and burn, because it's natural to keep doing things the way that worked well in the past.

The most successful managers and executives become even more open and interactive in their leadership styles and even more analytic in their thinking styles as they progress in their careers.

We saw the impact of this transition in the case of Jill, a second-level manager for a large petrochemical company. When we initially met Jill, she was a first-line supervisor in a power-generation facility at the company. When we met her again, she had earned an MBA and was managing a department that functioned as a liaison between an operating unit and company headquarters. In a casual conversation, Jill told us that she was enjoying the job – now that she had figured things out. At first, she had found her new responsibilities confusing and distressing. But one morning she realized that although she had important things to do that day, none of them had to be resolved immediately. She could take some time, collect information, and seriously consider her choices. This was in sharp contrast with her previous job, where every day things had to be decided and done on the spot. Just recognizing the difference eased the stress considerably and opened Jill's eyes to the change needed in the way she handled decisions.

We see a secondary transition point taking place in the thinking styles of managers around the mid-executive and director levels. This is where the integrative style reaches its zenith, a time when managers must think creatively and float a range of ideas to be passed upstairs for consideration. Beyond the director level, the pressure to think in an exploratory and creative way drops off, and

more focused thinking again becomes important for success. Increasingly, managers must narrow down their choices and commit people and resources to particular plans. They are ultimately responsible for their decisions; they must be able to call the shots and – in rare instances – call them on the spot.

Implications for Managers

The primary lesson for managers is that failing to evolve in how you make decisions can be fatal to your career. If a flailing manager recognizes this and corrects the course, he or she can probably recover. This is what happened with Jack, who was the chief engineer for a major shipping company and in his mid-forties. His position was critically important because the company often transported toxic materials, and accidents in the industry not infrequently cost lives and billions of dollars in damages. Jack was highly competent in most respects; in fact, the CEO, Norm, often said that he was able to sleep at night because he knew Jack was ever vigilant in keeping the vessels in top-notch condition and avoiding equipment failures.

But despite these strengths, Jack's career was in trouble. He was struggling to deal with changing tides of power and authority. Norm was convinced that without a high degree of teamwork at headquarters and in the field, a devastating accident would take place sooner or later, and so he launched a significant culture change initiative. We were part of the team that Norm had assembled for this effort, as was the new vice president of operations, Robert.

Jack had line authority over engineers working in the field alongside operations managers reporting to Robert. These people were expected to make decisions together, often right on the spot. Yet reports coming back from the field told a story of tense relations and little cooperation, and many employees pointed to Jack as the source of the unease. He was accused of not permitting field engineers to make decisions without first consulting him on matters large and small. Moreover, Jack's very strong ideas about how things should be done seemed often to conflict with the new spirit of teamwork. Tensions between Jack and Robert continued to escalate to the point where the two men could hardly be in a room together. Norm was ready to move Jack out of his role, even though it would have meant sacrificing a wealth of experience and knowledge. To keep his position, Jack would have to change his style.

Jack was not pleased to be singled out for what he considered remedial coaching. When we met with him, we focused on the 360-degree feedback ratings that had come out of the executive team-building process. These showed that his colleagues viewed him favorably as a problem solver and logistics manager. But Jack's peer evaluations dropped precipitously when it came to his ability to manage relationships and to communicate. He was defensive about his scores until we showed him a graph of the average 360 ratings for other managers whose decision-making approach resembled Jack's: high scores on the two highly focused styles, hierarchic and decisive, both in leadership and thinking. That graph looked like a duplicate of Jack's own results.

Basically, Jack's profile, particularly his leadership profile, looked like that of a first-line supervisor, not that of a senior executive. Jack's eyes drifted back and forth between the report he held in his hands and the profile on the computer screen. The look on his face changed then and there, as did the tone of the coaching. Jack went from feeling under assault to actively seeking out feedback and guidance. A few years later, people who joined Norm's team were shocked and skeptical when they heard stories about the "old" Jack. It just didn't square with the cooperative leader that Jack had become. To offer one example: When it was time to make a major upgrade in the company's facilities, Jack went out of his way to ensure that the final design reflected the input of many others, not just his own – something the old Jack never would have done.

OUR RESEARCH

For this study, we tapped Korn/Ferry International's database of detailed information on more than 200,000 predominantly North American executives, managers, and business professionals in a huge array of industries and in companies ranging from the *Fortune* 100 to start-ups. We examined educational backgrounds, career histories, and income, as well as standardized behavioral assessment profiles for each individual. We whittled the database down to just over 120,000 individuals currently employed in one of five levels of management from entry level to the top.

We then looked at the profiles of people at those five levels of management. This put us in an excellent position to draw conclusions about the behavioral qualities needed for success at each level and to see how those qualities change from one management level to another.

These patterns are not flukes. When we computed standard analyses of variance to determine whether these differences occurred by chance, the computer spit out nothing but zeroes, even when the probability numbers were worked out to ten decimal points. That means that the probability of the patterns occurring by chance is less than one in 10 billion. Our conclusion: The observed patterns come as close to statistical fact (as opposed to inference) as we have ever seen.

Charting Decision Styles

As an individual progresses from first-line supervisor to manager of managers to director to vice president to, finally, senior executive, his or her approach to decision making evolves along a predictable path. We analyzed the decision profiles of more than 120,000 managers and executives and plotted the predominance of each style at five levels of management. (The charts reflect different people at different levels, not the same people over the course of their careers.)

LEADERSHIP STYLES. When it comes to public decision making, the styles of senior executives are the complete opposite of lower-level managers'. The decisive style, which combines the use of minimal information and a single option, is dominant among first-level supervisors but nearly nonexistent among senior executives. Similarly, the fast-moving, multifocused flexible style, embraced by senior executives, scored lowest among supervisors. The hierarchic style (lots of data, one option) is the second-most frequently used for first-line supervisors; its use dips through a manager's career and bounces back somewhat at the most senior level. And the integrative style, relied on so heavily by senior executives, ranks near the bottom for junior managers. (See Figure 1.)

At the second level of management, the scores are tightly clustered, with no one style dominating, before they fan out again in the opposite direction. We call this the convergence zone, the point at which managers begin to understand that the approaches to decision making that have served them well are becoming less and less effective.

This pattern becomes even more dramatic when you look at the scores for top-performing managers. (We used salary as a proxy for success – an imperfect measure, but organizations do tend to pay more for better managers.) Once again, we see the crossover, with the most successful people reaching this point a bit earlier than average. This may be an indicator that they are faster to catch on to the need for new behaviors in their new jobs (Figure 2). The least successful managers – the bottom 20% in our database in terms of income – start out pretty much like the others, but they don't continue to evolve, and their leadership styles remain clustered in an "uncertainty zone." (See Figure 3.)

Figure 1 > Average Leadership Style Scores

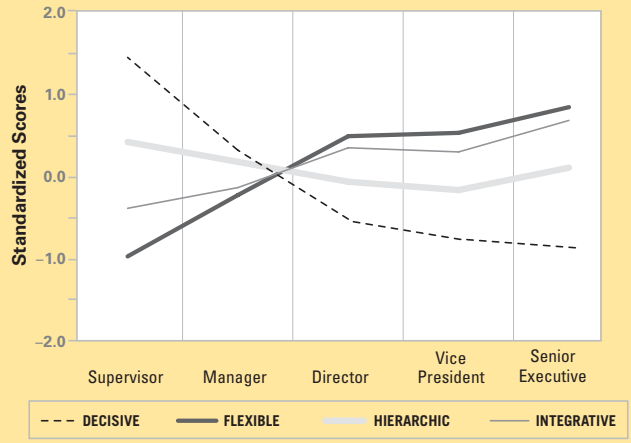


Figure 2 > Average Leadership Style Scores for Highest Compensated 20% of Executives and Managers

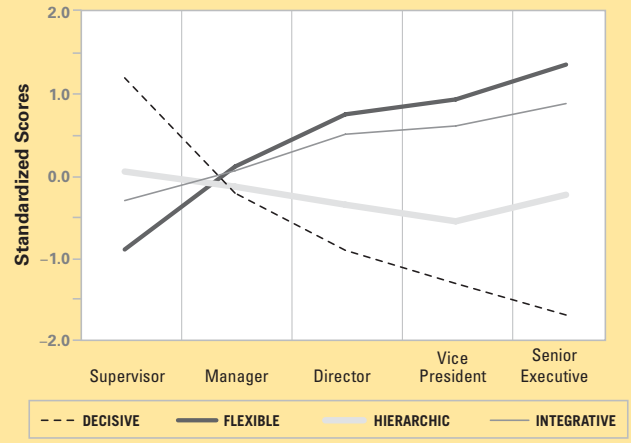
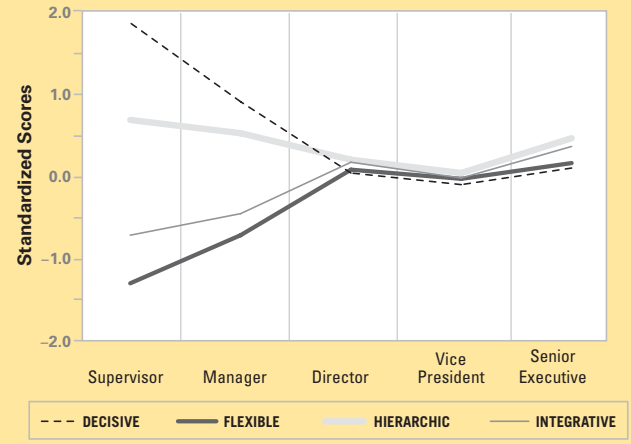


Figure 3 > Average Leadership Style Scores for Lowest Compensated 20% of Executives and Managers



THINKING STYLES. When we look at the private side of decision making, we see that the particulars that prevail at each level are very different from those in the leadership mode. The two analytic, maximizing styles – integrative and hierarchic – increase progressively and then merge at the senior level (see Figure 4). The action-oriented decisive style begins at low average and basically stays there with a slight hike at the uppermost level. The flexible style, which in the leadership graphs made such a dramatic upward climb, makes a noteworthy downward trip.

Among the top performers, the pattern changes (see Figure 5). At the director level, the polar opposites, the decisive style (little data, one option) and the integrative style (lots of data, lots of options) reach their maximum distance from each other. It appears that directors have the greatest need for exploratory, creative thinking and place the least emphasis on choose-one-course, focused thinking.

Thinking styles for the bottom 20%, shown in Figure 6, follow the same sort of funnel pattern seen in the leadership graphs. Entry-level scores are widely differentiated across the four styles and then squeeze down at the more senior levels. Again, it appears that the less successful managers and executives are catching on late to the changed nature of their job requirements and, upon recognizing that the old ways are not working well, are at a bit of a loss.

Figure 4 > Average Thinking Style Scores

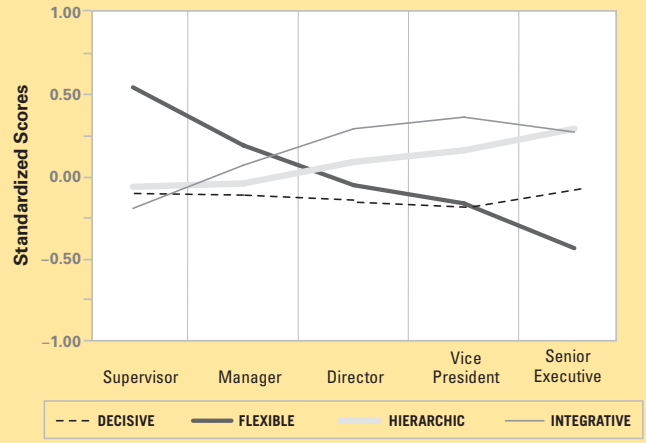


Figure 5 > Average Thinking Style Scores for Highest Compensated 20%

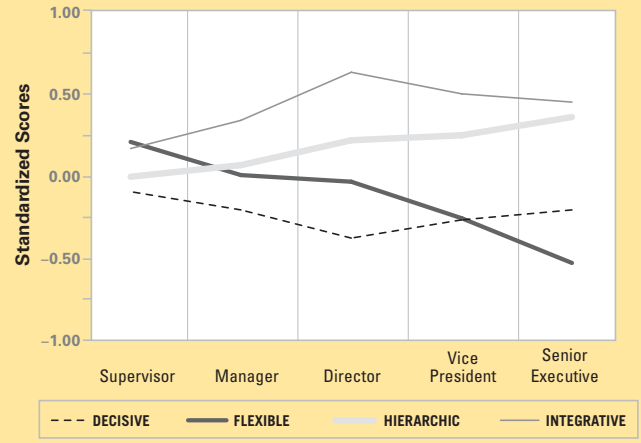
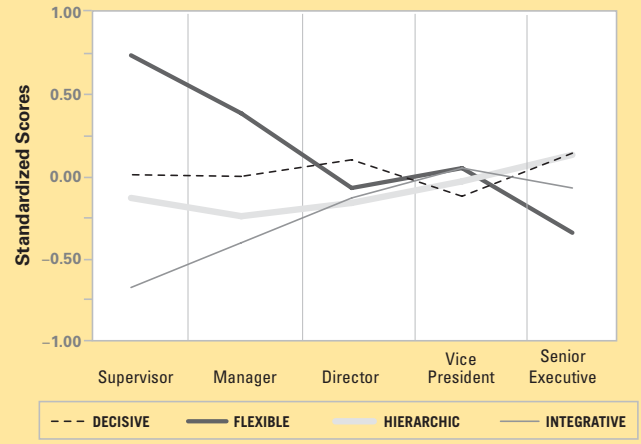


Figure 6 > Average Thinking Style Scores for Lowest Compensated 20%



In another case, we worked with Phillip, a group vice president for a large holding company. He was widely viewed as an extremely bright and creative executive with an outstanding track record when it came to launching new products and negotiating innovative contracts. Nonetheless, Peter, the chairman and CEO, was concerned about Phillip's future with the company. He saw Phillip as lacking interest in day-to-day problems, deadlines, and other operational details – a view that others shared, as a 360-degree profile confirmed. An assessment of Phillip's decision-style profile showed that while his public, or leadership, style was very much in line with those of successful C-level executives, Phillip's private, or thinking, style was another story. Although his high scores on both the flexible and integrative styles were fully consistent with his image as an innovative and creative thinker, Phillip's low scores on the focused hierarchic and decisive styles reflected what Peter saw as inattention to operational matters.

The assessment and 360 feedback forced Phillip to surrender his argument that Peter's concerns were overblown. To his credit, once he got over the shock of the feedback, Phillip made it a personal goal to focus more of his attention on day-to-day management issues and on getting problems solved in a timely manner. At our last inquiry, both Phillip and Peter reported that their working relationship was much improved.

It doesn't always work so well. Glen, a business development executive, was brought in to beef up sales at a pipeline company. He was very smart and very competent, with a lot of relevant experience. But somehow he'd moved up through the ranks without learning how to be open and participative in his public decision-making style. The problem became clear when, at a management team event, each member was invited to share a few stories about the best moments of his or her career. Most talked about working with their colleagues to overcome huge challenges, but all of Glen's stories were about prevailing over his peers, winning at the expense of others. He received extensive feedback, and his boss gave him many opportunities to change. Glen agreed to work with a coach, but during their sessions he would just sit there and smile – and then go back to doing things the way he always had. After ongoing feedback, and numerous chances, Glen was fired.

Another manager, John, was senior vice president of human resources for a company that had gone through a merger. The new organization initially retained all of the executives from both companies, but it was clear the ranks had to be weeded out at some point. John knew this as well as anybody – that he was competing with someone for his job. And he was very good at what he did. He was proactive, and he had superb systems that ran like clockwork. But they had to run according to *his* clock, and John refused input from anybody else. His decision style was strongly decisive and hierarchic. In short, he was highly competent, but he was a bully. And unlike Glen, he wouldn't even accept coaching. John's counterpart from the other organization, meanwhile, was the exact opposite: mainly flexible and integrative and, accordingly, willing to accommodate others' ideas and preferences. Eventually, seeing the writing on the wall, John quit. He knew he would lose the job if he didn't modify his decision style, but he wasn't willing to change. John's experience reminds us that there are two phases of the coaching process: seeing what the problem is and, just as important, being willing to change. That's what allowed Jack and Phillip to keep their jobs.

Somewhere between the manager and director levels, executives hit a point where approaches that used to work are no longer so effective.

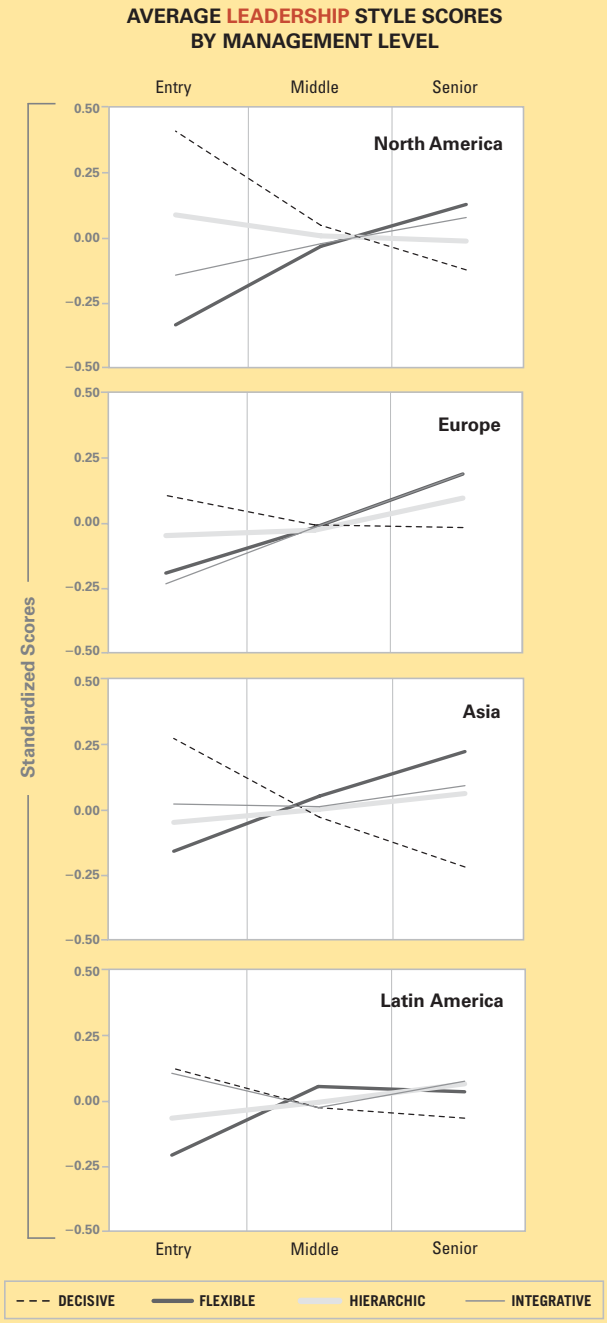
A Decision-Style Approach to Development

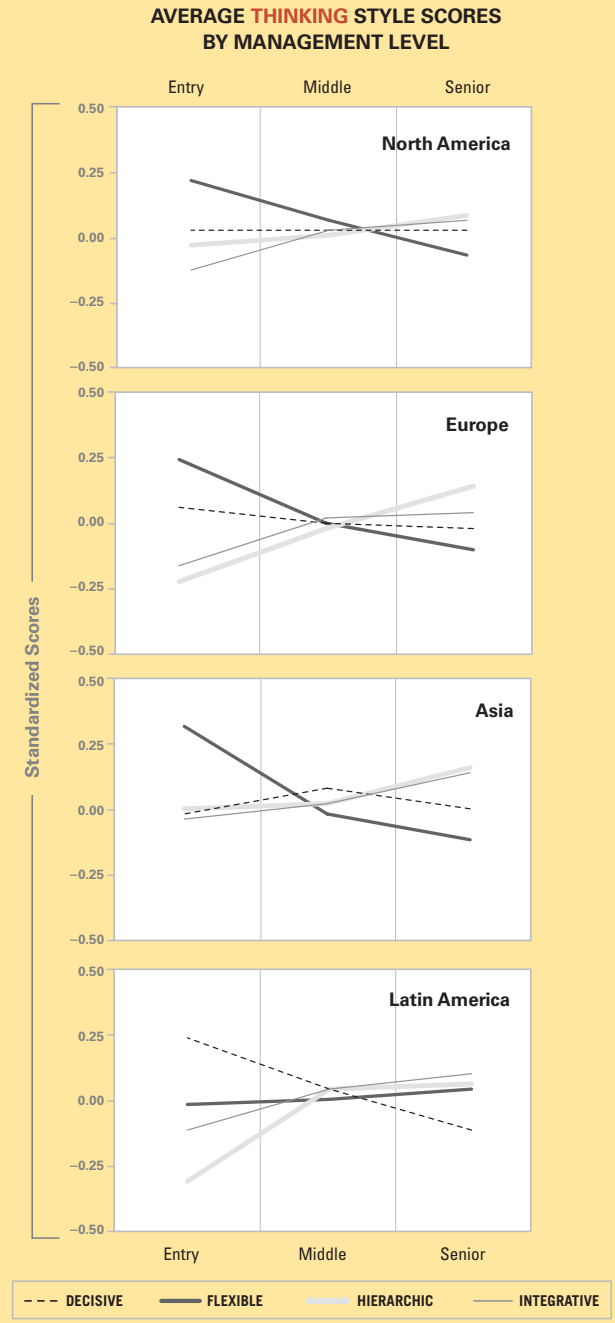
Most organizations have management development programs in place, and some have multitiered programs. But generally, the tiers are differentiated by the amount of training given, without reference to any fundamental shift in the way managers must think and lead. Such programs fail to take into account the different behavioral demands that accompany different levels of responsibility. Indeed, most companies still rely on management development and succession-planning schemes based largely on the notions that "leaders are leaders" and that "good people can handle anything." Hence the common approach of identifying high-potential employees and giving them special attention. Companies also often develop lists of leadership competencies – for instance, strategic visioning, teamwork, customer focus – on the assumption that the competencies are the right ones for everyone at all levels.

Our research and experience tell us otherwise. For a leader to succeed, behaviors and styles must evolve over

A Global Management Culture?

The database we used for our global research included a sample of more than 180,000 managers and executives on four continents. When we compared Europe, Asia, and Latin America, we expected to see some cultural impact on leadership and thinking styles. And we did see differences in terms of which styles dominated at the various levels of management (for instance, entry-level Asian managers generally score higher than managers from other regions on the decisive leadership style; Latin Americans stand apart in using a flexible thinking style more and more as they progress in their careers). But when we looked inside each region, comparing people only with others in the same region, we were amazed to see the same basic progression in both leadership and thinking styles. Here again, we saw the transition point where style profiles do a flip around the middle management levels. And, despite differences in degree, the styles by and large followed the same trajectory across all four continents.





Building a Road Map for Succession Planning and Development

	Major New Job Responsibilities		Management Development Issues: New Behavioral Competencies	Ideal Leadership and Thinking Styles Profiles
C-LEVEL EXECUTIVE	• Formulating strategic vision and plan • Facilitating enterprisewide integration and coordination • Communicating vision and priorities throughout the organization	Leadership	• Overseeing development of skills and abilities of personnel in one's area of responsibility • Role-modeling behavioral norms, especially collaboration and openness	Flexible: High to Very High Integrative: Mod High to High Hierarchic: Mod Low to Low Decisive: Low to Very Low
		Thinking	• Systems thinking for cross-functional decision making	Integrative: Mod High Hierarchic: Mod High Decisive: Mod Low Flexible: Mod Low to Low
VICE PRESIDENT AND DIRECTOR	• Analyzing current operations and future possibilities • Preparing and communicating recommendations and ideas • Actively participating in cross-unit teams and meetings	Leadership	• Highly open and interactive communication and leadership behavior • Teamwork skills – particularly, listening and cooperation	Flexible: Mod High Integrative: Mod High Hierarchic: Mod Decisive: Mod Low
		Thinking	• Brainstorming and creative thinking • Critical thinking	Integrative: Mod High to High Hierarchic: Mod to Mod High Flexible: Mod to Mod Low Decisive: Mod Low
SECOND-LEVEL MANAGER	• Managing other managers • Providing ideas and operating data to superiors • Facilitating coordination and cooperation across subunits	Leadership	• Adapting mode of communications to deal with diverse styles of others • Lessening reliance on any one style of communication and leadership – particularly, reducing reliance on direct, command-and-control mode	Flexible: Mod to Mod High Integrative: Mod Hierarchic: Mod Decisive: Mod to Mod Low
		Thinking	• Monitoring operations across subunits • Providing recommendations and ideas for improvements to superiors	Integrative: Mod High Hierarchic: Mod Flexible: Mod Decisive: Mod to Mod Low
FIRST-LINE SUPERVISOR	• Directing the activities of others • Monitoring ongoing operations • Responding to changing plans	Leadership	• Communicating succinctly and providing clear directions and instructions to others • Preparing reports and communicating detailed status to superiors	Decisive: High Hierarchic: Mod Integrative: Mod Flexible: Mod Low to Low
		Thinking	• Monitoring day-to-day status and making quick adjustments to keep things on track • Converting plans into specific tasks, schedules, and logistical arrangements	Flexible: Mod to Mod High Integrative: Mod to Mod High Hierarchic: Mod Decisive: Mod

the course of a career. This perspective is reflected in Bose Corporation's approach to management development. It uses a three-tiered model: one tier for first-line managers, another for mid- and upper-level managers, and a third for senior executives. With a better understanding of how behaviors and styles evolve, those who oversee talent management – whose job it is to attract, select, and develop high-performing managers – can create an accurate picture of key responsibilities and tasks at each level. They can then build a corresponding model describing the required competencies and establish a way to assess the degree to which individual executives possess those competencies. (See the exhibit "Building a Road Map for Succession Planning and Development.")

Even the most rudimentary development map makes it clear for up-and-coming managers that what lies just ahead is a new terrain, with challenges that are quite different – in some cases, the opposite – from what they've encountered in the past. It shows them that relying on past successes and habits is no guarantee of success; indeed, it may be the road to failure. For organizations, such a map can alter the conception of "high potential," and, consequently, how high-potentials are selected, evaluated, and developed. Put simply, early high performance is a useful indicator of future success, but it is by no means the only one.

Although the least successful managers do notice, at around the director level, that something has changed, they can't figure out what they should do differently.

Reprint R0602F
To order, see page 167.

P.C. VEY

"I like it, but then I liked eight-track tapes."

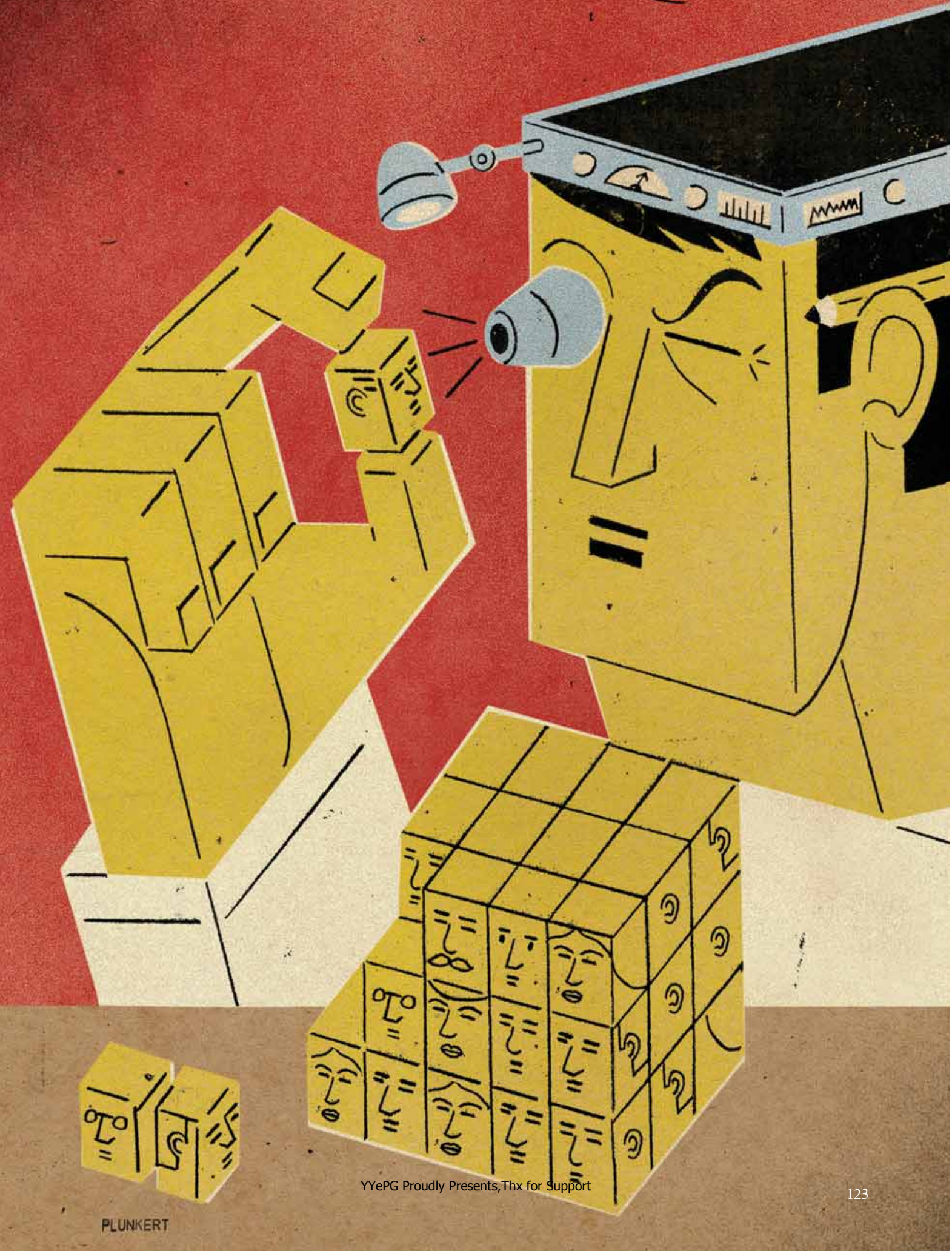
The psychographic profiling that passes for market segmentation these days is a mostly wasteful diversion from its original and true purpose – discovering customers whose behavior can be changed or whose needs are not being met.

REDISCOVERING MARKET SEGMENTATION

BY
DANIEL
YANKELOVICH
AND
DAVID MEER

THERE ARE MANY DIFFERENT KINDS of people, and they display about as many different buying patterns. That simple truth is well understood by those responsible for market research, product development, pricing, sales, and strategy. But they haven't been getting much help from a venerable technique – market segmentation – which, if properly applied, would guide companies in tailoring their product and service offerings to the groups most likely to purchase them. Instead, market segmentation has become narrowly focused on the needs of advertising, which it serves mainly by populating commercials with characters that viewers can identify with – the marketing equivalent of central casting.

DAVID PLUNKERT



This is hardly the state of affairs we anticipated 40 years ago when one of us introduced the concept of nondemographic segmentation in these pages as a corrective to the narrow reliance on purely demographic ways of grouping consumers. In 1964, in "New Criteria for Market Segmentation," Daniel Yankelovich asserted that:

- Traditional demographic traits such as age, sex, education levels, and income no longer said enough to serve as a basis for marketing strategy.
- Nondemographic traits such as values, tastes, and preferences were more likely to influence consumers' purchases than their demographic traits were.
- Sound marketing strategy depended on identifying segments that were potentially receptive to a particular brand and product category.

The idea was to broaden the use of segmentation so that it could inform not just advertising but also product innovation, pricing, choice of distribution channels, and the like. Yet today's segmentations do very little of this, even though markets and media are, if anything, even more fragmented today than they were in 1964 and consumers even more diverse and accustomed to following their own tastes and impulses.

Segmentation can do vastly more than serve as a source of human types, which individually go by such colorful monikers as High-Tech Harry and Joe Six-Pack and are known collectively by the term "psychographics." Psychographics may capture some truth about real people's lifestyles, attitudes, self-image, and aspirations, but it is very weak at predicting what any of these people is likely to purchase in any given product category. It thus happens to be very poor at giving corporate decision makers any idea of how to keep the customers they have or gain new ones.

The failings of psychographics, however, and the disappointments it has produced in its users, should not cast doubt on the validity of careful segmentation overall. Indeed, marketers continue to rely on it, and line executives increasingly demand segmentations that the whole enterprise can put into action. Because of the technique's underlying validity, and managers' continuing need for what it can do, there's good reason to think that segmentation's drift from its original purpose and potency can be halted. Good segmentations identify the groups most worth pursuing – the underserved, the dissatisfied, and those likely to make a first-time purchase, for example. They are dynamic – they recognize that the first-time purchaser may become underserved or dissatisfied if his or her situation changes. And they tell companies what products to place before the most susceptible consumers.

In this article, we'll describe the elements of a smart segmentation strategy. We'll explain how segmentations meant to strengthen brand identity and make an emotional connection with consumers differ from those capable of telling a company which markets it should enter and what goods to make. And we'll introduce a tool we call the "gravity of decision spectrum," which focuses on the form of consumer behavior that should be of greatest interest to marketers – the relationship of consumers to a product or product category, not to their jobs, their friends, their family, or their community, all of which lay in the realm of psychographics.

The Drift into Nebulousness

The years after World War II were marked by extraordinary innovations in consumer products – transistor radios, disposable diapers, razor cartridges, pleasant-tasting sugarless colas, among them. For products so groundbreaking and widely desired, advertising did not have to do much more than announce their existence and describe their dazzling features.

By the early 1960s, however, consumers were becoming less predictable in their buying habits: Many people without much education had become affluent; others with sophisticated tastes had become very price conscious. As a result, tastes and purchasing patterns no longer neatly aligned with age and income, and purely demographic segmentations lost their ability to guide companies' decisions.

As time went on, product introductions remained frequent, but they increasingly amounted to refinements of existing offerings that had originally answered real consumer needs but now merely catered to mild preferences. With ever more trivial improvements to report on, and few ways to distinguish a client's product from the competition's, advertising grew boring and bored with itself. Gradually, the focus of creative departments shifted from the product to the consumer: If, by the 1970s, products had become less distinctive, people seemed to be bursting with unprecedented variety.

One way companies found to convince particular groups of consumers that a product was perfect for them was to place in the advertising message a person whom they resembled or wished they did. Another way, which followed from the consumer orientation of the first, was to emphasize the emotional rather than the functional benefits products offered – pride of ownership, increased status, sex appeal. Cake mixes to which a fresh egg had to be added, for example, may have tasted no better than earlier versions containing powdered egg. But they sold well because the extra step allowed the preparer to feel she was fulfilling a wife's traditional domestic role. In

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Different Segmentations for Different Purposes

Psychographic segmentations can be used to create advertising that will influence consumers to think warmly about a particular brand. But they're not as well suited for other purposes. You would need a different kind of nondemographic segmentation to investigate, for instance, what kinds of products to make. Here we set out the different characteristics of these two types of segmentation exercises.

	Segmentations to develop advertising	Segmentations to develop new products
Populations studied	Users of the product or service to be advertised	Users of related products or services that already meet similar needs; partners such as distributors and retailers
Data sources tapped	Attitude surveys	Purchase and usage data on consumers, supplemented by surveys; analyses of consumers' finances and channel preferences
Analytical tools used	Statistical analysis of survey results	Analysis of customers (both in the field and in the laboratory) who remain loyal and those who switch to competing offerings
Outputs	Segments that differ in their responses to a given message	Segments that differ in their purchasing power, goals, aspirations, and behavior

contrast to breakthrough products – such as an effective over-the-counter dandruff shampoo – that addressed intense unmet needs, ordinary third-generation products had to find customers who were already and especially susceptible to their allure. Since the attraction was based on things like status, it made sense to fashion segments reflecting the personal characteristics and lifestyles of the target consumers. As competitors increased the speed and skill with which they could copy or reengineer products, the functional dimension of existing offerings became less compelling. Ironically, by the mid-1970s, belief in the power of imagery to stimulate sales of dull items may have begun to take pressure off product developers to come up with products and services displaying genuinely innovative technology and fresh design, thus aggravating the problem.

Two concurrent developments gave this new emphasis on the consumer's self-conception, emotions, and personality an extra measure of rigor. Social scientists began to apply their modes of analysis to business problems, and business executives, confused by the fragmentation of the mass audience and the speed with which tastes were changing, welcomed their insights. Using attitudinal indicators similar to those elicited by personality tests, psychologists carved out marketing segments based on their members' shared worldview. Those early segments were populated with the Inner-Directed, Traditionalists, Hedonists, and the like.

In 1978, Arnold Mitchell and his colleagues at the Stanford Research Institute launched the Values and Lifestyles (VALS) program, a commercial research service, which was soon retained by scores of consumer product companies and advertising agencies. VALS drew heavily on frameworks developed by Harvard sociologist David Riesman, coauthor of *The Lonely Crowd,* and Brandeis psychologist Abraham Maslow, who posited the now well-known hierarchy of needs. VALS classified individuals according to nine enduring psychological types. An individual consumer's behavior, the theory went, could in turn be explained by his or her correspondence to one of those types. VALS and similar models soon turned psychographics into the most accepted mode of segmentation. Not surprisingly, it was embraced by advertising departments and agencies, which appreciated a certifiably scientific technique whose stock-in-trade was inventing characters, just as they themselves had been doing for some time.

Psychographics, it should be said, proved to be effective at brand reinforcement and positioning. The Pepsi Generation campaign of decades ago, for example, did coalesce a wide assortment of consumers into a group that identified with the youth culture emerging at the time. But even

though campaigns built on psychographics are good at moving viewers emotionally, the characteristics and attitudes that such ads invoke are simply not the drivers of commercial activity. Those tend to be things like purchasing history, product loyalty, and a propensity to trade up, all of which are informed by attitudes and values that lead consumers to view particular offerings differently. What's more, psychographic segmentations have done little to enlighten the companies that commission them about which markets to enter or what kinds of offers to make, how products should be taken to market, and how they should be priced.

Despite its disappointing performance, market segmentation is still widely used. In 2004, for example, when Marakon Associates and the Economist Intelligence Unit surveyed 200 senior executives of large companies, 59% of them reported that they had conducted a major segmentation exercise during the previous two years. Yet the evidence suggests it's not a very effective tool: Only 14% of the executives said they derived real value from the exercise.

What happens when a company attempts to apply a segmentation appropriate for developing ad campaigns to product development or pricing decisions? Consider the experience of a company we'll call HomeAirCo, a leading manufacturer and installer of home heating and cooling systems. The chief marketing officer, after less than a year in that position, commissioned a respected consumer research company skilled in statistical analysis to conduct an expensive segmentation study with input from HomeAirCo's advertising agency. The agency was able to create an entertaining campaign featuring characters based on five typologies faithfully reflecting the interests and viewing habits of the members of each segment. One, for example, portrayed a Traditionalist male trying to work on his own heating system and botching it while his wife nagged him to call HomeAirCo; another showed a woman doing yoga in an ideal environment because she had a HomeAirCo system. But every segment had the same number of HomeAirCo customers in it, leaving the firm at a loss to know which groups would be most likely to want to upgrade their temperature control systems. The segmentation's many oversights included a failure to identify buyers of older homes in affluent neighborhoods who, the firm's own anecdotal experience suggested, would probably be the most likely purchasers of such a system.

The fact is that even the most memorable advertising, if based on a crudely drawn segmentation, will do little to spur sales or garner market share. The recent "Catfight" campaign for Miller Lite, for example, featuring mud-wrestling supermodels, certainly made an impression on the young, male segment it was intended to reach, but sales of that brand of beer did not increase. As it happens, there is a segment of light-beer drinkers that would gravitate to Miller Lite if only its members knew it had fewer carbohydrates than Bud Light. How do we know? A Miller campaign that told them so did indeed increase sales.

The Way Back

If meaningful segmentations depend on finding patterns in your customers' actual buying behavior, then to construct one properly, you need to gather the relevant data. Depending on the question your exercise is ultimately aimed at answering, you would want information about, say, which benefits and features matter to your customers. Or which customers are willing to pay higher prices or demand lower ones. Or the relative advantages and disadvantages customers identify in your existing offerings. You'll also need data on emerging social, economic, and technological trends that may alter purchasing and usage patterns.

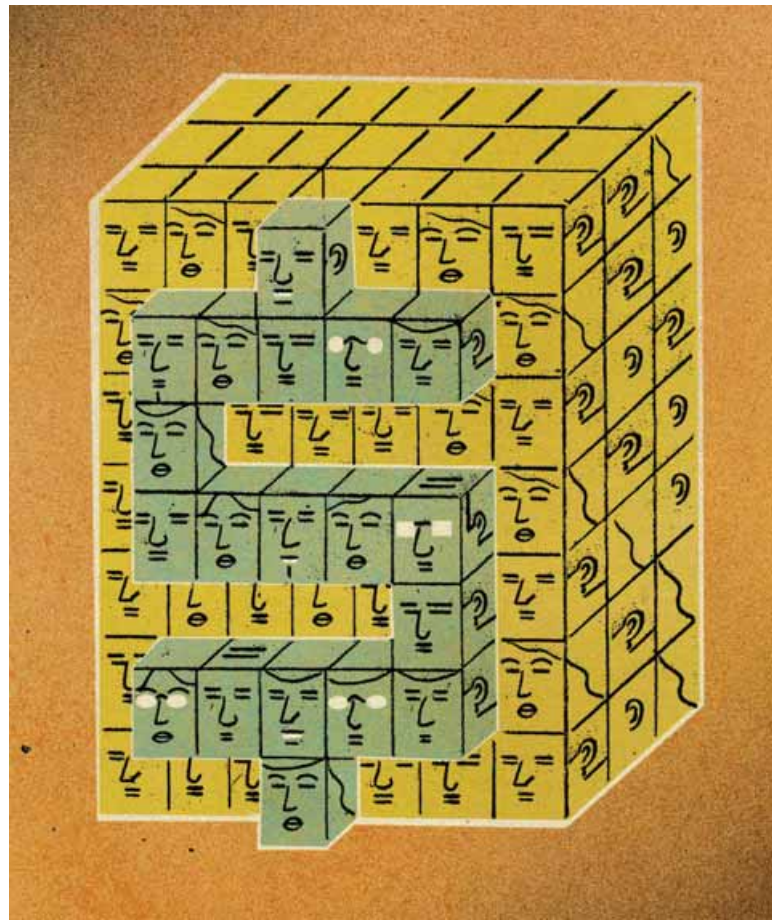
THE MILLER LITE ADS featuring mud-wrestling supermodels certainly impressed the young, male segment they were intended to reach, but sales did not increase.

Many companies capture this information routinely. If yours does not, you can use qualitative research to explore underlying motives and needs propelling current purchases and use quantitative research to understand competitive strengths and vulnerabilities. You can reexamine the sales data you already have to reveal the hidden patterns in customers' behavior. And you can retain trend-tracking services.

Armed with such data, you can then fashion segments that are both revealing and applicable. Such segments will:

- Reflect the company's strategy;
- Indicate where sources of revenue or profit may lie;
- Identify consumers' values, attitudes, and beliefs as they relate specifically to product or service offerings;
- Focus on actual customer behavior;
- Make sense to top executives;
- Accommodate or anticipate changes in markets or consumer behavior.

Let's consider each aspect in turn.



What are we trying to do? When companies change marketing chiefs, a new segmentation is rarely far behind. The new CMO often uses a segmentation exercise as a way to put his or her stamp on the business. Unfortunately, few marketing chiefs know or have thought about which of their company's strategic decisions would benefit from the guidance of a segmentation. For a traditional brokerage house, for instance, the main strategic challenge might be how to reduce customer defections to discount brokers. For a personal-care products company, it might be how to extend a strong soap brand into deodorants. And for a fast-food chain, it might be whether to come up with healthier menu alternatives. Segmentations designed to shed light on these questions won't try to explore the personalities of customers; they will try to identify groups of potentially interested or susceptible customers sufficiently numerous and lucrative to justify pursuit. Subsequent strategic moves will, of course, call for new and different segmentations.

Which customers drive profits? To be valid, a segmentation must identify groups that matter to a company's financial performance. To start, companies can rank their own customers by profitability so as to concentrate the right amount of attention on them. But to grow revenues, a company should understand what makes its best customers as profitable as they are and then seek new customers who share at least a couple of those characteristics. For instance, a luggage company whose soft but durable carry-on bags earn its highest margins might notice that the majority of the people who buy the bags are international flyers. It would therefore pursue other international travelers as potential customers.

To understand how important this question is, consider the experience of one leading bank with a large wealth management business. The bank had become concerned that its overall business was suffering from low rates of growth and a stagnant market share. Its existing segmentation sorted customers according to the level of employee that served them – relationship manager, senior branch personnel, or junior branch personnel – which mostly depended on customer assets and income. Relationship managers had the most profitable customers, and so forth. However, the bank knew next to nothing about what might distinguish one relationship-manager customer from another.

The bank decided to go beyond what it knew about its existing customer base and acquire market research on the lifetime value of wealthy prospects. The research was of three types:

- Demographic (age, occupation, assets, and so on);
- Behavioral (which services customers already used, how many institutions they did business with, how many transactions they made in a month);
- Attitudinal (financial sophistication, time spent on investments, risk tolerance).

The segmentation that resulted differed markedly from its predecessor. Every component of the three broad drivers of profitability contributed to an understanding of lifetime value. For instance, the new segments identified, such as Young Families, revealed high variations in profitability even in the existing high-profit segment. Equipped with this information, the bank was more willing to embark on the expensive task of tailoring offerings to potential clients, since it had greater confidence that the effort would turn out to be economically worthwhile. Three segments it discovered–On Their Way, Established Families, and Retirement Planners–contributed almost no profit, even though they accounted for half the customer base. Yet many of the individuals who fell into those segments had been assigned to relationship managers. The bank acted quickly to reduce the cost of servicing

those people by reassigning them to more junior branch personnel, to call centers, or to the Web.

Which attitudes matter to the buying decision? Even though segmenting customers according to immutable personality traits rarely bears much fruit, there is a place for examining people's lifestyles, attitudes, self-image, and aspirations. They should be explored, as the bank did, in a context that is directly related to the product or service under study. Unlike purely psychographic segments, these characteristics can be expected to change along with the customers' values and environment.

What are my customers actually doing? While relevant attitudes, values, and expressed preferences can bring color and insight to a segmentation, they lack the predictive power of actual purchase behavior, such as heaviness of use, brand switching, and retail-format or channel selection. If you want to understand how a consumer would respond to products or features that have not yet been introduced, you can elicit the next best thing to actual behavior by creating laboratory simulations to which special analytic techniques can be applied. One of them, called "conjoint analysis," involves presenting consumers with combinations of features. It then asks the consumers how willing they would be to purchase the product in question if particular attributes were added or removed, or if the price changed.

Here's an example of how it works: A pet food manufacturer gave consumers an opportunity to design their ideal pet food container. The consumers in the test saw on their computer screens a generic package to which they could drag and drop features they valued, such as a resealable opening and a handle attached to the 25-pound size. They were next asked how much more they would pay for products containing different combinations of such features. The consumers were then segmented according to their degree of price sensitivity and desire for convenience. On this basis, the company could redesign its packaging with added features that would maintain existing customers and attract new ones. It could also jettison features whose cost would have required charging too high an overall price.

Will this segmentation make sense to senior management? Modern marketing practitioners view their field as outward facing – that is, focused on listening and communicating to consumers and markets. In fact, marketing may do itself harm by failing to make itself understood by its internal constituency: senior management. As marketing has become more scientific and specialized, its practitioners have increasingly turned to advanced statistical techniques for dissecting segments into ever finer slices containing improbable combinations of traits. The masters of these techniques are often tempted to flaunt their technical virtuosity instead of defining segments that make intuitive sense to senior managers. If the segments seem inconsistent with managers' long experience, and managers cannot grasp how they were derived, the research they yield is unlikely to be accepted and applied.

One financial services company found this out the hard way. The firm, which develops investment products sold by third-party investment advisers, wanted a bigger role for itself in asset management, a service usually confined to wealthy investors. So it created a full-service offering designed to accommodate smaller investors. The challenge the company faced was to find out which kinds of advisers would be most likely to recommend the service to this new category of clients. Unfortunately, the advisers' existing classifications – national broker/dealer, regional broker/dealer, bank officer, and independent – revealed differences in recommendation patterns too minor to be meaningful.

The company therefore decided to segment its investment advisers in a more meaningful way – according to the kinds of recommendations they made to their clients. At first, the firm took an approach that was statistically powerful but highly complex. It developed profiles of typical investors based on their age, assets, risk tolerance, and the like. Then in a survey it asked the advisers to select a mix of investments suited to each customer profile. The statistical analysis teased out the underlying investment style of each adviser and then grouped together those with like patterns. Some advisers, for example, rarely recommended individually traded stocks, while others made stocks the foundation of their clients' portfolios.

Although the segmentation was mathematically sound, management did not trust its findings. For one thing, the segmentation relied heavily on whether advisers received fees or commissions, a distinction the statistical analysis determined was important. Since the new product was to be fee based, however, the commission-based segments would be largely irrelevant. So the senior managers could not understand why a segmentation along those lines had been made. Perhaps they would have accepted the study if they had been able to understand how its conclusions had been reached. But the study's reliance on esoteric statistical procedures foreclosed that possibility. If nothing else, the managers charged with applying the study's findings worried that they would lack answers for top management in the event the segmentation failed.

The in-house marketing science team and the consulting firm assisting it decided to recast the segmentation using simple criteria, not statistics. First, the advisers were grouped on the basis of the average net worth of their clients. And then they were grouped according to whether their clients' investments were actively managed. The result was four segments rated on two dimensions. We list them here by internal title in descending order of client wealth and portfolio activity.

- Active Investors (high-net-worth clients, strong reliance on actively managed investments such as stocks and bonds);

- Upscale Coaches (high-net-worth clients, little reliance on actively managed investments);
- Mass-Market Coaches (low-net-worth clients, strong reliance on actively managed investments);
- Product-Oriented (low-net-worth clients, little reliance on actively managed investments).

The Upscale Coaches, it turned out, were the most liable to consider the new asset-management product. The Mass-Market Coaches also showed some potential. The segments bracketing those two had almost no potential. In subsequent interviews, the Active Investors confessed they viewed the company developing the new product as a competitor offering a service uncomfortably close to their own. The Product-Oriented segment had the opposite objection: Their clients were not interested in having anyone actively manage their assets. But the new product could complement the service that the two middle groups provided without threatening to replace it. In other words, the more passive managers of high-net-worth clients and the more active managers of low-net-worth clients were found to be the two groups worth targeting, a conclusion management understood and unhesitatingly accepted.

of users, Transactors, for whom concern about sharing personal information, including credit card numbers, was no obstacle to transacting business online. Now that few people are worried about such things, many of today's segmentations tend to orient themselves around intrinsically Net-based services and functions such as games, parental control devices, and file sharing, each involving a set of separately measurable interests and concerns.

The Gravity of Decision Spectrum

The most common error marketers commit is applying segmentations designed to shed light on one kind of issue to some other purpose for which they were not designed. But which kinds of segmentations are best for which purposes? We suggest marketers begin by evaluating the expectations consumers bring to a particular kind of transaction. These can be located on our gravity of decision spectrum, which will tell you how deeply you need to probe consumers' motives, concerns, and even psyches.

EFFECTIVE SEGMENTATIONS focus on just one or two issues, and they need to be redrawn as soon as they have lost their relevance.

Can our segmentation register change? Segmentations are viewed by too many of their sponsors as one-time, go-for-broke efforts to provide a comprehensive portrait of customers that can inform all subsequent marketing decisions. In our view, segmentations should be part of an ongoing search for answers to important business questions as they arise. Consequently, effective segmentations are dynamic – in two senses. First, they concentrate on consumers' needs, attitudes, and behavior, which can change quickly, rather than on personality traits, which usually endure throughout a person's life. Second, they are reshaped by market conditions, such as fluctuating economics, emerging consumer niches, and new technologies, which in today's world are evolving more rapidly than ever. In short, effective segmentations focus on just one or two issues, and they need to be redrawn as soon as they have lost their relevance.

At the dawn of the World Wide Web, for example, a common segmentation criterion was the extent of a person's online experience. Early Adopters felt comfortable exploring the Web on their own; Newbies, or recent adopters, sought high levels of support. As newcomers became scarcer, the focus shifted to an emerging group

Some decisions people make, such as trying a new brand of toilet paper or applying for a credit card, are relatively inconsequential. If the product is unsatisfactory, at worst a small amount of money has been wasted and a bit of inconvenience incurred. But decisions such as buying a home or choosing a cancer treatment have momentous significance given their potential for benefit or harm and the expense associated with them.

At the shallow end of the spectrum, consumers are seeking products and services they think will save them time, effort, and money. So segmentations for items such as toiletries and snacks try to measure things like the price sensitivity, habits, and impulsiveness of the target consumer. Segmentations for big-ticket purchases like cars and electronic devices, in the middle of the spectrum, test how concerned consumers are about quality, design, complexity, and the status a product might confer. At the deepest end, consumers' emotional investment is great, and their core values are engaged. Those values are often in conflict with market values, and segmentations need to expose these tensions. Health care is the archetypal high-gravity issue. The exhibit, "What Is at Stake?" maps out the differences in business decisions, consumer

What Is at Stake?

Knowing how important a product or service is to your customers will help you decide which of their expectations are most likely to reveal their willingness to purchase your product. If your products are purely functional, you will probably want to investigate such garden-variety factors as the price sensitivity and brand loyalty of potential purchasers. But if such purchasers are facing life-altering choices, you will want to inquire into their most deeply held beliefs.

	Issues the business wants to address	Consumers' concerns	What the segmentation should try to find out
Shallowest decisions	• Whether to make small improvements to existing products • How to select targets of a media campaign • Whether to change prices	• How relevant and believable new-product claims are • How to evaluate a given product • Whether to switch products	• Buying and usage behavior • Willingness to pay a small premium for higher quality • Degree of brand loyalty
Middle-of-the-spectrum decisions	• How to position the brand • Which segments to pursue • Whether to change the product fundamentally • Whether to develop an entirely new product	• Whether to visit a clinic about a medical condition • Whether to switch one's brand of car • Whether to replace an enterprise software system	• Whether the consumers being studied are do-it-yourself or do-it-for-me types • Consumers' needs (better service, convenience, functionality) • Their social status, self-image, and lifestyle
Deepest decisions	• Whether to revise the business model in response to powerful social forces changing how people live their lives	• Choosing a course of medical treatment • Deciding where to live	• Core values and beliefs related to the buying decision

decisions, and approaches to segmentation that emerge as the gravity of a consumer's buying decision increases.

What follows are three illustrations representing three points along the spectrum. Of course, many gradations exist between them.

The shallow end. A manufacturer of men's shaving products faced a dilemma: how to spur fast growth when the firm already dominated the most profitable subcategory – shaving systems (a razor handle plus replaceable blades). Fearing it would cannibalize sales of its own shaving systems, the company shied away from disposable shavers, an obvious area to enter. But under pressure from senior management, the razor-and-blade business unit commissioned a new segmentation to find out whether there really was any basis for its fears.

Shavers are a small-ticket item. Though men naturally want to look neat and clean, most do not agonize over which technology or brand to choose, since all produce more or less the same result. Men's main concerns traditionally have been the comfort and closeness of the shave, how easy the razor is to use (which often determines whether people favor a system or a disposable), and the price.

Accordingly, to determine whether a new product would cannibalize existing ones, a first segmentation used detailed household purchase records to put customers into one of three classifications: those who buy systems exclusively, those who buy disposables exclusively, and those who switch between the two. To management's surprise, the switching segment was very small, suggesting that the company could introduce a more expensive disposable razor without taking business away from its systems.

The next question was whether enough disposables users, who are thought of as looking for a low-cost way to shave, would buy a higher-quality but more expensive

device. A second segmentation, therefore, sought to judge price sensitivity in order to reveal customers' propensity to trade up. As suspected, many men were not interested in a better disposable that cost more. However, the research did expose a modest level of emotional investment in the product on the part of young men who had girlfriends or were on the dating scene. For them, how their skin felt to the touch was almost as important as how they looked. Consequently, they would be willing to pay more for that smooth feel. Equipped with that insight, the company launched a very high-margin disposable, which garnered a solid and sustained market share without hurting its sister brands.

In the middle. In 1997, Toyota introduced a quirky internal combustion–electric hybrid vehicle to great success in its home market. But Americans were wary of the new technology. They sought greater power and faster acceleration at the Prius's price point. Moreover, in the late 1990s, U.S. drivers were mostly unconcerned about fuel consumption, an economic issue for some but not an environmental one.

Because even relatively inexpensive cars are large expenditures for most households and the cars people drive strongly influence their image in their own and others' eyes, some exploration of consumers' emotions and values was warranted. Accordingly, when Toyota did so, the carmaker discovered that about 10% of car buyers not only liked the car's design and accepted its performance but also were pleased that it was less harmful to the environment than other cars. Although a Prius would be an adventurous purchase, in certain communities it might even be an admired one because of the values it represented. If the small group of potential purchasers could be reached efficiently rather than through an expensive media campaign, Toyota could make money on the car. As it turned out, the best prospects were contacted via the Internet, and the Prius easily met its first-year sales and profit targets.

The deep end. Continuing care retirement communities (CCRCs) are residential facilities for healthy and affluent retirees. Such a community typically includes single-family houses, duplexes, or flats where residents live before graduating into assisted-living or nursing care, both of which are available on the same campus. Sponsored by both nonprofit and for-profit institutions such as Hyatt, CCRCs have quintupled in number in the past 15 years.

CCRCs are expensive. Seniors pay a hefty entry fee – from $125,000 to over $400,000 (depending on the size and geographical location of the dwelling they choose) usually after selling the family home. Still, residents do not own their unit and thus do not build equity. A major component of the fee is an insurance policy that covers the cost of assisted living and skilled nursing care if the resident's health declines. Residents also pay a monthly fee covering meals, housekeeping, utilities, and other amenities. Even though a typical continuing care retirement community returns 90% of the initial fee when a resident moves out or dies, the individual or estate suffers a significant financial sacrifice, given the rate of appreciation of today's real estate market.

What, then, explains the demand for CCRCs? The answer was revealed by a segmentation oriented around changing family values. Published comments of CCRC residents and industry experts indicate that the segment of seniors attracted to this option is seeking to avoid dependence on family and longtime friends, who in earlier decades would have looked after them. Two key values characterize this segment:

- The desire for autonomy – to avoid being a burden on their loved ones;
- The willingness to embrace, in lieu of the security and warmth of having family and friends nearby, life in a quasi-institutional setting among strangers.

This segmentation obviously operates at the deepest level of the gravity of decision framework. It tells the retirement industry that adding Alzheimer's care to the package offered would appeal to the large numbers of the elderly who worry about becoming a burden and that proximity to or affiliation with a university would add to the sense of community valued in CCRCs.

• • •

Segmentation initiatives have generally been disappointing to the companies launching them. Their failures have mostly taken three forms. The first is excessive interest in consumers' identities, which has distracted marketers from the product features that matter most to current and potential customers of particular brands and categories. The second is too little emphasis on actual consumer behavior, which definitively reveals their attitudes and helps predict business outcomes. And the third is undue absorption in the technical details of devising segmentations, which estranges marketers from the decision makers on whose support their initiatives depend.

We believe that organizations able to overcome these three weaknesses will be able to respond more quickly and effectively to rapidly changing market conditions, develop insights into where and how to compete, and gain maximum benefit from scarce marketing resources. Nondemographic segmentation began more than 40 years ago as a way to focus on the differences among customers that matter the most strategically. Since for more than half of that span, it has not managed to do so, we hope that the rediscovery we are proposing here can make up for lost time and, over the next 40 years, at last fulfill segmentation's original purpose.

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To order, see page 167.

The age-old desire of infertile couples for children has finally found a way to be satisfied – the brave new world of high-tech childbirth. The industry that has sprung into being challenges our ideas about what markets are and can do.

Where Babies Come From

Supply and Demand in an Infant Marketplace

by Debora L. Spar

Say the word "market," and what comes to mind? Financial markets, maybe, or supermarkets. There are markets in real estate, markets in used cars, markets filled with farmers selling green beans and cheese. But a market in human fertility – sperm, eggs, hormones, surrogate mothers, embryos? Babies, or the means to make them, aren't supposed to be sold. They aren't supposed to be bought. They aren't supposed to have prices fixed upon them.

But there *is* a market for babies, one that stretches across the globe and encompasses hundreds of thousands of people. This market doesn't work like the markets for green beans or mortgages. Its high prices are more stubborn than the usual adjustments in supply and demand normally produce, it can never fully provide all the goods that are desired, and the role of property rights – the underpinning of most modern markets – remains either ambiguous or contested.

What has created this market is a deep and persistent demand from people who have been denied the blessings of reproduction, along with a wide and steadily increasing supply of ways to produce babies when nature proves inadequate. It includes businesses such as for-profit fertility clinics and drug companies that sell their wares in this market, charging often hefty sums along the way. In 2001, nearly 41,000 children in the United States were born via in vitro fertilization (IVF). Roughly 6,000 sprang from donated eggs; almost 600 were carried in surrogate, or rented, wombs.

Some people lament the very existence of this baby trade, insisting that

JO TYLER

reproduction – like love or honor – should never be sold. Some argue that the cutting edge of reproductive science violates the rules of nature and degrades all of the participants. Yet the baby business is alive and well and growing. And the demand for it is so widespread and powerful that any attempts to stamp it out would almost certainly fail or do harm. If the baby trade were to move to a donor model like the one governing organs, for example, it would probably face comparable shortages: fewer women willing to donate eggs, fewer surrogate mothers, and a smaller supply of sperm. At the same time, a black market for these components would probably arise, much as it has for kidneys and other vital organs. Similarly, if governments were to outlaw the trade completely, people desperate for children would scramble to find illicit providers, subjecting themselves to legal and medical risk. Unlike outlawed trades such as drugs or prostitution, moreover, the baby business creates a product – children, for people who want them – that is inherently good. The market may make people uncomfortable, but it's more efficient than the alternatives, and it provides inestimable value to those who choose to purchase.

Even so, the United States is the only major country in the world whose national government has chosen not to address the complex issues of equity, access, and cost that are raised by the baby trade. The federal government has been exceedingly wary of imposing limits on high-tech baby making, preferring to let the courts, the markets, or the state legislatures sort things out. (See the exhibit "Rules, Regulations, and the Gray Area.")

Part of this reluctance may be rooted in America's typical laissez-faire response to emerging markets. Unlike its European counterparts, the U.S. government historically has been loath to constrain high-growth, high-technology markets and industries. The U.S. mobile phone and Internet industries, for example, arose in largely deregulated markets.

In the baby business, legislators' reluctance to regulate is exacerbated by a profound fear of religious or ethical entanglement. Because the abortion debate in the United States has been so divisive, politicians have avoided pursuing any policy agenda that touches it even lightly. As a result, there are no national policies on IVF, which requires creating and often discarding embryos; none addressing genetic engineering; and none on the permissibility of preimplantation genetic diagnosis (PGD), which involves examining an embryo for signs of genetic disease before its implantation in the uterus.

Greater regulation of fertility clinics might well expand the market for reproductive services and make the industry safer and more equitable.

Other countries are far more explicit. In Israel, for example, assisted reproduction is touted as a national good. Accordingly, Israel permits (and only lightly regulates) most forms of high-tech reproduction and pays for a couple's fertility treatments until the couple has two children. In Germany, a deep-seated wariness of genetic manipulation has manifested itself in more restrictive legislation: no egg transfers, no surrogacy, no PGD. And the UK has an agency, the Human Fertilisation and Embryology Authority, that oversees all aspects of Britain's reproductive trade. It licenses and monitors all IVF clinics, sets price caps for egg donation, and assesses applications for PGD.

In the United States, this kind of authority would almost certainly come under attack. As an over-50 mother of newborn twins said: "I had my babies. I paid for my babies. I could afford my babies. Why is it any more complicated than that?" Similar (though perhaps more subtle) sentiments are voiced by many practitioners in the fertility industry, who worry that regulation of their trade could become expensive, unwieldy, and unfair. One prominent specialist argues that any regulation would slow medical progress in his field: "We have been able to sail under regulatory visibility," he notes. "If we had been under scrutiny, many steps would have been forbidden."

Although U.S. fertility practitioners generally seem delighted to remain in the gray area of self-regulation, the history of technological development in other sensitive trades suggests that some widening of availability and the introduction of property rights, rules, and institutional policies would make the baby trade more responsive to the social, medical, and ethical issues that are emerging from its science. Right now, there is little reason for any provider – drug company, fertility clinic, sperm bank – to wrestle with these concerns. Should there be age limits on fertility treatments, for example? (Fertility clinics' most profitable patients are those women least likely to conceive.) Should new procedures be subject to rigorous testing protocols? Should multiple births, which often result from the multiple implantations intended to increase the likelihood of at least one embryo's viability, be controlled or limited?

In the absence of outside pressure, the market will try to satisfy most client desires in the interest of creating new business. Yes, a 63-year-old woman can choose to undergo IVF. Yes, a family with a daughter has the right to ensure that its next child is a son. Yes, a couple can proceed with the birth of IVF-induced quintuplets. And perhaps these individuals should indeed have these freedoms. But one could argue that these are not the kinds of questions that markets answer best. What happens when the

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The fertility market could well follow the pattern in industries such as personal computers and DVD players, where goods that were initially considered luxury items migrated over time to the mass market.

63-year-old sues the fertility clinic for damages because she has given birth to a severely deformed child? And what if hospitals and insurance companies balk at covering the costs for quintuplets? In the absence of accepted guidelines, private firms and independent physicians are likely to pass along to the rest of society the costs of decisions they are not fully authorized to make.

What Sort of Market?

It is entirely possible to conceive of the reproductive market in the United States as a small enclave of science. The market is irrelevant to 85% to 90% of the population – that is, to those lucky enough to conceive children the old-fashioned way. Nearly by definition, then, it shouldn't share the traits that characterize the markets for potato chips or sneakers or even general health services. It is a niche market, one that is unlikely to expand beyond a small segment of customers. Most of these potential customers, moreover, never avail themselves of any form of treatment: Only 36% of infertile women in the United States seek medical assistance in conceiving, 15% use fertility drugs, 5.5% employ artificial insemination, and only 1% try IVF or other high-tech treatments.

Those who do enter the market are decidedly wealthier and better educated than average, paying $12,400 for an average cycle of in vitro fertilization, $3,500 for PGD, and up to $50,000 for the eggs of select Ivy League women. The firms that service this clientele are highly concentrated and profitable. The global market for sperm, for example, is dominated by a small number of high-volume, high-profit firms. So is the market for the hormones that women take to induce ovulation. Makers like Serono and Organon International (a subsidiary of Akzo Nobel) face limited competition and almost no downward pressure on prices. Egg brokers and fertility centers are newer entrants to the trade but seem already to be evolving along a similar course, with smaller centers consolidating into networks like Integramed America and larger centers like Boston IVF reaping the substantial profits of scale.

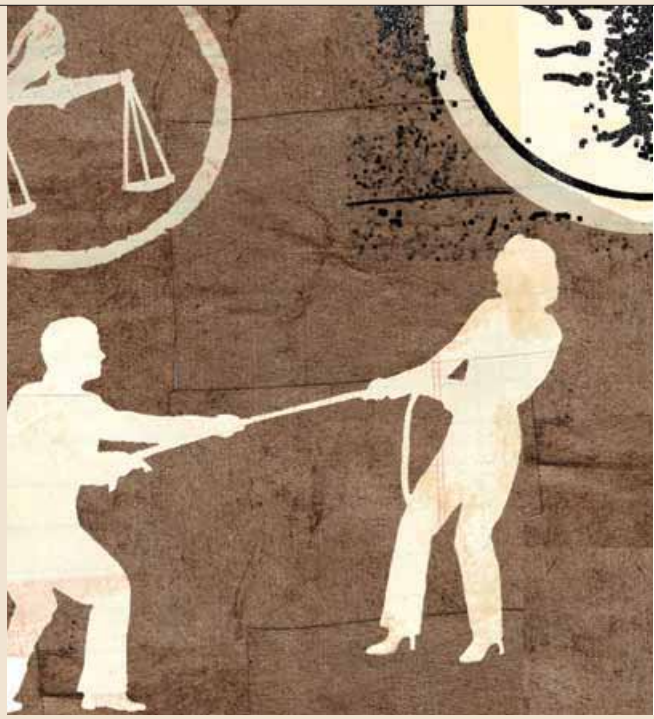
Yet experience outside the United States and in other industries suggests that the U.S. fertility trade could follow a very different route, one that embraces a larger market in exchange for substantially lower prices and a modicum of regulation. Even if prices were capped below current levels, an increase in demand could significantly offset any downward pressure on profits per client. Likewise, greater regulation of fertility clinics might well expand the market for reproductive services and make the industry safer and more equitable. In Denmark, where the state guarantees three free cycles of IVF to all infertile women under the age of 40, demand for the treatment is widespread: In 2001, 3.9% of all Danish babies benefited from assisted reproduction, compared with less than 1% in the United States. In England and Israel, too, state funding has reduced the price and expanded the demand for treatment.

Recent developments also suggest that the demand for fertility treatment could soon extend beyond the infertile population. In just the past few years, healthy young women have started clamoring for services like Extend Fertility, which promise to freeze their eggs as a hedge against late marriage or a prolonged career. Soldiers can already freeze their sperm before going off to war, and homosexual couples could use assisted reproduction to conceive and bear offspring that are genetically related to both parents. Such applications could add millions of customers to the fertility trade – but only if prices come down, access is widened, and rules are established.

This widening need not interfere with the pace of scientific progress. For although privately funded researchers in the United States have contributed mightily to the emerging science of assisted reproduction, so have researchers from the UK, France, Israel, and Australia, where fertility clinics and access to fertility services are regulated much more tightly than in the United States. The market could well follow the pattern in industries such as personal computers and DVD players, where goods that were initially considered luxury items migrated over time to the mass market, earning their manufacturers the revenues to finance further innovation.

A Better Market

If the baby trade is to develop into a broader and more normal market, it will also need to acquire at least some semblance of property rights. Defining these rights would not resolve the deep moral issues that this market raises. They would certainly not ease the concerns



Rules, Regulations, and the Gray Area

The U.S. government and the states take a broad range of approaches to the regulatory treatment of reproduction's components. Sperm is subject to only the barest hint of regulation; eggs face more complicated rules, as this sampling of state policies shows. Surrogacy is fully legal in some states and illegal in others and largely ignored by federal legislation. This inconsistency betrays an unfortunate unwillingness on society's part to wrestle with the propriety of parental decisions that will have far-reaching consequences.

In other countries, meanwhile, the fertility trade is regulated to varying degrees.

United States

	FEDERAL REGULATION	STATE REGULATION			
		MASSACHUSETTS	CALIFORNIA	FLORIDA	NORTH DAKOTA
Sperm	Sperm banks subject to FDA regulation as "clinical laboratories"	Donation permitted; consenting husband is legal father	Donation permitted; consenting husband is legal father	Donation permitted; consenting husband is legal father	Donation permitted; consenting husband is legal father
Eggs	Subject, under some conditions, to FDA regulation as "clinical laboratories"	No law; donation permitted	No law; donation permitted	Donation permitted; reasonable compensation allowed	Donation permitted; law says donor is not the parent of the child
In vitro fertilization (IVF)	Clinics must report success rates to Centers for Disease Control	Permitted; insurance must cover costs of IVF	Permitted; insurance may exclude costs of IVF	Permitted; insurance must offer option of IVF coverage	Permitted; no requirements for insurance coverage
Surrogacy	No law	No law	No law; courts have ruled in favor of "intended" parents	Law presumes that contracting couple are legal parents; payment prohibited	Contract void; surrogate and her husband are legal parents
Preimplantation genetic diagnosis (PGD)	Use of federal funding prohibited	No law	No law	No law	No law
Cloning	Ban on use of federal funds	Embryo and fetal research prohibited	Ban on reproductive cloning; therapeutic cloning allowed	No law	Ban on reproductive and therapeutic cloning
Adoption	Entry of foreign-born children subject to State Department rules; placement of foster children subject to national law	No independent adoption	Independent adoption, advertising, and reimbursement permitted	Independent adoption, advertising, and reimbursement permitted	Independent adoption permitted; advertising allowed only by state or licensed agency

Other Countries

UNITED KINGDOM	ISRAEL	EGYPT	GERMANY	DENMARK	SOUTH AFRICA
Donation permitted; compensation illegal	Donation permitted	Donation prohibited	Donation permitted	Donation and sale permitted	Donation and payment in kind permitted
Donation permitted; cap on compensation	Donation permitted; no payment allowed beyond expenses	Donation prohibited	Donation prohibited	Donation permitted but limited	Donation and payment in kind permitted
Permitted; partially covered under national health plan	Permitted; fully covered under national health plan	Permitted for married couples only; no insurance coverage	Permitted for "stable" couples only; generally covered under national health plan	Permitted for "stable" couples only; fully covered under national health plan	Permitted without restriction; no insurance coverage
Permitted if couple is married; regulated by Human Fertilisation and Embryology Authority (HFEA)	Permitted if couple is married and surrogate is single; regulated by Ministry of Health	Prohibited	Prohibited	Prohibited	No relevant statutes
Permitted; regulated by HFEA	Permitted; subject to local authorities	Permitted	Prohibited	Permitted	No relevant statutes
Therapeutic cloning allowed; regulated by HFEA	Prohibited; use of stem cells regulated by Ministry of Health	Prohibited	Prohibited	Prohibited	No relevant statutes
Permitted	Permitted	Prohibited	Permitted	Permitted	Permitted

Sources: Howard W. Jones, Jr., and Jean Cohen, "IFFS Surveillance," *Fertility and Sterility,* 81, no. 5, Supplement 4 (May 2004); Stéphane Viville and Deborah Pergament, "Results of a Survey of the Legal Status and Attitudes Towards Preimplantation Genetic Diagnosis Conducted in 13 Different Countries," *Prenatal Diagnosis,* 18 (1998); Beverly J. Wunderlin, "The Regulation of Medically Assisted Procreation in Europe and Related Nations," PhD dissertation, Department of Sociology, University of North Texas, 2002; Viveca Söderström-Anttila et al., "Oocyte Donation in Infertility Treatment: A Review," *Acta Obstetrica et Gynecologica Scandinavica,* 80 (2001); and Julie Selwyn and Wendy Sturgess, *International Overview of Adoption: Policy and Practice* (University of Bristol, 2001).

of those who view reproductive medicine as a step toward the commoditization of both children and families. But property rights could at least provide a framework for discussion and for clarifying, at a minimum, who has the right to create, dispose of, implant, and exchange embryos. Similar guidelines could easily cover the component side of the market, clarifying ownership rights involving eggs, sperm, and wombs. Supported by rules and policies, the fertility trade would have a better chance of producing happy, healthy children, matched more consistently and at a lower cost to the parents who so desperately want them.

Economists have long argued that property rights are critically important to any modern market economy, the first step in a long and often arduous trek toward commercial development. If people want bread on their tables, farmers need to know that the wheat they grow will be theirs to sell. If high-tech industries like software or biotechnology are to develop, the firms that invest in those technologies need to know they can recoup their investments by bringing the resulting products to market.

In the $3 billion baby business, though, such rights are essentially nonexistent. Consider two cases. In 2003, a retired firefighter sued a Boston fertility clinic for implanting in his ex-wife, against his objections, embryos that the couple had previously produced. And in February 2005, a Chicago couple sued a local clinic for discarding embryos frozen five years earlier.

The firefighter presumed that the embryos he had helped create belonged to him. His ex-wife presumed they belonged to her. If the "property" had been virtually anything but an embryo, courts in Massachusetts would have been able to resolve the dispute rather easily: The divorced couple could have split a contested joint bank account, say, or sold a car. But you can't split an embryo. More important, the court that handled the case didn't even want to deal with it as an issue of property. Instead, the jury decided that the clinic should have obtained the father's written consent and accordingly awarded him compensation for child support.

In the Chicago case, the clinic argued that it had mistakenly destroyed property; the plaintiffs alleged that the clinic had killed their children. The courts were asked to decide: Was an embryo property or a human being? Should its disposal be treated as the destruction of property or the termination of a life? The first judge dismissed the couple's claims of wrongful death, but the second accepted them. When this article went to press, the case was still wending its way through the Illinois legal system.

How are we to resolve these cases without some common underlying convictions about either ownership or contractual rights? Do parents own the embryos they produce? Do clinics? Or are they the property of the state? Do frozen embryos have a right to be born (a right currently denied to other, implanted, embryos)? Or, if they are defective, a right not to be born? Do they have a right not to be used for research? To inherit things? For that matter, does a sperm donor have any rights involving the offspring he genetically fathers? Does he have responsibilities? What about an egg donor? Or a surrogate mother? If an infant has three potential mothers (the egg donor, the surrogate carrier, and the intended mother), how does a court decide whom to favor?

A system of contracts and property rights – even a rudimentary one – could help bring some measure of clarity to this confusion. It could delineate not only who has rights to what forms of genetic or social offspring, but under what conditions those rights can be expanded. It could establish by law not necessarily who has *ownership* of a particular child but who has the right or responsibility to parent that child.

Establishing a property rights regime for sperm, for example, should be relatively easy. Laws could establish whether men have any lingering rights to the children created by their sperm and whether (or under what conditions) these children could uncover their ge-

What Price Babies?

Depending on what method they choose, where they live, and what sort of insurance coverage they have, would-be parents who use assisted reproduction face costs that can be enormous.

	TYPICAL COST	INSURANCE COVERAGE	TAX CREDIT
Sperm	$300	Varies by state	0
Eggs	$4,500	Varies by state	0
IVF	$12,400 per cycle	Varies by state	0
Surrogacy	$59,000	None	0
PGD	$3,500	None	0
Cloning	Unknown	None	0
Adoption	$2,500 (foster child) $15,000 (domestic infant) $25,000 (international)	Does not apply	$10,000 (federal)

netic heritage. Similar rules could cover eggs and, with somewhat more difficulty, wombs. One could imagine a regime that worked as follows. Female donors (or surrogates) could agree at the outset to the kind of relationship that would exist between them and an eventual child. They would then know, explicitly, what rights they had with regard to this child and what kinds of decisions were theirs to make. Theoretically, such a system could incorporate provisions from the world of adoption, including a mandatory waiting period after the child's birth, during which the birth mother (or egg donor) would retain all rights to the child. Once she agreed to relinquish the baby, though, she would forfeit any subsequent rights to parent the child.

A system of property rights could also define the limits of the market, separating those elements – sperm, eggs – that can be sold or, in the case of wombs, leased, from those that cannot. In particular, it could draw a much clearer line between the components of reproduction and the babies themselves, ensuring that parents do not profit from relinquishing their offspring. Men could still sell their sperm, women could receive compensation for reasonable pregnancy expenses, and intermediaries could charge fees for managing these exchanges. But while mothers and fathers could renounce their right to parent a particular child, they could not sell their parenting rights to others. Essentially, this is the fine line that already exists – and generally works – in the area of adoption.

Note that in this type of system, potential offspring would not be treated as property per se. They wouldn't be bargained for or sold, and their humanity would never be called into question. Instead, market participants would be furnished with a sense of order and predictability, a set of norms that would prescribe behavior and establish the limits of acceptability. These norms would allow people to transact more securely and to know the rules beforehand. Creating property rights for the baby business would neither, as critics assert, turn children into commodities nor mothers into baby machines. It would not tarnish reproduction or turn intimate relations into financial ones. Instead, property rights would help codify transactions and procedures that already take place and thus resolve disputes that lead too often to tragedy.

Defining property rights would not resolve the deep moral issues that this market raises. But it could provide a framework for clarifying who has the right to create, dispose of, implant, and exchange embryos.

Beyond Property Rights

A baby business governed by a system of property rights is a vital intermediate step that would bring clarity and predictability to the market. The introduction of these rights would not, however, tell us which pieces of this emerging technology are acceptable or for whom. Therefore, society also needs to decide how much control parents can exert over their child's conception and genetic makeup and what part of the conception society should pay for. These are exceedingly difficult, Solomonic choices. Yet at the moment, we are making them in a purely ad hoc way – depending on the particular state, the local court system, and the finances of the individuals involved. A far better approach would be for Americans to decide, as a society, just what we consider acceptable in the baby trade. Are we comfortable allowing commercial exchange in the pursuit of procreation? Are we willing to permit

parents and their doctors to manipulate the embryos that will become their offspring? How will we determine which procedures push the trade too far? Any one person – this author included – is likely to have strong views on each of these questions. But the process here is far more important than any single set of conclusions. Americans need to debate these questions. For without such a process, we will never be able to arrive at a regulatory strategy that sticks.

Admittedly, the politics of this process will be tough. Americans may never agree on the moral issues that surround the baby trade or on the rules that should guide it. But if we break this debate into several manageable pieces, thinking of the baby business in terms of principles rather than problems or technologies, we may find a route to consensus and thus to effective policies. There are five areas that should be considered in the debate over making the baby business both efficient and decent.

Access to information. Most Americans view information as a public good. We are happy to have the government provide it for free (or require others to do so), and we believe others should have access to information as well. This set of preferences is particularly strong in matters that relate to health and safety, which explains why the United States has long had warning labels on consumer products and dosage information on drugs. Applying this preference to the field of reproductive medicine would be relatively straightforward. It would simply suggest a light-handed regulatory regime in which providers of assisted reproductive services would be required to inform potential clients of the costs, benefits, and potential dangers of their services. The government could subsequently decide to aggregate some of these data or to commission additional studies of longer-term risks. In any case, the essential idea would be to determine what information is important to the health and safety of the American population and then to provide it.

Already, the outlines of such provisions are in place. In 1992, Congress passed the Fertility Clinic Success Rate and Certification Act, which requires fertility clinics to submit basic statistical information to the Centers for Disease Control. In 2004, the President's Council on Bioethics recommended stiffer penalties for clinics that don't report their data, and it recommended longitudinal studies of children born through assisted reproduction. Should Americans decide that they need more information about the effects of high-tech baby making – about the impact of hormone treatments, for example, or the costs of labor and delivery for mothers over 40 – the release of different kinds of data could similarly be required.

Equity. The United States guarantees equal education for children and gives all citizens equal protection under the law. Although there's no guarantee of equal access to health care, Americans do in many situations apply the notion of equity to the medical realm: Donor kidneys can be had even by the poorest patients, for instance, and free prenatal care is extended, by statute and regulation, to nearly all women. Various aspects of the baby trade could receive similar treatment. Legislators could, for example, decide to designate infertility (under certain conditions) a disease and require that treatment be distributed equitably among its sufferers. Or they could decide that having children is a basic right and that society therefore needs to find some way to provide at least one child to everyone who wants to be a parent.

Note that the equity principle does not dictate a particular policy outcome. Instead it provides a relatively neat way of framing an otherwise messy and complicated debate. What is it about reproduction that society might want to distribute fairly? Is it a pregnancy? A child genetically related to both parents? Simply a chance at parenthood? If it's the first of these options, then implementation would involve providing assisted reproduction services to all kinds of prospective parents and either subsidizing or reimbursing the cost. If it's the second, then taxpayers wouldn't need to cover forms of reproduction that involve third-party sperm or eggs. And if it's the third, citizens would probably want policies that favor adoption over fertility treatments. Yet the logic in these cases is precisely the same. As a society, we need to consider what, if anything, we want to distribute equitably. Then we need to decide how to accomplish this distribution and cover its inevitable costs.

Legality. While the baby business is full of parents who don't get the children they crave, certain clinics and middlemen arguably carry the pursuit of babies too far. A central question, then, is where to draw the line between legitimate and illegitimate practice. Currently, there are few laws in this field and few politicians willing to tackle a subject that touches both on the question of abortion and on the deeply held desires of those most likely to be affected by any restrictions or bans. Yet even in this intimate area, Americans could still consider where in the baby business they want to limit either technology or parental choice. Some of these lines exist already. Cloning for reproductive purposes, for example, is explicitly banned in the United States. So is cytoplasmic transfer, a process in

Economists have long argued that property rights are critically important to any modern market economy. In the $3 billion baby business, though, such rights are essentially nonexistent.

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which donor cytoplasm is used to refresh the egg of an older woman. Other U.S. laws prohibit birth mothers from selling their children and define the legitimate boundaries of reimbursement. Americans could, if they chose, draw similar lines in other areas of the baby business, explicitly limiting parental choice or the reach of technology.

Cost. In the baby business, even private transactions can impose costs on the rest of society. Consider, for instance, the babies born to 25-year-old Teresa Anderson of Mesa, Arizona, in April 2005. Anderson was a gestational surrogate who, for $15,000, had agreed to carry a child for Enrique Moreno, a landscaper, and his 32-year-old wife, Luisa Gonzalez. To increase the chance of pregnancy, doctors transplanted five embryos into Anderson's womb. They all survived, and Anderson subsequently bore quintuplets for the couple. When the babies arrived, the news media showed the smiling surrogate, the delighted couple, and the five relatively healthy babies. These babies, however, were extraordinarily expensive: The costs of delivery almost certainly ran to well over $400,000. Gonzalez and Moreno paid to conceive these children, but U.S. consumers – through increased insurance fees and hospital costs – are paying, too. According to one recent study, the total cost of delivering a child born through IVF ranges between $69,000 and $85,000. If the child is born to an older woman, the cost rises to between $151,000 and $223,000. The prospective parents in these cases pay for part of these costs – the IVF, the hormones, the multiple medical visits – but their fellow citizens are paying as well. (See the exhibit "What Price Babies?")

Society also pays the costs that accumulate as these children grow up. Currently, about 35% of births resulting from IVF and intracytoplasmic sperm injection (ICSI), a relatively common procedure in high-tech pregnancies, are multiples. While most of these newborns are perfectly fine, a significant portion arrive prematurely or under weight, conditions that can burden them with problems later in life. Approximately 20% of low-birth-weight children suffer from severe disabilities, while 45% need to attend special-education programs. So individual choices about procreation generate costs for society at large, not to mention for the children themselves.

In these cases, Americans may choose to pay the steep costs of assisted reproduction and to embrace the technologies that impose those costs. Or they may not. The cost consideration merely helps frame the policy debate. In so doing, it forces society to address the question of how much it values the various outcomes of the baby business. If the cost of delivering quintuplets is exceedingly high, then perhaps there should be a limit on the number of embryos that can be transferred in a single cycle of IVF (most European countries already have such limits). If the overall

costs of IVF babies are deemed too great, then perhaps access to the technology should be limited to clients who can pay.

Parental choice. In choosing to conceive a child, parents have to make decisions that run from the prosaic (Is this the right time?) to the profound: Should I create a second child in the hope that some of his or her bone marrow could save my first, who is suffering from leukemia? Am I too old? Too sick? Too single? Since the advent of assisted reproduction, Americans have shied away from interference in these choices, believing that their rights to privacy and procreation shield essentially all aspects of reproduction from government prying.

As the baby business expands, however, a zone of parental privacy may be increasingly difficult to maintain. Confronted with the costs of delivering high-tech babies, of educating disabled children, and perhaps of caring for youngsters orphaned by elderly parents, society may become more willing to set limits on who can make use of assisted reproduction and when.

Other questions are potentially even more vexing. Should society take it in stride if gender ratios are shifted by a generation of parents separately making the private decision to conceive either a boy or a girl? Should parents be allowed to manipulate their gene pool to produce offspring who are taller, smarter, or more athletic than they would have been otherwise? What if cloning were to become a realistic reproductive option? At that point, procreative choices would become more than personal. They would affect the very core of how people reproduce themselves and their society.

Thus, as the technology of procreation evolves, society may well want to revisit the bounds of privacy and parental choice. What kind of control should parents have over the fate of their offspring? And what controls should they be denied? Already, Americans draw these lines in more mundane realms. Under U.S. law, for example, parents can choose to educate their children at home, have them tutored, or send them to any of a wide variety of schools. They cannot, however, choose to deprive their children of an education. Similarly, while parents can opt to serve their teenagers beer or give them guns, they cannot let their children purchase beer or attend school with guns. Parents' rights to administer or withhold medical care are also circumscribed. In all these cases, society sets clear limits on what families can do and where parents' desires for their own children must give way to the interests of others.

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As changing demographics and social mores collide with exploding technological advances, more and more people will desire the goods and services that allow them control over conception. They will want to decide when they conceive and how they conceive and even, increasingly, the characteristics of the children they raise.

If this market isn't to balloon out of control, society has only four options. First, it could leave the baby business to the vagaries of market forces, allowing supply and demand alone to determine its shape. In that case, supply would increase, but only the rich would enjoy the benefits. Second, society could vainly attempt to ban the baby business altogether after deciding that its risks and inherent inequities are simply too great. Third, it could treat high-technology reproduction as it treats organ transplants, allowing the science to flourish but removing it completely from the market. Societal pressure to maintain an open market, however, would be all but insurmountable; unlike the organs of living or recently deceased people, a supply of eggs, wombs, and embryos is already available, and the players are in place.

Which leaves us, really, with the best and most feasible option: U.S. society needs to decide how to regulate the baby trade and how to make the market work better and more equitably.

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GREGORY MANCHESS

PETER F. DRUCKER, 1909–2005

WHAT EXECUTIVES SHOULD REMEMBER

by Peter F. Drucker

No management thinker was as prolific or as profound as Peter Drucker. Here is some of the savviest advice he offered executives.

EDITORS' NOTE: Peter Drucker flourished in what is often called the information age, but his writings offered far more thinking than data. In dozens of sharply written essays for *Harvard Business Review* and other publications, he delved into executives' basic challenges and opportunities. The payoff in his articles rarely came from a research finding or little-known fact. Instead, it came from his ideas, which confronted common assumptions about business and people. And he urged readers to follow his lead and take on the hard work of thinking – always combined, he insisted, with decisive action.

Peter Ferdinand Drucker was born in Vienna in 1909, the son of a high-level civil servant in the Hapsburg empire. World War I left Vienna with little opportunity to offer him, so after he finished school, he worked in Germany, first in banking and then in journalism. While he was there, he also earned a doctorate in international law. The rise of Nazism forced him to leave Germany in 1933; after four years in London, he moved for good to the United States, where he became a professor as well as a freelance writer.

His career as a business thinker took off in the 1940s, when his initial writings on politics and society won him access to the internal workings of General Motors, then one of the largest companies in the world. His experiences in Europe had left him fascinated with the problem of authority, a fascination shared by Donaldson Brown, the mastermind behind the administrative controls at GM. Brown invited him in to conduct what might be called a political audit. The resulting *Concept of the Corporation* popularized GM's multidivisional structure and led to numerous articles, consulting engagements, and additional books.

A knowledge worker himself, Drucker was particularly interested in the growing importance of people who worked with their minds rather than their hands. He was intrigued by employees who knew more about certain subjects than their bosses or colleagues but who still had to cooperate with others in a large organization. Rather than simply glorify the phenomenon as the epitome of human progress, Drucker analyzed it and explained how it challenged the common thinking about how organizations should be run.

His approach worked well in the increasingly mature business world of the second half of the twentieth century. By that time, large corporations had developed the basic manufacturing efficiencies and managerial hierarchies of mass production. Executives had come to think they knew how to run companies, and Drucker took it upon himself to poke holes in their beliefs, lest organizations become stale. But he did so in a sympathetic way. He assumed that his readers were intelligent, rational, hardworking people of goodwill. If their organizations struggled, he believed it was usually because of outdated ideas, a narrow conception of a problem, or internal misunderstandings. His insights were well suited to *Harvard Business Review*'s format – practical, idea-based essays for executives – and his clear-eyed, humanistic writing enriched the magazine time and again. He helped us all think broadly and deeply.

The Theory of the Business

>> Excerpted from September–October 1994

The root cause of nearly every one of these [business] crises is not that things are being done poorly. It is not even that the wrong things are being done. Indeed, in most cases, the *right* things are being done – but fruitlessly. What accounts for this apparent paradox? The assumptions on which the organization has been built and is being run no longer fit reality. These are the assumptions that shape any organization's behavior, dictate its decisions about what to do and what not to do, and define what the organization considers meaningful results. These assumptions are about markets. They are about identifying customers and competitors, their values and behavior. They are about technology and its dynamics, about a company's strengths and weaknesses. These assumptions are about what a company gets paid for. They are what I call a company's *theory of the business*....

Whenever a big organization gets into trouble – and especially if it has been successful for many years – people blame sluggishness, complacency, arrogance, mammoth bureaucracies. A plausible explanation? Yes. But rarely the relevant or correct one....

For 70 years, [General Motors' theory of the business] worked like a charm. Even in the depths of the Depression, GM never suffered a loss while steadily gaining market share. But in the late 1970s, its assumptions about the market and about production became invalid. The market was fragmenting into highly volatile "lifestyle" segments. Income became one factor among many in the buying decision, not the only one. At the same time, lean manufacturing created an economics of small scale. It made short runs and variations in models less costly and more profitable than long runs of uniform products.

GM knew all this but simply could not believe it. (GM's union still doesn't.) Instead, the company tried to patch things over. It maintained the existing divisions based on income segmentation, but each division now offered a "car for every purse." It tried to compete with lean manufacturing's economics of small scale by automating the large-scale, long-run mass production (losing some $30 billion in the process). Contrary to popular belief, GM patched things over with prodigious energy, hard work, and lavish investments of time and money. But patching only confused the customer, the dealer, and the employees and management of GM itself. In the meantime, GM neglected its *real* growth market, where it had leadership and would have been almost unbeatable: light trucks and minivans....

...Traditionally, we have searched for the miracle worker with a magic wand to turn an ailing organization around. To establish, maintain, and restore a theory, however, does not require a Genghis Khan or a Leonardo da Vinci in the executive suite. It is not genius; it is hard work. It is not being clever; it is being conscientious. It is what CEOs are paid for.

There are indeed quite a few CEOs who have successfully changed their theory of the business. The CEO who built Merck into the world's most successful pharmaceutical business by focusing solely on the research and development of patented, high-margin breakthrough drugs radically changed the company's theory by acquiring a large distributor of generic and nonprescription drugs. He did so without a "crisis," while Merck was ostensibly doing very well. Similarly, a few years ago, the new CEO of Sony, the world's best-known manufacturer of consumer electronic hardware, changed the company's theory of the business. He acquired a Hollywood movie production company and, with that acquisition, shifted the organization's center of gravity from being a hardware manufacturer in search of software to being a software producer that creates a market demand for hardware.

But for every one of these apparent miracle workers, there are scores of equally capable CEOs whose organizations stumble. We can't rely on miracle workers to rejuvenate an obsolete theory of the business any more than we

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A DEGENERATIVE DISEASE WILL NOT BE CURED BY PROCRASTINATION. IT REQUIRES DECISIVE ACTION.

can rely on them to cure other types of serious illness. And when one talks to these supposed miracle workers, they deny vehemently that they act by charisma, vision, or, for that matter, the laying on of hands. They start out with diagnosis and analysis. They accept that attaining objectives and rapid growth demand a serious rethinking of the theory of the business. They do not dismiss unexpected failure as the result of a subordinate's incompetence or as an accident but treat it as a symptom of "systems failure." They do not take credit for unexpected success but treat it as a challenge to their assumptions.

They accept that a theory's obsolescence is a degenerative and, indeed, life-threatening disease. And they know and accept the surgeon's time-tested principle, the oldest principle of effective decision making: A degenerative disease will not be cured by procrastination. It requires decisive action.

Managing for Business Effectiveness

>> Excerpted from May–June 1963

I do not propose to give here a full-blown "science of management economics," if only because I have none to give. Even less do I intend to present a magic formula, a "checklist" or "procedure" which will do the job for the manager. For his job is *work* – very hard, demanding, risk-taking work. And while there is plenty of laborsaving machinery around, no one has yet invented a "work-saving" machine, let alone a "think-saving" one.

But I do claim that we know how to organize the job of managing for economic effectiveness and how to do it with both direction and results. The answers to the [following] three key questions…are known, and have been known for such a long time that they should not surprise anyone.

1. What is the manager's job? It is to direct the resources and the efforts of the business toward opportunities for economically significant results. This sounds trite – and it is. But every analysis of actual allocation of resources and efforts in business that I have ever seen or made showed clearly that *the bulk of time, work, attention, and money first goes to "problems" rather than to opportunities, and, secondly, to areas where even extraordinarily successful performance will have minimal impact on results.*

2. What is the major problem? It is fundamentally the confusion between effectiveness and efficiency that stands between doing the right things and doing things right. *There is surely nothing quite so useless as doing with great efficiency what should not be done at all.* Yet our tools – especially our accounting concepts and data – all focus on efficiency. What we need is (1) a way to identify the areas of effectiveness (of possible significant results), and (2) a method for concentrating on them.

3. What is the principle? That, too, is well-known – at least as a general proposition. Business enterprise is not a phenomenon of nature but one of society. In a social situation, however, events are not distributed according to the "normal distribution" of a natural universe (that is, they are not distributed according to the U-shaped Gaussian curve). *In a social situation a very small number of events – 10% to 20% at most – account for 90% of all results, whereas the great majority of events account for 10% or less of the results.*

This is true in the marketplace. A handful of customers out of many thousands produce the bulk of the orders; a handful of products out of hundreds of items in the line produce the bulk of the volume; and so on. This is true of markets, end uses, and distributive channels. It is equally true of sales efforts: a few salesmen, out of several hundred, always produce two-thirds or more of all new business. It is true in the plant: a handful of production runs account for most of the tonnage. It is true of research: a few men in the laboratory produce all the important innovations, as a rule….

UNFORTUNATELY I KNOW OF NO PROCEDURE OR CHECKLIST FOR MANAGERIAL COURAGE.

This is part of the last and most crucial "how to do it" requirement: the courage to go through with logical decisions – despite all pleas to give this or that product another chance, and despite all such specious alibis as the accountant's "it absorbs overhead" or the sales manager's "we need a full product line." (Of course, these are not always unfounded alibis, but the burden of proof of every alibi rests with those that plead it.) It would be nice if I did, but unfortunately I know of no procedure or checklist for managerial courage.

What I have sketched out in this article is the manager's real work. As such it requires that he attack the problem of increasing business effectiveness systematically – with a plan of action, with a method of analysis, and with an understanding of the tools he needs.

And while the job to be done may look different in every individual company, one basic truth will always be present: every product and every activity of a business begins to obsolesce as soon as it is started. Every product, every operation, and every activity in a business should, therefore, be put on trial for its life every two or three years. Each should be considered the way we consider a proposal to go into a *new* product, a new operation or activity – complete with budget, capital appropriations request, and so on. One question should be asked of each: "If we were not

in this already, would we now go into it?" And if the answer is "no," the next question should be: "How do we get out and how fast?"

What Business Can Learn from Nonprofits

>> Excerpted from July–August 1989

Starting with the mission and its requirements may be the first lesson business can learn from successful nonprofits. It focuses the organization on action. It defines the specific strategies needed to attain the crucial goals. It creates a disciplined organization. It alone can prevent the most common degenerative disease of organizations, especially large ones: splintering their always limited resources on things that are "interesting" or look "profitable" rather than concentrating them on a very small number of productive efforts.

The best nonprofits devote a great deal of thought to defining their organization's mission. They avoid sweeping statements full of good intentions and focus, instead, on objectives that have clear-cut implications for the work their members perform – staff and volunteers both. The Salvation Army's goal, for example, is to turn society's rejects – alcoholics, criminals, derelicts – into citizens. The Girl Scouts help youngsters become confident, capable young women who respect themselves and other people. The Nature Conservancy preserves the diversity of nature's fauna and flora. Nonprofits also start with the environment, the community, the "customers" to be; they do not, as American businesses tend to do, start with the inside, that is, with the organization or with financial returns....

A well-defined mission serves as a constant reminder of the need to look outside the organization not only for "customers" but also for measures of success. The temptation to content oneself with the "goodness of our cause" – and thus to substitute good intentions for results – always exists in nonprofit organizations. It is precisely because of this that the successful and performing nonprofits have learned to define clearly what changes *outside* the organization constitute "results" and to focus on them.

The experience of one large Catholic hospital chain in the Southwest shows how productive a clear sense of mission and a focus on results can be. Despite the sharp cuts in Medicare payments and hospital stays during the past eight years, this chain has increased revenues by 15% (thereby managing to break even) while greatly expanding its services and raising both patient-care and medical standards. It has done so because the nun who is its CEO understood that she and her staff are in the business of delivering health care (especially to the poor), not running hospitals.

As a result, when health care delivery began moving out of hospitals for medical rather than economic reasons about ten years ago, the chain promoted the trend instead of fighting it. It founded ambulatory surgery centers, rehabilitation centers, X-ray and lab networks, HMOs, and so on. The chain's motto was: "If it's in the patient's interest, we have to promote it; it's then our job to make it pay." Paradoxically, the policy has filled the chain's hospitals; the freestanding facilities are so popular they generate a steady stream of referrals....

Many nonprofits now have what is still the exception in business – a functioning board. They also have something even rarer: a CEO who is clearly accountable to the board and whose performance is reviewed annually by a board committee. And they have what is rarer still: a board whose performance is reviewed annually against preset performance objectives. Effective use of the board is thus a second area in which business can learn from the nonprofit sector....

...[H]owever common professional management becomes – and professional CEOs are now found in most nonprofits and all the bigger ones – nonprofit boards cannot, as a rule, be rendered impotent the way so many business boards have been. No matter how much nonprofit CEOs would welcome it – and quite a few surely would – nonprofit boards cannot become their rubber stamp. Money is one reason. Few directors in publicly held corporations are substantial shareholders, whereas directors on nonprofit boards very often contribute large sums themselves, and are expected to bring in donors as well. But also, nonprofit directors tend to have a personal commitment to the organization's cause. Few people sit on a church vestry or on a school board unless they deeply care about religion or education. Moreover, nonprofit board members typically have served as volunteers themselves for a good many years and are deeply knowledgeable about the organization, unlike outside directors in a business.

Precisely because the nonprofit board is so committed and active, its relationship with the CEO tends to be highly contentious and full of potential for friction. Nonprofit CEOs complain that their board "meddles." The directors, in turn, complain that management "usurps" the board's function. This has forced an increasing number of nonprofits to realize that neither board nor CEO is "the boss." They are colleagues, working for the same goal but each

MANY NONPROFITS NOW HAVE WHAT IS STILL THE EXCEPTION IN BUSINESS – A FUNCTIONING BOARD.

having a different task. And they have learned that it is the CEO's responsibility to define the tasks of each, the board's and his or her own….

The weakening of the large corporation's board would, many of us predicted (beginning with Myles Mace), weaken management rather than strengthen it. It would diffuse management's accountability for performance and results; and indeed, it is the rare big-company board that reviews the CEO's performance against preset business objectives. Weakening the board would also, we predicted, deprive top management of effective and credible support if it were attacked. These predictions have been borne out amply in the recent rash of hostile takeovers.

The New Society of Organizations

>> Excerpted from September–October 1992

Society, community, and family are all conserving institutions. They try to maintain stability and to prevent, or at least to slow, change. But the modern organization is a destabilizer. It must be organized for innovation and innovation, as the great Austro-American economist Joseph Schumpeter said, is "creative destruction." And it must be organized for the systematic abandonment of whatever is established, customary, familiar, and comfortable, whether that is a product, service, or process; a set of skills; human and social relationships; or the organization itself. In short, it must be organized for constant change. The organization's function is to put knowledge to work – on tools, products, and processes; on the design of work; on knowledge itself. It is the nature of knowledge that it changes fast and that today's certainties always become tomorrow's absurdities….

Unlike "community," "society," or "family," organizations are purposefully designed and always specialized. Community and society are defined by the bonds that hold their members together, whether they be language, culture, history, or locality. An organization is defined by its task. The symphony orchestra does not attempt to cure the sick; it plays music. The hospital takes care of the sick but does not attempt to play Beethoven.

Indeed, an organization is effective only if it concentrates on one task. Diversification destroys the performance capacity of an organization, whether it is a business, a labor union, a school, a hospital, a community service, or a house of worship. Society and community must be multidimensional; they are environments. An organization is a tool. And as with any other tool, the more specialized it is, the greater its capacity to perform its given task.

Because the modern organization is composed of specialists, each with his or her own narrow area of expertise, its mission must be crystal clear. The organization must be single-minded, or its members will become confused. They will follow their own specialty rather than apply it to the common task. They will each define "results" in terms of their own specialty and impose its values on the organization. Only a focused and common mission will hold the organization together and enable it to produce. Without such a mission, the organization will soon lose credibility and, with it, its ability to attract the very people it needs to perform….

The diversity that is characteristic of a developed society and that provides its great strength is only possible because of the specialized, single-task organizations that we have developed since the Industrial Revolution and, especially, during the last 50 years. But the feature that gives them the capacity to perform is precisely that each is autonomous and specialized, informed only by its own narrow mission and vision, its own narrow values, and not by any consideration of society and community.

Therefore, we come back to the old – and never resolved – problem of the pluralistic society: Who takes care of the Common Good? Who defines it? Who balances the separate and often competing goals and values of society's institutions? Who makes the trade-off decisions and on what basis should they be made?

Medieval feudalism was replaced by the unitary sovereign state precisely because it could not answer these questions. But the unitary sovereign state has now itself been replaced by a new pluralism – a pluralism of function rather than one of political power – because it could neither satisfy the needs of society nor perform the necessary tasks of community. That, in the final analysis, is the most fundamental lesson to be learned from the failure of socialism, the failure of the belief in the all-embracing and all-powerful state. The challenge that faces us now, and especially in the developed,

AN ORGANIZATION IS EFFECTIVE ONLY IF IT CONCENTRATES ON ONE TASK. DIVERSIFICATION DESTROYS THE PERFORMANCE CAPACITY OF AN ORGANIZATION.

free-market democracies such as the United States, is to make the pluralism of autonomous, knowledge-based organizations redound both to economic performance and to political and social cohesion.

The Information Executives Truly Need

>> Excerpted from January–February 1995

Ever since the new data processing tools first emerged 30 or 40 years ago, businesspeople have both overrated and underrated the importance of information in the organization. We – and I include myself – overrated the possibilities to the point where we talked of computer-generated "business models" that could make decisions and might even be able to run much of the business. But we also grossly underrated the new tools; we saw in them the means to do better what executives were already doing to manage their organizations.

Nobody talks of business models making economic decisions anymore. The greatest contribution of our data processing capacity so far has not even been to management. It has been to operations – for example, computer-assisted design or the marvelous software that architects now use to solve structural problems in the buildings they design.

Yet even as we both overestimated and underestimated the new tools, we failed to realize that they would drastically change the *tasks* to be tackled. Concepts and tools, history teaches again and again, are mutually interdependent and interactive. One changes the other. That is now happening to the concept we call a business and to the tools we call information. The new tools enable us – indeed, may force us – to see our businesses differently….

Traditional cost accounting measures what it costs to *do* a task, for example, to cut a screw thread. Activity-based costing also records the cost of *not doing,* such as the cost of machine downtime, the cost of waiting for a needed part or tool, the cost of inventory waiting to be shipped, and the cost of reworking or scrapping a defective part. The costs of not doing, which traditional cost accounting cannot and does not record, often equal and sometimes even exceed the costs of doing. Activity-based costing therefore gives not only much better cost control, but increasingly, it also gives *result control*….

Whichever way we satisfy it, the need for information on the environment where the major threats and opportunities are likely to arise will become increasingly urgent.

It may be argued that few of those information needs are new, and that is largely true. Conceptually, many of the new measurements have been discussed for many years and in many places. What is new is the technical data processing ability. It enables us to do quickly and cheaply what, only a few short years ago, would have been laborious and very expensive. Seventy years ago, the time-and-motion study made traditional cost accounting possible. Computers have now made activity-based cost accounting possible; without them, it would be practically impossible.

But that argument misses the point. What is important is not the tools. It is the concepts behind them. They convert what were always seen as discrete techniques to be used in isolation and for separate purposes into one integrated information system. That system then makes possible business diagnosis, business strategy, and business decisions. That is a new and radically different view of the meaning and purpose of information: as a measurement on which to base future action rather than as a postmortem and a record of what has already happened.

The command-and-control organization that first emerged in the 1870s might be compared to an organism held together by its shell. The corporation that is now emerging is being designed

around a skeleton: *information,* both the corporation's new integrating system and its articulation.

Our traditional mind-set – even if we use sophisticated mathematical techniques and impenetrable sociological jargon – has always somehow perceived business as buying cheap and selling dear. The new approach defines a business as the organization that adds value and creates wealth.

Managing Oneself

>> Excerpted from March–April 1999

Amazingly few people know *how* they get things done. Indeed, most of us do not even know that different people work and perform differently. Too many people work in ways that are not their ways, and that almost guarantees nonperformance. For knowledge workers, How do I perform?

may be an even more important question than What are my strengths?

Like one's strengths, how one performs is unique. It is a matter of personality. Whether personality be a matter of nature or nurture, it surely is formed long before a person goes to work. And *how* a person performs is a given, just as *what* a person is good at or not good at is a given. A person's way of performing can be slightly modified, but it is unlikely to be completely changed – and certainly not easily. Just as people achieve results by doing what they are good at, they also achieve results by working in ways that they best perform. A few common personality traits usually determine how a person performs.

The first thing to know is whether you are a reader or a listener. Far too few people even know that there are readers and listeners and that people are rarely both. Even fewer know which of the two they themselves are….

…Lyndon Johnson destroyed his presidency, in large measure, by not knowing that he was a listener. His predecessor, John Kennedy, was a reader who had assembled a brilliant group of writers as his assistants, making sure that they wrote to him before discussing their memos in person. Johnson kept these people on his staff – and they kept on writing. He never, apparently, understood one word of what they wrote. Yet as a senator, Johnson had been superb; for parliamentarians have to be, above all, listeners….

…Whenever I, or any other consultant, start to work with an organization, the first thing I hear about are all the personality conflicts. Most of these arise from the fact that people do not know what other people are doing and how they do their work, or what contribution the other people are concentrating on and what results they expect. And the reason they do not know is that they have not asked and therefore have not been told.

This failure to ask reflects human stupidity less than it reflects human history. Until recently, it was unnecessary to tell any of these things to anybody. In the medieval city, everyone in a district plied the same trade. In the countryside, everyone in a valley planted the same crop as soon as the frost was out of the ground. Even those few people who did things that were not "common" worked alone, so they did not have to tell anyone what they were doing.

Today the great majority of people work with others who have different tasks and responsibilities. The marketing vice president may have come out of sales and know everything about sales, but she knows nothing about the things she has never done – pricing, advertising, packaging, and the like. So the people who do these things must make sure that the marketing vice president understands what they are trying to do, why they are trying to do it, how they are going to do it, and what results to expect.

If the marketing vice president does not understand what these high-grade knowledge specialists are doing, it is primarily their fault, not hers. They have not educated her. Conversely, it is the marketing vice president's responsibility to make sure that all of her coworkers understand how she looks at marketing: what her goals are, how she works, and what she expects of herself and of each one of them.

Even people who understand the importance of taking responsibility for relationships often do not communicate sufficiently with their associates. They are afraid of being thought presumptuous or inquisitive or stupid. They are wrong. Whenever someone goes to his or her associates and says, "This is what I am good at. This is how I work. These are my values. This is the contribution I plan to concentrate on and the results I should be expected to deliver," the response is always, "This is most helpful. But why didn't you tell me earlier?"

And one gets the same reaction – without exception, in my experience – if one continues by asking, "And what do I need to know about your strengths, how you perform, your values, and your proposed contribution?" In fact, knowledge workers should request this of

TRUST BETWEEN PEOPLE DOES NOT NECESSARILY MEAN THAT THEY LIKE ONE ANOTHER. IT MEANS THAT THEY UNDERSTAND ONE ANOTHER.

everyone with whom they work, whether as subordinate, superior, colleague, or team member. And again, whenever this is done, the reaction is always, "Thanks for asking me. But why didn't you ask me earlier?"

Organizations are no longer built on force but on trust. The existence of trust between people does not necessarily mean that they like one another. It means that they understand one another. Taking responsibility for relationships is therefore an absolute necessity. It is a duty. Whether one is a member of the organization, a consultant to it, a supplier, or a distributor, one owes that responsibility to all one's coworkers: those whose work one depends on as well as those who depend on one's own work.

They're Not Employees, They're People

>> Excerpted from February 2002

A knowledge-based workforce is qualitatively different from a less-skilled one. True, knowledge workers are a minority of the total workforce and are unlikely ever to be more than that. But they have become the major creators of wealth and jobs. Increasingly, the success – indeed, the survival – of every business will depend on the performance of its knowledge workforce. And since it is impossible, according to the laws of statistics, for an organization to hire more than a handful of "better people," the only way that it can excel in a knowledge-based economy and society is by getting more out of the same kind of people – that is, by managing its knowledge workers for greater productivity. The challenge, to repeat an old saying, is "to make ordinary people do extraordinary things…."

Temps and especially PEOs [professional employee organizations] free up managers to focus on the business rather than on employment-related rules, regulations, and paperwork. To spend up to one-quarter of one's time on employment-related paperwork is indeed a waste of precious, expensive, scarce resources. It is boring. It demeans and corrupts, and the only thing it can possibly teach is greater skill in cheating.

Companies thus have ample reason to try to do away with the routine chores of employee relations – whether by systematizing employee management in-house or by outsourcing it to temps or to a PEO. But they need to be careful that they don't damage or destroy their relationships with people in the process. Indeed, the main benefit of decreasing paperwork may be to gain more time for people relations. Executives will have to learn what the effective department head in the university or the successful conductor of the symphony orchestra have long known: The key to greatness is to look for people's potential and spend time developing it. To build an outstanding university department requires spending time with the promising young postdocs and assistant professors until they excel in their work. To build a world-class orchestra requires rehearsing the same passage in the symphony again and again until the first clarinet plays it the way the conductor hears it. This principle is also what makes a research director in an industry lab successful.

Similarly, leaders in knowledge-based businesses must spend time with promising professionals: Get to know them and be known by them; mentor them and listen to them; challenge them and encourage them. Even if these people are not traditional – read, legal – employees, they are still a capital resource for the organization and critical to its business performance. The administrative tasks that are involved with employee relations can, and should, be systematized – and that means they can, perhaps should, become impersonal. But if employee relations are being outsourced, executives need to work closely with their PEO counterparts on the professional development, motivation, satisfaction, and productivity of the knowledge workers on whose performance their own results depend.

What Makes an Effective Executive

>> Excerpted from June 2004

An effective executive does not need to be a leader in the sense that the term is now most commonly used. Harry Truman did not have one ounce of charisma, for example, yet he was among the most effective chief executives in U.S. history. Similarly, some of the best business leaders and nonprofit CEOs I've worked with over a 65-year consulting career were not stereotypical leaders. They were all over the map in terms of their personalities, attitudes, values, strengths, and weaknesses. They ranged from extroverted to nearly reclusive, from easy-going to controlling, from generous to parsimonious.

What made them all effective is that they followed the same eight practices:

- They asked, "What needs to be done?"
- They asked, "What is right for the enterprise?"
- They developed action plans.
- They took responsibility for decisions.
- They took responsibility for communicating.
- They were focused on opportunities rather than problems.
- They ran productive meetings.
- They thought and said "we" rather than "I…."

We've just reviewed eight practices of effective executives. I'm going to throw in one final, bonus practice. This one's so important that I'll elevate it to the level of a rule: *Listen first, speak last.*

Reprint R0602J
To order, see page 167.

PETER DRUCKER'S HBR ARTICLES

What Makes an Effective Executive
June 2004

They're Not Employees, They're People
February 2002

Managing Oneself
March–April 1999, republished January 2005

The Future That Has Already Happened
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November–December 1951
January–February 1952

Population Trends and Management Policy
May–June 1951

Management Must Manage
March 1950

Information Technology and the Board of Directors

Richard Nolan and F. Warren McFarlan's "Information Technology and the Board of Directors" (October 2005) illuminates an important topic but misses much of the story. Boards of directors need to be concerned about people, information, and strategy, not just about technology. Most IT issues are actually about people's reliance on technology

Board practices for monitoring technology investments vary widely and often wildly. As technology's cost, complexity, and consequences grow, directors need a framework to develop IT policies that fit the companies they oversee.

Information Technology and the Board of Directors

by Richard Nolan and F. Warren McFarlan

to produce, access, or use information. The authors count as IT assets only the hardware and software, underestimate the importance of the CIO, and do not explain the board's role in ensuring the alignment of information resources with the company's priorities.

The article uses the quaint (but common) term "IT governance," which doesn't sound really odd unless we ask whether "physical plant governance" or "human resources governance" would sound strange for other, comparable corporate resources. Too narrow a focus on IT, particularly at the policy level, leads to information-management disasters, as happened during the September 11 attacks; information fumbling; and costly, wasteful overproduction of information. Boards need to develop policies and strategies that ensure the following:

• The CEO is information savvy. He or she understands and articulates the strategic role of information and its relationship to technology – and ensures the information's alignment with the company's objectives.

• The CIO is a major strategist who is responsible for developing the organization's plans for using information resources to transform business processes and activities.

• Managers are information aware. They appreciate the role of information, make sure that their employees have not only the tools but also the understanding to apply it, encourage information sharing, and foster innovation.

• There is a strategic information management plan. A good plan, developed through a consultative process led by the CIO with the support of the CEO, shows how information resources are deployed in support of the company's objectives.

• Reporting requirements and measures are in place. Such measures help companies gauge the true costs of IT-related work (the salaries of knowledge workers, for instance, not just the costs of computers and software) and the true contribution and impact of strategically managed and applied information.

Boards really can't – and shouldn't try to – govern IT. But they can and should

We welcome letters from all readers wishing to comment on articles in this issue. Early responses have the best chance of being published. Please be concise and include your title, company affiliation, location, and phone number. E-mail us at hbr_letters@hbsp.harvard.edu; send faxes to 617-783-7493; or write to The Editor, Harvard Business Review, *60 Harvard Way, Boston, MA 02163. HBR reserves the right to solicit and edit letters and to republish letters as reprints.*

develop effective policies and strategies for information management.

Bruce W. Dearstyne
Professor of Information Studies, Retired
Albany, New York

Richard Nolan and F. Warren McFarlan's article offers a useful model for assessing a company's IT preparedness and for optimizing operations. It also underscores the need to establish IT-savvy board committees that can navigate a company through ever-changing circumstances. However, support, factory, turnaround, and strategic modes may vary depending on a company's size and number of divisions. Large, diversified companies can be in multiple modes – defensive and offensive – simultaneously. For instance, while certain departments can switch quickly to manual procedures in the absence of Internet access, others may grind to a complete halt. Similarly, some groups within a company may be prepared to invest in new systems to reduce costs, while others may find regular maintenance checks to existing systems sufficient. These varied situations can affect a company's performance and create new challenges for decision makers.

Leslie Gaines-Ross
Chief Knowledge and Research Officer
Worldwide
Burson-Marsteller
New York

Idil Cakim
Director of Knowledge Development
Burson-Marsteller
New York

While Nolan and McFarlan are absolutely correct that boards of directors need to oversee IT activities, I disagree with their statements that "to date there have been no standards for IT governance" and "because there has been no comparable body of knowledge and best practice, IT governance doesn't exist per se."

Nolan and McFarlan should have mentioned that there is a widely accepted international framework for IT governance: Control Objectives for Information and related Technology (COBIT). An open standard, COBIT helps board members, managers, and other professionals gain more value from IT and mitigate IT-related risks. It has been implemented by governments, major businesses, and other organizations worldwide and is one of three internationally accepted standards selected to tighten information-systems security across the European Union's 25 member states.

Everett C. Johnson
International President
IT Governance Institute
Rolling Meadows, Illinois

Nolan and McFarlan suggest that an IT inventory comprises only hardware and software, but widely accepted IT inventory views held by enterprise architecture expert John Zachman and others include human and data assets. Hardware and software today are increasingly commoditized, and companies have commoditized their human resources as well through downsizing and outsourcing. What remains unique is a company's data – the most specialized, least replaceable, and most undervalued component of any IT inventory.

A company's accumulated knowledge about itself, its environment, and the parties with which it does business is the underlying asset with which the IT governance committee should be most concerned. Data's increasing ubiquity and its ease of replication and distribution may devalue any small segment of a company's arguably intangible data assets to virtually zero. But estimating the cost of the considerable effort required to restore a company's data entirely from scratch enables its replacement value to be easily conceptualized. At a strategic level, the totality of a company's data resources are nearly irreplaceable. Yet data at this macro level remains largely overlooked by corporate leadership.

Rather than simply fine-tuning the administration of commodities, effective IT governance requires formulating highly creative strategies for wielding a company's unique data assets. Computers and programs are but a means to the real end: employees dynamically interacting with the data, which is essential to a company performing at the top of its game.

Bill Lewis
Principal Consultant
Enterprise Warehousing Solutions
Hinsdale, Illinois

As infrequently as boards choose to oversee IT, it is equally uncommon that CEOs urge their boards to take up this duty – just ask nearly any CIO or CTO. CEOs tend to be determinedly individualistic, but they often believe one of the following statements:

• "I've got the problem covered." Nearly all CEOs who believe this don't dig deeply into the issues Nolan and McFarlan raise and are regularly surprised by adverse IT events.

• "My CIO has the problem covered." This extremely common belief, while highly complimentary to the CIO, is completely wrong from a governance perspective – and, in my experience, good CIOs want more from their CEOs.

• "The board isn't interested." This is also a very common belief, which Nolan and McFarlan ably deal with.

• "No one can really get IT right." CEOs usually share this sentiment only with their trusted advisers. The most dangerous viewpoint of all, it frequently becomes a self-fulfilling prophecy.

No CEO should wait for the board to drive IT oversight. CEOs should work with their boards to determine what level of IT oversight is required and then put it into place.

Gary Curtis
Global Managing Partner
Strategic IT Effectiveness
Accenture
San Francisco

Nolan and McFarlan respond: We were pleased that our article generated so many responses. We agree with Bruce Dearstyne about the types of policies and strategies that are generically appropriate for IT. However, in our article we go beyond this generic analysis and identify a set of organizations where IT

is absolutely critical as an engine of innovation (not to mention survival) and crucial for the delivery of robust operations performance. These companies require a much higher level of IT awareness and board involvement than has existed in the past. For them, the generic policies Dearstyne suggests are not sufficient.

As a result of Sarbanes-Oxley, boards have an expanded accounting role and are now enmeshed in all the details of financial review. Boards today would not dream of abdicating responsibility for the audit overview to either the public accounting firm or the CFO. Rather, the financially literate members on a board's audit committee must render a reasonable and informed judgment on these matters. This response is primarily a defensive one. It's become necessary in a post-Enron world but will ultimately do little for a company's bottom line.

For a select group of companies, preemptive excellence in IT is an important offensive move. These organizations must be at the very forefront of innovation and differentiation in service and products, and their boards must have both expertise and time to oversee these areas.

Companies like Novell and Home Depot have built IT governance mechanisms into their boards that not only address all the points Dearstyne makes but also go beyond what he is comfortable with. Our article tries to provide some practical ways for their boards to act responsibly.

We used the support, factory, turnaround, and strategic quadrants to talk about a company in general. They have also been successfully applied at a more granular level inside the company to describe divisions and functions, but as Leslie Gaines-Ross and Idil Cakim note, they may not all be at the same point on the grid, and thus the specific units may each require different governance responses. Similarly, as technology opportunities evolve and industry conditions change, a firm's aggregate position on the grid may shift from one quadrant to another, again suggesting that governance processes may also have to change.

A lot of useful work has been done on IT and governance, as Everett Johnson rightly observes. What has been overlooked, however, is how this governance process can reach the board of directors, requiring different coordinating mechanisms and perhaps even different board members for some organizations.

Bill Lewis makes a good point that companies can view their software and hardware as vehicles to store and manage their data assets. New technologies allow data assets to be stored in more detail and massaged more effectively. Lewis's thoughts on these assets represent a very important perspective.

Finally, our response to Gary Curtis's observation is, simply, we agree!

The Office of Strategy Management

In "The Office of Strategy Management" (October 2005), Robert S. Kaplan and David P. Norton are absolutely correct when they say that a persistent gap between ambition and performance arises from a disconnect between companies' strategy formulation and strategy execution.

However, each organization has a specific set of reasons for that disconnect. In their article "Turning Great Strategy into Great Performance" (July–August 2005), Michael C. Mankins and Richard Steele highlight the reasons in the 197 companies they studied worldwide.

Some strategy implementation problems, of course, may be dealt with by establishing an office of strategy management (OSM), as Norton and Kaplan recommend. However, an OSM still looks like the good old strategic-planning unit redecorated and repositioned as more "advanced."

In a number of cases, OSMs neglect the underlying reasons for the strategy-to-performance gap. Imagine OSM managers at a multiunit company trying to fix poor strategy implementation in the

division when the real problem is the ineffective allocation of responsibilities or poor and uncommitted senior leadership. What information, incentives, levers, instruments, and resources will these managers have to fix such a problem? Who should evaluate the quality of their attempts, and how? Norton and Kaplan do not address the metrics of OSM's performance or its responsibility for inadequate strategic management procedures.

Executives should be very careful in evaluating Norton and Kaplan's ideas. It is in a very specific context that they are trying to improve strategy process. Without considering that context, you may find that OSM has the opposite of its intended effect, and the disconnect could simply persevere.

Vladislav Beloshapka
Associate Professor
International Management Department
Kiev National University of Economics
Kiev, Ukraine

Kostiantyn Redchenko
Partner
Ukrconsulting
L'viv, Ukraine

I was utterly disappointed by Kaplan and Norton's "The Office of Strategy Management." The challenge of successfully executing strategy is a daunting one. Management's failure to spend enough time discussing strategy, misaligned systems and functions, and uninformed stakeholders all can create real problems. There is scant chance, however, that an office of strategy management will solve them.

The problems of implementing strategy are not about the failure to properly manage a measurement system but about the failure of organizations to think through their approach to strategic governance and infrastructure. Governance defines relationships among constituencies: the nature of control and accountability, the allocation and proper use of power, the way decisions are to be made. Which strategic decisions, for example, should be left to the business unit and which to portfolio managers?

Infrastructure is about the controls, systems, and processes put in place to facilitate a chosen model of governance. What is reviewed, and by whom? Should

enterprise executives focus just on how the various business portfolios are managed, or should they dive into the management of individual businesses? Will a single planning method be mandated, or will business units be allowed to use whatever methods work for them?

The failure to work out these and a host of related questions have done more to doom good strategies than the absence of an office of strategy management ever would.

Jan Dekema
President
Stratiquest Consulting
Ben Lomond, California

Although Kaplan and Norton argue that an OSM is a facilitating organization, adding one more layer to management may well cause resentment among division heads. Some managers may react to this interference by abdicating some of their responsibilities.

S. Viswanathan
Managing Director
John Fowler, India
Bangalore, India

Kaplan and Norton respond: We agree that by itself, establishing a new office can't ensure successfully executed strategies. Our article assumes that readers are already familiar with our previous HBR articles and books on the Balanced Scorecard strategy management system. In our book *The Strategy-Focused Organization,* we describe the importance of executive leadership, communication, incentives and rewards, strategy testing, and a governance system that involves management reports, accountability, and meetings. We do not explicitly discuss all these necessary conditions in the article because we covered them in previous publications. Obviously, however, two of the letter writers are unaware of this work.

Our major new insight in the article is that CEOs can use a chief of staff or OSM to integrate or monitor critical management processes that are vital for successful strategy execution. The OSM enhances the effectiveness of leadership, communication, incentives, and governance. Without senior-level integration and oversight, many otherwise well-supported implementations have failed.

As for S. Viswanathan's concern about adding another layer of management, we are not fans of bureaucracy either. But sometimes staff plays a valuable role. We believe that an OSM, which integrates strategic planning with strategy execution processes, delivers benefits that are many times the multiple of its costs. Among other benefits, the OSM helps align previously siloed divisions with corporate priorities.

The Passive-Aggressive Organization

The section of Gary Neilson, Bruce Pasternack, and Karen Van Nuys's article "The Passive-Aggressive Organization" (October 2005) entitled "Agreement Without Cooperation" highlighted for me one of the differences between U.S. and European organizations. As someone who has worked on both sides of the Atlantic, I am always interested in the dynamics of change management in diverse cultural and legal environments. The example of the complexity reduction program, which was launched by the CEO and which the European manager supported and then essentially killed by placing it low on the priority list, is a very common scenario indeed.

American companies are often reputed to be more open and more democratic than their European counterparts, but I have frequently observed the opposite to be true. The power of the boss, the respect she is given, and the fear she sometimes elicits frequently lead to the passive-aggressive organization the article describes.

In the example, the only dissenter to the CEO's proposed program was the European manager, who perhaps did not insist too strongly against it because of the context. The European manager wanted to express his disfavor gently, without alienating others. He may have already had the reputation of not going along with the program. Therefore, he ducked the issue, never intending to champion the program's execution.

In a European context, the committee, or at least that one manager, would have said "Boss, there are more essential things we should be working on, such as A, B, and C. Our business is complex for reasons X, Y, and Z. Why don't we try to simplify only this part of the process?" Now, I am sure some managers in some American organizations would have reacted like this as well, a point implied by the author, but I am drawing a picture with big Crayolas.

What partially explains European managers' behavior is that they frequently can't be terminated, lest they profit from their termination rights. (Sometimes, these managers actually want to be terminated to gain this financial advantage.) Being an employee under contract versus an employee at the will of the CEO can change managers' reactions and, subsequently, the dynamics of some projects–particularly among senior staff.

In my American–European business world, the Americans' willingness to give new projects a go comes out ahead when the project leader is truly enlightened, experienced, energetic, and motivated to further the interests of the organization. Unfortunately, there are too many cases where one or more of those qualities is missing, and constructive dissent would be useful.

George Arkedis
President
Zep Industries
Nogent-le-Roi, France

Neilson, Pasternack, and Van Nuys respond: As George Arkedis notes, regional distinctions among organizations are very real; our 30,000 survey responses worldwide clearly bear that out. For example, we know that Europeans are more likely than Americans to agree that promotions in their organizations can include lateral movements (Europe: 63%; United States: 52%), while Americans are more likely to agree that other incentives besides pay motivate individuals to do a good job (United States: 73%; Europe: 65%). And as Arkedis also notes, such differences are partly due to differences in exogenous factors such as labor regulations, tax codes, and legal environments. An individual worker at a company can do little to change such

factors. So rather than focus on the region in which a company operates to explain differences in organizational outcomes, we focus on an organization's internal makeup, or its DNA. A company's DNA is infinitely malleable, and almost every employee can initiate improvements to it.

The example mentioned does indeed show a European division behaving passive-aggressively, but our point is not that passive-aggressive behavior is more likely because the division is European. Instead, the behavior is more likely because the division has different priorities than headquarters; in that organization, differences are not raised and dealt with effectively.

Arkedis describes a European context in which the division's differing priorities would be constructively and openly discussed. We would have described it as a "resilient" context regardless of where the managers having the discussion were based.

Hiring for Smarts

I recently read Justin Menkes' "Hiring for Smarts" (November 2005). As an industrial-organizational psychologist with 25 years of experience in the test-publishing industry, and as a journal editor who has published many articles on executive assessment, I would like to address the two basic premises of Menkes' article – namely, that the best predictor of executive performance is intelligence, and no credible intelligence test exists that is relevant to leadership assessment.

There are many ways to assess intelligence, ranging from traditional academic measures of IQ to job-related measures of intelligence to measures of practical or streetwise intelligence. Intelligence is a strong predictor of leadership performance, but the collective psychological research does not suggest that intelligence is a stronger predictor than relevant personality traits. Both types of measurement systems – intelligence testing and personality assessment – typically are needed to ensure the hiring and retention of a successful, and not just an intellectually competent, leader.

Belying Menkes' position that no relevant measure of intelligence exists for the selection of business leaders, many members of the Association of Test Publishers already offer a wide variety of intelligence tests that are being successfully applied in work settings. At IPAT, we have combined job-related measures of personality with a measure of intelligence to assess a leader's "intellectual efficiency." Many of the most successful leaders not only have higher levels of intelligence, on average, but also can think quickly and accurately under pressure. If a leader is extremely intelligent but is not resilient, then the benefits of having a high IQ can be compromised. Additionally, some people with high IQs lack leadership traits such as self-confidence and assertiveness and aren't effective in getting their intelligent positions implemented. Finally, many intelligent leaders are often derailed by their personality flaws and blind spots.

Psychological testing assesses executive potential best when measures of both mental ability and work-related personality are used. By focusing on a test battery that includes both assessment strategies, stronger, more successful leaders can be hired, developed, and retained.

John W. Jones
President
IPAT
Savoy, Illinois

Perhaps Menkes' executive intelligence interview has implications beyond recruitment. Critical thinking is important to senior leadership – why not explicitly nurture such thinking? Several recent software developments, mostly from philosophy and computing groups, support the use of argument diagramming as one means to develop critical thinking. Gains equivalent to those resulting from a complete undergraduate program have been achieved in fewer than 100 hours of class time using argument-mapping techniques.

My colleagues Rossana Guttilla and Phillip Sainter are now introducing argument mapping into undergraduate business teaching and learning, but after reading Menkes's article, I wonder whether we should go further.

Mike Towler
Senior Lecturer in Operations Management and Business Decision Making
Plymouth Business School
University of Plymouth
England

Menkes responds: Any assertion that intelligence is not a dramatically stronger predictor of executive success than personality type runs counter to the volumes of independent research on the subject. The largest published studies on the topic demonstrate that cognitive ability is anywhere from five to ten times more predictive of performance than personality assessments.

Hundreds of measures of emotional, practical, and occupational intelligence currently on the market claim to be predictive of success, but only the evaluative power of the IQ test has been indisputably proven. However, the use of IQ tests for managerial populations is highly unpopular, for a host of reasons, including the irrelevance of their subject matter and the adverse impact they have on minority groups. An executive intelligence measure attempts to harness the predictive power of IQ tests by defining the specific cognitive abilities necessary for managerial work and measuring them in a real-time conversational format that is palatable and appropriate for executives.

John Jones's assertion that intelligence alone does not make an executive successful is an important one. No competent evaluator would draw

conclusions regarding an individual's strengths and weaknesses based on only one source of information. But given the limited value of personality assessments, we must question whether they should be given any significant weight. Research has shown that past-behavioral interviewing and intelligence testing are by far the most powerful means of evaluating performance. Furthermore, these measures each assess different skills, giving very different – and useful – information about a candidate. Therefore, the multimethod approach of administering an intelligence assessment appropriate for executive populations, along with a past-behavioral interview, must now be considered best practice.

Scanning the Periphery

I read George S. Day and Paul J.H. Schoemaker's article "Scanning the Periphery" (November 2005) with great interest. The business environment today is more confusing and uncertain than it was when I developed one of the first systematic scanning programs, the American Council of Life Insurers Trend Analysis Program (TAP), in the 1960s; indeed, the need for objective observation is more critical now than it was then.

When I was researching TAP, authorities at one think tank famous for its work with the U.S. Department of Defense recommended the same approach that Day and Schoemaker do – that I must first figure out which questions I wanted to ask and then devise a system that would help answer those questions. I disagreed. A questions-based program, however open ended, might blind executives to a company's evolving needs. In a time of rapid and constant change, it would be impossible for executives to know which questions to ask until they could see clearly what was happening in their external environments.

In the years since then, the TAP model has been used more successfully by more businesses than any other program, so I have concluded that it was the right approach then and is the right approach now.

Arnold Brown
Chairman
Weiner, Edrich, Brown
New York

Day and Schoemaker respond: Improving peripheral vision begins by asking the right questions. The problem Arnold Brown raises is that every question will focus the mind and thus increase the risk that relevant signals may be overlooked.

Leaders must weigh the risks of being blinded by a semistructured search against the costs of a wild-goose chase. A small list of preselected trends will often prove too narrow to monitor, while a totally random scan will likely result in scattered vision. Each case requires a balance.

By offering a menu of guiding questions, we hope to expand managers' thinking. Brown adds the valuable caveat that these guiding questions – or any other ones – should not become blinders. We agree.

The Cane Mutiny

I am a 41-year-old single parent pursuing a bachelor's degree while working as an office manager in a small company. I recently read and enjoyed the HBR Case Study "The Cane Mutiny: Managing a Graying Workforce" (October 2005).

Perhaps companies should group older employees with newer hires – particularly with recent college graduates who have little work experience. Older employees can share real-world know-how with younger employees, and younger employees can share their up-to-date technical or academic knowledge with the older group. Each group can put its knowledge to work in different ways.

Mary Thompson
Office Manager
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EXECUTIVE SUMMARIES

February 2006


SPECIAL: BREAKTHROUGH IDEAS FOR 2006

Harvard Business Review

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THE SECRET OF LONG-LIVED ADVANTAGE

PAGE 72

> **"You can wait for a competitor to stumble upon the next great management breakthrough, or you can become a management innovator right now."**
> – page 72

COVER STORY

72 | The Why, What, and How of Management Innovation

Gary Hamel

For organizations like GE, P&G, and Visa, management innovation is the secret to success. But what is management innovation? Why is it so important? And how can other companies learn to become management innovators? This article from expert Gary Hamel answers those questions.

A management breakthrough can deliver a strong advantage to the innovating company and produce a major shift in industry leadership. Few companies, however, have been able to come up with a formal process for fostering management innovation. The biggest challenge seems to be generating truly unique ideas. Four components can help: a big problem that demands fresh thinking, creative principles or paradigms that can reveal new approaches, an evaluation of the conventions that constrain novel thinking, and examples and analogies that help redefine what can be done.

No doubt there are existing management processes in your organization that exacerbate the big problems you're hoping to solve. So how can you learn to identify them? Start by asking a series of questions for each one. For instance, Who owns the process? What are its objectives? What are the metrics for success? What are the decision-making criteria? How are decisions communicated, and to whom? After documenting these details, ask the people involved with the process to weigh in. This exploration may reveal opportunities to reinvent your management processes.

A management innovation, the author says, creates long-lasting advantage when it meets at least one of three conditions: It is based on a novel principle that challenges the orthodoxy; it is systemic, involving a range of processes and methods; or it is part of a program of invention, where progress compounds over time.

So far, management in this century isn't much different from management in the previous one, says Hamel. Therein lies the opportunity. You can wait for a competitor to come upon the next great management process and drive you out of business – or you can become a management innovator right now.

Reprint R0602C; HBR OnPoint 3420; OnPoint collection "Staying Ahead of Your Competition" 3455

HBR CASE STUDY

21 | The Nice Guy

Russ Edelman and Tim Hiltabiddle

As Paul Kennedy sits in Cleveland's endless morning traffic, his thoughts are going in all sorts of directions, even if he's not. He's worried about his wife, who may be coming down with a cold right before their wedding anniversary. He's worried about the pitching and fielding assignments he'll have to make for tonight's Little League game. He's worried about the health of his boss, Larry, who recently had a heart attack. He's worried about his associate, Lisa, whose mother is ill and whose work is slipping. He's worried about the Cleveland Browns.

He's excited too, though, about his plans to expand Daner Associates into Europe and the reorganization he's recommending, which would take a load off Larry by ceding day-to-day operations of the new-media company to a new CEO – probably Paul, from all the hints he's heard. "I could swear Larry's been doing the nudge-nudge, wink-wink in my direction," Paul says to himself. And why not? He's been there for ten years; he knows every facet of the operations. Customers, vendors, and employees love him.

But when he meets with his boss that afternoon, Paul's in for a rude shock. Larry's considering hard-nosed George for the top slot and Paul for the number two role. Paul has many of the right ingredients to be CEO, Larry explains, but he's got to get tougher. "What does that mean?" Paul thinks indignantly, back in traffic, on the way home that night. "Become an absolute jerk like George?"

What can Paul do to show he's CEO material? Four experts – Google CEO Eric Schmidt, author Stephen R. Covey, AVL North America CEO Don Manvel, and executive coach Maggie Craddock – comment on this fictional case study.

Reprint R0602A

THE HBR LIST

35 | Breakthrough Ideas for 2006

We highlight 20 ideas just bubbling up to the surface in 2006.

Howard Gardner contends that the ability to synthesize information will be the most valued trait for leaders. **Dan Williams** explores how body area networks can lower health care costs and improve safety. **William McDonough** describes China as a seedbed for environmental innovation. **Nitin Nohria** and **Thomas A. Stewart** say the next frontier for business will be managing incalculable uncertainty.

Jeff Cares outlines the challenge confronting business as networks face off against networks. **Claire Craig** reports how scientists are going beyond the lab and using the world outside as their petri dish. **Ted Halstead** recommends that every newborn in America receive $6,000 as a down payment on a productive life. **Georg von Krogh** warns that customer-collaborators are starting to demand a stake in IP.

Ged Davis envisions an OPEC-like organization to benefit consumers instead of producers. **Nancy M. Dixon** describes a model for peer-to-peer leadership development. **Harris Allen** and **Sean Sullivan** contend that investment in employees' health can pay for itself. **David Weinberger** says that stores should imitate Web design.

Gerd Gigerenzer shows how a leader's personal rules of thumb influence employees. **Zachary Karabell** discusses the growing gap between nations' and companies' economic performance. **Paul Hemp** tells why avatars make good customers. **Philip Parker** explains why creating private labels for your retail customers is smart strategy.

Judith Samuelson and **Claire Preisser** describe how companies are combating short-term thinking. **George Stalk, Jr.,** explains why many firms aren't benefiting from China sourcing. **Michael S. Gazzaniga** punctures inflated expectations about what neuroscience can do for business. **E.L. Kersten** says employees shouldn't expect their jobs to provide meaning.

HBR also offers a list of important business books due out in 2006.

Reprint R0602B

88 | The Great Intimidators

Roderick M. Kramer

After Disney's Michael Eisner, Miramax's Harvey Weinstein, and Hewlett-Packard's Carly Fiorina fell from their heights of power, the business media quickly proclaimed that the reign of abrasive, intimidating leaders was over. However, it's premature to proclaim their extinction. Many great intimidators have done fine for a long time and continue to thrive.

Their modus operandi runs counter to a lot of preconceptions about what it takes to be a good leader. They're rough, loud, and in your face. Their tactics include invading others' personal space, staging tantrums, keeping people guessing, and possessing an indisputable command of facts.

But make no mistake – great intimidators are not your typical bullies. They're driven by vision, not by sheer ego or malice. Beneath their tough exteriors and sharp edges are some genuine, deep insights into human motivation and organizational behavior. Indeed, these leaders possess *political intelligence,* which can make the difference between paralysis and successful – if sometimes wrenching – organizational change. Like socially intelligent leaders, politically intelligent leaders are adept at sizing up others, but they notice different things. Those with social intelligence assess people's strengths and figure out how to leverage them; those with political intelligence exploit people's weaknesses and insecurities.

Despite all the obvious drawbacks of working under them, great intimidators often attract the best and brightest. And their appeal goes beyond their ability to inspire high performance. Many accomplished professionals who gravitate toward these leaders want to cultivate a little "inner intimidator" of their own.

In the author's research, quite a few individuals reported having positive relationships with intimidating leaders. In fact, some described these relationships as profoundly educational and even transformational. So before we throw out all the great intimidators, the author argues, we should stop to consider what we would lose.

Reprint R0602D

MARKETING

98 | Defeating Feature Fatigue

Roland T. Rust, Debora Viana Thompson, and Rebecca W. Hamilton

Consider a coffeemaker that offers 12 drink options, a car with more than 700 features on the dashboard, and a mouse pad that's also a clock, calculator, and FM radio. All are examples of "feature bloat," or "featuritis," the result of an almost irresistible temptation to load products with lots of bells and whistles. The problem is that the more features a product boasts, the harder it is to use. Manufacturers that increase a product's capability – the number of useful functions it can perform – at the expense of its usability are exposing their customers to *feature fatigue*.

The authors have conducted three studies to gain a better understanding of how consumers weigh a product's capability relative to its usability. They found that even though consumers know that products with more features are harder to use, they initially choose high-feature models. They also pile on more features when given the chance to customize a product for their needs. Once consumers have actually worked with a product, however, usability starts to matter more to them than capability.

For managers in consumer products companies, these findings present a dilemma: Should they maximize initial sales by designing high-feature models, which consumers consistently choose, or should they limit the number of features in order to enhance the lifetime value of their customers? The authors' analytical model guides companies toward a happy middle ground: maximizing the net present value of the typical customer's profit stream. The authors also advise companies to build simpler products, help consumers learn which products suit their needs, develop products that do one thing very well, and design market research in which consumers use actual products or prototypes.

Reprint R0602E; HBR OnPoint 3439; OnPoint collection "Make Sure *All* Your Products Are Profitable, 2nd Edition" 3447

LEADERSHIP

110 | The Seasoned Executive's Decision-Making Style

Kenneth R. Brousseau, Michael J. Driver, Gary Hourihan, and Rikard Larsson

Leaders make decisions every day of their lives, but how they do it changes dramatically over the course of their careers. At lower levels, the job is to get widgets out the door; action is at a premium. At higher levels, the job involves decisions about which widgets to offer and how to develop them. To climb the corporate ladder and be effective in new roles, managers need to change the way they use information and evaluate options.

Based on a study of the decision-making profiles of more than 120,000 executives, the authors found that people make decisions very differently in public than they do in private and that the decision styles of successful managers evolve in highly predictable patterns. The most successful managers and executives become increasingly open and interactive in their leadership (or public) styles, and more analytic in their thinking (or private) styles, as they progress in their careers.

The research shows that decision-making profiles do a complete flip over the course of a career; that is, the decision profile of a successful CEO is the opposite of a successful first-line supervisor's. When does the major change in focus occur? Somewhere between the manager level and the director level, executives find that formerly effective decision styles no longer work so well. At this point, decision styles fall into a "convergence zone," where managers use all styles more or less equally. From then on, the executives continue to evolve their styles. The most successful managers come to the convergence zone quickly and continue to adjust their styles as their careers progress. Low performers seem to stagnate once they hit the convergence zone; their styles do not evolve in new directions. Clearly, relying on past successes and habits is no guarantee of success – indeed, it may be the road to failure.

Reprint R0602F

122 | Rediscovering Market Segmentation

Daniel Yankelovich and David Meer

In 1964, Daniel Yankelovich introduced in the pages of HBR the concept of nondemographic segmentation, by which he meant the classification of consumers according to criteria other than age, residence, income, and such. The predictive power of marketing studies based on demographics was no longer strong enough to serve as a basis for marketing strategy, he argued. Buying patterns had become far better guides to consumers' future purchases. In addition, properly constructed nondemographic segmentations could help companies determine which products to develop, which distribution channels to sell them in, how much to charge for them, and how to advertise them.

But more than 40 years later, nondemographic segmentation has become just as unenlightening as demographic segmentation had been. Today, the technique is used almost exclusively to fulfill the needs of advertising, which it serves mainly by populating commercials with characters that viewers can identify with.

It is true that psychographic types like "High-Tech Harry" and "Joe Six-Pack" may capture some truth about real people's lifestyles, attitudes, self-image, and aspirations. But they are no better than demographics at predicting purchase behavior. Thus they give corporate decision makers very little idea of how to keep customers or capture new ones.

Now, Daniel Yankelovich returns to these pages, with consultant David Meer, to argue the case for a broad view of nondemographic segmentation. They describe the elements of a smart segmentation strategy, explaining how segmentations meant to strengthen brand identity differ from those capable of telling a company which markets it should enter and what goods to make. And they introduce their "gravity of decision spectrum," a tool that focuses on the form of consumer behavior that should be of the greatest interest to marketers – the importance that consumers place on a product or product category.

Reprint R0602G

133 | Where Babies Come From: Supply and Demand in an Infant Marketplace

Debora L. Spar

Persistent demand from people who have been denied the blessings of parenthood has created an assisted-reproduction market that stretches around the globe and encompasses hundreds of thousands of people. In the United States alone, nearly 41,000 children were born via in vitro fertilization (IVF) in 2001. Roughly 6,000 came from donated eggs, and almost 600 were carried by surrogate mothers.

U.S. legislators have been reluctant to regulate this market. As a result, there are no national policies for IVF, which requires creating – and often discarding – embryos, or for many other technologies. State laws vary widely, and many states have no legislation on these subjects whatsoever.

Although fertility specialists generally seem delighted to practice in an unregulated gray area, a modicum of regulation and the establishment of agreed-upon norms could lead to substantially lower prices, wider access, and an expansion of the market to the millions who have not yet sought out assisted reproduction. Among those millions are fertile individuals seeking to ensure that they'll be able to produce offspring in the future. For example, the technology already permits young women to freeze their eggs, thus preserving their fertility (in case, for instance, they marry late in life). The fertility trade is in some ways analogous to the markets for personal computers and DVD players, which were initially considered luxury items but migrated to the mass market, earning manufacturers the revenues to finance further innovation.

A widening of availability and the introduction of property rights, rules, and institutional policies would make the marketplace more sensitive to the social, medical, and ethical issues that are emerging from the science. For example: Should there be age limits on infertility treatment? Should new procedures be subject to rigorous testing? It is time for U.S. society to begin discussion of these complex questions.

Reprint R0602H

144 | What Executives Should Remember

Classic Advice from Peter F. Drucker

In more than 30 essays for *Harvard Business Review,* Peter Drucker (1909–2005) urged readers to take on the hard work of thinking – always combined, he insisted, with decisive action. He closely analyzed the phenomenon of knowledge work – the growing call for employees who use their minds rather than their hands – and explained how it challenged the conventional wisdom about the way organizations should be run. He was intrigued by employees who knew more about certain subjects than their bosses or colleagues but who still had to cooperate with others in a large organization.

As the business world matured in the second half of the twentieth century, executives came to think that they knew how to run companies – and Drucker took it upon himself to poke holes in their assumptions, lest organizations become stale. But he did so sympathetically, operating from the premise that his readers were intelligent, hardworking people of goodwill. Well suited to HBR's format of practical, idea-based essays for executives, his clear-eyed, humanistic writing enriched the magazine time and again.

This article is a compilation of the savviest management advice Drucker offered HBR readers over the years – in short, his greatest hits. It revisits the following insightful, influential contributions:

"The Theory of the Business" (September–October 1994)

"Managing for Business Effectiveness" (May–June 1963)

"What Business Can Learn from Nonprofits" (July–August 1989)

"The New Society of Organizations" (September–October 1992)

"The Information Executives Truly Need" (January–February 1995)

"Managing Oneself" (March–April 1999, republished January 2005)

"They're Not Employees, They're People" (February 2002)

"What Makes an Effective Executive" (June 2004)

Reprint R0602J

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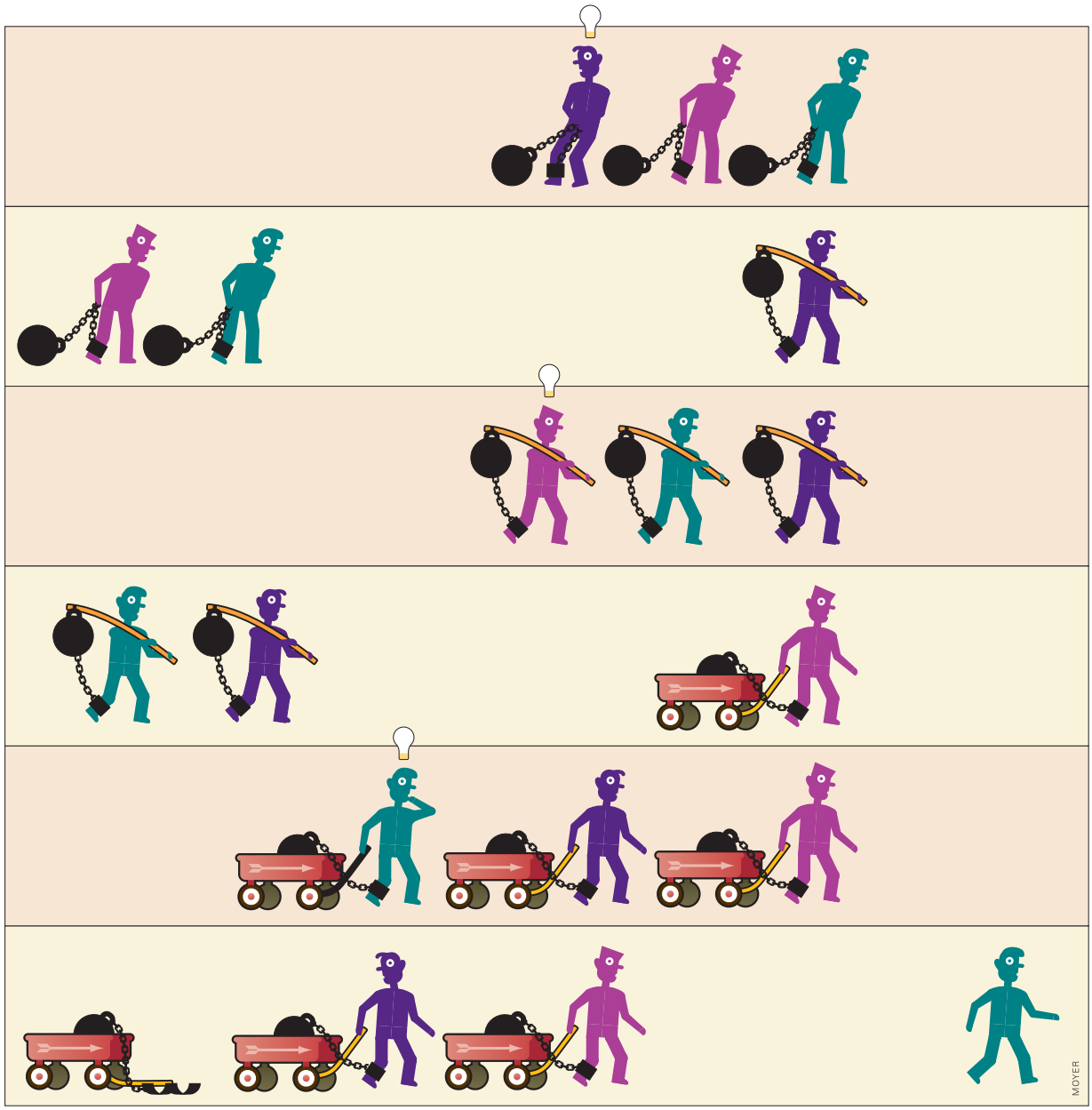
Volume 84, Number 2

by Don Moyer



Take a Giant Step

The motto "Evolution, not revolution" became bumper sticker fare when a faltering new economy took out more upstarts than the battle of Camden. Tweaks, refinements, and enhancements to existing products rarely looked so good. You can cover lots of ground with a series of small steps, many companies realized.

But in a race, competitors can usually match each small step. What's tough to beat are those giant, muscle-straining strides that take innovators off the well-trod path and drop them miles away on a different road where no one else is. As W. Chan Kim and Renée Mauborgne argue in "Blue Ocean Strategy" (HBR October 2004), businesses are better off breaking fresh ground than contesting one diminutive edge after another.

It's hard to spot opportunities for innovative leaps when you're preoccupied with baby steps. Iterative improvers believe that "every day in every way, I get better and better." Probably they will get better. Probably they won't get great.

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