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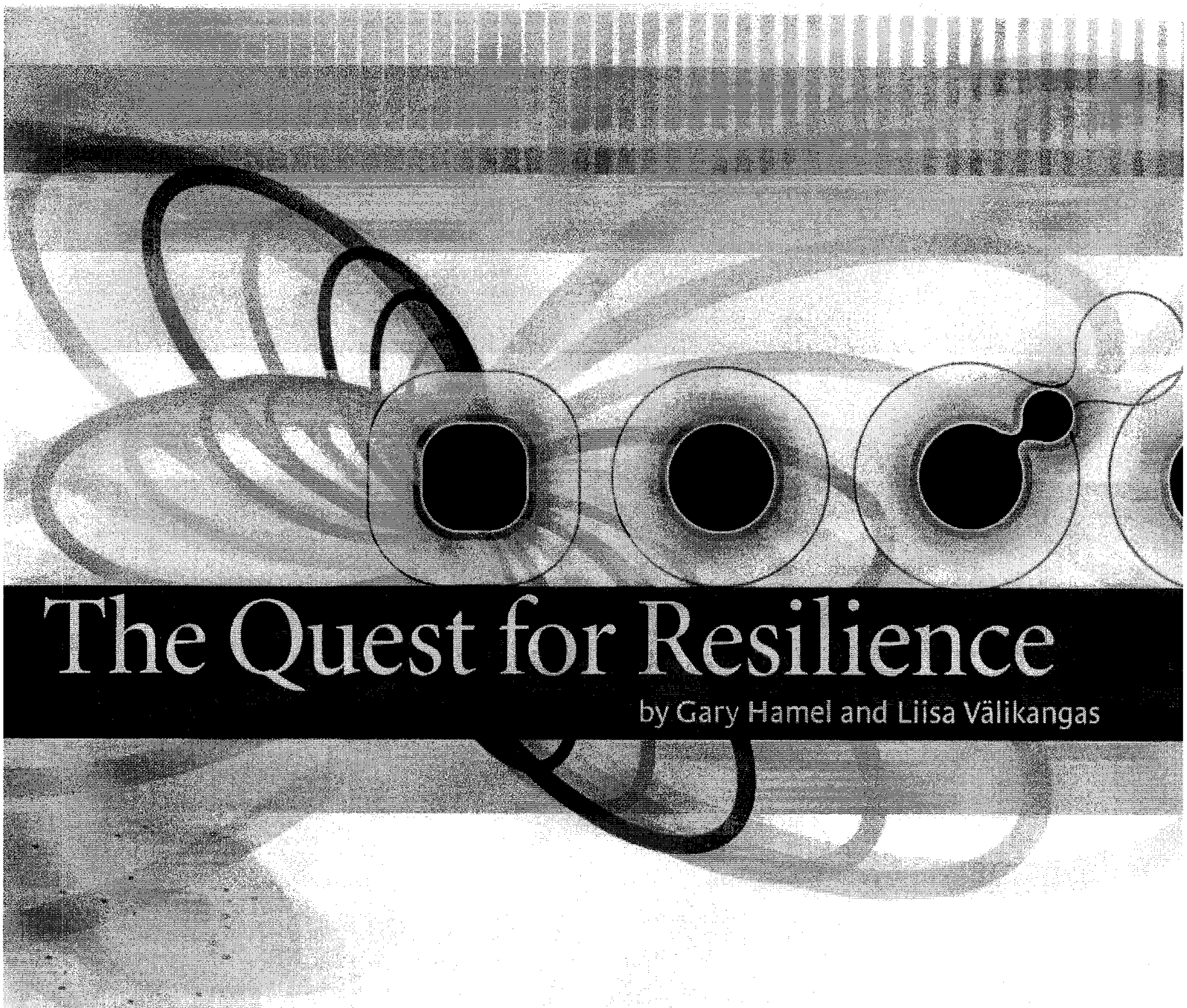


The Quest for Resilience

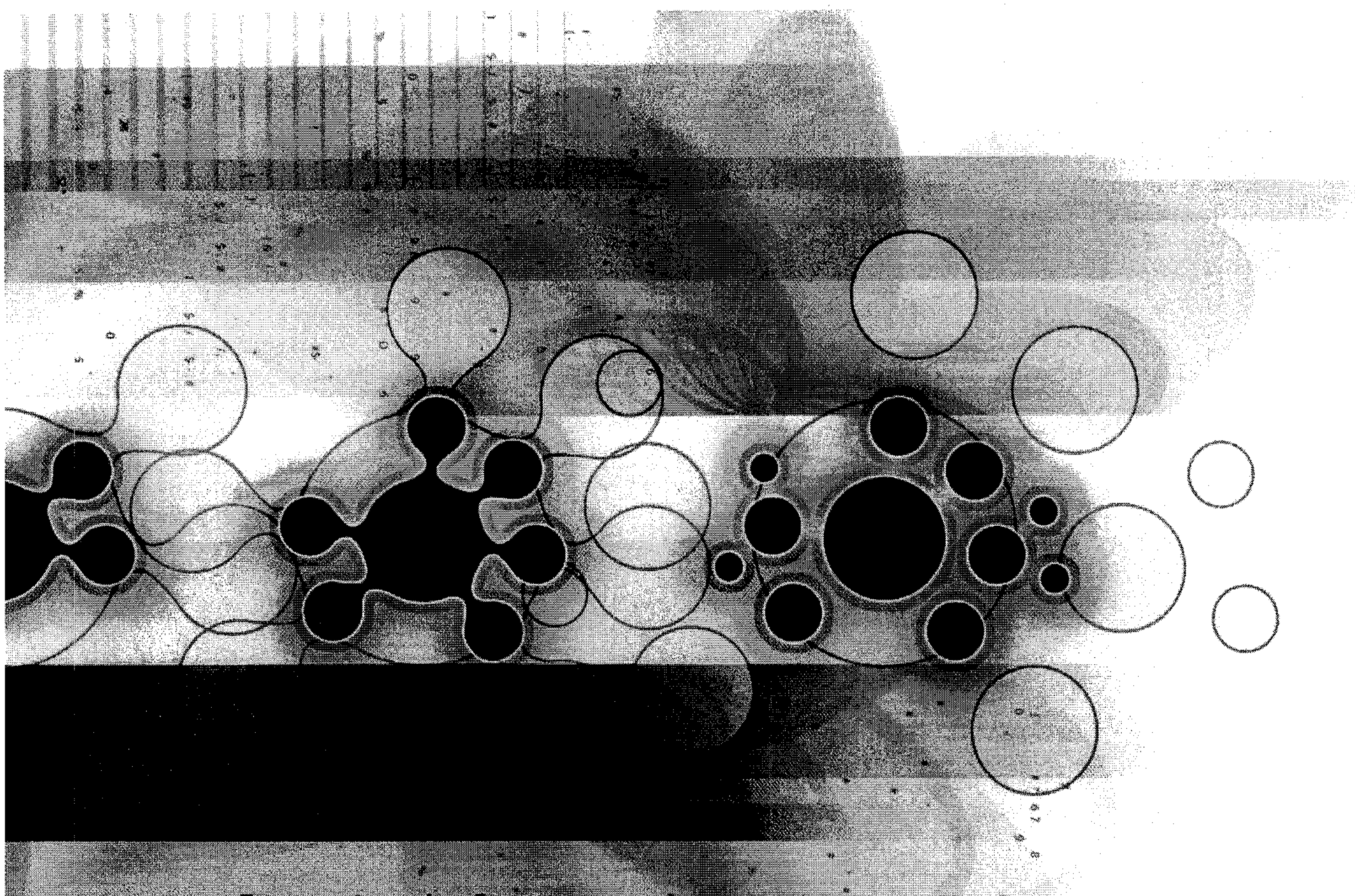
by Gary Hamel and Liisa Välikangas

CALL IT THE RESILIENCE GAP. The world is becoming turbulent faster than organizations are becoming resilient. The evidence is all around us. Big companies are failing more frequently. Of the 20 largest U.S. bankruptcies in the past two decades, ten occurred in the last two years. Corporate earnings are more erratic. Over the past four decades, year-to-year volatility in the earnings growth rate of S&P 500 companies has increased by nearly 50%–despite vigorous efforts to "manage" earnings. Performance slumps are proliferating. In each of the years from 1973 to 1977, an average of 37 *Fortune* 500 companies were entering or in the midst of a 50%, five-year decline in net income; from 1993 to 1997, smack in the middle of the longest economic boom in modern times, the average number of companies suffering through such an earnings contraction more than doubled, to 84 each year.

Even perennially successful companies are finding it more difficult to deliver consistently superior returns. In their 1994 best-seller *Built to Last*, Jim Collins and Jerry Porras singled out 18 "visionary" companies that had consistently outperformed their peers between 1950 and 1990. But over the last ten years, just six of these companies managed to outperform the Dow Jones Industrial Average. The other twelve – a group which includes companies like Disney, Motorola, Ford, Nordstrom, Sony, and Hewlett-Packard – have apparently gone from great to merely OK. Any way you cut it, success has never been so fragile.

In less turbulent times, established companies could rely on the flywheel of momentum to sustain their success. Some, like AT&T and American Airlines, were insulated from competition by regulatory protection and oligopolistic practices. Others, like General Motors and Coca-Cola, enjoyed a relatively stable product paradigm – for more than a century, cars have had four wheels and a combustion engine and consumers have sipped caffeine-laced soft drinks. Still others, like McDonald's and Intel,

LISA BERGHOUT



In a turbulent age, the only dependable advantage is a superior capacity for reinventing your business model before circumstances force you to. Achieving such strategic resilience isn't easy. Four tough challenges stand in the way.

built formidable first-mover advantages. And in capital-intensive industries like petroleum and aerospace, high entry barriers protected incumbents.

The fact that success has become less persistent strongly suggests that momentum is not the force it once was. To be sure, there is still enormous value in having a coterie of loyal customers, a well-known brand, deep industry know-how, preferential access to distribution channels, proprietary physical assets, and a robust patent portfolio. But that value has steadily dissipated as the enemies of momentum have multiplied. Technological discontinuities, regulatory upheavals, geopolitical shocks, industry deverticalization and disintermediation, abrupt shifts in consumer tastes, and hordes of nontraditional competitors–these are just a few of the forces undermining the advantages of incumbency.

In the past, executives had the luxury of assuming that business models were more or less immortal. Companies always had to work to get better, of course, but they seldom had to get different–not at their core, not in their essence. Today, getting different is the imperative. It's the challenge facing Coca-Cola as it struggles to raise its "share of throat" in noncarbonated beverages. It's the task that bedevils McDonald's as it tries to rekindle growth in a world of burger-weary customers. It's the hurdle for Sun Microsystems as it searches for ways to protect its high-margin server business from the Linux onslaught. And it's an imperative for the big pharmaceutical companies as they confront declining R&D yields, escalating price pressure, and the growing threat from generic drugs. For all these companies, and for yours, continued success no longer hinges on momentum. Rather, it rides on resilience – on the ability to dynamically reinvent business models and strategies as circumstances change.

Strategic resilience is not about responding to a one-time crisis. It's not about rebounding from a setback. It's about continuously anticipating and adjusting to deep, secular trends that can permanently impair the earning power of a core business. It's about having the capacity to change before the case for change becomes desperately obvious.

Zero Trauma

Successful companies, particularly those that have enjoyed a relatively benign environment, find it extraordinarily difficult to reinvent their business models. When confronted by paradigm-busting turbulence, they often experience a deep and prolonged reversal of fortune. Consider IBM. Between 1990 and 1993, the company went from making $6 billion to losing nearly $8 billion. It wasn't until 1997 that its earnings reached their previous high. Such a protracted earnings slump typically provokes a leadership change, and in many cases the new CEO–be it Gerstner at IBM or Ghosn at Nissan or Bravo at Burberry – produces a successful, if wrenching, turnaround. However celebrated, a turnaround is a testament to a company's lack of resilience. A turnaround is transformation tragically delayed.

Imagine a ratio where the numerator measures the magnitude and frequency of strategic transformation and the denominator reflects the time, expense, and emotional energy required to effect that transformation. Any company that hopes to stay relevant in a topsy-turvy world has no choice but to grow the numerator. The real trick is to steadily reduce the denominator at the same time. To thrive in turbulent times, companies must become as efficient at renewal as they are at producing today's products and services. Renewal must be the natural consequence of an organization's innate resilience.

The quest for resilience can't start with an inventory of best practices. Today's best practices are manifestly inadequate. Instead, it must begin with an aspiration: zero trauma. The goal is a strategy that is forever morphing, forever conforming itself to emerging opportunities and incipient trends. The goal is an organization that is constantly making its future rather than defending its past. The goal is a company where revolutionary change happens in lightning-quick, evolutionary steps – with no calamitous surprises, no convulsive reorganizations, no colossal write-offs, and no indiscriminate, across-the-board layoffs. In a truly resilient organization, there is plenty of excitement, but there is no trauma.

Sound impossible? A few decades ago, many would have laughed at the notion of "zero defects." If you were driving a Ford Pinto or a Chevy Vega, or making those sorry automobiles, the very term would have sounded absurd. But today we live in a world where Six Sigma, 3.4 defects per million, is widely viewed as an achievable goal. So why shouldn't we commit ourselves to zero trauma? Defects cost money, but so do outdated strategies, missed opportunities, and belated restructuring programs. Today, many of society's most important institutions, including its largest commercial organizations, are not resilient. But no law says they must remain so. It is precisely because resilience is such a valuable goal that we must commit ourselves to making it an attainable one. (See the sidebar "Why Resilience Matters.")

Any organization that hopes to become resilient must address four challenges:

The Cognitive Challenge: A company must become entirely free of denial, nostalgia, and arrogance. It must be deeply conscious of what's changing and perpetually willing to consider how those changes are likely to affect its current success.

The Strategic Challenge: Resilience requires alternatives as well as awareness–the ability to create a plethora of new options as compelling alternatives to dying strategies.

The Political Challenge: An organization must be able to divert resources from yesterday's products and programs to tomorrow's. This doesn't mean funding flights of fancy; it means building an ability to support a broad portfolio of breakout experiments with the necessary capital and talent.

The Ideological Challenge: Few organizations question the doctrine of optimization. But optimizing a business model that is slowly becoming irrelevant can't secure a company's future. If renewal is to become continuous and opportunity-driven, rather than episodic and crisis-driven, companies will need to embrace a creed that extends beyond operational excellence and flawless execution.

Few organizations, if any, can claim to have mastered these four challenges. While there is no simple recipe for building a resilient organization, a decade of research on innovation and renewal allows us to suggest a few starting points.

Conquering Denial

Every business is successful until it's not. What's amazing is how often top management is surprised when "not" happens. This astonishment, this belated recognition of dramatically changed circumstances, virtually guarantees that the work of renewal will be significantly, perhaps dangerously, postponed.

Why the surprise? Is it that the world is not only changing but changing in ways that simply cannot be anticipated – that it is *shockingly* turbulent? Perhaps, but even "unexpected" shocks can often be anticipated if one is paying close attention. Consider the recent tech sector

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For many companies, the future is less unknowable than it is unthinkable, less inscrutable than unpalatable.

meltdown–an event that sent many networking and computer suppliers into a tailspin and led to billions of dollars in write-downs.

Three body blows knocked the stuffing out of IT spending: The telecom sector, traditionally a big buyer of networking gear, imploded under the pressure of a massive debt load; a horde of dot-com customers ran out of cash and stopped buying computer equipment; and large corporate customers slashed IT budgets as the economy went into recession. Is it fair to expect IT vendors to have anticipated this perfect storm? Yes.

They knew, for example, that the vast majority of their dot-com customers were burning through cash at a ferocious rate but had no visible earnings. The same was true for many of the fledgling telecom outfits that were buying equipment using vendor financing. These companies were building fiber-optic networks far faster than they could be utilized. With bandwidth increasing more rapidly than demand, it was only a matter of time before plummeting prices would drive many of these debt-heavy companies to the wall. There were other warning signs. In 1990, U.S. companies spent 19% of their capital budgets on information technology. By 2000, they were devoting 59% of their capital spending to IT. In other words, IT had tripled its share of capital budgets–this during the longest capital-spending boom in U.S. history. Anyone looking at the data in 2000 should have been asking, Will capital spending keep growing at a double-digit pace? And is it likely that IT spending will continue to grow so fast? Logically, the answer to both questions had to be no. Things that can't go on forever usually don't. IT vendors should have anticipated a major pullback in their revenue growth and started "war gaming" postboom options well before demand collapsed.

It is unfair, of course, to single out one industry. What happened to a few flat-footed IT companies can happen to any company–and often does. More than likely, Motorola was startled by Nokia's quick sprint to global leadership in the mobile phone business; executives at the Gap probably received a jolt when, in early 2001, their company's growth engine suddenly went into reverse; and CNN's management team was undoubtedly surprised by the Fox News Channel's rapid climb up the ratings ladder.

But they, like those in the IT sector, should have been able to see the future's broad outline–to anticipate the point at which a growth curve suddenly flattens out or a business model runs out of steam. The fact that serious

Revolution, Renewal, and Resilience: A Glossary for Turbulent Times

What's the probability that your company will significantly outperform the world economy over the next few years? What's the chance that your company will deliver substantially better returns than the industry average? What are the odds that change, in all its guises, will bring your company considerably more upside than downside? Confidence in the future of your business–or of any business–depends on the extent to which it has mastered three essential forms of innovation.

Revolution

In most industries it's the revolutionaries–like JetBlue, Amgen, Costco, University of Phoenix, eBay, and Dell–that have created most of the new wealth over the last decade. Whether newcomer or old timer, a company needs an unconventional strategy to produce unconventional financial returns. Industry revolution is creative destruction. It is innovation with respect to industry rules.

Renewal

Newcomers have one important advantage over incumbents–a clean slate. To reinvent its industry, an incumbent must first reinvent itself. Strategic renewal is creative reconstruction. It requires innovation with respect to one's traditional business model.

Resilience

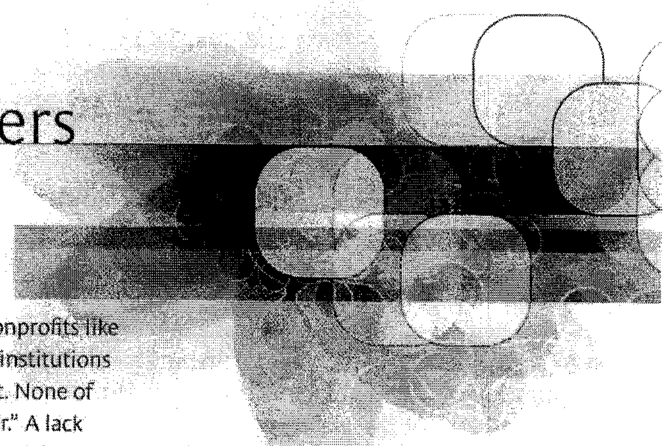
It usually takes a performance crisis to prompt the work of renewal. Rather than go from success to success, most companies go from success to failure and then, after a long, hard climb, back to success. Resilience refers to a capacity for continuous reconstruction. It requires innovation with respect to those organizational values, processes, and behaviors that systematically favor perpetuation over innovation.

performance shortfalls so often come as a surprise suggests that executives frequently take refuge in denial. Greg Blonder, former chief technical adviser at AT&T, admitted as much in a November 2002 *Barron's* article: "In the early 1990s, AT&T management argued internally that the steady upward curve of Internet usage would somehow collapse. The idea that it might actually overshadow traditional telephone service was simply unthinkable. But the trend could not be stopped – or even slowed – by wishful thinking and clever marketing. One by one, the props that held up the long-distance business collapsed." For AT&T, as for many other companies, the future was less unknowable than it was unthinkable, less inscrutable than unpalatable.

Denial puts the work of renewal on hold, and with each passing month, the cost goes up. To be resilient, an organization must dramatically reduce the time it takes to go from "that can't be true" to "we must face the world as it is." So what does it take to break through the hard carapace of denial? Three things.

First, senior managers must make a habit of visiting the places where change happens first. Ask yourself how often in the last year you have put yourself in a position where you had the chance to see change close-up – where you're

Why Resilience Matters



Some might argue that there is no reason to be concerned with the resilience of any particular company as long as there is unfettered competition, a well-functioning market for corporate ownership, a public policy regime that doesn't protect failing companies from their own stupidity, and a population of start-ups eager to exploit the sloth of incumbents. In this view, competition acts as a spur to perpetual revitalization. A company that fails to adjust to its changing environment soon loses its relevance, its customers, and, ultimately, the support of its stakeholders. Whether it slowly goes out of business or gets acquired, the company's human and financial capital gets reallocated in a way that raises the marginal return on those assets.

This view of the resilience problem has the virtue of being conceptually simple. It is also simpleminded. While competition, new entrants, takeovers, and bankruptcies are effective as purgatives for managerial incompetence, these forces cannot be relied on to address the resilience problem efficiently and completely. There are several reasons why.

First, and most obvious, thousands of important institutions lie outside the market for corporate control, from privately owned companies like Cargill to public-sector agencies like Britain's National Health Service to nonprofits like the Red Cross. Some of these institutions have competitors; many don't. None of them can be easily "taken over." A lack of resilience may go uncorrected for a considerable period of time, while constituents remain underserved and society's resources are squandered.

Second, competition, acquisitions, and bankruptcies are relatively crude mechanisms for reallocating resources from poorly managed companies to well-managed ones. Let's start with the most draconian of these alternatives – bankruptcy. When a firm fails, much of its accumulated intellectual capital disintegrates as teams disperse. It often takes months or years for labor markets to redeploy displaced human assets. Takeovers are a more efficient reallocation mechanism, yet they, too, are a poor substitute for organizational resilience. Executives in underperforming companies, eager to protect their privileges and prerogatives, will typically resist the idea of a takeover until all other survival options have been exhausted. Even then, they are likely to significantly underestimate the extent of institutional decay – a misjudgment that is often shared by the acquiring company. Whether it be Compaq's acquisition of a stumbling Digital Equipment Corporation or Ford's takeover of the deeply troubled Jaguar, acquisitions often prove to be belated, and therefore expensive, responses to institutional decline.

And what about competition, the endless warfare between large and small, old and young? Some believe that as long as a society is capable of creating new organizations, it can afford to be unconcerned about the resilience of old institutions. In this ecological view of resilience, the population of start-ups constitutes a portfolio of experiments, most of which will fail but a few of which will turn into successful businesses.

In this view, institutions are essentially disposable. The young eat the old. Leaving aside for the moment the question of whether institutional longevity has a value in and of itself, there is a reason to question this "who needs dumb, old incumbents when you have all these cool start-ups" line of reasoning. Young companies are generally less efficient than older companies – they are at an earlier point on the road from disorderly innovation to disciplined optimization. An economy composed entirely of start-ups would be grossly inefficient. Moreover, start-ups typically depend on estabweren't reading about change in a business magazine, hearing about it from a consultant, or getting a warmed-over report from an employee, but were experiencing it firsthand. Have you visited a nanotechnology lab? Have you spent a few nights hanging out in London's trendiest clubs? Have you spent an afternoon talking to fervent environmentalists or antiglobalization activists? Have you had an honest, what-do-you-care-about conversation with anyone under 18? It's easy to discount secondhand data; it's hard to ignore what you've experienced for yourself. And if you have managed to rub up against what's changing, how much time have you spent thinking through the second- and third-order consequences of what you've witnessed? As the rate of change increases, so must the personal energy you devote to understanding change.

Second, you have to filter out the filterers. Most likely, there are people in your organization who are plugged tightly in to the future and understand well the not-so-sanguine implications for your company's business model. You have to find these people. You have to make sure their views are not censored by the custodians of convention and their access is not blocked by those who believe they are paid to protect you from unpleasant truths. You should be wary of anyone who has a vested

lished companies for funding, managerial talent, and market access. Classically, Microsoft's early success was critically dependent on its ability to harness IBM's brand and distribution power. Start-ups are thus not so much an alternative to established incumbents, as an insurance policy against the costs imposed on society by those incumbents that prove themselves to be unimaginative and slow to change. As is true in so many other situations, avoiding disaster is better than making a claim against an insurance policy once disaster has struck. Silicon Valley and other entrepreneurial hot spots are a boon, but they are no more than a partial solution to the problem of nonadaptive incumbents.

To the question, Can a company die an untimely death? an economist would answer no. Barring government intervention or some act of God, an organization fails when it deserves to fail, that is, when it has proven itself to be consistently unsuccessful in meeting the expectations of its stakeholders. There are, of course, cases in which one can reasonably say that an organization "deserves" to die. Two come immediately to mind: when an organization has fulfilled its original purpose or when changing circumstances have rendered the organization's core purpose invalid or no longer useful. (For example, with the collapse of Soviet-sponsored communism in Eastern Europe, some have questioned the continued usefulness of NATO.)

But there are cases in which organizational death should be regarded as premature in that it robs society of a future benefit. Longevity is important because time enables complexity. It took millions of years for biological evolution to produce the complex structures of the mammalian eye and millions more for it to develop the human brain and higher consciousness. Likewise, it takes years, sometimes decades, for an organization to elaborate a simple idea into a robust operational model. Imagine for a moment that Dell, currently the world's most successful computer maker, had died in infancy. It is at least possible that the world would not now possess the exemplary "build-to-order" business model Dell so successfully constructed over the past decade – a model that has spurred supply chain innovation in a host of other industries. This is not an argument for insulating a company from its environment; it is, however, a reason to imbue organizations with the capacity to dynamically adjust their strategies as they work to fulfill their long-term missions.

There is a final, noneconomic, reason to care about institutional longevity, and therefore resilience. Institutions are vessels into which we as human beings pour our energies, our passions, and our wisdom. Given this, it is not surprising that we often hope to be survived by the organizations we serve. For if our genes constitute the legacy of our individual, biological selves, our institutions constitute the legacy of our collective, purposeful selves. Like our children, they are our progeny. It is no wonder that we hope they will do well and be well treated by our successors. This hope for the future implies a reciprocal responsibility – that we be good stewards of the institutions we have inherited from our forebears. The best way of honoring an institutional legacy is to extend it, and the best way to extend it is to improve the organization's capacity for continual renewal.

Once more, though, we must be careful. A noble past doesn't entitle an institution to an illustrious future. Institutions deserve to endure only if they are capable of withstanding the onslaught of new institutions. A society's freedom to create new institutions is thus a critical insurance policy against its inability to recreate old ones. Where this freedom has been abridged as in, say, Japan, managers in incumbent institutions are able to dodge their responsibility for organizational renewal.

interest in your continued ignorance, who fears that a full understanding of what's changing would expose his own failure to anticipate it or the inadequacy of his response.

There are many ways to circumvent the courtiers and the self-protecting bureaucrats. Talk to potential customers who aren't buying from you. Go out for drinks and dinner with your most freethinking employees. Establish a shadow executive committee whose members are, on average, 20 years younger than the "real" executive committee. Give this group of 30-somethings the chance to review capital budgets, ad campaigns, acquisition plans, and divisional strategies – and to present their views directly to the board. Another strategy is to periodically review the proposals that never made it to the top – those that got spiked by divisional VPs and unit managers. Often it's what doesn't get sponsored that turns out to be most in tune with what's changing, even though the proposals may be out of tune with prevailing orthodoxies.

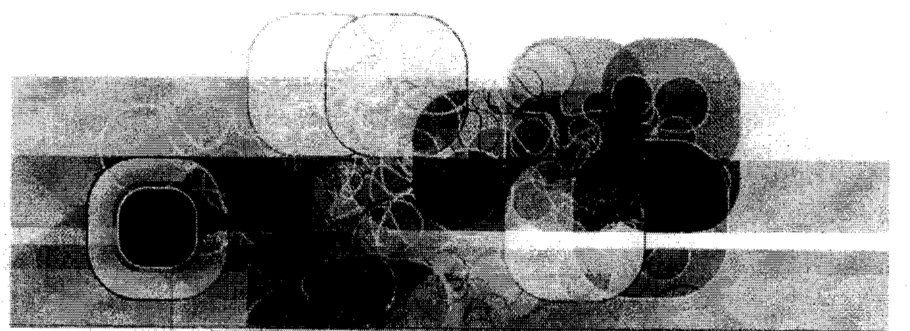
Finally, you have to face up to the inevitability of strategy decay. On occasion, Bill Gates has been heard to remark that Microsoft is always two or three years away from failure. Hyperbole, perhaps, but the message to his organization is clear: Change will render irrelevant at least some of what Microsoft is doing today – and it will do so sooner rather than later. While it's easy to admit that nothing lasts forever, it is rather more difficult to admit that a dearly beloved strategy is rapidly going from ripe to rotten.

Strategies decay for four reasons. Over time they get *replicated;* they lose their distinctiveness and, therefore, their power to produce above-average returns. Ford's introduction of the Explorer may have established the SUV category, but today nearly every carmaker – from Cadillac to Nissan to Porsche – has a high-standing, gas-guzzling monster in its product line. No wonder Ford's profitability has recently taken a hit. With a veritable army of consultants hawking best practices and a bevy of business journalists working to uncover the secrets of high-performing companies, great ideas get replicated faster than ever. And when strategies converge, margins collapse.

Good strategies also get *supplanted* by better strategies. Whether it's made-to-order PCs à la Dell, flat-pack furniture from IKEA, or downloadable music via KaZaA, innovation often undermines the earning power of traditional business models. One company's creativity is another's destruction. And in an increasingly connected economy, where ideas and capital travel at light speed, there's every reason to believe that new strategies will become old strategies ever more quickly.

Strategies get *exhausted* as markets become saturated, customers get bored, or optimization programs reach the point of diminishing returns. One example: In 1995, there were approximately 91 million active mobile phones in the world. Today, there are more than 1 billion. Nokia rode this growth curve more adeptly than any of its rivals. At one point its market value was three-and-a-half times that of its closest competitor. But the number of mobile phones in the world is not going to increase by 1,000% again, and Nokia's growth curve has already started to flatten out. Today, new markets can take off like a rocket. But the faster they grow, the sooner they reach the point where growth begins to decelerate. Ultimately, every strategy exhausts its fuel supply.

Finally, strategies get *eviscerated.* The Internet may not have changed everything, but it has dramatically accelerated the migration of power from producers to consumers. Customers are using their newfound power like a knife, carving big chunks out of once-fat margins. Nowhere has this been more evident than in the travel business, where travelers are using the Net to wrangle the lowest possible prices out of airlines and hotel companies. You know all those e-business efficiencies your



Anticipating Strategy Decay

Business strategies decay in four ways – by being replicated, supplanted, exhausted, or eviscerated. And across the board, the pace of strategy decay is accelerating. The following questions, and the metrics they imply, make up a panel of warning lights that can alert executives to incipient decline.

The fact that renewal so often lags decay suggests that corporate leaders regularly miss, or deny, the signs of strategy decay. A diligent, honest, and frequent review of these questions can help to remedy this situation.

company has been reaping? It's going to end up giving most of those productivity gains back to customers in the form of lower prices or better products and services at the same price. Increasingly it's your customers, not your competitors, who have you – and your margins – by the throat.

An accurate and honest appraisal of strategy decay is a powerful antidote to denial. (See the sidebar "Anticipating Strategy Decay" for a list of diagnostic questions.) It is also the only way to know whether renewal is proceeding fast enough to fully offset the declining economic effectiveness of today's strategies.

Valuing Variety

Life is the most resilient thing on the planet. It has survived meteor showers, seismic upheavals, and radical climate shifts. And yet it does not plan, it does not forecast, and, except when manifested in human beings, it possesses no foresight. So what is the essential thing that life teaches us about resilience? Just this: Variety matters. Genetic variety, within and across species, is nature's insurance policy against the unexpected. A high degree of biological diversity ensures that no matter what particular future unfolds, there will be at least some organisms that are well-suited to the new circumstances.

Evolutionary biologists aren't the only ones who understand the value of variety. As any systems theorist will tell you, the larger the variety of actions available to a system, the larger the variety of perturbations it is able to accommodate. Put simply, if the range of strategic alternatives your company is exploring is significantly narrower than the breadth of change in the environment, your business is going to be a victim of turbulence. Resilience depends on variety.

Big companies are used to making big bets – Disney's theme park outside Paris, Motorola's satellite-phone venture Iridium, HP's acquisition of Compaq, and GM's gamble on hydrogen-powered cars are but a few examples. Sometimes these bets pay off; often they don't. When audacious strategies fail, companies often react by imposing draconian cost-cutting measures. But neither profligacy nor privation leads to resilience. Most companies would be better off if they made fewer billion-dollar bets and a whole lot more $10,000 or $20,000 bets – some of which will, in time, justify more substantial commitments. They should steer clear of grand, imperial strategies and devote themselves instead to launching a swarm of low-risk experiments, or, as our colleague Amy Muller calls them, stratlets.

The arithmetic is clear: It takes thousands of ideas to produce dozens of promising stratlets to yield a few outsize successes. Yet only a handful of companies have committed themselves to broad-based, small-scale strategic experimentation. Whirlpool is one. The world's leading manufacturer of domestic appliances, Whirlpool competes in an industry that is both cyclical and mature. Growth is a function of housing starts and product replacement cycles. Customers tend to repair rather than replace their old appliances, particularly in tough times. Megaretailers like Best Buy squeeze margins mercilessly. Customers exhibit little brand loyalty. The result is zero-sum competition, steadily declining real prices, and low growth. Not content with this sorry state of affairs, Dave Whitwam, Whirlpool's chairman, set out in 1999 to make innovation a core competence at the company. He knew the only way

Replication	Supplantation	Exhaustion	Evisceration
Is our strategy losing its distinctiveness?	**Is our strategy in danger of being superseded?**	**Is our strategy reaching the point of exhaustion?**	**Is increasing customer power eviscerating our margins?**
Does our strategy defy industry norms in any important ways?	Are there discontinuities (social, technical, or political) that could significantly reduce the economic power of our current business model?	Is the pace of improvement in key performance metrics (cost per unit or marketing expense per new customer, for example) slowing down?	To what extent do our margins depend on customer ignorance or inertia?
Do we possess any competitive advantages that are truly unique?	Are there nascent business models that might render ours irrelevant?	Are our markets getting saturated; are our customers becoming more fickle?	How quickly, and in what ways, are customers gaining additional bargaining power?
Is our financial performance becoming less exceptional and more average?	Do we have strategies in place to co-opt or neutralize these forces of change?	Is our company's growth rate decelerating, or about to start doing so?	Do our productivity improvements fall to the bottom line, or are we forced to give them back to customers in the form of lower prices or better products and services at the same price?

to counter the forces that threatened Whirlpool's growth and profitability was to generate a wide assortment of genuinely novel strategic options.

Over the subsequent three years, the company involved roughly 10,000 of its 65,000 employees in the search for breakthroughs. In training sessions and workshops, these employees generated some 7,000 ideas, which spawned 300 small-scale experiments. From this cornucopia came a stream of new products and businesses–from Gladiator Garage Works, a line of modular storage units designed to reduce garage clutter; to Briva, a sink that features a small, high-speed dishwasher; to Gator Pak, an all-in-one food and entertainment center designed for tailgate parties. (For more on Whirlpool's strategy for commercializing the Gladiator line, see "Innovating for Cash" in this issue.)

Having institutionalized its experimentation process, Whirlpool now actively manages a broad pipeline of ideas, experiments, and major projects from across the company. Senior executives pay close attention to a set of measures–an innovation dashboard–that tracks the number of ideas moving through the pipeline, the percentage of those ideas that are truly new, and the potential financial impact of each one. Whirlpool's leadership team is learning just how much variety it must engender at the front end of the pipeline, in terms of nascent ideas and first-stage experiments, to produce the earnings impact it's looking for at the back end.

Experiments should go beyond just products. While virtually every company has some type of new-product pipeline, few have a process for continually generating, launching, and tracking novel strategy experiments in the areas of pricing, distribution, advertising, and customer service. Instead, many companies have created innovation ghettos – incubators, venture funds, business development functions, and skunk works–to pursue ideas outside the core. Cut off from the resources, competencies, and customers of the main business, most of these units produce little in the way of shareholder wealth, and many simply wither away.

The isolation – and distrust – of strategic experimentation is a leftover from the industrial age, when variety was often seen as the enemy. A variance, whether from a quality standard, a production schedule, or a budget, was viewed as a bad thing – which it often was. But in many companies, the aversion to unplanned variability has metastasized into a general antipathy toward the nonconforming and the deviant. This infatuation with conformance severely hinders the quest for resilience.

Our experience suggests that a reasonably large company or business unit – having $5 billion to $10 billion in revenues, say – should generate at least 100 groundbreaking experiments every year, with each one absorbing between $10,000 and $20,000 in first-stage investment funds. Such variety need not come at the expense of focus. Starting in the mid-1990s, Nokia pursued a strategy defined by three clear goals – to "humanize" technology (via the user interface, product design, and aesthetics); to enable "virtual presence" (where the phone becomes an all-purpose messaging and data access device); and to deliver "seamless solutions" (by bundling infrastructure, software, and handsets in a total package for telecom operators). Each of these "strategy themes" spawned dozens of breakthrough projects. It is a broadly shared sense of direction, rather than a tightly circumscribed definition of served market or an allegiance to one particular business model, that reins in superfluous variety.

Of course, most billion-dollar opportunities don't start out as sure things – they start out as highly debatable propositions. For example, who would have predicted, in December 1995, when eBay was only three months old, that the on-line auctioneer would have a market value of $27 billion in the spring of 2003 – two years *after* the dot-com crash? Sure, eBay is an exception. Success is always an exception. To find those exceptions, you must gather and sort through hundreds of new strategic options and then test the promising ones through low-cost, well-designed experiments – building prototypes, running computer simulations, interviewing progressive customers, and the like. There is simply no other way to reconnoiter the future. Most experiments *will* fail. The issue is not how many times you fail, but the value of your successes when compared with your failures. What counts is how the portfolio performs, rather than whether any particular experiment pans out.

Liberating Resources

Facing up to denial and fostering new ideas are great first steps. But they'll get you nowhere if you can't free up the resources to support a broad array of strategy experiments within the core business. As every manager knows, reallocating resources is an intensely political process. Resilience requires, however, that it become less so.

Institutions falter when they invest too much in "what is" and too little in "what could be." There are many ways companies overinvest in the status quo: They devote too much marketing energy to existing customer segments while ignoring new ones; they pour too many development dollars into incremental product enhancements while underfunding breakthrough projects; they lavish resources on existing distribution channels while starving new go-to-market strategies. But whatever the manifestation, the root cause is always the same: Legacy strategies have powerful constituencies; embryonic strategies do not.

In most organizations, a manager's power correlates directly with the resources he or she controls – to lose resources is to lose stature and influence. Moreover, personal success often turns solely on the performance of one's own unit or program. It is hardly surprising, then,

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that unit executives and program managers typically resist any attempt to reallocate "their" capital and talent to new initiatives – no matter how attractive those new initiatives may be. Of course, it's unseemly to appear too parochial, so managers often hide their motives behind the facade of an ostensibly prudent business argument. New projects are deemed "untested," "risky," or a "diversion." If such ruses are successful, and they often are, those seeking resources for new strategic options are forced to meet a higher burden of proof than are those who want to allocate additional investment dollars to existing programs. Ironically, unit managers seldom have to defend the risk they are taking when they pour good money into a slowly decaying strategy or overfund an activity that is already producing diminishing returns.

The fact is, novelty implies nothing about risk. Risk is a function of uncertainty, multiplied by the size of one's financial exposure. Newness is a function of the extent to which an idea defies precedent and convention. The Starbucks debit card, which allows regular customers to purchase their daily fix of caffeine without fumbling through their pockets for cash, was undoubtedly an innovation for the quick-serve restaurant industry. Yet it's not at all clear that it was risky. The card offers customers a solid benefit, and it relies on proven technology. Indeed, it was an immediate hit. Within 60 days of its launch, convenience-minded customers had snapped up 2.3 million cards and provided Starbucks with a $32 million cash float.

A persistent failure to distinguish between new ideas and risky ideas reinforces companies' tendency to overinvest in the past. So too does the general reluctance of corporate executives to shift resources from one business unit to another. A detailed study of diversified companies by business professors Hyun-Han Shin and René Stulz found that the allocation of investment funds across business units was mostly uncorrelated with the relative attractiveness of investment opportunities within those units. Instead, a business unit's investment budget was largely a function of its own cash flow and, secondarily, the cash flow of the firm as a whole. It seems that top-level executives, removed as they are from day-to-day operations, find it difficult to form a well-grounded view of unit-level, or subunit-level, opportunities and are therefore wary of reallocating resources from one unit to another.

Now, we're not suggesting that a highly profitable and growing business should be looted to fund some dimwitted diversification scheme. Yet if a company systematically favors existing programs over new initiatives, if the forces of preservation regularly trounce the forces of experimentation, it will soon find itself overinvesting in moribund strategies and outdated programs. Allocational rigidities are the enemy of resilience.

Just as biology can teach us something about variety, markets can teach us something about what it takes to liberate resources from the prison of precedent. The evidence of the past century leaves little room for doubt: Market-based economies outperform those that are centrally planned. It's not that markets are infallible. Like human beings, they are vulnerable to mania and despair. But, on average, markets are better than hierarchies at getting the right resources behind the right opportunities at the right time. Unlike hierarchies, markets are apolitical and unsentimental; they don't care whose ox gets gored. The average company, though, operates more like a socialist state than an unfettered market. A hierarchy may be an effective mechanism for applying resources, but it is an imperfect device for allocating resources. Specifically, the market for capital and talent that exists within companies is a whole lot less efficient than the market for talent and capital that exists between companies.

In fact, a company can be operationally efficient and strategically inefficient. It can maximize the efficiency of its existing programs and processes and yet fail to find and fund the unconventional ideas and initiatives that might yield an even higher return. While companies have many ways of assessing operational efficiency, most firms are clueless when it comes to strategic efficiency. How can corporate leaders be sure that the current set of initiatives represents the highest value use of talent and capital if the company hasn't generated and examined a large population of alternatives? And how can executives be certain that the right resources are lined up behind the right opportunities if capital and talent aren't free to move to high-return projects or businesses? The simple answer is, they can't.

When there is a dearth of novel strategic options, or when allocational rigidities lock up talent and cash in existing programs and businesses, managers are allowed to "buy" resources at a discount, meaning that they don't have to compete for resources against a wide array of alternatives. Requiring that every project and business earn its cost of capital doesn't correct this anomaly. It is perfectly possible for a company to earn its cost of capital and still fail to put its capital and talent to the most valuable uses.

To be resilient, businesses must minimize their propensity to overfund legacy strategies. At one large company, top management took an important step in this direction by earmarking 10% of its $1 billion-a-year capital budget for projects that were truly innovative. To qualify, a project had to have the potential to substantially change customer expectations or industry economics. Moreover, the CEO announced his intention to increase this percentage over time. He reasoned that if divisional executives were not funding breakout projects, the company was never going to achieve breakout results. The risk of this approach was mitigated by a requirement that each division develop a broad portfolio of experiments, rather than bet on one big idea.

Freeing up cash is one thing. Getting it into the right hands is another. Consider, for a moment, the options facing a politically disenfranchised employee who hopes to win funding for a small-scale strategy experiment. One option is to push the idea up the chain of command to the point where it can be considered as part of the formal planning process. This requires four things: a boss who doesn't peremptorily reject the idea as eccentric or out of scope; an idea that is, at first blush, "big" enough to warrant senior management's attention; executives who are willing to divert funds from existing programs in favor of the unconventional idea; and an innovator who has the business acumen, charisma, and political cunning to make all this happen. That makes for long odds.

What the prospective innovator needs is a second option: access to many, many potential investors–analogous to the multitude of investors to which a company can appeal when it is seeking to raise funds. How might this be accomplished? In large organizations there are hundreds, perhaps thousands, of individuals who control a budget of some sort–from facilities managers to sales managers to customer service managers to office managers and beyond. Imagine if each of these individuals were a potential source of funding for internal innovators. Imagine that each could occasionally play the role of angel investor by providing seed funding for ideas aimed at transforming the core business in ways large and small. What if everyone who managed a budget were allowed to invest 1% or 3% or 5% of that budget in strategy experiments? Investors within a particular department or region could form syndicates to take on slightly bigger risks or diversify their investment portfolios. To the extent that a portfolio produced a positive return, in terms of new revenues or big cost savings, a small bonus would go back to those who had provided the funds and served as sponsors and mentors. Perhaps investors with the best track records would be given the chance to invest more of their budgets in breakout projects. Thus liberated, capital would flow to the most intriguing possibilities, unfettered by executives' protectionist tendencies.

When it comes to renewal, human skills are even more critical than cash. So if a market for capital is important, a market for talent is essential. Whatever their location, individuals throughout a company need to be aware of all the new projects that are looking for talent. Distance, across business unit boundaries or national borders, should not diminish this visibility. Employees need a simple way to nominate themselves for project teams. And if a project team is eager to hire a particular person, no barriers should stand in the way of a transfer. Indeed, the project team should have a substantial amount of freedom in negotiating the terms of any transfer. As long as the overall project risk is kept within bounds, it should be up to the team to decide how much to pay for talent.

Executives shouldn't be too worried about protecting employees from the downside of a failed project. Over time, the most highly sought-after employees will have the chance to work on multiple projects, spreading their personal risk. However, it is important to ensure that successful projects generate meaningful returns, both financial and professional, for those involved, and that dedication to the cause of experimentation is always positively recognized. But irrespective of the financial rewards, ambitious employees will soon discover that transformational projects typically offer transformational opportunities for personal growth.

Embracing Paradox

The final barrier to resilience is ideological. The modern corporation is a shrine to a single, 100-year-old ideal – optimization. From "scientific management" to "operations research" to "reengineering" to "enterprise resource planning" to "Six Sigma," the goal has never changed: Do more, better, faster, and cheaper. Make no mistake, the ideology of optimization, and its elaboration into values, metrics, and processes, has created enormous material wealth. The ability to produce millions of gadgets, handle millions of transactions, or deliver a service to millions of customers is one of the most impressive achievements of humankind. But it is no longer enough.

The creed of optimization is perfectly summed up by McDonald's in its famous slogan, "Billions Served." The problem comes when some of those billions want to be served something else, something different, something new. As an ideal, optimization is sufficient only as long as there's no fundamental change in what has to be optimized. But if you work for a record company that needs to find a profitable on-line business model, or for an airline struggling to outmaneuver Southwest, or for a hospital trying to deliver quality care despite drastic budget cuts, or for a department store chain getting pummeled by discount retailers, or for an impoverished school dis-

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trict intent on curbing its dropout rate, or for any other organization where more of the same is no longer enough, then optimization is a wholly inadequate ideal.

An accelerating pace of change demands an accelerating pace of strategic evolution, which can be achieved only if a company cares as much about resilience as it does about optimization. This is currently not the case. Oh sure, companies have been working to improve their operational resilience – their ability to respond to the ups and downs of the business cycle or to quickly rebalance their product mix – but few have committed themselves to systematically tackling the challenge of strategic resilience. Quite the opposite, in fact. In recent years, most companies have been in retrenchment mode, working to resize their cost bases to accommodate a deflationary economy and unprecedented competitive pressure. But retrenchment can't revitalize a moribund business model, and great execution can't reverse the process of strategy decay.

It's not that optimization is wrong; it's that it so seldom has to defend itself against an equally muscular rival. Diligence, focus, and exactitude are reinforced every day, in a hundred ways – through training programs, benchmarking, improvement routines, and measurement systems. But where is the reinforcement for strategic variety, wide-scale experimentation, and rapid resource redeployment? How have these ideals been instantiated in employee training, performance metrics, and management processes? Mostly, they haven't been. That's why the forces of optimization are so seldom interrupted in their slow march to irrelevance.

When you run to catch a cab, your heart rate accelerates – *automatically.* When you stand up in front of an audience to speak, your adrenal glands start pumping – *spontaneously.* When you catch sight of someone alluring, your pupils dilate – *reflexively.* Automatic, spontaneous, reflexive. These words describe the way your body's autonomic systems respond to changes in your circumstances. They do not describe the way large organizations respond to changes in their circumstances. Resilience will become something like an autonomic process only when companies dedicate as much energy to laying the groundwork for perpetual renewal as they have to building the foundations for operational efficiency.

In struggling to embrace the inherent paradox between the relentless pursuit of efficiency and the restless exploration of new strategic options, managers can learn something from constitutional democracies, particularly the United States. Over more than two centuries, America has proven itself to be far more resilient than the companies it has spawned. At the heart of the American experiment is a paradox – unity and diversity – a single nation peopled by all nations. To be sure, it's not easy to steer a course between divisive sectarianism and totalitarian conformity. But the fact that America has managed to do this, despite some sad lapses, should give courage to managers trying to square the demands of penny-pinching efficiency and break-the-rules innovation. Maybe, just maybe, all those accountants and engineers, never great fans of paradox, can learn to love the heretics and the dreamers.

The Ultimate Advantage

Perhaps there are still some who believe that large organizations can never be truly resilient, that the goal of "zero trauma" is nothing more than a chimera. We believe they are wrong. Yes, size often shelters a company from the need to confront harsh truths. But why can't size also provide a shelter for new ideas? Size often confers an inappropriate sense of invincibility that leads to foolhardy risk-taking. But why can't size also confer a sense of possibility that encourages widespread experimentation? Size often implies inertia, but why can't it also imply persistence? The problem isn't size, but success. Companies get big because they do well. Size is a barrier to resilience only if those who inhabit large organizations fall prey to the delusion that success is self-perpetuating.

Battlefield commanders talk about "getting inside the enemy's decision cycle." If you can retrieve, interpret, and act upon battlefield intelligence faster than your adversary, they contend, you will be perpetually on the offensive, acting rather than reacting. In an analogous way, one can think about getting inside a competitor's "renewal cycle." Any company that can make sense of its environment, generate strategic options, and realign its resources faster than its rivals will enjoy a decisive advantage. This is the essence of resilience. And it will prove to be the ultimate competitive advantage in the age of turbulence – when companies are being challenged to change more profoundly, and more rapidly, than ever before.

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