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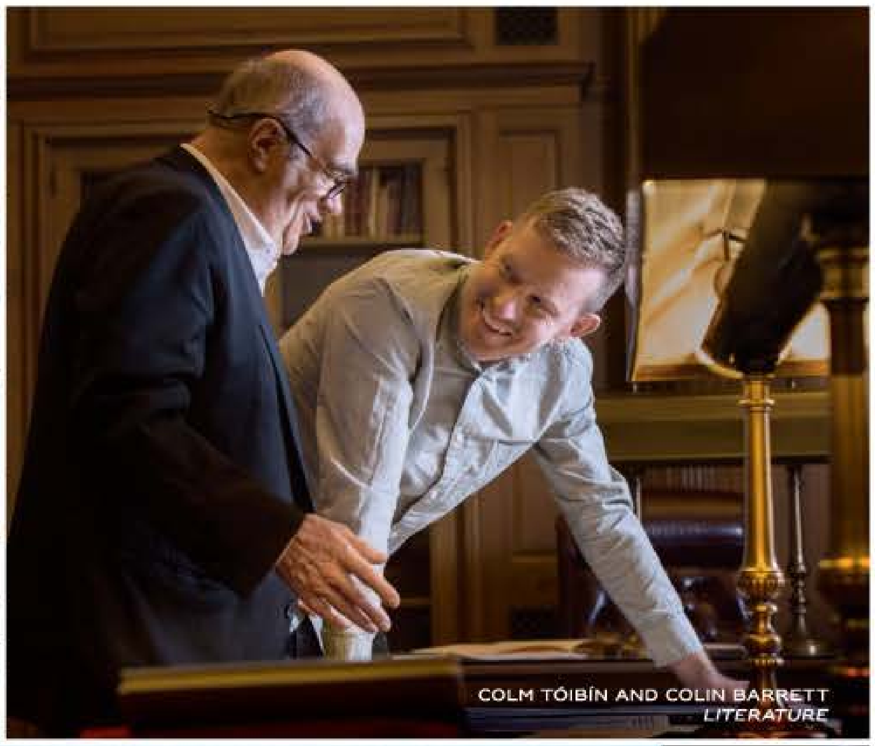
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Harvard Business Review

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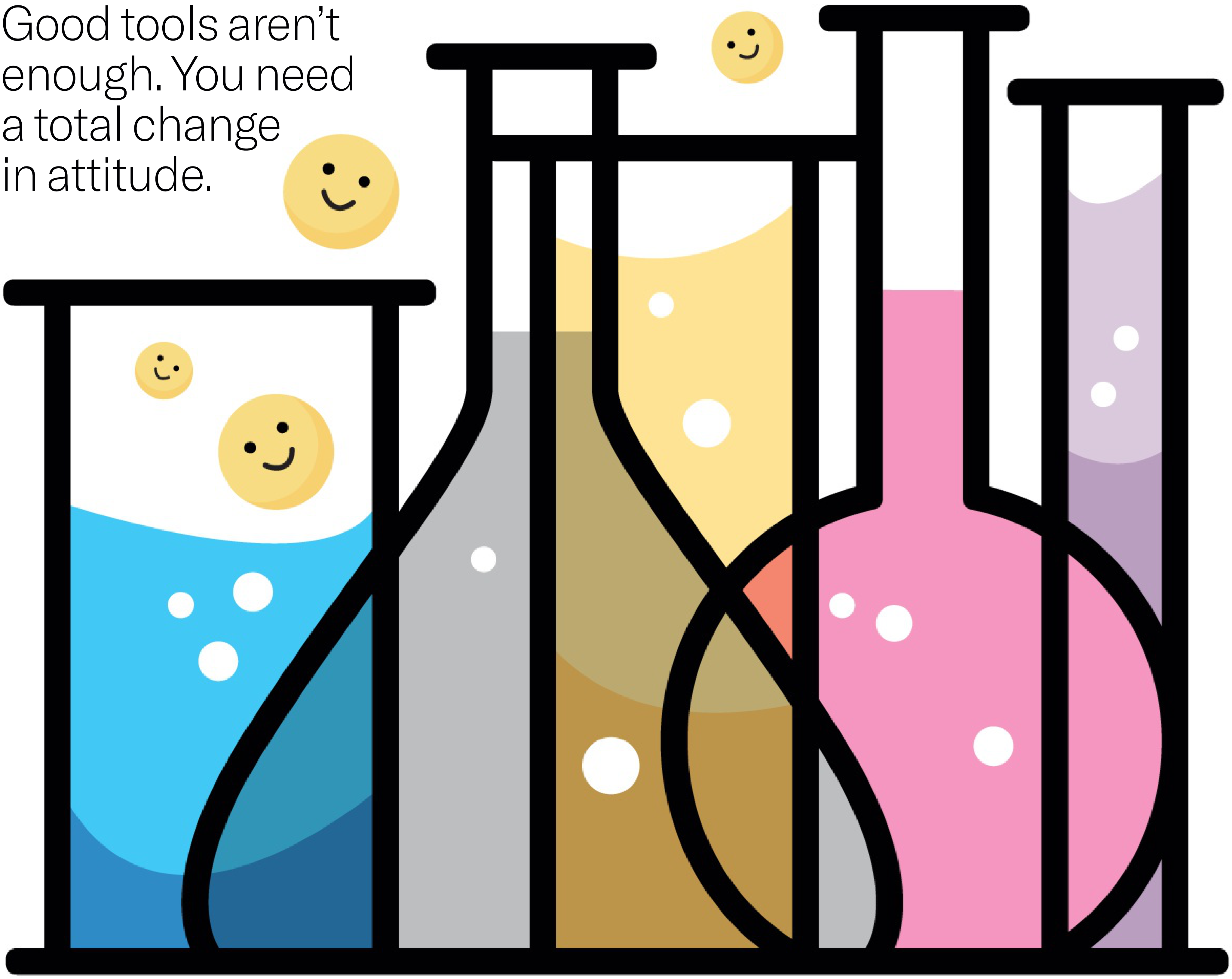
March–April 2020

Creating a Culture of Experimentation

Good tools aren't enough. You need a total change in attitude.



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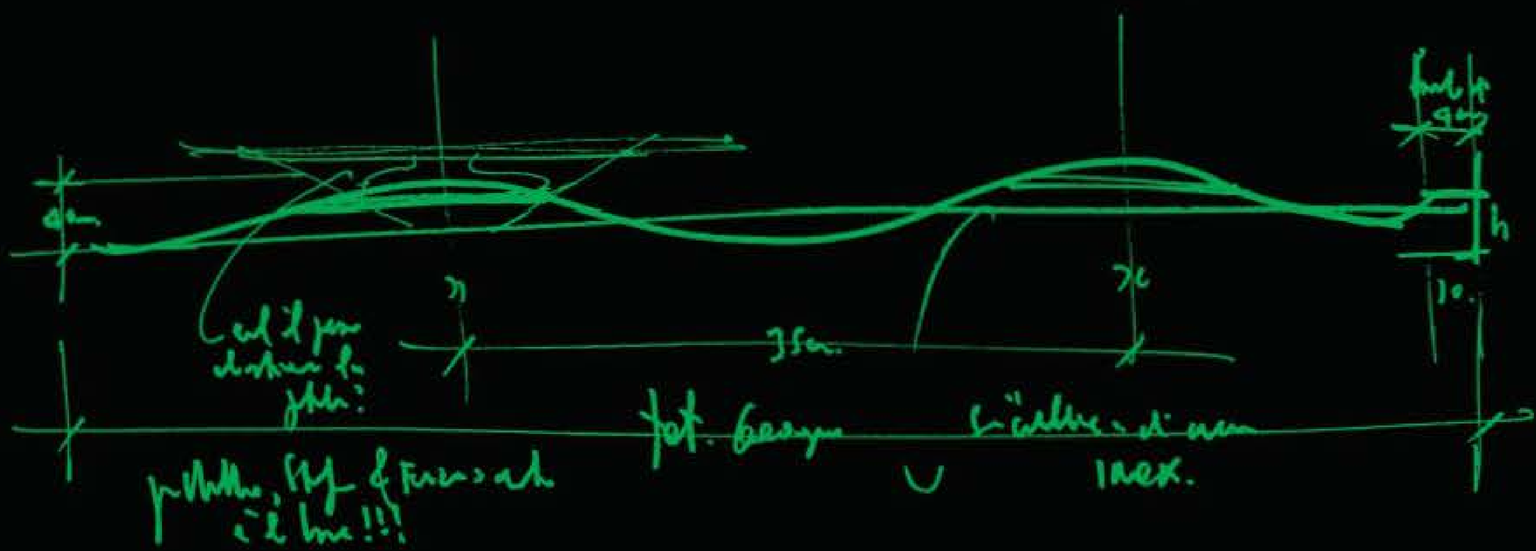


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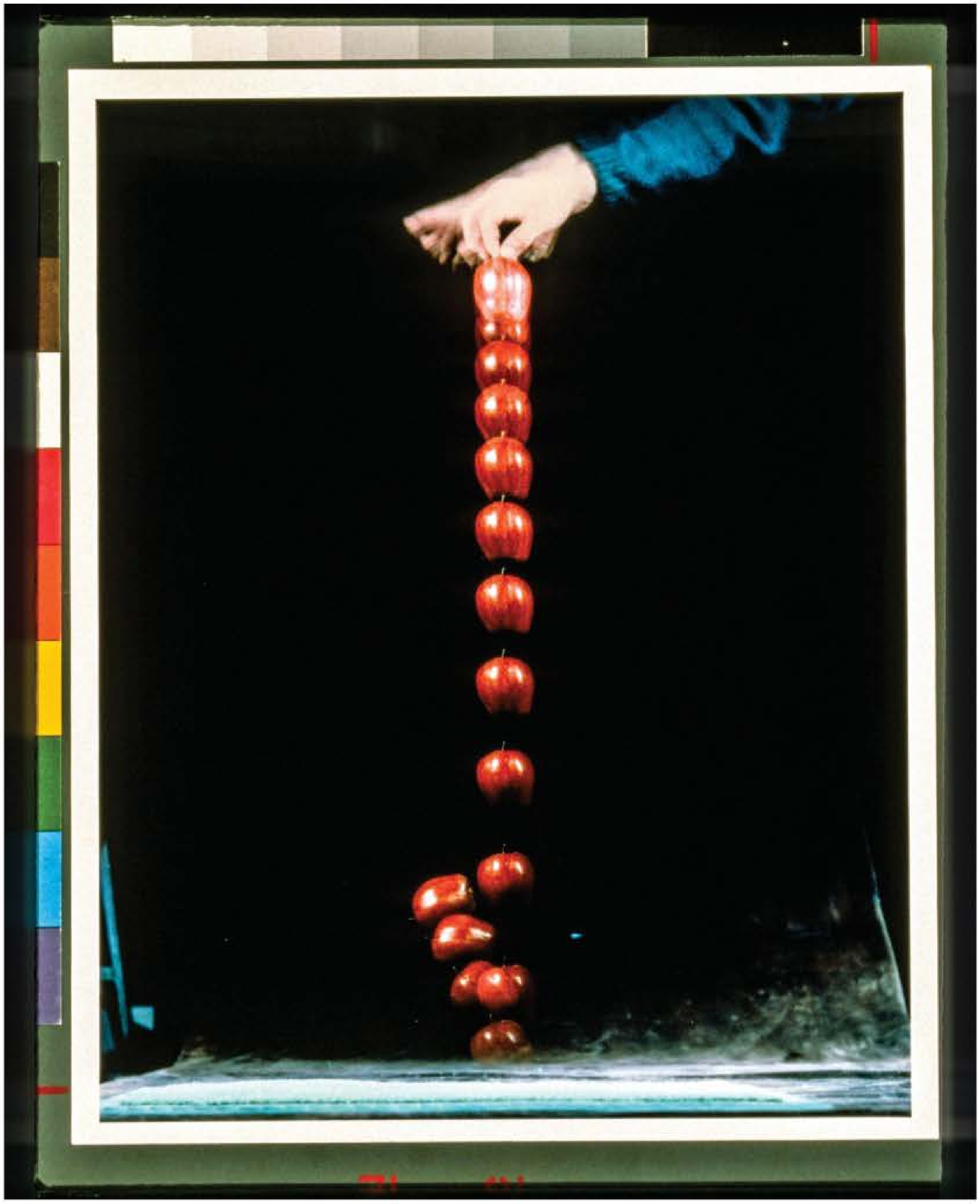

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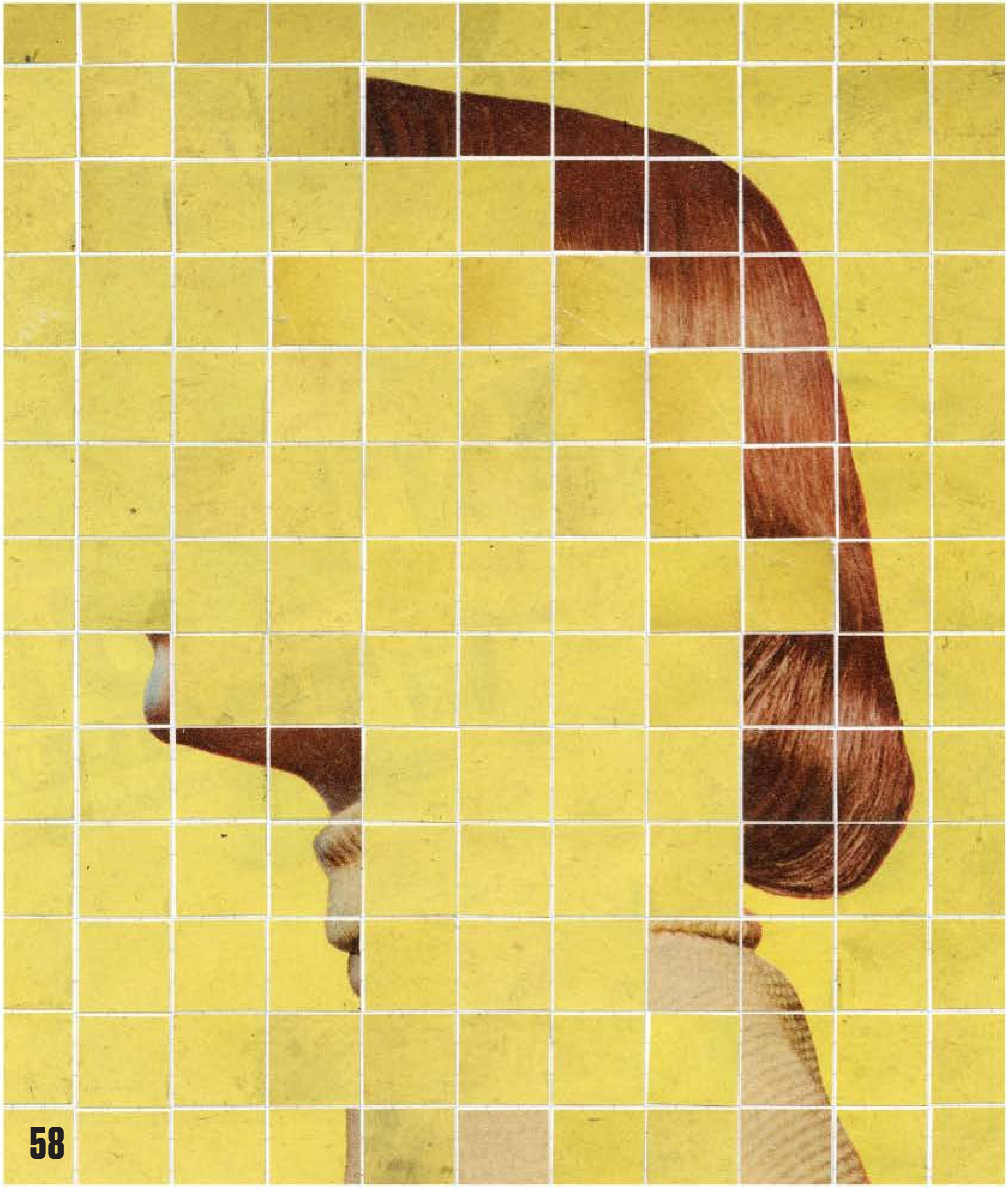

Illustration by ANTHONY GERACE

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The Right Thing to Do

Adi Ignatius with John Korpics, HBR's creative director

WE TALK A LOT about the importance of authenticity. The ability to be true to yourself has been tied to higher engagement, greater workplace satisfaction, better performance, and increased overall well-being. But if your gender identity doesn't conform to the sex you were assigned at birth, the likelihood is high that you aren't bringing your whole self to work.

The workplace is deeply unkind to transgender people. Study after study shows that they are stigmatized and discriminated against. A 2015 survey of trans individuals in the United States revealed that an appalling 77% reported taking active steps to avoid mistreatment at work, such as hiding their gender identities or quitting their jobs. Two-thirds reported negative work outcomes, such as being fired or forced to resign, not being hired for a job, or being denied a promotion.

The experience of burying their true natures can be psychologically devastating for trans individuals, as Christian Thoroughgood of Villanova, Katina Sawyer of George Washington, and Jennica Webster of Marquette note in "Creating a Trans-Inclusive Workplace" (page 114). And "a failure to adopt trans-specific policies and practices can cost businesses dearly," they write, "in the form of higher turnover, decreased engagement and productivity, and possible litigation."

The business case for diversity is clear. More important, it's the right thing to do. At a time when executives are grappling with the proper role of the corporation in society, they can no longer play it safe by simply reflecting the values of the world in which they operate. Businesses have the power to shape sensibilities for the greater good. They should exercise it.

ADI IGNATIUS
Editor in chief

Sasha Patkin

Contributors

In the early 1990s **Stefan Thomke** was a doctoral student at MIT and an electrical engineer. In both roles he focused on the testing of chip designs and the management of experimentation. "Experimentation should affect everyone and everything in a company, not just R&D and operations," says Thomke, now a professor at Harvard Business School. "The ability to run online experiments at massive scale is changing how firms compete." In his article in this issue, adapted from his new book, *Experimentation Works,* he explores how to create a culture in which experimentation is a way of life.

40 Building a Culture of Experimentation

Before pursuing advanced degrees in business and marketing, **Ayelet Israeli** served as a lieutenant in the Israeli Intelligence Corps. The analytical skills she learned there have informed her research into online and omnichannel retailing. In her article in this issue, Israeli—now an assistant professor at Harvard Business School—and coauthor Eugene Zelek Jr. describe how brands can use pricing policies to reduce unauthorized discounting. "I was surprised by how often resellers violate brands' rules, and I wanted to find ways to stop them," she says.

76 Pricing Policies That Protect Your Brand

In 1998, when **Indra Nooyi** was PepsiCo's senior vice president of corporate strategy, CEO Roger Enrico told her he wanted to make the firm a defining corporation of the 21st century. Asked what that meant, he replied, "I don't know. Figure it out." The goal of creating a defining corporation never left Nooyi—and in October 2006, when she became CEO, she set out to achieve it. In her article in this issue, she and coauthor Vijay Govindarajan describe how PepsiCo devised and implemented a strategy for building a more sustainable future and setting an example of what it means to be a purpose-driven modern company.

94 Becoming a Better Corporate Citizen

While studying microeconomics at Cornell, **Dan Lovallo** struggled with the notion that humans are rational agents. This line of inquiry led him first to the economist Richard Thaler and eventually to the psychologist and economist Daniel Kahneman, whose PhD student he became. Now a professor at the University of Sydney and a senior adviser to McKinsey, Lovallo has collaborated with Kahneman on a number of academic and managerial articles rooted in behavioral economics. Their piece in this issue, with coauthors Tim Koller and Robert Uhlaner, is the latest.

104 Your Company Is Too Risk-Averse

When **Anthony Gerace** was growing up in Ontario, he says, he "thought design was just record covers and posters." But after studying graphic design at OCAD University, he began a career as a designer, photographer, and collage artist. "The theme I'm most concerned with is the effect of time on objects," says Gerace, who now lives in London. The collages in this issue, he explains, are "about breaking down an image into something that both transcends its source and ceases to function."

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Harvard Business Review

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VOLUME 98, NUMBER 2 | MARCH–APRIL 2020
Printed in the U.S.A.

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IdeaWatch

New Research and Emerging Insights

IN THEORY

WHY SOLICITING DONATIONS AT THE CASH REGISTER CAN BACKFIRE

Use these strategies to ensure that it doesn't.

EFUA OBENG DESCRIBES HERSELF as an altruistic person who regularly writes checks to charities. But several years ago she began taking note of how she reacted when asked for donations while paying for purchases in stores. "I hated it," says Obeng, an assistant professor of marketing at Howard University. Conversations with family and friends confirmed that she was not alone. Yet research showed that philanthropic organizations relied heavily on such solicitations. So Obeng decided to investigate the practice and how retailers could mount more-effective charity-at-checkout campaigns.

That work has led to an explanation for why otherwise altruistic people may react negatively to point-of-sale solicitations. Across several studies involving hundreds of

Illustrations by TIM BOWER

participants, Obeng and her coauthors found that customers perceive point-of-sale solicitations as a violation of their social contract with the retailer—a contract built on the principle of reciprocity, whereby the two parties equally contribute to and benefit from the exchange. When customers are asked for a donation—a one-way transaction—the balance is upended.

Study participants imagined that they were shopping at a grocery store and were either asked for a donation or checked out without such a request. Afterward they rated their satisfaction with the store and the extent to which they believed it had violated the social contract. Subjects who were asked for a donation were far likelier than others to perceive a social-contract violation. The request also diminished customer satisfaction by up to 10% and decreased the likelihood of recommending and revisiting the store. Controlling for other factors that might account for those results, the researchers ruled out guilt, loss of trust, and dislike for the retailer.

If a retailer's social-contract violation erodes customer satisfaction, Obeng and her colleagues reasoned, then a similar violation by the customer should restore equilibrium and leave satisfaction intact. So in one of their studies half the subjects were told they were checking out with an expired coupon, while the other half checked out normally. Those in the latter group who were asked for a donation reported a breach of social contract and decreased satisfaction with the store. But for participants with expired coupons, requests for a donation had no negative effect on satisfaction or perceptions of the social contract. "When customers knowingly take more than they are contributing and then are asked to give, it evens out," Obeng explains.

The final study in the series tested a practical method by which retailers might maintain reciprocity and avoid a hit to customer satisfaction: incurring a donation-related cost of their own. Here, half the subjects who were asked to donate were offered a reusable shopping bag in return. They perceived their relationship with the store to be in greater equilibrium than did subjects who were asked to donate without the offer of a bag, and they expressed higher satisfaction with the retailer—in fact, their level of satisfaction was similar to that of subjects who were not asked to donate.

A subsequent statistical analysis suggests significant implications for retailers' revenues. Starting with a list of the world's top 100 public retailers in 2017, the researchers identified those that had sponsored point-of-sale campaigns that year. Controlling for factors including ad expenditures, age, debt leverage, and size, and using publicly available financial results, they found that the sponsors had earned $17 million less, on average, than their counterparts.

To be sure, there's little consensus regarding how many customers who are asked to donate at the cash register actually do so. A survey by the professional association Engage for Good found that participation in any one campaign averaged 18%. The subjects in Obeng's studies were not asked to say whether they would comply with the donation request, but on the basis of other research she has conducted, she estimates the average participation rate for any given campaign to be roughly 30%. Customers who do make donations express more satisfaction with the retailer and a greater willingness to return—so if retailers can increase participation, it should benefit them and their charity partners alike.

To that end, Obeng and her coauthors offer several strategies for inspiring customers to donate while minimizing the risk of a backlash. Retailers can:

Reward customers for donating. As the social-contract studies demonstrate, "retailers that utilize charity at checkout can offset the decrease in customers' satisfaction by giving customers something that has a similar value in return," the researchers write. Obeng says there may be exceptions. For instance, people readily give around the holidays and to causes that help children, so in those cases they may feel no need for a reward.

Carefully choose the donation method and make the process simple. A study involving two of Obeng's

coauthors found that the rounding-up technique—giving customers the option to bump up their payment to the nearest full dollar amount, with the difference going to the designated charity—is perceived as less painful than a request for a flat amount. And for simplicity, a yes-or-no PIN pad option is generally best, Obeng says. "Some retailers ask customers to write their names on a sticker or a balloon for display in recognition of their donation, but as customers, we're focused on efficiency," she explains. "Any extra bells and whistles will harm a program's effectiveness."

Train employees. Even if the donation request is made silently, via PIN pad, store workers should be informed and engaged to serve as the charity's ambassadors, Obeng says. And customer service can be crucial to a campaign's success. In another recent study, she and her collaborators found that people experiencing high-quality service are twice as likely to donate as those experiencing normal levels of service—and nine times as likely as those experiencing inferior service. The psychological mechanism responsible is similar to the one in the social-contract study, she explains: "The consumer feels grateful to the retailer and reciprocates to keep the relationship in balance." A caveat: If shoppers doubt the authenticity of the superior service—because, for example, they've learned that employees are paid on commission—the tactic is likely to backfire. Study participants in that condition were less willing than members of the control group to make a donation.

Be altruistic and transparent. In another project Obeng found that people asked to donate at checkout reported greater satisfaction with the retailer when they believed it was truly committed to social responsibility. So it's important, she says, to invest in CSR activities more broadly and to publicize that involvement—say, with signage in stores. Retailers should also be clear about how much will go to the charity in question. That might mean specifying a dollar amount rather than promising to donate a percentage of profits or sales.

Select the right charity partner and the right time to launch. Customers are likely to perceive a partnership between a pharmacy and a nonprofit that funds medical research—two organizations operating in a similar space—more positively than one between a pharmacy and a literacy campaign, Obeng says. And she sounds a note of caution about retailer-operated charitable foundations: People may believe they are being asked to give to the retailer in the guise of the foundation. In terms of timing, campaigns launched in response to national tragedies or natural disasters—events that tug at customers' heartstrings—tend to yield higher rates of participation than year-round campaigns.

"Point-of-sale campaigns can be a win for the customer, the retailer, and the charity if executed carefully," Obeng says. "Rather than haphazardly launching campaigns, retailers must strategically craft them to ensure success."

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ABOUT THE RESEARCH *"Would You Like to Donate Today? Why Charity at Checkout May Backfire," by Efua Obeng, Casey E. Newmeyer, Katie Kelting, and Stefanie Robinson (working paper)*

IN PRACTICE

"People Want to Know Where Their Money Is Going"

For more than two decades ***Maureen Carlson*** *has held positions related to corporate social responsibility and social good. She is currently the lead strategist at On Purpose, a social-impact consultancy that guides charities and sponsoring companies. She recently spoke with HBR about trends and best practices in point-of-sale campaigns. Edited excerpts follow.*

What makes for a good match between charity and retailer? There are two ways to look at it. If the cause and the retailer are a natural fit—if they operate in the same sphere—the consumer doesn't have to wonder why the retailer is backing that particular cause. But on the flip side, you could say to a supermarket, for example, that if everyone else is supporting food-related nonprofits, maybe there's an opportunity for you to sponsor something different and cut through the clutter in the marketplace. It has

to be something the retailer cares about, and it should be something its customers have some passion or affinity for.

How can retailers demonstrate that they care about the cause? Make sure your outreach to consumers is across-the-board, and make it part of your culture—a natural extension of who you are. Don't limit your efforts to point of sale; move them across all your channels—digital and brick-and-mortar. As a consumer, if I'm asked by a retailer to give at the register but not over mobile or e-commerce, it can seem disjointed and less sincere. This can be challenging for retailers—their IT teams have other priorities—yet they're doing it, slowly but surely.

One of the findings of this research is that retailers should reward customers for donating. Do you agree? There's a lot of conversation about whether incentives are needed. We've actually found that most people just want to be thanked. It sounds so obvious, but for years we weren't seeing big thank-yous to consumers and employees at the end of a campaign. We really pushed for that: Thank people with the same vigor you had when asking them to give.

Some observers have noted that customers increasingly want information about the causes they're asked to contribute to and the impact their donations would have. Does that jibe with your experience? It does, and it's not unique to point of sale. Transparency is critical. The intensely popular TOMS "One for One" campaign—for every pair of shoes sold, the company donates a pair to a child in need—was a defining moment in terms of nonprofits' waking up and understanding that they have to specify the use of donated funds. People got used to seeing that model, and now they want to know where their money is going. That means, in part, educating employees so that they truly understand the cause and can give a one-sentence "why" when customers ask.

What other trends are you seeing from consumers? People want to be asked digitally—quietly, by PIN pad. And they increasingly prefer being asked to round up rather than to give a flat amount. It's much easier psychologically to add however many cents to your bill. Even though the individual donations are smaller, more people respond positively to the request, so it yields larger total amounts, we've found. For example, Children's Miracle Network Hospitals has a long-running campaign with Casey's General Stores. They recently moved to a round-up campaign and saw a 101% increase in funding.

Photograph by PHIL KLINE

IdeaWatch

BOARDS

Another Reason to Push for Female Directors

Research has shown that female board representation leads to better acquisition and investment decisions and less-aggressive risk-taking. A new study suggests an underlying mechanism for those results: Female directors temper the overconfidence of male CEOs.

The researchers gathered data on 1,629 U.S. companies and their leaders from 1998 to 2013. As a proxy for overconfidence, they looked at whether CEOs had held stock options when exercising them would have yielded hefty profits; the researchers reasoned that a failure to cash in when the market price is high reflects the often unrealistic belief that it will go even higher. The data showed that male CEOs whose boards included women were less likely than other male chief executives to hang on to so-called deep-in-the-money options. (There was no such effect for female leaders.) This happened, the researchers believe, because female directors, lacking membership in "old boy" networks, tend to be less conformist than their male counterparts and are thus more likely to challenge the CEO, curbing his overconfidence.

Next the researchers looked at how the companies in their sample performed. In industries with an abundance of overconfident CEOs (pharmaceuticals, construction, and computer software, among others), the presence of one or more women on the board was associated with less-aggressive investment policies, better acquisition decisions, and improved financial results. Last they drilled down into the performance of a subset of firms during the 2007–2009 financial crisis. This showed that firms with female board representation suffered smaller hits to firm value, return on assets, and return on equity, because their CEOs were less likely to adopt aggressive and risky strategies. "Female board representation matters more in some industries than others," the researchers conclude, adding that in times of crisis, "firms that do not have (sufficient) female board representation suffer a greater drop in performance."

ABOUT THE RESEARCH *"Why Female Board Representation Matters: The Role of Female Directors in Reducing Male CEO Overconfidence," by Jie Chen et al.* (Journal of Empirical Finance, *2019)*

DECISION-MAKING

Stick to Your Guns or Back Down?

If you're presented with evidence suggesting you've made a poor decision, will you make a better impression by staying the course or taking a new tack? A series of studies shows that it depends on the context. People who changed their minds in the face of disconfirming evidence were perceived as more intelligent than those who maintained their original stance—but they were also seen as being less confident.

The researchers began by studying 84 entrepreneurs entered in a U.S. pitch competition. Just 20 modified their pitches in response to potential investors' feedback; they were nearly six times as likely as their more-stubborn peers to advance to the final round.


F_OS

IdeaWatch

A KINDER, GENTLER TONGUE-LASHING

When bilingual speakers received criticism in both their native Chinese and English, they rated the English-language comments as less unpleasant.

"Criticism in a Foreign Language Hurts Less," by Shan Gao, Lizhu Luo, and Ting Gou

In a subsequent experiment, subjects played the role of a hiring manager evaluating two candidates on the basis of their performance in a debate. After the moderator presented facts contradicting both candidates' positions, one revised his stance. Subjects told that they were hiring an engineer—a position for which intelligence is perceived to be paramount—overwhelmingly chose the candidate who had backed down. But subjects told that they were hiring a motivational speaker—a position for which confidence is seen as key—preferred the candidate who had stood fast.

"When one is trying to appear confident, changing one's mind is unwise," the researchers write. "But our results suggest that when one is trying to appear intelligent, doing so is wise."

ABOUT THE RESEARCH *"The Self-Presentational Consequences of Upholding One's Stance in Spite of the Evidence," by Leslie K. John et al.* (Organizational Behavior and Human Decision Processes, *2019)*

INNOVATION

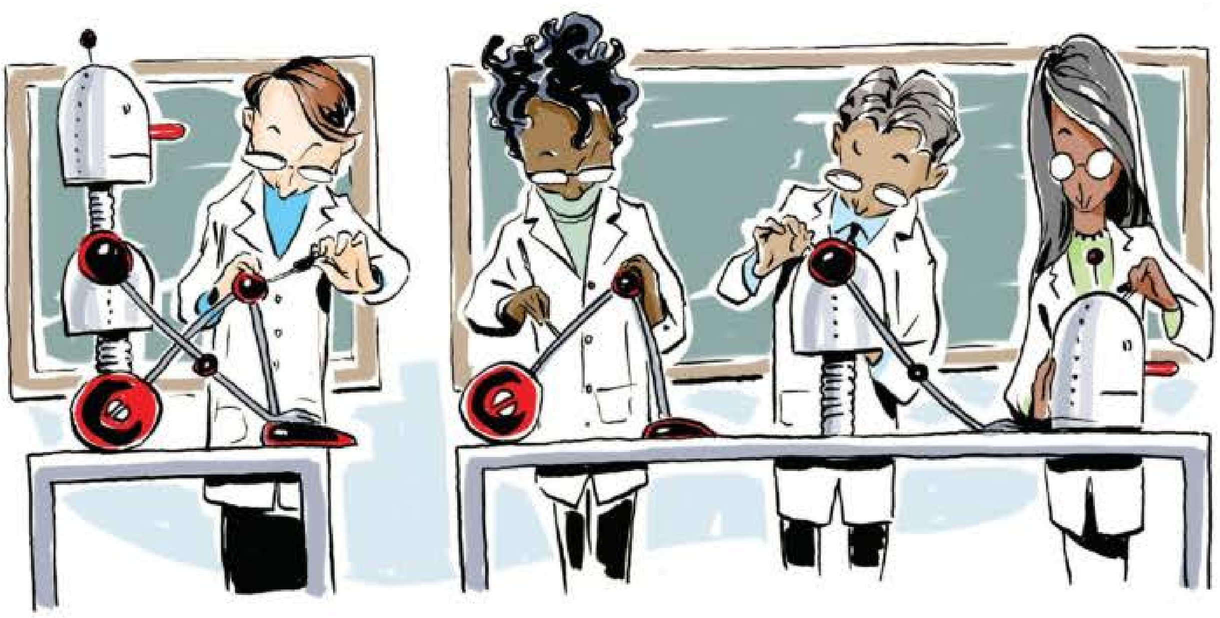
The Case for the Lone Inventor

A large body of research has concluded that breakthrough innovation is more commonly achieved by teams than by individuals; indeed, some observers have proclaimed the lone inventor to be a myth. A new study finds a more nuanced picture: that the relative effectiveness of teams and individuals varies according to whether the invention can be broken down into discrete chunks of work.

The researchers studied more than 1.8 million U.S. patents filed from 1985 to 2009, dividing them into two groups according to patent office classifications. *Utility patents* refer to inventions involving function, while *design patents* relate to form. Looking at the most-successful design patents (determined by the number of citations), the researchers found that solo inventors were just as likely as teams to produce breakthrough innovations. That happened, they say, because design innovations tend to be holistic; the work doesn't lend itself to division into separate chunks, so a team gains no advantage and incurs coordination costs.

With utility patents, the researchers found that solo inventors had a 17% lower probability of creating a breakthrough. But the effect wasn't universal. Because patent filings are highly structured—each aspect of an invention (and its variants) is assigned a subject and a number—the researchers were able to count the chunks of work in each one. They found that although teams outperformed individuals in conceiving highly modular inventions, there was no appreciable difference when it came to more-holistic ones. Further analysis showed that solo inventors performed well only if they had a rich history of collaboration, presumably because that gave them a learning platform to draw on when working on their own.

"Aligning the structure of the innovation task (creating a modular vs. an integral system) with the collaborative structure (working with others vs. working alone) is a critical decision that significantly affects the chances of a breakthrough," the researchers write. "Managers can avoid—or at least minimize—coordination pitfalls if they ensure that invention and collaborative structures 'mirror' each other."



ABOUT THE RESEARCH *"Revisiting the Role of Collaboration in Creating Breakthrough Inventions," by Tian Heong Chan, Jürgen Mihm, and Manuel Sosa* (Manufacturing & Service Operations Management, *forthcoming)*

MARKETING

Not All Social Media Posts Are Equal

Marketers are increasingly using social media to boost customer engagement, often putting up posts before, during, and after events such as concerts and sports games. A pair of studies finds that tailoring the volume and content of such posts to what happens at the event—whether a fan's team wins or loses, say—can have a sizable impact on customer sentiment, an important driver of engagement, purchases, and lifetime value. In particular, the studies focused on the effects of informational posts ("Our next game is against X") versus emotional ones ("Thanks, fans, for the fantastic support!").

The researchers examined a European soccer team's official Facebook page from 2011 to 2015, collecting and studying 265,530 user comments made during and shortly after matches, in addition to the team's posts. They used a linguistic algorithm to identify positive and negative fan comments and coded team-generated posts as either informational or emotional. Their analysis showed that whereas emotional posts positively affected fan sentiment regardless of the outcome of a match, informational posts had a positive impact only after a loss—and it took just four informational posts to raise customer sentiment by 20%. A follow-up lab experiment yielded similar findings.

"Our results suggest that [customer engagement] initiatives should be strategically adapted based on firm performance during customers' interaction events," the researchers write. "With positive event outcomes, experiential initiatives leveraging multisensory and emotional content may be particularly effective at reinforcing any experience-related positive affect, further enriching customers' mental representations of a brand. For negative event outcomes, task-based engagement initiatives in which marketers share and then encourage others to share brand or firm-related information might be more effective."

ABOUT THE RESEARCH *"The Role of Marketer-Generated Content in Customer Engagement Marketing," by Matthijs Meire et al. (Journal of Marketing, 2019)*

STRATEGIC REINVENTION

The Top Business Transformations of the Past Decade

The ability to adapt is more critical than ever before. Which companies are best meeting the challenge? To find out, researchers evaluated the S&P 500 and *Forbes* Global 2000 firms along three dimensions: the creation of new offerings and business models, an effective repositioning of the core business, and the attainment of robust financials. Aided by a panel of management experts, they identified these firms as having made the highest-impact transformations.

Key: Company (HQ)
New-growth-area revenue as a share of total revenue: X%
Stock compound annual growth rate (CAGR) since start of transformation: X%
CAGR of benchmark index: *X%*

Company (HQ)	New-growth area: share of revenue	CAGR since	CAGR	Benchmark index	Benchmark CAGR
1. Netflix (U.S.)	Original content: 44%	2012	59%	S&P 500	10%
2. Adobe (U.S.)	Digital experiences: 27%	2009	26%	S&P 500	10%
3. Amazon (U.S.)	Web services: 11%	2009	39%	S&P 500	10%
4. Tencent (China)	Fintech, transportation: 25%	2011	32%	Hang Seng	1%
5. Microsoft (U.S.)	Intelligent cloud: 29%	2010	17%	S&P 500	9%
6. Alibaba (China)	Fintech, sports, entertainment: 14%	2013	8%	NYSE	1%
7. Ørsted (Denmark)	Offshore wind: 37%	2017	30%	OMX Copenhagen 25	0%
8. Intuit (U.S.)	Online ecosystem: 14%	2012	22%	S&P 500	10%
9. Ping An (China)	Fintech, health tech: 6%	2012	17%	SSE Composite	2%
10. DBS Group (Singapore)	Digital platforms: 48%	2013	12%	Singapore Exchange	–1%
11. A.O. Smith (U.S.)	Water tech: 100%	2009	25%	S&P 500	10%
12. Neste (Finland)	Renewable fuels: 70%	2010	24%	OMX Helsinki 25	7%
13. Siemens (Germany)	Digital factory initiative: 26%	2012	8%	DAX	8%
14. Schneider Electric (France)	IoT-enabled solutions: 22%	2012	8%	S&P Global 100	6%
15. Cisco (U.S.)	Subscription applications: 43%	2010	9%	S&P 500	9%
16. Ecolab (U.S.)	Water & energy services: 44%	2011	16%	S&P 500	9%
17. Fujifilm (Japan)	Medical imaging, health care: 18%	2010	7%	Tokyo Stock Exchange	6%
18. AIA Group (China)	Wellness & prevention: 10%	2013	15%	MSCI Hong Kong	2%
19. Dell (U.S.)	Infrastructure & security: 51%	2013	29%	S&P 500	11%
20. Philips (Netherlands)	Health care: 65%	2014	6%	S&P 500	6%

Source: "The Transformation 20: The Top Global Companies Leading Strategic Transformations" (Innosight, 2019)

PASSING THE REINS TO A ROBOT

A majority of people surveyed say they would rather have a laid-off coworker replaced by a human being than by a robot—but if their own jobs were on the chopping block, they'd prefer that a robot take over.

"Psychological Reactions to Human Versus Robotic Job Replacement," by Armin Granulo, Christoph Fuchs, and Stefano Puntoni

RETAIL

How Many Temp Workers Are Too Many?

Staffing agencies have long touted the benefits of hiring workers temporarily, for specified periods of time. This gives companies the flexibility to respond to changing market conditions while avoiding the cost of excess employees. Because temp workers' end dates can be planned well in advance, their departures should cause minimal disruption, the thinking goes. But other research holds that the exit of any type of employee hurts organizational performance. A new study seeks to reconcile the conflicting strands of thought.

The researchers examined eight years' worth of monthly data for the Italian operations of a global food-service company. Analyzing each store's profitability and controlling for factors including unusually heavy traffic on nearby highways (presumably causing unanticipated surges in demand), they found that up to a point—a planned turnover rate of about 30%—the use of temporary workers boosted profits by 2%. After that profits dropped by as much as 6%.

This occurred, the researchers say, because in addition to the need for remaining employees to reorganize their routines and the costs of training new workers when more are again needed, temp workers acquire considerable firm-specific knowledge, which is lost when they depart. "We challenge the scholarly and managerial assumption that temporary workers are disposable resources that perform 'plug-in' jobs without firm-specific capital," the researchers write. "Disposing of [them] significantly depletes the unit's collective human capital. Managers should evaluate the costs of this disruption when assessing the benefits of flexibility that temporary hiring brings."

ABOUT THE RESEARCH *"Does Losing Temporary Workers Matter? The Effects of Planned Turnover on Replacements and Unit Performance," by Federica de Stefano, Rocio Bonet, and Arnaldo Camuffo* (Academy of Management Journal, *2019)*

BIAS

Rush to Judgment

Hiring managers can accurately assess the socioeconomic class of a job candidate almost as soon as he or she begins speaking—and those determinations may cause them to favor applicants from higher classes. That's the conclusion of research investigating the role of speech patterns in perpetuating income inequality in the United States.

Across four studies, the research team found that after hearing a stranger speak for a short time—in some cases just seven words were sufficient—listeners could identify his or her social class, defined by education, income, and occupation, with above-chance accuracy. The cues came not just from content but also from pronunciation, tone, and rhythm.

In the fifth study, subjects with previous hiring experience either listened to or read transcripts of job applicants answering the preinterview question "How would you describe yourself?" Without

seeing résumés or interview responses, the subjects then assessed each applicant's social class and qualifications and proposed a starting salary and a signing bonus. Both groups of subjects identified social class with above-chance accuracy, but the effect was stronger among the group that had heard the applicants speak. Analyzing that group's responses, the researchers found that subjects deemed the higher-class applicants to be more competent and a better fit for the job and proposed larger salaries and signing bonuses for them.

"The studies highlight the persistent need for organizational oversight to combat these biases in hiring decisions," the researchers write. "Managers may inadvertently consider class signals to be evidence of job-specific competence and fit [and may] seek out these cues in applicants in ways that would be illegal if racial or gender cues were utilized in a similar fashion."

ABOUT THE RESEARCH *"Evidence for the Reproduction of Social Class in Brief Speech," by Michael W. Kraus et al.* (Proceedings of the National Academy of Sciences, *2019)*

IdeaWatch

COLLABORATION

How to Keep Performance Rankings from Killing Cooperation

The common practice of ranking employees against one another comes with a downside: People may be less inclined to cooperate with their coworkers for fear of losing ground themselves. Think of a sales team that benefits from sharing leads but whose members are rated and compensated according to individual productivity. A new study documents this effect and finds an antidote: Posting information about how people are helping one another can keep cooperation alive.

The researchers recruited 592 subjects for a decision-making game in which people could transfer points to others over multiple rounds. When rankings were introduced showing how many points each subject possessed, point transfers plummeted. But when the information also included the extent to which each person had previously shared his or her points, cooperation bounced back, eventually reaching the level achieved before the rankings were introduced. This happened, the researchers say, because people acted to reduce imbalances they saw.

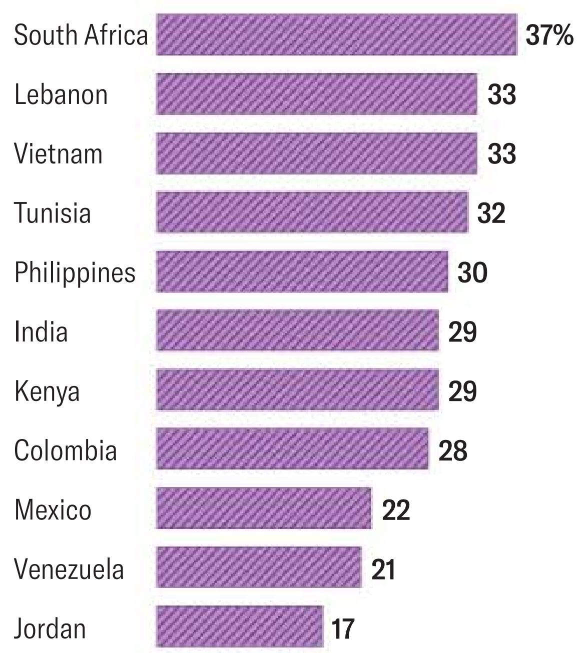
"If managers seek to develop a pay-it-forward culture of helping… they must pay careful attention to the potentially disruptive effects of performance rankings," the researchers write. "Our findings suggest that managers can maintain or restore cooperation, without changing the underlying performance appraisal system, by displaying and offering recognition for employees' prosocial contributions." That might involve peer-to-peer bonus systems, service awards and other public acknowledgments of those who go out of their way to be helpful, and performance reviews that explicitly include measures of cooperation, they say.

ABOUT THE RESEARCH *"Robust Systems of Cooperation in the Presence of Rankings: How Displaying Prosocial Contributions Can Offset the Disruptive Effects of Performance Rankings," by Cassandra R. Chambers and Wayne E. Baker* (*Organization Science*, *forthcoming)*

EMERGING ECONOMIES

The Online Language Barrier

Mobile phones have allowed many emerging economies to leapfrog wired infrastructure—but despite high levels of penetration, problems remain. Perhaps unsurprisingly, a median of 33% of residents in those markets "occasionally" or "frequently" have trouble finding somewhere to charge their phones, 37% struggle to pay for service, and 46% have difficulty getting a signal. Adding to those concerns: a dearth of content in people's native or preferred language. The graph at right shows the share of mobile owners surveyed who encounter that roadblock at least occasionally.



Note: Countries were chosen to provide a representative sample across various geographic regions and with a range of market conditions.

Source: "Mobile Divides in Emerging Economies," by Laura Silver et al. (Pew Research Center, 2019)

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IdeaWatch

Yeun Joon Kim of the University of Cambridge and Junha Kim of the Ohio State University conducted a field experiment at a Korean health-food company in which they assessed the top-down, bottom-up, and lateral feedback that product developers received during quarterly performance evaluations. Two months later they examined how each person's supervisor rated his or her creativity in the intervening time. They found that people reviewed negatively by a manager or a peer showed low levels of creativity—but for managers critiqued by a lower-ranking employee, the opposite was true. **Their conclusion:**

A Subordinate's Criticism Makes You More Creative

Professor Yeun Joon Kim, DEFEND YOUR RESEARCH

YEUN JOON KIM: People typically respond to negative feedback in one of two ways: They may feel threatened, become reluctant to experiment, and get distracted from their work. Or they may identify problems with their current performance and implement better strategies for getting things done. Which way people react depends on where the feedback came from. When employees are criticized by a boss or a peer, they tend to feel threatened. But when leaders are criticized by followers—employees they manage—they're more likely to focus on getting better at their tasks.

HBR: Why would managers be OK having underlings point out their weaknesses? Surely that's a blow to the ego. It's all about the power dynamic. When employees get negative feedback from a higher-up, it affects their self-image and makes them anxious about their future, because bosses hold all the cards—they evaluate employees and determine their promotions and pay. Criticism from a peer, too, will probably create some insecurity; after all, colleagues often compete for the same resources and opportunities, so negative feedback can feel like a power play—an attempt to denigrate someone's abilities and an attack on self-esteem. When a manager is criticized by an employee, it feels less threatening because the employee doesn't have any control over the boss's resources and rewards.

How big was the managers' creativity bump? After getting negative feedback from subordinates, the managers' creativity rose, on average, by about 9%, according to reviews from supervisors.

Could it be that because the managers were older and more experienced, they had thicker skins and were better able to handle criticism? If that were the case, the positive relationship between criticism and creativity should have been stronger for older managers and managers with longer tenures. We tested for both things but didn't find any such effect.

Were the results the same for male and female managers? I get asked that question a lot! We looked at that, too, but didn't see any differences.

What if a boss is new to the role or incompetent—or, even worse, really insecure? Would you still expect negative feedback from a subordinate to have this beneficial effect? We couldn't control for personality differences, so our data can't answer that question. But my gut feeling is that if a boss has high levels of neuroticism, he or she will probably feel really threatened, and that could hurt performance on creative tasks.

The employees you studied worked for a Korean company. Could cultural norms have influenced the results? We were concerned about that. In Korea shame and power are salient cultural factors; no one is likely to think that an employee could possibly threaten a manager, so bosses might find it pretty easy to take criticism from subordinates. So we conducted a second study, this time with undergraduate students at a North American university. We assigned participants to the role of manager, subordinate, or peer and told them they would be getting feedback from other participants in those roles—but in fact we manipulated the comments they got and the directions they thought the comments came from. We then asked participants to come up with creative ideas about organizational issues and had independent judges evaluate the results. We found exactly the same pattern we'd seen in the Korean firm: When people got negative feedback and believed it had come from a manager or a peer, they felt threatened and their creativity suffered. When they believed the criticism had come from a subordinate, their creativity increased.

I have a fantastic boss—who happens to be a pretty creative guy—but wouldn't he resent me at least a little if I suddenly started critiquing his work? When you get negative feedback from any direction, there's no question: It feels bad. But our study suggests that managers facing employee criticism can deal with that negative feeling and keep their focus on improving their creativity.

Your question dovetails with another research project, which I just finished collecting data on. I went to a second company in Korea and used surveys to measure managerial actions that could be viewed as retaliatory. Then I looked at whether the employees involved had given those bosses any negative feedback in the previous round of performance evaluations. The results were clear: Critics had been retaliated against. So even if managers respond to criticism by upping their creativity, it doesn't mean they won't get even.

Yikes! Sounds as if I should watch my step. You do have to be a little careful. I saw three kinds of retaliation in that company: Managers intentionally lowered employees' performance evaluations. They became aggressive and even abusive toward them. And—this was particularly disappointing—they engaged in social exclusion.

Could companies skirt the problem by anonymizing and aggregating the negative feedback that goes to managers? Yes, I think it might be wise for companies to measure all the feedback flows—top-down, bottom-up, and lateral—and combine the flows rather than break them down when presenting the information. For instance, they shouldn't say, "This is aggregated feedback from subordinates," because then bosses might retaliate against *all* subordinates. I'm testing this with one company now.

What about positive feedback—did you look at that? That's another project I've been working on. I've found that there's ultimately no relationship between praise and creativity, because there are two opposing mechanisms in play. Positive feedback can be good for creativity; it makes people feel recognized, and they might put more effort into their jobs as a result. But there's also an effect whereby once you're complimented for your work, you don't do anything to improve, because you think you're doing perfectly fine as it is.

How did you get interested in this subject? Before going to graduate school, I was a software engineer—a really terrible one. I got tons of negative feedback. Like most people, I didn't enjoy it, and I thought my creativity was probably suffering as a result. Software engineering has a lot to do with creativity. But then I went into academia—where you're constantly receiving critical comments—and I began to see that negative feedback could help me improve, too. I realized it could generate both good and bad outcomes, and I decided to study those phenomena.

How can companies keep negative top-down and lateral feedback from killing people's creativity? Should they throw manager and peer reviews out the window and make sure that criticism comes only from the bottom up? The Korean company in our study did implement a formal system for employees to give their bosses negative feedback. That's one possibility. Another is to create an automated system that provides objective feedback—for example, an algorithm that counts the number of errors in a software program or the volume of goods that a salesperson has sold. In those cases there would be no reason for people to feel threatened by the negative feedback—it would be coming from a computer.

If a normal amount of criticism boosts a boss's creativity, would a whole lot of it be even better? If I were to completely ignore the research I'm doing on retaliation, I'd say sure: Employees should share all their negative feedback with their managers. That would really improve the higher-ups' creativity. But my subsequent work shows that if employees did that, it could come back to bite them.

Interview by **Amy Meeker**

HBR Reprint F2002B

IdeaWatch

HOW I DID IT TILRAY'S CEO ON BECOMING THE FIRST MOVER IN A CONTROVERSIAL INDUSTRY

by Brendan Kennedy

In May of 2010 I was working at a subsidiary of Silicon Valley Bank (SVB), where I spent all day talking to smart people—CEOs and founders of disruptive companies seeking to achieve the impossible. This gave my team a unique window into products, companies, and brands that didn't exist yet—but probably would someday. One afternoon Christian Groh (my SVB colleague and longtime friend) and I met with a California start-up that described itself as a "medical-cannabis technology company." We didn't like the company's team, strategy, or business model, but the much bigger issue was that we didn't know how to evaluate a start-up in that space, because we'd never thought about cannabis as a legitimate business opportunity.

A few days after the meeting, I heard an NPR news report about Proposition 19, which would be on the ballot in California that November. Prop 19 called for the legalization of "adult use" cannabis in the state. My curiosity piqued, I called Michael Blue, a business school classmate and friend. Fifteen states had already legalized cannabis for medical use, as had 15 countries. No state or country had legalized it for "adult" or "recreational" use. But Christian, Michael, and I began to wonder about the possibilities in this nascent industry. We started making phone calls and doing research.

A few months later, California voters rejected Prop 19. That seemed like a setback, but we felt a bit relieved, because we'd worried that we were coming to the

Photograph by PEDRO GUIMARÃES

Cannabis cultivation in a Tilray greenhouse in Cantanhede, Portugal

opportunity too late. Although it was hard to put numbers on it, we estimated that legal medical and illegal recreational cannabis together added up to an industry worth $40 billion to $50 billion in the United States and $150 billion to $200 billion globally. We saw that industry as highly fragmented, with immature companies, no established brands, inconsistent quality standards, severe restrictions on access to capital, and a lack of professional management. We could launch a company to gain a first-mover advantage before legalization progressed further.

In December of 2010 I gave notice at the bank and started developing a business plan with Christian and Michael. Our initial idea was to create a venture capital firm that would invest in cannabis start-ups. That proved to be complicated. We felt we couldn't trust any of the companies in the space with our capital. We decided to pivot to a private-equity holding-company model, whereby we'd wholly own, operate, and incubate a portfolio of companies with the goal of making each of them a leader in its respective segment of the industry.

INTO THE HILLS AND FIELDS

I was born in San Francisco, the sixth of seven children. We didn't have a lot of money when I was growing up. I was handy, so I began working construction when I was 16. I studied architecture at Berkeley and earned a master's degree in civil engineering from the University of Washington. During graduate school I began writing software, and I wound up starting a custom software company. Then I launched a start-up focused on internet usability. By 2002 I had exited both companies with outcomes that were okay but not great. At the age of 30 I had already been the CEO of two companies. Nobody wants to hire a 30-year-old two-time CEO. So I decided to go to business school to formalize the hands-on experience I'd gained. After graduating from Yale's MBA program, in 2005, I joined SVB, where I ultimately became the chief operations officer of its recently established analytics division.

Two colleagues and I were hired to solve a problem created by a new IRS code that required VC-based start-ups to begin calculating the market value of the stock options they issued to employees. Since no market existed for those options, it was a complex challenge. We created a model that addressed it while building a start-up within the bank. Our team grew from three to 125 people, and from zero to 3,000 clients. One of them was Tesla, when it was just a handful of people working in a small warehouse in San Carlos, California. I sat in the first car Elon Musk ever built and rode in the second one. One reason I stayed in the job was that I met so many brilliant entrepreneurs and learned something from them every day.

Before we began researching the cannabis industry, I knew little about it. I've always been an athlete—I do triathlons—and never liked the idea of smoking anything. The few times I tried cannabis, I didn't particularly enjoy it. However, I do have strong libertarian views about drug laws. I believe that people should be allowed to use cannabis, and that the U.S. war on drugs—which has led to the incarceration of millions of Americans—is morally wrong.

From my days working construction, I knew how to talk to people with all types of backgrounds. That became very useful as we began our research. We went into the hills of northern California and southern Oregon, the fields of Colorado and Washington, and the barns of British Columbia. We went anywhere people were growing cannabis, legally or illegally. We went to Jamaica and to licensed producers working in Israel near the Sea of Galilee. During a trip to Amsterdam, I visited in a single day more than 80 coffee shops that sold cannabis.

At times this work was nerve-racking. My cofounders and I were fit, had short haircuts, and dressed conservatively. At first glance, a lot of people suspected that we were federal narcotics agents. We worked to put them at ease and build rapport. We bought hundreds of coffees, breakfasts, lunches, and dinners and asked industry experts question after question. The network we built in those early days may be one of the best investments we ever made. It continues to feed us information about developments around the world.

We pored over polling data and quickly noticed something intriguing: Since 1973 Gallup had been asking Americans whether they supported legalizing cannabis. It also asked about support for same-sex marriage. We studied the data closely and found that the two trend lines were strikingly similar. Same-sex marriage was about five years ahead of cannabis legalization, but the two issues showed the same pattern of growing acceptance. By 2012 it seemed clear that same-sex marriage was going to become legal throughout the United States. (And it did, in 2015, with the U.S. Supreme Court ruling in *Obergefell v. Hodges.*) We became more confident that cannabis prohibition would end someday.

PEOPLE THOUGHT WE WERE CRAZY

Very slowly we began to create our investment thesis: (1) Medical cannabis

Pedro Guimarães

was on its way to becoming a mainstream treatment around the world. (2) Most existing players in the industry were focusing on either their tiny niche or their geographic market, whereas we saw a global paradigm shift as prohibition gave way to legalization. (3) As that shift took place, cannabis would become an industry like any other, with trusted brands and multinational supply chains. We sought to invest in businesses that could capitalize on those trends.

As our thesis developed, we recognized that working as venture capitalists wasn't the best approach. VCs focus on early-stage investments, and they need to plan on exiting within seven years so that they can return money to their limited partners. The cannabis time line felt too unpredictable for that. We thought we knew what was going to happen, but we didn't know when. We needed the flexibility to buy entire companies, to make minority investments, and to deal with uncertainty around when or how we'd see a return. We decided to form a private equity firm, which we called Privateer Holdings.

For the first two years, raising money felt nearly impossible. People thought we were crazy. If not for our backgrounds—MBAs who'd worked with a lot of VC funds—nobody would have even met with us. We took a lot of meetings with prospects we knew would never invest. Some praised us for our thorough research; some laughed us out of the room. A few challenged us directly: "Why are you throwing away your careers pitching a cannabis company?"

Then, in November of 2012, Washington and Colorado legalized recreational cannabis, and two more states legalized medical use. Suddenly we didn't seem so crazy anymore. By then polls showed that 70% of Americans were in favor of medical cannabis, and 50% supported recreational use. It wasn't quite a tipping point, but it was a move in the right direction.

Our first acquisition was Leafly, a website that reviews various strains of cannabis. We liked the business and its team, and it would allow us to gain insight into the product and consumer preferences. Because Leafly is a publishing operation, there were no questions about its legality, which was also a plus. It remains the top online source for cannabis information to this day.

At right: above, a cannabis "field" in Cantanhede and below, quality control in the lab

A CANADIAN WELCOME

In 2013 the government of Canada reached out to us. It had been producing cannabis through a single contract and wanted to shift to a competitive private-sector network of cultivators, processors, and distributors. Applicants for Canadian federal licenses were having trouble finding investors, and Health Canada, the national department of public health, asked Privateer to consider backing some of those start-ups. We looked closely at 60 companies that had applied to the program but couldn't find one that seemed like a good investment. So we told the government that we'd like to create and fund our own company. The response was that if we moved fast, it would move equally fast. We quickly incorporated Tilray, applied for a license, bought land, and built a cultivation facility. By April of 2014 we were shipping our first products as a licensed producer of medical cannabis products in Canada.

Our cultivation facility was very different from anything built before. With my background in construction, architecture, and engineering, I had been reverse engineering facilities for years when we visited operations all over the world. We were able to combine the best ideas in what we built. We had our own testing lab and 40 identical grow rooms so that we could do A/B testing: We used plants with the same genetics and controlled everything while varying just one factor, such as the CO_2 level, the humidity, or the lighting. We grew cannabis more scientifically than was being done anywhere else. Partly because of this approach, Tilray became the first cannabis company to conduct a clinical trial approved by Health Canada. Today we have 10 clinical trials announced and numerous distributor relationships, including a global agreement with Sandoz, a division of Novartis.

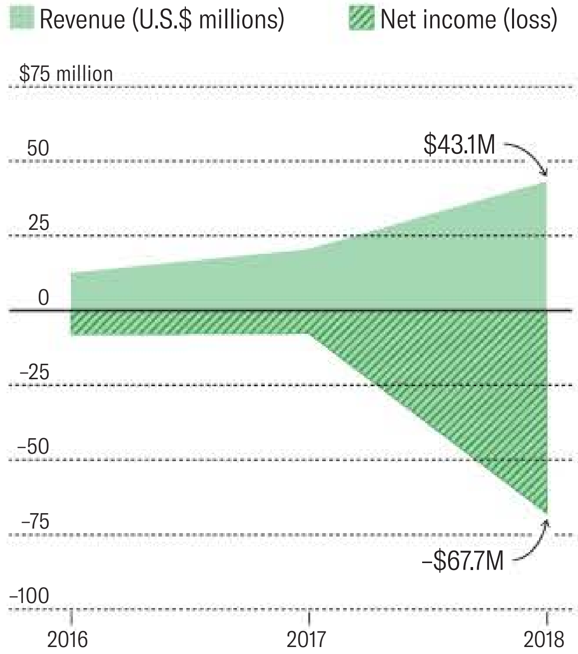
In December of 2014 we closed an investment from Founders Fund, Peter Thiel's VC firm. It was the first institutional investment in the cannabis industry. I credit Peter, Geoff Lewis (who led the investment), and their entire team for taking that bold, contrarian leap. It was transformational for us, because it gave other smart people permission to invest with us. By October of 2018 we'd raised $1.1 billion.

At that point Canada had many smaller cannabis producers. None of them were profitable, so they needed funding, and several of them decided to do IPOs on the Toronto Stock Exchange. By 2017 we'd begun talking about an IPO on the TSX too. When we met with institutional investors in Boston and New York, several of them said they could not invest in Canada and encouraged us to go public in the United States. They wanted a cannabis company that was U.S. listed, regulated by the SEC, and used generally accepted accounting principles. This was a controversial idea: Even as states have legalized cannabis, it remains illegal under U.S. federal law, which is why banks and credit card companies are leery of transactions involving the product. But our operations were restricted to countries where cannabis is legal, so we were in compliance with U.S. law. We paid several very expensive lawyers to study the issue and talk with the SEC and NASDAQ. In the fall of 2017 we decided to launch our IPO in the United States.

FACTS & FINANCIALS

Tilray

Founded: 2013
Headquarters: Nanaimo, British Columbia
No. of employees: 1,400+



Source: *Wall Street Journal*

I spent the first six months of 2018 meeting with investors all over the world. Of the 20 largest Canadian cannabis producers at that time, Tilray was the only one that hadn't gone public in Canada. Many investors would never buy our shares, but they took meetings to listen. We filed our S-1, and I flew around the world—to Seattle, Hong Kong, Sydney, London, Frankfurt, New York, Boston, San Francisco, Vancouver, Chicago—to make presentations about our ability to produce quality medical-grade cannabis, the adult-use brands we were developing for Canada, and the global distribution network we were building. That July we became the first cannabis company to complete an IPO on an American stock exchange.

Since then, more large banks and institutional investors have bought our shares, which increases the mainstream acceptance of this industry. In the fall of 2018 we issued convertible bonds, and Bank of America Merrill Lynch was our underwriter. That would have been

Courtesy of Tilray

unimaginable just a year earlier. Some of that money has gone to build out our large facility in Portugal, enabling us to import across the EU rather than export from Canada to Europe.

IT'S STILL DAY ONE

This is a tumultuous industry with growing competition, and we expect it to remain so. As I write, medical cannabis is legal in 41 countries and 33 U.S. states. (I believe it will be legal in 80 countries by the end of 2022.) Adult-use cannabis is legal in Canada, Uruguay, and 11 U.S. states. I expect that Luxembourg, Portugal, Mexico, and New Zealand will be the next countries to legalize adult use and that the trend will continue.

Someday adult-use cannabis may be a bigger source of revenue than medical, but for the next 10 years medical cannabis will be our dominant product. Today we spend a lot of time with policy makers, regulators, and doctors around the world, demonstrating why it should be mainstream medicine. We export to 13 countries, but we do no business in the United States (other than four FDA-approved clinical trials) because of federal laws there. I used to meet with members of Congress to talk about relaxing those laws, but now I think real movement on the issue will come from voters. In November of 2020 we're likely to see seven to nine more states pass adult-use laws, and it's likely that they'll be Republican states such as Idaho, Wyoming, North Dakota, and Missouri. On November 3, 2020, when 14 or more Republican senators whose voters have just legalized cannabis wake up, their thinking may change about the banking laws that make it difficult for cannabis businesses to operate in the United States.

We also see significant opportunities in cannabidiol (CBD). We've been paying attention to it for years, and most of our clinical trials include tests of CBD, but even we were surprised by the pace with which CBD products have gained mainstream acceptance. CBD is just one nonpsychoactive cannabinoid, along with cannabigerol (CBG) and cannabinol (CBN), for instance. In a few years we may see new formulations that emphasize them, too.

When we look at the trend lines around cannabis, we see five stages on a continuum: prohibition, decriminalization, legal CBD, legal medical use, and legal adult use. Twenty years ago nearly every country was at the prohibition stage. My partners and I were fortunate to see this trend developing before most other people did—and to have built a successful business around that insight.

The most exciting part of this journey is that it's still day one in the cannabis industry. The brands and products that exist today in legal markets around the world are prototypes in a lot of ways. We have the opportunity to lead, legitimize, and define the future of a multibillion-dollar global industry that is emerging from the shadows practically overnight. I've never worked so hard in my life, but I've also never had so much fun. I can't wait to see where this journey takes us next.

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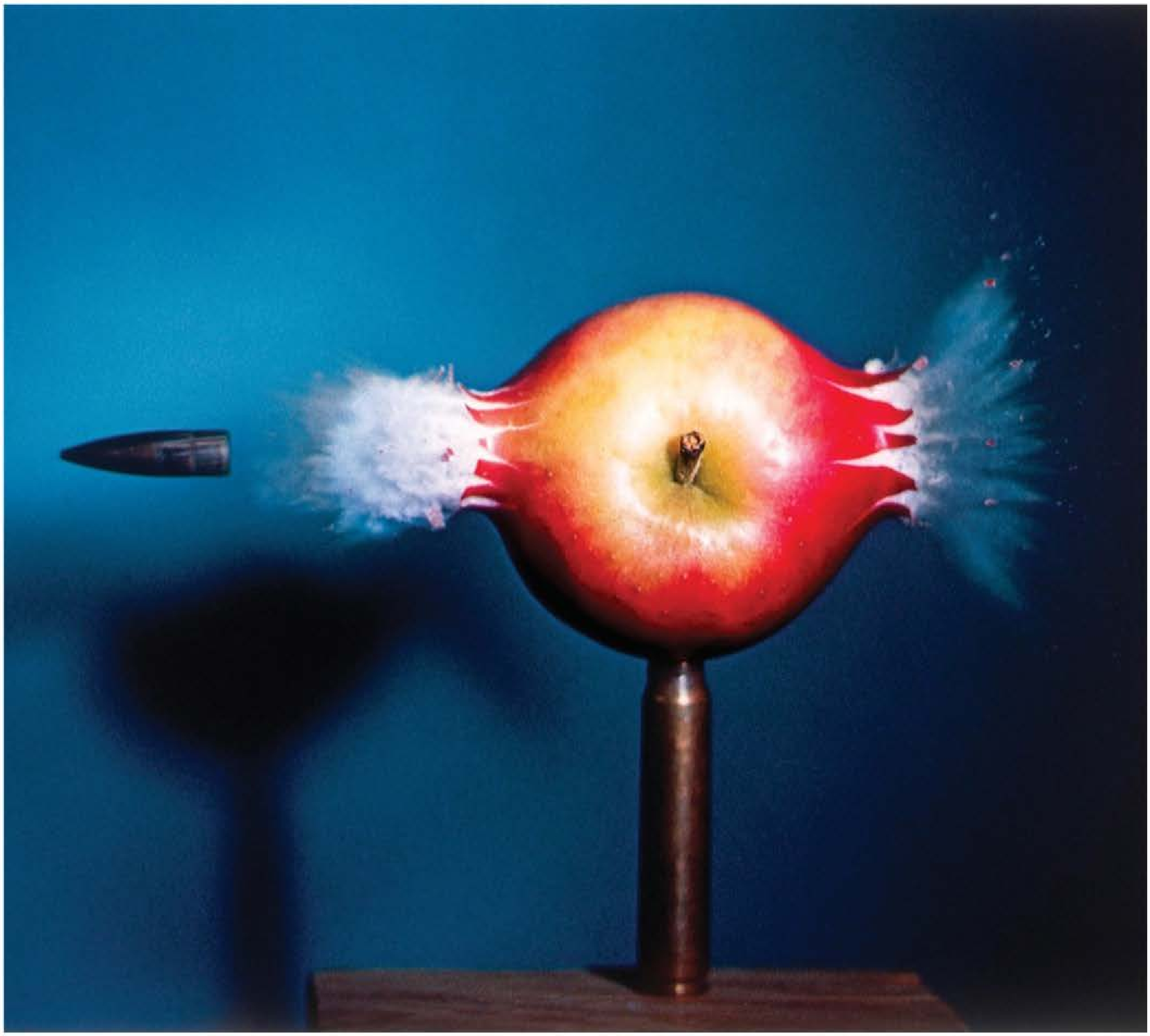
Spotlight

PRODUCTIVE INNOVATION



Photograph by **HAROLD EDGERTON**

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Harold Edgerton was known for his experiments with high-speed photography and used stroboscopic equipment to capture moments in time.

Building a Culture of Experimentation

It takes more than good tools. It takes a complete change of attitude.

Stefan Thomke
Professor, Harvard Business School

IN DECEMBER 2017, just before the busy holiday travel season, Booking.com's director of design proposed a radical experiment: testing an entirely new layout for the company's home page. Instead of offering lots of options for hotels, vacation rentals, and travel deals, as the existing home page did, the new one would just feature a small window asking where the customer was going, the dates, and the number of people in the party, and present three simple options: "accommodations," "flights," and "rental cars." All the content and design elements—pictures, text, buttons, and messages—that Booking.com had spent years optimizing would be eliminated.

Gillian Tans, Booking.com's CEO at the time, was skeptical. She worried that the change would cause confusion among the company's loyal customers. Lukas Vermeer, then the head of the firm's core experimentation team, bet a bottle of champagne that the test would "tank"—meaning it would drive down the company's critical performance metric: customer conversion, or how many website visitors made a booking. Given that pessimism, why didn't senior management just veto the trial? Because doing so would have violated one of Booking.com's core tenets: Anyone at the company can test anything—without management's permission.

Booking.com runs more than 1,000 rigorous tests simultaneously and, by my estimates, more than 25,000 tests a year. At any given time, quadrillions (millions of billions) of landing-page permutations are live, meaning two customers in the same location are unlikely to see the same version. All this experimentation has helped transform the company from a small Dutch start-up to the world's largest online accommodation platform in less than two decades.

Booking.com isn't the only firm to discover the power of online experiments. Digital giants such as Amazon, Facebook, Google, and Microsoft have found them to be a game changer when it comes to marketing and innovation. They've helped Microsoft's Bing unit, for instance, make dozens of monthly improvements, which collectively have boosted revenue per search by 10% to 25% a year. (See "The Surprising Power of Online Experiments," HBR, September–October 2017.) Firms without digital roots—including FedEx, State Farm, and H&M—have also embraced online testing, using it to identify the best digital touchpoints, design choices, discounts, and product recommendations.

"In an increasingly digital world, if you don't do large-scale experimentation, in the long term—and in many industries the short term—you're dead," Mark Okerstrom, the CEO of Expedia Group told me. "At any one time we're running hundreds, if not thousands, of concurrent experiments, involving millions of visitors. Because of this, we don't have to guess what customers want; we have the ability to run the most massive 'customer surveys' that exist, again and again, to have them tell us what they want."

But in studying more than a dozen organizations and analyzing anonymized data on experiments from upwards of 1,000, I have seen that Booking.com, Expedia, and their ilk are the exception. Instead of running hundreds or thousands of online tests a year, many firms run no more than a few dozen that have little impact.

If testing is so valuable, why don't companies do it more? After examining this question for several years, I can tell you that the central reason is culture. As companies try to scale up their online experimentation capacity, they often find that the obstacles are not tools and technology but shared behaviors, beliefs, and values. For every experiment that succeeds, nearly 10 don't—and in the eyes of many organizations that emphasize efficiency, predictability, and "winning," those failures are wasteful.

To successfully innovate, companies need to make experimentation an integral part of everyday life—even when budgets are tight. That means creating an environment where employees' curiosity is nurtured, data trumps opinion, anyone (not just people in R&D) can conduct or commission a test, all experiments are done ethically, and managers embrace a new model of leadership. In this article, I'll look at several companies that have managed to do those things well, focusing in particular on Booking.com, which has one of the strongest cultures of experimentation I have found.

CULTIVATE CURIOSITY

Everyone in the organization, from the leadership on down, needs to value surprises, despite the difficulty of assigning a dollar figure to them and the impossibility of predicting when and how often they'll occur. When firms adopt this mindset, curiosity will prevail and people will see failures not as costly mistakes but as opportunities for learning.

IDEA IN BRIEF

THE OPPORTUNITY
In an increasingly digital world, randomized, controlled A/B experiments are an extremely valuable way to create or improve online experiences.

THE OBSTACLE
Culture—not tools and technology—prevents companies from conducting the hundreds, even thousands, of tests they should be doing annually and then applying the results.

THE REMEDY
Create an environment in which curiosity is nurtured, data trumps opinion, anyone can conduct a test, all experiments are done ethically, and managers embrace a new model of leadership.

It’s actually less risky to run a large number of experiments than a small number. If a company does only a handful of experiments a year, it may have only one success—or none. Then failure is a big deal.

A classic example concerns an incident at Amazon involving a revision of Air Patriots, a game for mobile devices in which players defend towers from attack with a squadron of planes. When Amazon launched a new version of it, the development team was taken aback by the response: The seven-day user-retention rate dropped by an astonishing 70%, and revenue fell 30%. The team discovered that it had inadvertently increased the game’s difficulty by about 10%. Amazon quickly shipped a fix, but the developers wondered if making the game easier could produce large *gains* in retention and revenue. To find out, they ran a test with four new levels of difficulty, in addition to a control, and learned that the easiest variant did the best. After some further refinements, Amazon launched a new version—and this time users played 20% longer and revenue increased by 20%. An accident had led to a surprising insight, which became the starting point for new experiments.

Unfortunately, this kind of reaction is an anomaly. At many companies the risk associated with experiments makes managers reluctant to allocate resources to them. But the gains enjoyed by companies that have made the leap of faith should give others the courage to follow them.

Many organizations are also too conservative about the nature and amount of experimentation. Overemphasizing the importance of successful experiments may encourage employees to focus on familiar solutions or those that they already know will work and avoid testing ideas that they fear might fail. And it’s actually less risky to run a large number of experiments than a small number. At Booking.com, only about 10% of experiments generate positive results—meaning that “B,” a modification that attempts to improve something (sales, repeat usage, click-through rates, or the time users spend on the site, for example), performs better among randomly assigned users than “A,” the control, which is the status quo. (In addition to A/B tests, Booking.com also runs more-complex tests that assess more than one modification at the same time.) But when you conduct a large volume of experiments, a low success rate still translates into a significant number of successes, which, in turn, diminish the financial and emotional costs of the failures. If a company does only a handful of experiments a year, it may have only one success or, if it’s unlucky, none. Then failure is a big deal.

At the companies I studied, the success rate for ideas tested early in the development of a brand-new offering is even lower. Early failures, however, allow developers to quickly eliminate unfavorable options and refocus their efforts on more-promising alternatives.

In experimental cultures, employees are undaunted by the possibility of failure. “The people who thrive here are curious, open-minded, eager to learn and figure things out, and OK with being proven wrong,” said Vermeer, who now oversees all testing at Booking.com. The firm’s recruiters look for such people, and to make sure they’re empowered to follow their instincts, the company puts new hires through a rigorous onboarding process, which includes experimentation training, and then gives them access to all testing tools.

INSIST THAT DATA TRUMP OPINIONS

The empirical results of online experiments must prevail when they clash with strong opinions, no matter whose opinions they are. This is the attitude at Booking.com, but it’s rare among most firms for an understandable reason: human nature. We tend to happily accept “good” results that confirm our biases but challenge and thoroughly investigate “bad” results that go against our assumptions.

The remedy is to implement the changes that experiments validate with few exceptions. As one director at Booking.com told me, “If the test tells you that the header of the website should be pink, then it should be pink. You always follow the test.”

Getting executives in the top ranks to abide by this rule isn’t easy. (As the American writer Upton Sinclair once quipped, “It is difficult to get a man to understand something, when his salary depends upon his not understanding it!”) But it’s vital that they do: Nothing stalls innovation faster than a so-called HiPPO—highest-paid person’s opinion.

Note that I’m not saying that all management decisions can or should be based on online experiments. Some things are very hard, if not impossible, to conduct tests on—for example, strategic calls on whether to acquire a company.

But if everything that can be tested online is tested, experiments can become instrumental to management decisions and fuel healthy debates. Sometimes, those discussions might result in a conscious choice to overrule the data. That’s what happened with one decision involving a comedy series at

Andreas Feininger/The LIFE Picture Collection via Getty Images

Netflix, which has built a sophisticated infrastructure for large-scale experimentation. According to a *Wall Street Journal* article published in 2018, the company's executives were torn when tests showed that a promotion featuring an image of only Lily Tomlin, one of the stars of *Grace and Frankie,* resulted in more clicks by potential viewers than promotions featuring both Tomlin and her costar, Jane Fonda. The content team worried that excluding Fonda would alienate the actress and possibly violate her contract. After heated debates that pitted empirical evidence against "strategic considerations," Netflix chose to use images that included both actresses, even though customer data didn't support the decision. However, the experimental evidence made the trade-offs more transparent.

DEMOCRATIZE EXPERIMENTATION

As I've noted, any employee at Booking.com can launch an experiment on millions of customers without management's permission. About 75% of its 1,800 technology and product staffers actively use the company's experimentation platform. Standard templates allow them to set up tests with minimal effort, and processes like user recruitment, randomization, the recording of visitors' behavior, and reporting are automated. A core experimentation team and five satellite teams used to provide training and support to the whole organization, but because the firm's needs evolved, that structure was recently changed to four central teams that report to Vermeer and specialists ("ambassadors") that are placed in product teams.

To get things rolling, individuals or teams fill out an electronic form, which is visible to all and includes the name of the experiment, its purpose, the main beneficiaries (customers or suppliers),

←
A long-exposure photograph by Andreas Feininger captures the light trail of a helicopter.

related past experiments, and the number of modifications to be tried out in A/B, A/B/C, or A/B/n tests. Once an experiment is up and running, the team watches it closely for the first few hours; if its primary or secondary metrics tank quickly, the team can stop the test. After that initial period, the platform continues to automatically run data-quality checks and sends warning messages if something is odd. To encourage openness, Booking.com maintains a central searchable repository of past experiments, with full descriptions of successes, failures, iterations, and final decisions. And everyone can see the real-time information generated by ongoing experiments.

"Somewhat ironically, the centralizing of our experimentation infrastructure is what makes our organizational decentralization possible," Vermeer explained to me. "Everyone uses the same tools. This fosters trust in each other's data and enables discussion and accountability. While some companies, like Microsoft, Facebook, and Google, may be more technically advanced in areas like machine learning, our use of simple A/B tests makes us more successful in getting all people involved; we have democratized testing throughout the organization."

Democratization, of course, has its challenges. One is the risk that teams or individuals could break something on Booking.com's high-traffic website, causing it to crash. Another is that each team has to set its own direction and figure out which user problems it wants to solve. That requires extensive training and ongoing discussions among team members about what the right problems are. Debates are encouraged, and people reach out to colleagues if they see anything that strikes them as questionable. Just as anyone can launch an experiment, anybody can stop one. However, this happens only on the rare occasion when an experiment has gone catastrophically awry—for example, if someone is alone in the office at night and sees that an experiment is causing a key metric like the customer conversion rate to plunge and will cost the company millions of dollars in revenues if it continues.

This system gives teams the autonomy they need to try out new approaches they believe are valuable and allows people throughout the company to monitor the experiments and provide feedback in real time. It truly liberates everyone to test any idea about how to improve Booking.com's business.

BE ETHICALLY SENSITIVE

When contemplating new experiments, companies must think carefully about whether users would consider the tests to be unethical. While the answer isn't always clear-cut, organizations that fail to examine this question risk sparking a backlash. Take the weeklong experiment that Facebook ran in 2012 to learn whether emotional states were contagious on its platform. Facebook rejiggered its news feed—an algorithmically curated list of posts, stories, and activities—to see whether viewing fewer positive news stories led people to reduce their number of positive posts. The network also tested whether the reverse happened when people were exposed to fewer negative news stories. The experiment involved nearly 690,000 randomly selected users, about 310,000 of whom were unwittingly exposed to manipulated emotional expressions in their news feeds, while the rest were subjected to control conditions in which a corresponding number of randomly chosen posts were omitted.

When researchers from Facebook and Cornell University published the results in an academic journal, public outrage erupted. Facebook's data science team had been running experiments on unsuspecting users for years without controversy, but the emotional manipulation struck a nerve. Critics raised concerns about whether the participants' consent to Facebook's general data-use policy sufficed; they felt the company should have made it clearer that users could opt out of testing and that data was collected for research. From a learning perspective, the experiment was a success: It found that emotional contagion existed online, though the effect was very small. But some users felt that Facebook had exploited them in the name of science.

Research suggests that companies that test new ideas first face greater customer scrutiny than competitors that implement new practices without conducting any experiments. In a published analysis of 16 studies in domains such as health care, vehicle design, and global poverty, bioethicist Michelle Meyer and her collaborators concluded that participants considered A/B tests to be more morally questionable than the universal implementation of an untested practice (A or B) on the entire population—even when both treatments were unobjectionable.

Clearly, ethics training and some kind of oversight are necessary. The challenge is conducting the latter in ways that don't make people overly cautious or tangle them in red tape. For those precise reasons, Booking.com has shied away from imposing rules from on high about what kind of tests can be run. Instead, it encourages employees to ask whether an experiment or proposed practice would help or hurt customers. "I'd rather stay away from policing or ethical review boards," David Vismans, Booking.com's chief product officer, told me. "That's not a scalable solution. You'd create a bottleneck, and testing police don't make people feel like they're empowered." Instead, the company encourages debates in internal online forums that are open to all employees. The debates can be vigorous and have tackled issues like the use of techniques to persuade customers to complete transactions (for example, messages such as "Please book now or you will lose this reservation" or "Only three rooms left"). "I would rather have a community that is self-correcting," Vismans explained.

To that end, Booking.com's onboarding process also includes ethics training. LinkedIn, another company with a large experimentation program, takes a slightly different approach. It has created internal guidelines that state the company won't run experiments "that are intended to deliver a negative member experience, have a goal of altering members' moods or emotions, or override existing members' settings or choices."

EMBRACE A DIFFERENT LEADERSHIP MODEL

By democratizing experimentation and following test results where they lead, companies can enable employees to make good decisions on their own and accelerate innovation and improvements. But if most decisions are made this way, what's left for senior leaders to do, beyond developing the company's strategic direction and tackling big decisions such as which acquisitions to make? There are at least four things:

Set a grand challenge that can be broken into testable hypotheses and key performance metrics. Employees need to see how their experiments support an overall strategic goal. Say Booking.com's senior leaders challenged employees to design the best online experience in the industry. They might expect that a superior experience would generate more customer traffic, which would attract more suppliers to Booking.com's platform, helping expand the customer base and activity even more. To discover ways to pursue that goal, employees could devise hypotheses and related metrics—for instance, that underlining important text would increase conversion rates by making critical information easier to find, and that a "one click, no cost" cancellation option would boost user return rates without causing net hotel bookings to drop.

Put in place systems, resources, and organizational designs that allow for large-scale experimentation. Scientifically testing nearly every idea requires infrastructure: instrumentation, data pipelines, and data scientists. Several third-party tools and services make it easy to try experiments, but to scale things up, senior leaders must tightly integrate the testing capability into company processes. Doing so requires striking the right balance between centralization and decentralization.

In centralized groups, dedicated specialists such as developers, user interface designers, and data analysts can run experiments for the entire company and focus on introducing state-of-the-art methods and tools. But if testing is limited to a small group of specialists, it will be hard to scale up experimentation and change a company's culture. In decentralized testing, firms spread specialist teams throughout different business units. While this approach expands experimentation to more parts of the organization, it can hinder knowledge sharing and lead to conflicting goals and poor coordination among specialists. Decentralization may be needed to get the broader organization involved at first, but after that, firms should turn to improving their experimentation capabilities. That's what Booking.com did. It initially used satellite teams to spread experimentation across the company but found that they were too busy supporting users to focus on building firmwide capabilities. To address that problem and align the teams better, Booking.com recently switched to a center-of-excellence model that supports business units, standardizes the company's approach to experimentation, and makes sure that best practices are adopted and followed.

Be a role model. Leaders have to live by the same rules as everyone else and subject their own ideas to tests. "You can't have an ego, thinking that you always know best," Tans told me. "If I, as the CEO, say to someone, 'This is what I want you to do because I think it's good for our business,' employees would literally look at me and say, 'OK, that's fine, we are going to test it and see if you are right.'" Bosses ought to display intellectual humility and be unafraid to admit, "I don't know." They should heed the advice of Francis Bacon, the father of the scientific method: "If a man will begin with certainties, he shall end in doubts; but if he will be content to begin with doubts, he shall end in certainties."

Recognize that words alone won't change behavior. Ultimately, being a leader in an experiment-driven organization means letting go and empowering employees to perform their own tests—which doesn't happen by simply telling people that they can do so. It requires a concerted effort like IBM's.

How Booking.com Experiments with Site Improvements

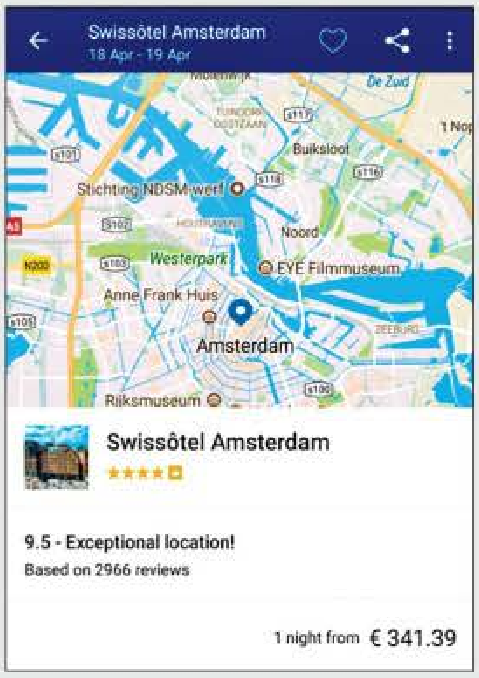
Every day, employees at the company use A/B tests to try out their ideas for tweaks. Below are two examples.

SCENARIO #1

Hypothesis
Highlighting a neighborhood's walkability helps users make better decisions about property location.

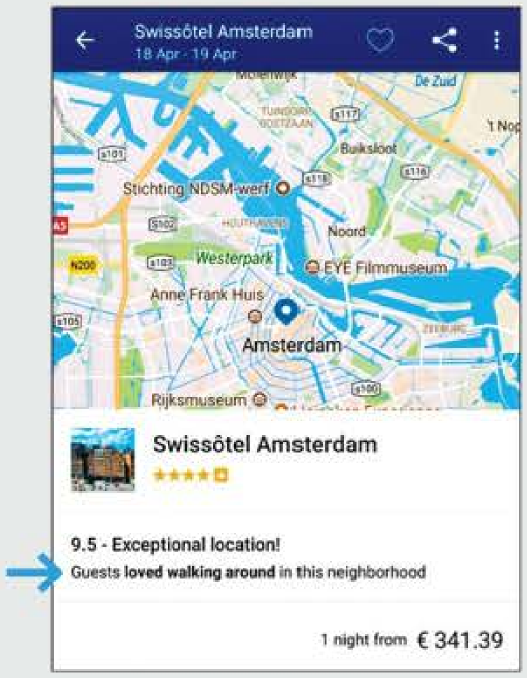
A

The Control
Shows the site's current practice



B

The Treatment
Adds walkability information



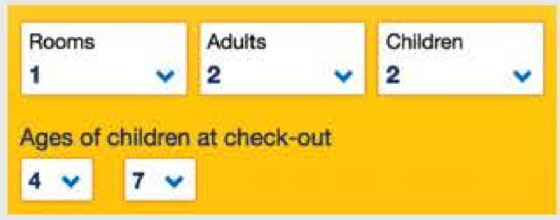
The Result
The treatment had no significant impact on the key metric. The current practice is kept in place.

SCENARIO #2

Hypothesis
Displaying the checkout date when users select the age of children in their party improves their experience.

A

The Control
Shows the site's current practice



B

The Treatment
Adds the checkout date above children's ages

The Result
The treatment had a significant positive impact on the key metric, and the change is implemented.

In 2015 experimentation wasn't a core activity at IBM; the company's IT function offered to run tests, but they were costly, were charged back to business units, and had to follow a rigid process. The testing capacity consisted of just one specialist, who was also the gatekeeper and who rejected many proposed experiments because he felt that they weren't strong-enough candidates. As a result, the company ran only 97 tests that year. Then, Ari Sheinkin, IBM's head of marketing analytics at the time, took over experimentation and, with the backing of the chief marketing officer, empowered over 5,500 marketers worldwide to conduct their own tests. To induce them to do so, Sheinkin took a number of steps. He installed easy-to-use tools, created a center of excellence to provide support, introduced a framework for conducting disciplined experiments, offered training for everyone, and made online tests free for all business groups. He also conducted an initial "testing blitz" during which the marketing units had to run a total of 30 online experiments in 30 days. After that, he held quarterly contests for the most innovative or most scalable experiments. He also employed more-forceful tactics: IBM tied part of marketing units' budgets to experimentation plans. These efforts

Spotlight

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Caleb Charland's photographs use everyday objects to combine art and science, playing with our perception of the world and its natural laws.

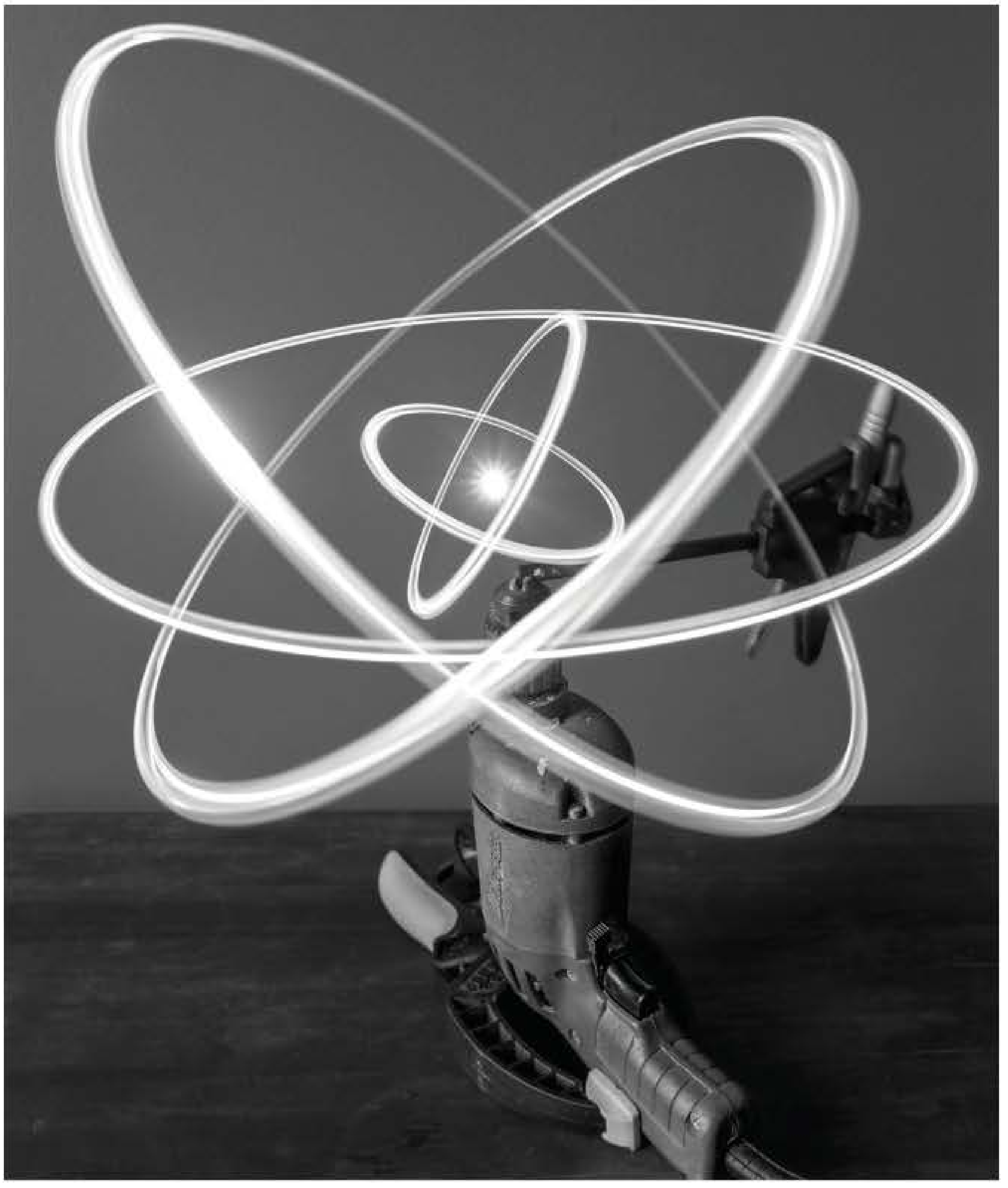
worked. By 2018, the number of annual tests had surged to 2,822.

REALIZING THE TRANSFORMATIVE power of experimentation requires a sustained commitment. Over time experiments will result in thousands of small and not-so-small changes that collectively generate huge benefits. Providing the right tools, while essential, is the easy part and isn't enough to make experimentation a way of life. Vismans put it best: "If I have any advice for CEOs, it's this: Large-scale testing is not a technical thing; it's a cultural thing that you need to fully embrace. You need to ask yourself two big questions: How willing are you to be confronted every day by how wrong you are? And how much autonomy are you willing to give to the people who work for you? And if the answer is that you don't like to be proven wrong and don't want employees to decide the future of your products, it's not going to work. You will never reap the full benefits of experimentation."

The lesson is that it's not so important whether any one experiment succeeds or fails; what matters is how decisions are adjudicated under uncertainty in an organization. They should not be based on faith or personal opinion alone. If they can be put to the test, they should be.

HBR Reprint R2002B

STEFAN THOMKE *is the William Barclay Harding Professor of Business Administration at Harvard Business School and the author of* Experimentation Works: The Surprising Power of Business Experiments *(HBR Press, 2020).*



Caleb Charland

Avoid the Pitfalls of A/B Testing

Make sure your experiments recognize customers' varying needs.

Iavor Bojinov
Assistant professor, Harvard Business School

Guillaume Saint-Jacques
Computational social science lead, LinkedIn

Martin Tingley
Experimentation research lead, Netflix

A change may cause use to jump up among one type of customer but totally turn off another type.

IN RECENT YEARS the use of online A/B testing has skyrocketed, fueled by a growing appreciation of its value and by the relatively low cost of technology for conducting it. Today digital firms and, increasingly, conventional companies each run tens of thousands of online experiments annually measuring whether "A," a control (usually the current approach), is inferior to "B," a proposed improvement to a product, service, or offer. By quickly revealing users' reactions to modifications, the experiments help firms identify the best ways to update digital products and create new ones. Because they push innovations out to a small, randomly selected group before they're released to everyone, the tests also lessen the risk of unintended adverse side effects. And their unique ability to objectively measure the impact of a change enables firms to disentangle any growth in revenues, engagement, or other key business metric that improvements produce from growth that would have happened anyway. That vital information allows firms to spot opportunities and accurately assess their return on investment.

For many firms A/B testing is now an integral part of the product-development cycle. Decisions about when or whether to launch brand-new products or alter existing ones, whether or how to penetrate untapped markets or customer segments, and how to allocate capital to different areas of the business are all based on test results. It's no exaggeration to say that successful A/B testing is critical to these firms' future. But often companies make serious mistakes in conducting experiments. In our research at Harvard Business School and our experiences as data science leaders at Netflix and LinkedIn, we've identified three major pitfalls in the approaches companies take. In this article we describe how you can avoid those traps by applying techniques that have worked at Netflix and LinkedIn and that will help you use experiments more effectively to improve your firm's performance.

PITFALL 1

NOT LOOKING BEYOND THE AVERAGE

One common mistake is focusing on the impact that innovations have on the mean, or average, of the business metrics in question. By doing so, companies are essentially measuring the effect on a fictional average person and ignoring the enormous differences in how real customer segments behave. A change may cause use to jump up among one type of customer but totally turn off another type.

Imagine launching a new product that increases average user spending by $1. Our instinct is to assume that each user is spending an extra dollar. However, that increase could also occur if a few users started spending a lot more and all the others started taking their business elsewhere. Typical A/B testing dashboards, which report only a difference in the global average, don't differentiate between those two scenarios.

Whenever core business metrics are dominated by a small number of large clients or superusers, averages are especially misleading. Unless decision makers stop thinking of their customers as one idealized, representative person, they risk optimizing for heavy users at the expense of light users. That's dangerous because finding ways to get light users to increase consumption is often a firm's biggest opportunity.

In some cases the answer might be to find the best single version (or, in experimentation lingo, "treatment") for all users. But in others, it might make sense to create different versions tailored to the preferences of important segments of users. A/B testing can help companies do that. They can segment by using predefined groups such as country, industry, and past engagement, or by applying machine-learning techniques to identify groups that will respond differently to innovations. Even when not all insights are actionable, the test results allow firms to size up potential opportunities and discover ways to tap them.

To address the heterogeneity of customers, firms should do the following:

Use metrics and approaches that reflect the value of different customer segments. Netflix wants to increase the benefits that it provides all its members—not just those who use its service the most. Consider what might happen if popular TV shows appeared more often in all users' recommendations. That could induce frequent users to watch even more programming, dramatically increasing the average time users spent on Netflix. But this change doesn't consider the needs of members who use Netflix to stream niche content and therefore may watch less overall. This is a problem: In general, less-engaged Netflix members don't receive as much value from the service as heavy users do and are more likely to cancel their subscriptions. Therefore, increasing the amount of content that less-engaged members want to stream, even by a small percentage, is better for Netflix than getting heavy users to watch a few more hours of programming.

To navigate such issues, Netflix takes two approaches. First, it uses

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Charland's Sparkling Pendulum *explores the possibility for invention and discovery within the well-tested laws of science.*

interleaving A/B testing designs. In this technique Netflix alternates each user's experience between "A" and "B": The user receives the control experience on day one and the treatment on day two, or vice versa. That allows Netflix to identify the most-promising innovations while accounting for different members' behaviors. Second, instead of looking at the raw average of streaming minutes, it has developed a metric that balances the effects on lightly and heavily engaged members and ensures that product changes don't benefit one segment at the expense of another.

Measure the impact across different levels of digital access. By "digital access" we mean whether customers have fast and reliable or slow and unstable internet connections; have the latest, most sophisticated devices or older or less powerful ones; and so on. Designing and analyzing A/B tests for those distinct cohorts allows you to match users with the experience that's best suited to their digital environment.

For technical metrics (such as app loading times, delays before playback commences, and crash rates), it's particularly important to understand individual members' perceptions of how a modification affects the quality of their service. To do this, both Netflix and LinkedIn track the upper, middle, and lower percentiles of these metrics and how their mean values change. Has the treatment slowed app loading relative to the control for both users in the fifth percentile of loading times (those with the fastest internet connections) and users in the 95th percentile (those with the slowest)? Or has the treatment benefited users in the fifth percentile while harming those in the 95th percentile? Netflix uses this approach to test innovations aimed at improving the quality of streaming video playback for different devices and network connectivity conditions.

Always account for group-specific behavior. LinkedIn's A/B testing platform automatically computes the effects of experiments by group. For example, it separately calculates the impact of new features for each country, because something that works well in the United States may not be as successful in India. It also groups individuals by the reach of their social networks—since a communication enhancement will affect well-connected and sparsely connected individuals differently. In a recent initiative, for instance, LinkedIn found that instantly notifying job seekers of new job listings disproportionately increased the likelihood that sparsely connected individuals would apply for positions, because they're less likely to hear of openings through other means than well-connected people are.

Finally, LinkedIn tracks the impact of changes on inequality itself by checking whether an innovation is increasing or decreasing the share of revenue, page views, and other top-line metrics contributed by the top 1% of users. This ensures that LinkedIn is not over-optimizing for the most active members at the expense of the less engaged.

Segment key markets. Identifying country-specific differences has enabled LinkedIn and Netflix to continue serving their primary regions and grow into new ones without forcing the same experience onto all. In India, for instance, where people primarily access the internet via mobile devices, any initiative that slows down app loading speeds lowers engagement significantly more than it does in the United States and other markets where consumers aren't as likely to rely on older mobile devices or slower 3G networks. Accordingly, to serve the needs of India and similar markets, LinkedIn developed the LinkedIn Lite version of its main application. To make it work more quickly, Lite has a lower image quality and a modified user interface, reducing the amount of data the app has to process. At Netflix, market-specific research on device usage has led the firm to experiment with and ultimately release a mobile-only membership plan for India.

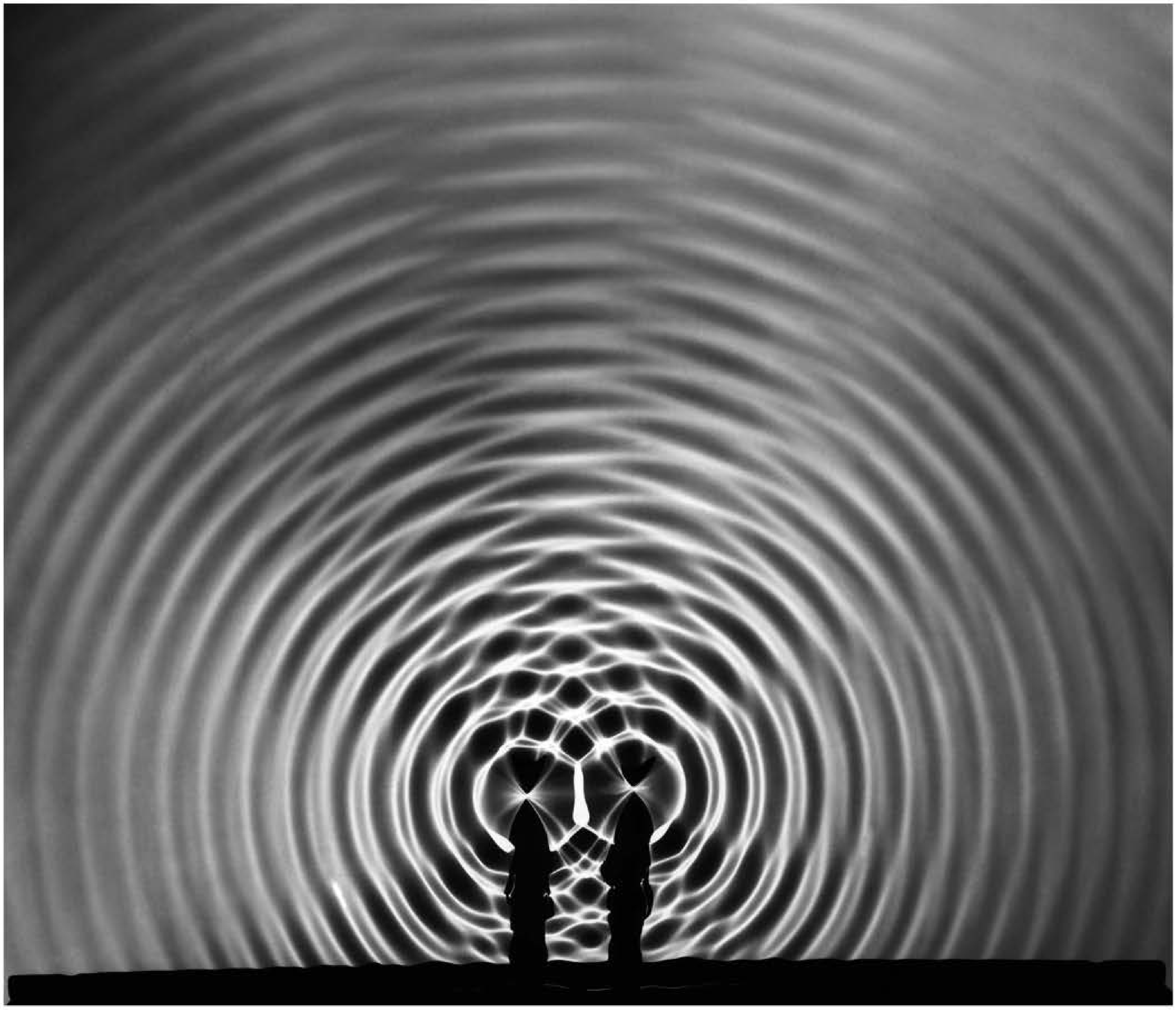
PITFALL 2

FORGETTING THAT CUSTOMERS ARE CONNECTED

Standard A/B testing, in which you compare group A with group B, assumes there is no interaction between users in the two groups. That premise is often reasonable in traditional randomized experiments—such as clinical trials measuring the effectiveness of a new medicine. But interactions among the participants in an online A/B test can affect the outcome.

Consider an experiment that tests a change designed to make it easier to start a conversation with people in your LinkedIn network—for instance, by notifying you when someone is using LinkedIn at the moment or about contacts at a firm with a job you might be interested in and then letting you message them from the notification page. Since users without the update may receive and, in turn, respond to more messages (sent by people who got the update), there will most likely be a positive impact on the control group. If decision makers don't take this "contamination" into account, severe mismeasurement can happen, which can lead to the wrong decision—such as concluding

Caleb Charland



that a bad treatment is good or that a good one is bad. Here are ways to avoid that pitfall:

Use network A/B testing. LinkedIn has developed techniques that allow it to measure the extent of group interactions or avoid them altogether. It does the latter by isolating users in group A from users in group B—by making sure that if a user is in group A, all the other users who could influence her behavior are also in group A. It then does the same with group B. These techniques capture a more detailed picture of user behavior. Consider a new content-recommendation algorithm that shows more long-form text content, such as news articles, and fewer images. Typically, images generate a lot of likes and a few comments, and news articles generate fewer likes but more comments. Users, however, are more likely to interact with or respond to content that one of their contacts has commented on than content the contact has merely liked. While a standard A/B test will show that the new algorithm is generating fewer likes, network A/B testing will capture both the likes and the positive downstream impact initiated by more comments from the exposed users. More broadly, network A/B testing has helped LinkedIn managers understand the total impact of their initiatives and on multiple occasions has led to significant changes in strategy.

Use time-series experiments. These are A/B tests that randomly switch

Berenice Abbott/Getty Images

←
Berenice Abbott photographed scientific phenomena, such as this interference pattern of rippling water.

between exposing the whole market to treatment A and exposing it to treatment B. Online marketplaces where many buyers and sellers interact (such as platforms for online ad auctions or ride sharing) are particularly prone to contamination. There, even small A/B tests that target only some users can shift the market equilibrium in ways that don't represent what would have happened had everyone been exposed to the change. Time-series experiments, however, can accurately gauge the true impact on the entire market.

For example, imagine that LinkedIn develops a new algorithm for matching job seekers with job openings. To measure its effectiveness, LinkedIn would simultaneously expose all job postings and seekers in a given market to the new algorithm for 30 minutes. In the next 30-minute period, it would randomly decide to either switch to the old algorithm or stay with the new one. It would continue this process for at least two weeks to ensure that it sees all types of job search patterns. Netflix's interleaving strategy is a special application of this more general methodology.

PITFALL 3

FOCUSING PREDOMINANTLY ON THE SHORT TERM

For A/B testing to be successful, experiments have to run for a sufficient period of time. Focusing solely on short-term signals can throw off a business for several reasons. First, the initial signal from a test is often different from the results seen once members grow accustomed to a new experience. This is particularly true of changes to user interfaces, where novelty, or "burn-in," effects are common: Users will often show an initial heightened engagement with new features that decays over time. Second, innovations may lead to long-term but slow-to-materialize changes in how users interact with the product. For example, ongoing incremental improvements to recommendation algorithms or app performance may have no immediate measurable effects but may slowly but significantly increase customer satisfaction. Here's how to account for these behaviors:

Get the length of experiments right. You need to ensure that you're measuring the steady-state impact of a new feature, as opposed to a short-term novelty effect. How long is long enough? That varies, because users respond differently to, say, a change to a user interface than they do to changes in a recommendation system. So you should run A/B tests until user behavior stabilizes. Both LinkedIn and Netflix monitor how engagement with new features evolves over time and have found that, for most of the tests they run, results typically stabilize after about a week.

Run "holdout" experiments. In these a small subset of users is not exposed to the changes for a preset period of time (usually over a month) while everyone else is. This approach helps companies measure slow-to-materialize effects. LinkedIn has found that holdout experiments are beneficial in scenarios where the cumulative impact of many incremental changes may eventually lead to improvement or where it may take users a while to discover a new feature.

Imagine you're testing a feature that highlights professional milestones (such as getting a new job) achieved by network connections in a social media feed. This feature would likely be triggered intermittently, perhaps only once or twice a week, depending on who is in a member's network. In such cases an experimental period of several weeks or months may be needed to ensure that members of the treatment group are exposed to enough updates to test the feature's effect on feed quality, or how relevant users perceive the content to be.

ONLINE A/B TESTING offers a powerful way to gain insights into the impact of potential changes on different customer segments and markets. But standard approaches, which tend to focus on the short-term impact of a new experience on the average user, may lead companies to draw the wrong conclusions. The techniques we've described can help managers avoid common mistakes and identify the most valuable short- and long-term opportunities, both globally and for strategically important customer segments.

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“The Power of These Techniques Is Only Getting Stronger”

A conversation with Pinterest’s **Jeremy King**

JEREMY KING HAS WORKED in technology for nearly three decades—and has spent much of the past 15 years helping companies use experimentation and data to improve decision-making. Now the senior vice president for technology at Pinterest, King spoke with HBR about the benefits of the experimental approach and the kind of culture that’s necessary to support it. Here are edited excerpts of that conversation:

HBR: When did A/B testing first become part of your work?

KING: I worked at eBay from 2001 to 2008, and during the second half of my tenure there experimentation platforms and A/B testing became a focal point. In the early days a lot of experiments focused on the company’s search engine. When I worked at eBay, there were 100 million items for sale on the site, and we were constantly trying to optimize what users were shown when they searched on various terms. The goal was to keep it relevant but also to create serendipity. On platforms such as eBay, Etsy, and Pinterest, you don’t want the search function to be too precise. You want to encourage exploration so that people will roam around and discover new things. So we would experiment with different search results and measure things like transactions, click rates, and exploration time to try to get the best mix.

Does a company require a certain kind of culture to excel at experimentation?

To succeed at it, people have to commit to making decisions based on data. For most established companies, that requires transformational change. In many organizations the senior person in the room,

Photograph by CODY PICKENS

the subject matter expert, or the person with direct responsibility makes the decision unilaterally, often based on instinct. At companies that are data-driven, you are much less likely to hear someone say, "My guess is…" or "I bet that…."

When I joined Pinterest, what impressed me most was that 65% of employees there had done a query in its big-data system in the previous six days. They included not just product engineers and executives but people in HR and on the legal team. In our meetings, if somebody asks a question, instead of guessing at an answer, people's typical response is to flip open their laptops and begin looking through customer transactions to try to find a data-driven answer.

How hard is it for older, nondigital organizations to shift to that kind of environment?
The number one issue at those firms is that people don't have access to the data. Organizations like to talk about data democracy, but there are barriers, such as privacy concerns. I get lots of questions from people in all kinds of industries who are skeptical: "Should I really allow the entire company to see all this data?" Data democracy requires an investment and a cultural shift, but the benefits you get from letting more of your company have access to your data are significant, because it unlocks better decision-making.

You spent nearly eight years at Walmart. Describe its experimentation culture.
At Walmart, people still talk about Store Number Eight, which was the location Sam Walton used when he wanted to experiment with some new approach. The practice of selecting a small number of locations where you try out new ideas continues: Walmart has approximately 10 stores it designates for experiments, with at least one in each region. Experiments typically involve things like floor layout or interactive devices. When I was at the company we experimented with a store that had only self-checkout aisles and no cashiers. As you can imagine, in a physical store experimentation is much slower than it is in a digital environment. Walmart's culture is also affected by its merchants, who have so much experience that they sometimes rely more on instinct than on data. That instinctual approach can be successful up to a point. But especially when you're operating at scale and launching thousands of new products each day, as we did at Walmart.com, one person's ability to understand every new item coming into a category and at what volume it's going to sell in each region is limited. That task is better left to a computer.

Do you have to hire different kinds of people to support an experimentation-driven culture?
I'm not sure we hire differently, but it does require a different kind of onboarding. Companies like Facebook, Google, and Pinterest are famous for their long onboarding processes. I have friends at Facebook, where new employees spend two full weeks going through data training so that everyone understands what kind of data is available, how to access it, and how to best use it to support decision-making. That kind of training requires a huge investment.

Can companies become too focused on experiments, to the point that it slows decision-making?
At Pinterest we have that debate internally quite a bit. To avoid letting experiments get in the way of a decision, we use a technique called "holdouts." Let's say your gut instinct is that a certain change to the site is going to have positive effects, and you feel very confident of that. Instead of waiting two weeks to do an A/B test, sometimes we'll make the change right now for 99% of users but not make the change for 1%. Then we test to make sure the experience for the 99% really is exceeding the experience of the small group we've held out. That allows us to make a change immediately but still test to be sure our instincts are right.

Do you worry about whether the costs of all this experimentation are worth the investment?
Experimentation is relatively expensive, but the gains we're seeing are so significant that it's usually worth it. At Pinterest, for instance, we've been running experiments looking at how well machine learning can detect content that goes against our community guidelines. We've built a new system that shows a 20% increase in the ability to detect that content. There is no way we'd have been able to get that kind of improvement without testing one approach against another, dozens and dozens of times. For example, we've developed new machine-learning technologies to identify and hide self-injury content, so there's much less of this on Pinterest, and reports of this content from Pinners have decreased by 88% over the last year. If someone does report a Pin for self-harm, we're now three times faster at removing it, which means fewer people see it. Experimentation helped us achieve that.

Is there a danger that A/B testing is just another fad?
I don't think so. I began using this approach in 2004, so it's been 15 years already. The power of these techniques is only getting stronger. The platforms used to run these experiments are becoming more widely available and more efficient. I expect that over time we'll see more business decisions at more companies being made by doing experiments.

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Features

Start-ups operating far from Silicon valley tend to avoid the high-risk grow-or-die approach.

—"BEYOND SILICON VALLEY: HOW START-UPS SUCCEED IN UNLIKELY PLACES," PAGE 126

Photograph by **REUBEN WU**

ORGANIZATIONAL CULTURE

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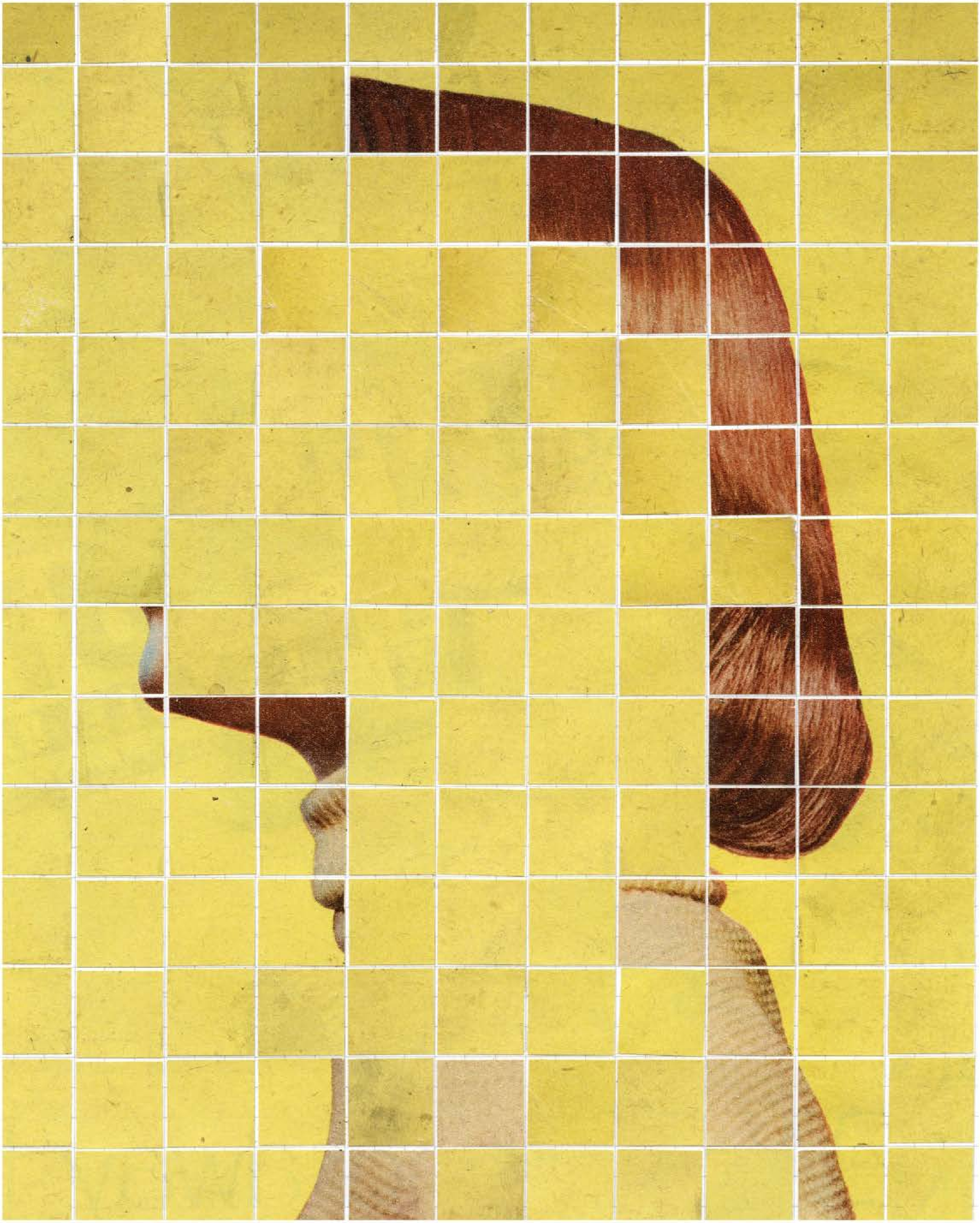
What's *Really* Holding *Women* Back?

ILLUSTRATOR
ANTHONY GERACE

IT'S **NOT** WHAT MOST PEOPLE THINK.



ORGANIZATIONAL CULTURE

ABOUT THE ART

Anthony Gerace, a photographer and artist based in London, works primarily with collage, portraiture, and landscape. His images explore the effects of time on objects and the transient nature of memory and experience.

As scholars of *gender inequality* in the workplace,

we are routinely asked by companies to investigate why they are having trouble retaining women and promoting them to senior ranks. It's a pervasive problem. Women made remarkable progress accessing positions of power and authority in the 1970s and 1980s, but that progress slowed considerably in the 1990s and has stalled completely in this century.

Ask people *why* women remain so dramatically underrepresented, and you will hear from the vast majority a lament—an unfortunate but inevitable "truth"—that goes something like this: High-level jobs require extremely long hours, women's devotion to family makes it impossible for them to put in those hours, and their careers suffer as a result. We call this explanation the work/family narrative. In a 2012 survey of more than 6,500 Harvard Business School alumni from many different industries, 73% of men and 85% of women invoked it to explain women's stalled advancement. Believing this explanation doesn't mean it's true, however, and our research calls it seriously into question.

We heard this explanation a few years ago from a global consulting firm that, having had no success with off-the-shelf solutions, sought our help in understanding how its culture might be hampering its women employees. The firm recruits from elite colleges and MBA programs and ranks near the top of lists of prestigious consultancies, but like most other professional services firms, it has few female partners.

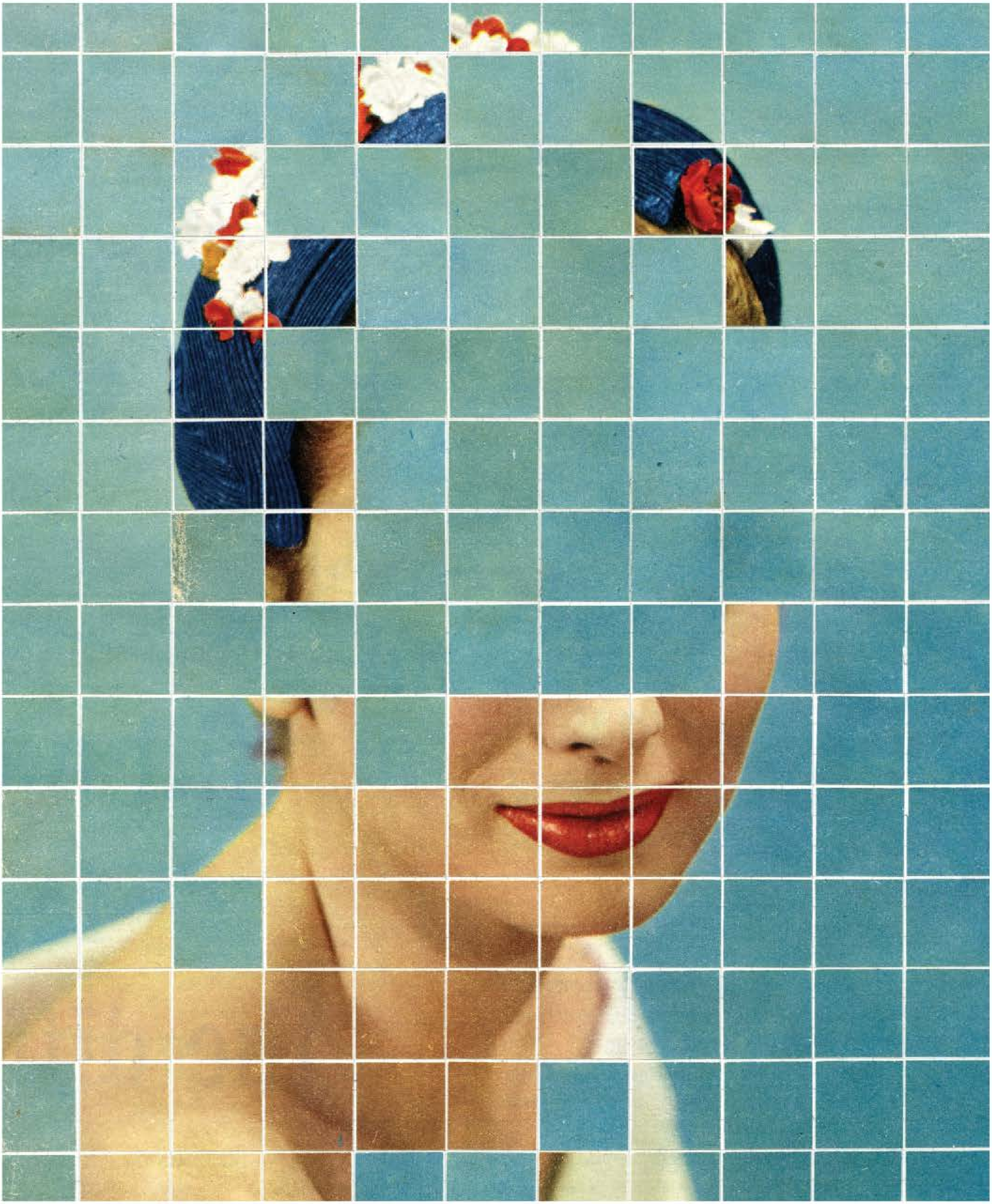
We worked with the firm for 18 months, during which time we interviewed 107 consultants—women and men, partners and associates. Virtually everybody resorted to some version of the work/family narrative to explain the paucity of female partners. But as we reported last year with our colleague Erin Reid, the more time we spent with people at the firm, the more we found that their explanations didn't correspond with the data. Women weren't held back because

IDEA IN BRIEF

THE PROBLEM
To explain why women are still having trouble accessing positions of power and authority in the workplace, many observers point to the challenge of managing the competing demands of work and family. But the data doesn't support that narrative.

THE RESEARCH
The authors conducted a long-term study of beliefs and practices at a global consulting firm. The problem, they found, was not the work/family challenge itself but a general culture of overwork in which women were encouraged to take career-derailing accommodations to meet the demands of work and family.

THE WAY FORWARD
This culture of overwork punishes not just women but also men, although to a lesser degree. Only by recognizing and addressing the problem as one that affects all employees will we have a chance of achieving workplace equality.



of trouble balancing the competing demands of work and family—men, too, suffered from the balance problem and nevertheless advanced. Women were held back because, unlike men, they were encouraged to take accommodations, such as going part-time and shifting to internally facing roles, which derailed their careers. The real culprit was a general culture of overwork that hurt both men and women and locked gender inequality in place.

What People Told Us—and What the Data Showed

On several dimensions, the firm's data revealed a reality very different from the story employees told us—and were telling themselves. The disconnects we observed made us question why the story had such a powerful grip—even on the firm's data-minded analysts, who should have recognized it as a fiction.

Consider retention. Although one of the firm's motives for reaching out to us was that it wanted help addressing "women's higher turnover rate," when we took a careful look at its data for the preceding three years, we discovered virtually no difference in turnover rates for women and men.

Another disconnect: Whereas firm members attributed distress over work/family conflict primarily to women, we found that many men were suffering, too. "I was traveling three days a week and seeing my children once or twice a week for 45 minutes before they went to bed," one told us. He recalled a particularly painful Saturday when he told his son he couldn't come to his soccer game. "He burst into tears," the man said. "I wanted to quit then and there." Two-thirds of the associates we talked to who were fathers reported this kind of work/family conflict, but only one was taking accommodations to ease it.

Accommodations were another area in which the firm's narrative and its data didn't line up. Employees who took advantage of them—virtually all of whom were women—were stigmatized and saw their careers derailed. The upshot for women at the individual level was sacrifices in power, status, and income; at the collective level, it meant the continuation of a pattern in which powerful positions remained the purview of men. Perversely, in its attempt to solve the problem of women's stalled advancement, the firm was perpetuating it.

We also found incongruities within the work/family rhetoric itself. Take the way this man summed up the problem: "Women are going to have kids and not want to work, or they are going to have kids and might want to work but won't want to travel every week and live the lifestyle that consulting requires, of 60- or 70-hour weeks." Resolute in his conviction that women's personal preferences were the obstacle to their success, he was unable to account for such anomalies as childless women, whose promotion record was no better than that of mothers. In his calculation *all* women were mothers, a conflation that was common in our interviews. Childless women figured nowhere in people's remarks, perhaps because they contradict the work/family narrative.

In a final disconnect, many of those we spoke with described experiences that called into question the work/family narrative's foundational premise: that 24/7 work schedules are unavoidable. They talked about devoting long hours to practices that were costly and unnecessary, chief among them overselling and overdelivering. We heard many stories of partners who, as one associate put it, "promise the client the moon" without thinking of how much time and energy it takes to deliver on such promises. The pitch goes like this, he explained: "We'll do X, Y, and Z, and we're going to do it all in half the time that you think it should take." Clients are wowed and can't wait to sign up, he told us.

Associates felt pressured to go along with these demands for overwork because they wanted to stand out as stars amid their highly qualified colleagues. "We do these crazy slide decks that take hours and hours of work," one said. "It's this attitude of, 'I'm going to kill the client with a 100-slide deck.' But the client can't use all that!" Another associate ruefully described all the weekends she had devoted to these sorts of tasks. "I just worked really, really hard," she told us, "and sacrificed family stuff, sacrificed my health for it, and at the end of the day, I look back on it, 'Well, did we really have to do that? Probably not.'"

We pointed out these disconnects to the firm's leaders, challenging the work/family narrative as oversimplified and

For the firm to address its gender problem, it would have to address its long-hours problem. And the way to start would be to stop overselling and overdelivering.

offering a broader, more-nuanced, and data-driven explanation: What really held women back was the crushing culture of overwork at the firm. The unnecessarily long hours were detrimental to everyone, we explained, but they disproportionately penalized women because, unlike men, many of them take accommodations, which exact a steep career price.

All this led us to what we felt was an inescapable conclusion: For the firm to address its gender problem, it would have to address its long-hours problem. And the way to start would be to stop overselling and overdelivering.

The leaders reacted negatively to this feedback. They continued to maintain that women were failing to advance because they had difficulty balancing work and family, and they insisted that any solution had to target women specifically. Unable to convince them otherwise, we were at a loss for how to help, and the engagement effectively ended.

But we kept thinking about the situation. The firm's leaders were smart, empirically minded, and well-meaning, and yet they had dismissed the data and clung reflexively to an empirically dubious belief in the work/family narrative. As thoughtful as they were, it was a puzzle why they continued to rely on a "solution" that only perpetuated the problem.

The firm was not atypical in this regard. Research shows that a 24/7 culture creates discontent for women and men alike and that the "accommodations" solution, ironically, tends to derail the careers of highly qualified women, leaving companies' senior ranks depleted of some of their brightest female stars. Studies show an additional irony: Long hours don't raise productivity. In fact, they have been associated with decreases in performance and increases in sick-leave costs.

Considering those downsides, we asked: Why do companies continue on the same work/life balance path and disregard the possibility of instituting more-humane work hours?

We suspected that in the answer lay something profound but hidden—not just at our client firm but in corporate culture generally. Perhaps the work/family narrative is so pervasive and tenacious because it feeds into an elaborate system of social and psychological defenses that protect both women and men from the disturbing emotions that arise from the demand for long work hours. We decided to investigate.

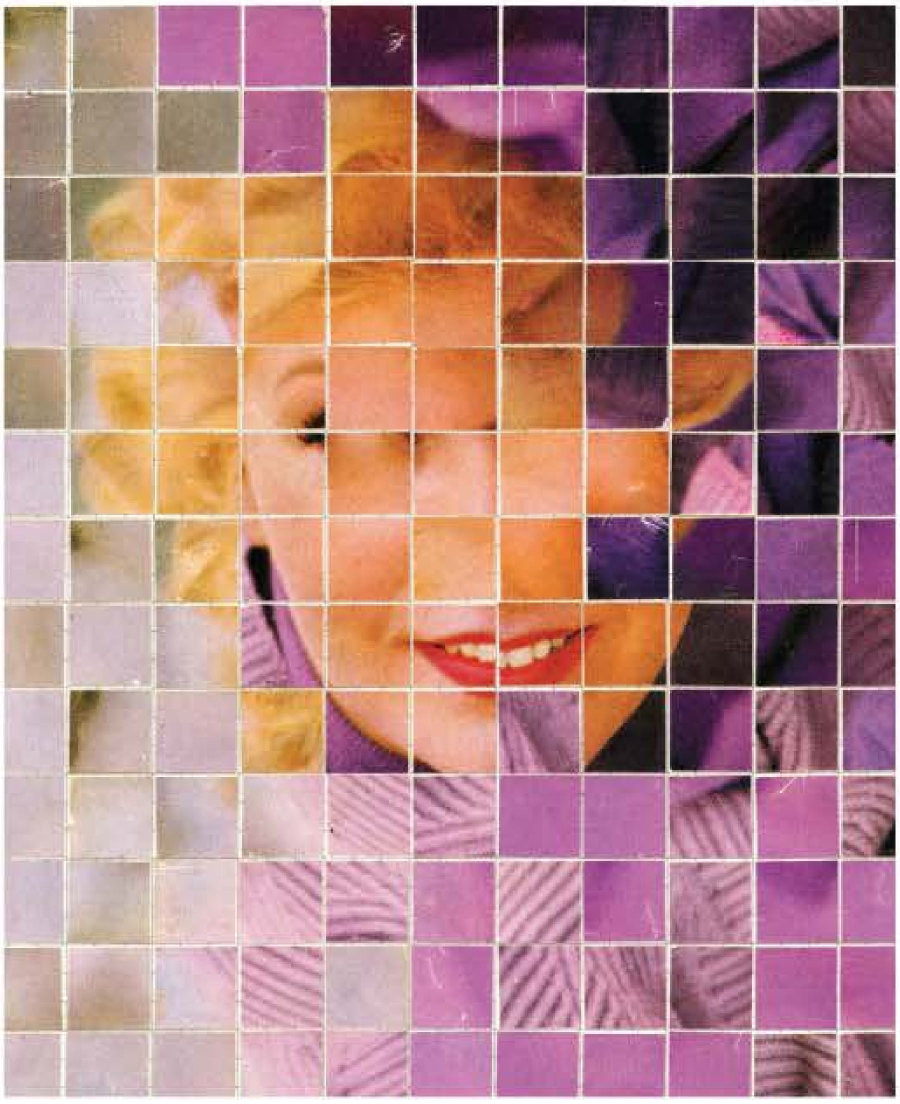
Unconscious Psychological Defenses and Universal Beliefs

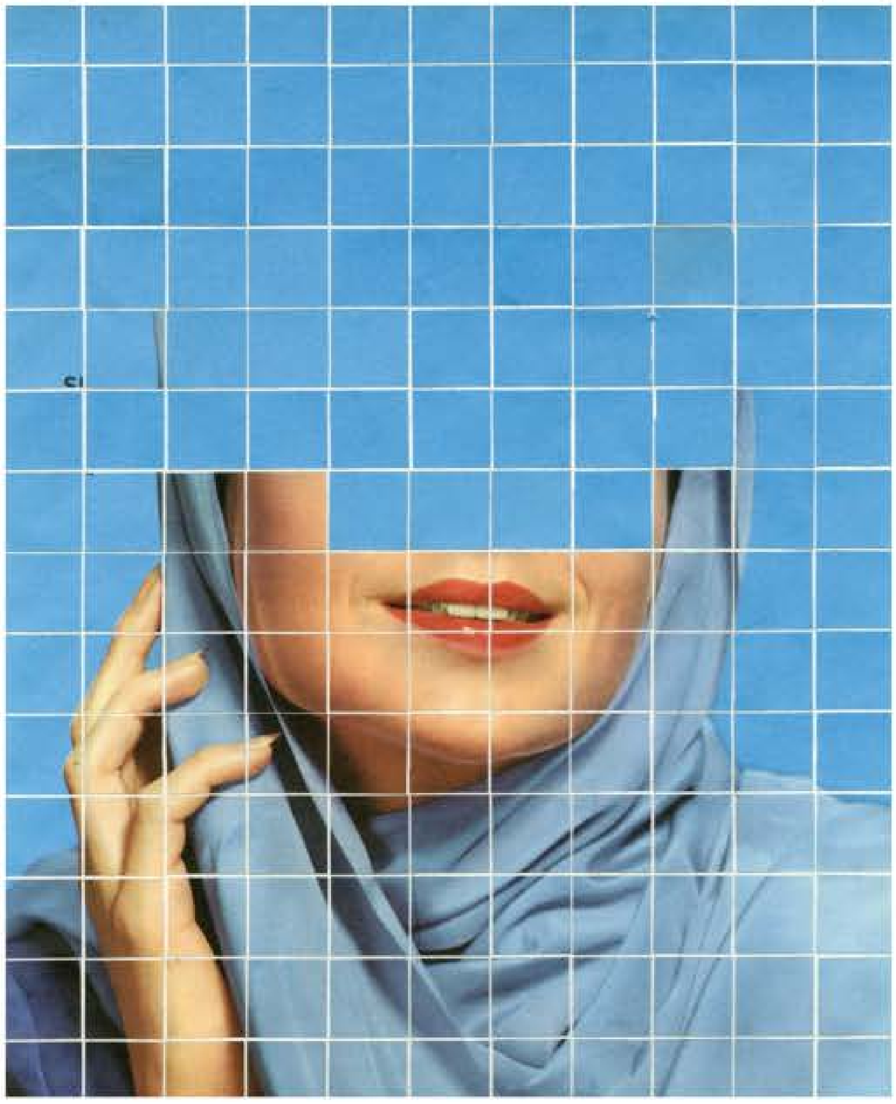
We returned to our interviews, this time paying special attention not only to *what* interviewees had said (or hadn't) but also to *how* they had said it. The exercise was illuminating. Consciously or unconsciously, virtually all the employees we had talked to revealed that they were emotionally conflicted by the firm's relentless demand for 24/7 availability and the daily choices that demand forced them to make between family and work. The unease thus created set the stage for protective measures to kick in—measures that would keep the firm's leaders from having to face up to the devil's choice they were handing their employees, and employees from having to face up to the price of whichever choice they made.

The linchpin of those protective measures was a belief in women's natural fitness for family, and in men's for work. At the employee level, they appeared as unconscious psychological defense mechanisms that reinforced the gendered work/family split. At the organizational level, they emerged as the universally held belief in the work/family narrative and in the form of policies that, as with accommodations, effectively took women off the partnership path. These employee-level and firm-level dynamics operated together to create the firm's social defense system.

All parties benefited from these measures in the short run. Firm leaders could deflect responsibility for the lack of women partners on the grounds that it was inescapable. Employees could make some semblance of peace with their decisions: Men could justify as inevitable the sacrifices they'd made in ratcheting up at work, and women could justify as natural the sacrifices they'd made in ratcheting down. And all the while, the firm's long-hours culture remained unchallenged.

But as with all defensive maneuvers, this social defense system didn't fully work. Conflict relegated to the unconscious merely hides; it isn't resolved, and anxieties continually poke through to conscious awareness, experienced differently among women than among men.





The Problem for Men

In a long-hours work culture, men have one primary identity: that of an ideal worker, fully committed and fully available. To fit this image, they must adopt the psychological stance of "my job is all-important." Nonwork identities, no matter how personally meaningful, become contingent and secondary. Naturally, this imperative to be an ideal worker generates internal conflict, especially for parents.

The men we talked to clearly felt guilty about how little time they spent with their families. They spoke poignantly about their deep emotional attachment to them, told us how much they regretted the time spent away from them, and described in heart-wrenching detail their interactions with disappointed children.

Men employed one key psychological tactic to manage these emotions: They split off their guilt and sadness, projected those feelings onto women at the firm, and identified with them there, at a bit of a remove. Consider the psychological jujitsu one man performed as he drew on the work/family narrative to explain women's lack of advancement in the firm. "I believe deeply in my heart and soul that women encounter different challenges," he said. "There's the collusion of society that it's the woman who takes the extended maternity leave, and there are some biological imperatives, too. When my first child was born, I got to carry her from the delivery room to the nursery. It's almost like I could feel the chemicals releasing in my brain. I fell so chemically, deeply, in love with my daughter. I couldn't imagine a world without her. I mean, here it was in [just] the first eight minutes of her life. So I can understand, 'How can I possibly give this up and go back to work?'"

But back to work he went. And what was his takeaway from this emotionally charged experience? A sense that he better understood the difficulties *women* face in trying to balance work and family! To banish his guilt and sadness about returning to his highly demanding workweeks, he projected his intense emotional experience onto the women at the firm—a move that allowed him to let go of those feelings while still identifying with them.

Let's unpack his story. He started with a distinction between women and men, linking motherhood to biology. It is women, not men, he suggested, who have the parenting experience. He abruptly changed course to speak about his own intensely emotional and biologically determined parenting experience but then changed course again, distancing himself from that experience and projecting it onto women. In effect, he was saying, "I was having this experience, but it was transient, and now that I've sampled it, now that I've been a tourist in this emotional land, I have a way to understand what is happening to women." The emotions he had experienced, in other words, were no longer his. They now belonged to women.

At that point he shifted the conversation to the male-dominated world of work. He told us about his time in the beer industry, a domain that, as he put it, consists of "men slapping each other on the back and talking about golf and s--- like that." In his telling, there was no room in this domain for the emotional experience of parenting, which he implicitly relegated to the world of women. Men and women, he said, just have different commitments to work and family. "I can't think of a single instance," he told us, "where the fella took a six-month paternity leave to care for the baby while mom went back to work."

This man was not alone in setting up women as the organizational bearers of distress about curtailed family time. That psychological defense gave many men at the firm the illusion of a fulfilled life and enabled them to perform as the committed workers the firm valorized. But the defense was only a Band-Aid; reality—the on-the-ground, relentless demands of family—was not so easily banished.

The Problem for Women

Women experience a different psychic tension. According to the work/family narrative and broader cultural notions, their commitment to family is primary by nature, so their commitment to work *has* to be secondary. They are expected to embrace an intensive, "my family is all-important" approach to parenting, a stance encouraged by the firm's readily accessible accommodations. But a family-first stance comes at a significant cost to their careers and flies in the face of their professional ambitions.

> One “push” factor was the poor reputation of female partners with children. We heard them described as “horrible” women who were not “positive role models of working moms.”

Most of the firm’s women had tasted professional success and resisted the idea that they belonged at home, which made this tension especially acute. They willingly complied with the family-devotion schema but struggled openly with the idea of splitting off the work component of their identities.

That ambivalence is clear in the account of one mother, who talked about her inability to shirk responsibilities on the home front despite having a family-oriented husband. “There’s just a difference between the way a mother and a father look at their kids and the sense of responsibility that they feel,” she told us. “I feel my male counterparts can more easily disconnect from what’s happening at home.... If I did sort of disconnect, things wouldn’t fall apart, but I wouldn’t feel good about it, so it’s just not going to happen.” Yet her work commitment was also strong, leaving her at a loss for knowing whether her family responsibilities would allow her the space to develop professionally. “I know I’ll fall down from time to time,” she said. “I know I need to learn...I don’t doubt myself....It’s more from a place of needing to learn and needing to grow. I doubt myself generally in being able to honor that while also honoring the commitments I’ve made to my family. That is a constant worry.” The ambivalence she felt about her career is on full display here. She embraced her family identity but was unwilling to relinquish her work identity, which is why she could say that she didn’t doubt herself but then go on to say that she did.

Many other women at the firm similarly struggled with the work/family narrative’s injunction to reject the role of ambitious professional. This meant that they weren’t able to reap all its psychological benefits as a social defense. They willingly complied with the cultural dictate that they become the primary family caregiver, allowing men to identify vicariously with that split-off aspect of themselves—but they didn’t shed their work identities. Thus the psychological resolution that men found, having made the “right” choice in fully committing themselves to a work identity, was unavailable to women, who had made the “wrong” choice in not fully committing themselves to a family identity. Working women in this situation are left with identities constructed as contradictory, forcing them to constantly assess whether they should ratchet down their career aspirations.

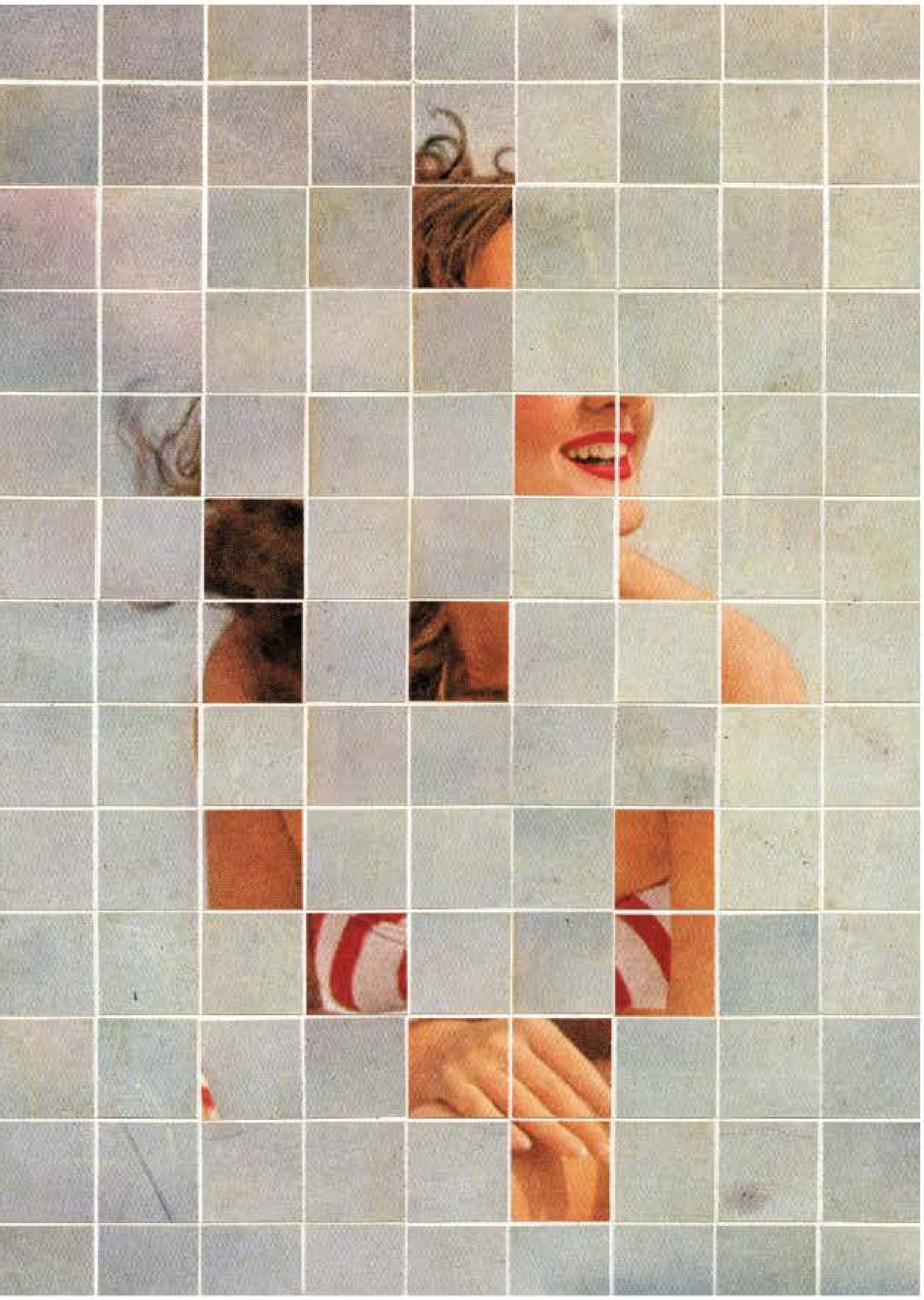
Adding to this tension at the firm were regular reminders that women were in the wrong place by being at work instead of at home—“push” factors that women had to withstand if they wanted to retain their work identities as ambitious professionals.

The Power of “Push” Factors

One particularly strong push factor that women encounter is work/family accommodations. Going part-time or shifting to internally facing roles provides an enticing off-ramp from the path of overwork, but those moves stigmatize women and derail their careers. Female associates at the firm who took accommodations generally fell off the track to partner; female partners who took them veered away from the route to real power.

Many women at the firm described having to resist a second push factor: the pressure to give up what they saw as their relational style in favor of the hard-charging “masculine” style the firm venerated in client interactions. One female partner told us how an early mentor warned that relying on her well-honed relationship-building skills would communicate to prospective clients that “you don’t have a lot going on between your ears.” In other words, her skill set didn’t cut the mustard. Such assessments loosened women’s identification with work while affirming a style more commonly associated with men, further encouraging women to step back.

A third push factor was the poor reputation of female partners with children, whose mothering was roundly condemned. These were formidable women who had held fast to their professional identities and achieved much recognition and success—achievements contradicting the idea that it is impossible to meet the demands of both work and family. One could imagine their being held up as exemplars, but we heard them routinely described as bad mothers—“horrible” women who were not “positive role models of working moms.” For junior women facing decisions about being good mothers and having successful careers, such condemnation implies that professional commitment exacts a terrible cost.



ORGANIZATIONAL CULTURE

With these push factors constantly reminding women that they don't really belong in the workplace, it's no wonder that women are often ambivalent about their career commitments. When faced with the long-hours problem, they find themselves on the horns of a dilemma: If they respond to the pull of family by taking accommodations, they undermine their status at work, but if they refuse accommodations in favor of their professional ambitions, they undermine their status as good mothers. Thus they are positioned to be seen as subpar performers or subpar mothers—or both. This dilemma leaves the culture of overwork intact, allows firms to deflect responsibility for women's stalled advancement, and locks gender inequality in place. Women are the ones who have a work/family problem to sort out, the story goes, and that's just the way it is.

SOCIAL DEFENSE SYSTEMS are insidious. They divert attention from a core anxiety-provoking problem by introducing a less-anxiety-provoking one that can serve as a substitute focus. At our client firm, the core problem was the impossibly long work hours, and the substitute problem was the firm's inability to promote women. By presenting work/family accommodations as the solution to the substitute problem, the firm added to an invisible and self-reinforcing social-defense system—one that cloaked inefficient work practices in the rhetoric of necessity while perpetuating gender disparities. This move gave firm leaders an unresolvable and therefore always available problem to worry about, which in turn allowed everybody to avoid confronting the core problem. As a result, two strongly held ideologies supporting the status quo remained in place: Long work hours are necessary, and women's stalled advancement is inevitable.

Our findings align with a growing consensus among gender scholars: What holds women back at work is not some unique challenge of balancing the demands of work and family but rather a general problem of overwork that prevails in contemporary corporate culture.

Women and men alike suffer as a result. But women pay higher professional costs. If we want to solve this problem, we must reconsider what we're willing to allow the workplace to demand of all employees. Such a reconsideration is possible. As individual families and employees push back against overwork, they will pave the way for others to follow. And as more research shows the business advantage of reasonable hours, some employers will come to question the wisdom of grueling schedules. If and when those forces gain traction, neither women nor men will feel the need to sacrifice the home or the work domain, demand for change will swell, and women may begin to achieve workplace equality with men.

HBR Reprint R2002C

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LEADERSHIP

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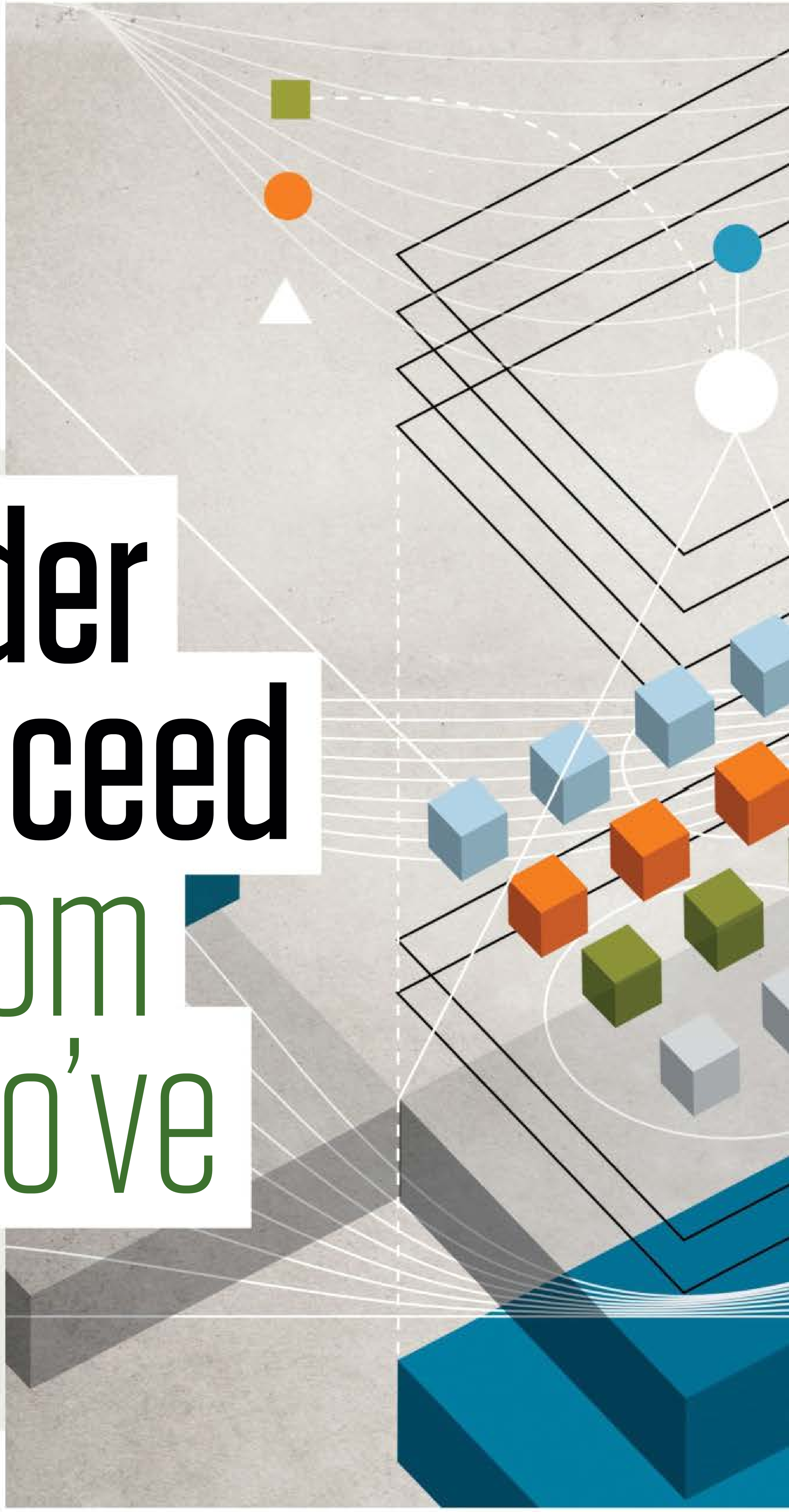
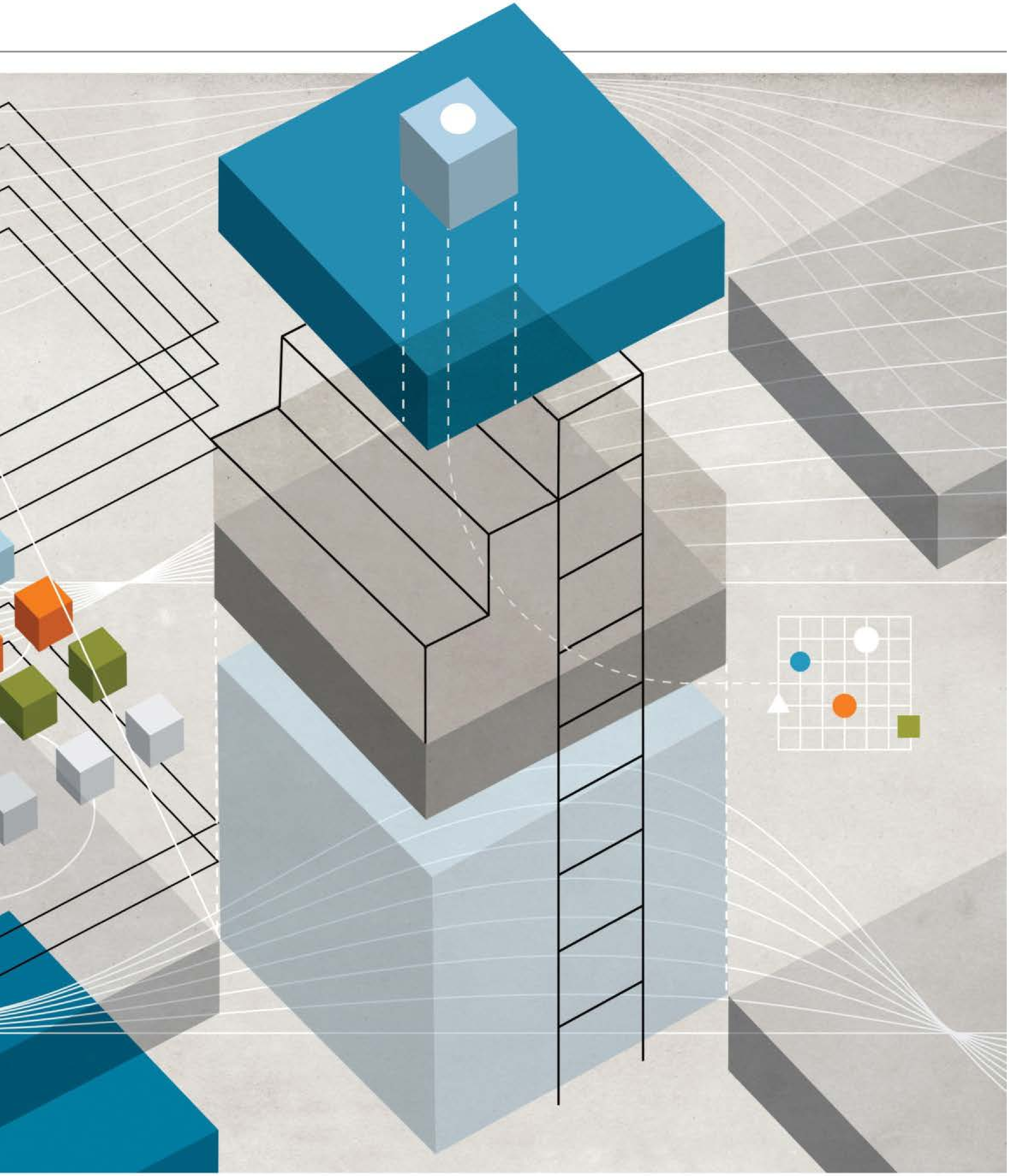
How Insider CEOs Succeed

Advice from those who've done it



ILLUSTRATOR **CHAD HAGEN**



When an organization taps one of its current executives to be its new CEO, the transition might seem straightforward. The promotion is often the culmination of years—maybe decades—of hard work. CEOs who come from inside the company have probably served in the C-suite or run a large division before, so they have relationships with everyone in top management and the confidence of the board.

They know the organization, its history, and its culture. They understand its strategy and might have been intimately involved in developing it. They've established credibility and support. You'd think, then, that they'd have an easier time adjusting to and excelling in the job than external hires would.

In reality, chief executives who have advanced from within face hurdles that are comparable in magnitude, albeit different in character, from those that externally hired leaders confront. Through our research and our experience working with newly promoted CEOs, we have identified insiders' five key challenges: operating in the shadow of their own past; making early decisions that surprise and disappoint supporters; overseeing former peers; pacing change; and managing the outgoing CEO.

These issues show up in varying degrees for every inside CEO appointee. In this article we offer advice for navigating them, drawing on interviews with dozens of internally promoted chief executives. This is a primer not only for leaders who want to attain the very top job but also for outgoing CEOs, HR departments, management teams, and boards that want to offer support. And some of the lessons can also be applied to succession at lower levels of the hierarchy.

FIVE CHALLENGES

In 2018, a PwC study of CEO turnover at 2,500 of the world's largest companies found, 83% of successions involved internal candidates. The implication: While external hires tend to get more attention, most companies still typically promote CEOs from within. Internal executives are known

IDEA IN BRIEF

THE PARADOX

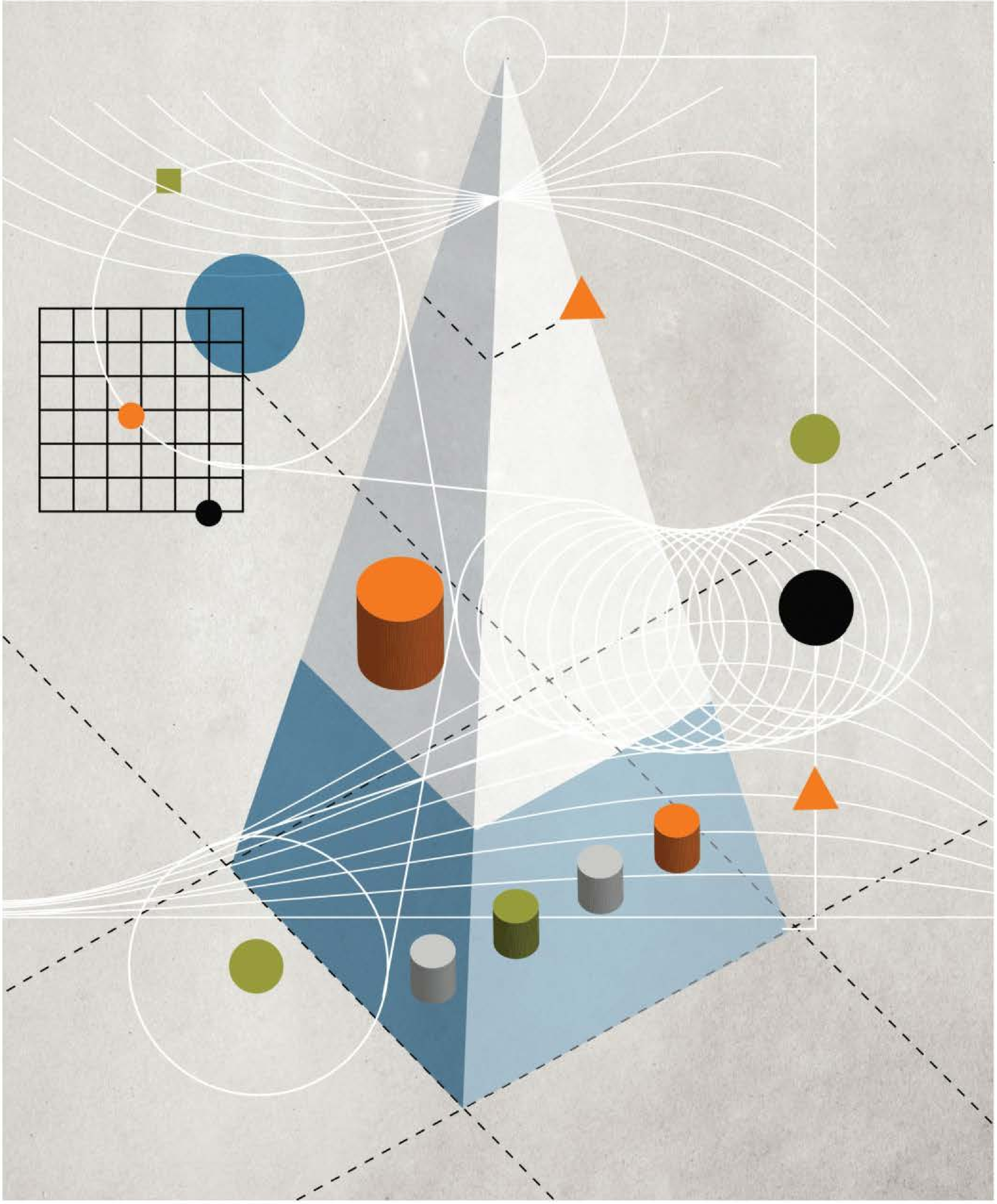
Firms invest a lot in onboarding CEOs hired from the outside, but transitions for CEOs appointed from within are rarely handled with as much care.

THE PROBLEM

Interviews with internally promoted CEOs reveal that they face five significant challenges: operating in the shadow of their past; making decisions that disappoint supporters; overseeing former peers; pacing change; and managing the outgoing CEO.

THE SOLUTION

Executives must understand each challenge and develop strategies for overcoming it, with the help and support of the board, the senior management team, and top executives in HR and communications.



commodities, theoretically carrying less risk. Yet because they're "safe bets," the specific challenges associated with their ascension can be overlooked.

Operating in the shadow of their past. One assumed advantage internally promoted CEOs have is that people in the organization know them. They come with established track records, relationships, and leadership and operating styles. But that can mean that employees, direct reports, and board members have built-in expectations of them. "Nobody goes to CEO school and becomes CEO. Everyone comes from somewhere," says David Verinder, who spent four years as Sarasota Memorial Health Care System's CFO and four as its COO before assuming the organization's top job. "And with it there's a perceived bias—oh, he's the finance guy who doesn't care about quality and only cares about the checkbook."

To head off such assumptions, internally appointed CEOs need to adopt different attitudes toward key business drivers and managing risk than they had in their previous roles. For Verinder, that meant leaning heavily toward strategy and growth planning in his early days as CEO and downplaying discussions about finance and day-to-day operations, where his credentials were already established. "In an effort to be more balanced, you have to lean way over to the area that you haven't touched before," he notes.

Harris Pastides, the former president of the University of South Carolina, who stepped into the top job from a post as the school's vice president of research and health sciences, agrees. After the promotion "I needed to spend energy and resources on other areas to show my commitment to the entire university, not just my previous areas of responsibility," he recalls.

When Richard Wilkerson moved up from a role as executive vice president of human resources at Michelin North America to become the chairman and president, in 2008, many of his colleagues were surprised. He had previously led several manufacturing units and knew people at all levels of the organization. "But HR is not a natural route to the most senior role," explains Wilkerson, who retired in 2011. That's why he took special care to reintroduce himself: "I made sure that I was very visible from the start and promoted my vision of servant leadership across the company."

Escaping the shadow of your past requires a shift in mindset, adds Lydia Jumonville, who transitioned from CFO to interim CEO and ultimately to CEO at Colorado-based SCL Health in 2017. "Really visualize yourself in the new role early on," she advises, and "consciously see yourself moving out of the old one."

Making tough calls that disappoint supporters. Once in office, promotees quickly realize that they will have to make decisions and trade-offs that displease some of the people who helped them advance. One CEO—who had the support of "every board and management team member" during his transition—told us the honeymoon didn't last long. "It took just three days before I was confronted with a significant decision that made clear to some that I would support a vision that was different from their personal vision," he explains.

Frank Longobardi, the former CEO of the New York–based accounting firm CohnReznick, agrees that consensus is rarely possible: "If I can make 80% happy with a given decision, then we're all right."

These situations can be particularly tricky when new CEOs let down or are at odds with allies who backed them for the role and expected to benefit from their promotion. But CEOs can't represent a narrow set of interests or favor friends and must avoid any perceptions that they do. As one CEO put it: "I 'grew up' in our largest operating division. It was important for me to invest in getting to know our other divisions. I knew my decisions would be viewed through the lens of favoritism if I didn't invest in building bridges." To shift your mindset, try imagining that you've been hired from the outside and are coming into the company with fresh eyes.

It can also be difficult for new CEOs to be objective about things they helped shape or championed in previous roles—for example, the strategic plan or major initiatives such as acquisitions. When Andrew became the CEO of WittKieffer, he had to step away from vetting an enterprise customer relationship strategy that he had helped craft in his previous job as managing partner and chair of the firm's health care practice and was personally invested in.

Wise new CEOs set up in-depth, objective business-review processes and engage with people who can give them honest, thoughtful assessments of the organization, warts and all. For every longtime trusted ally from whom advice

These leaders want to attack issues and plant a flag early in their tenure. However, it's important to think about priorities and timing before acting on pent-up desires.

is solicited, one or more people who represent a different perspective should also be consulted. If the new CEO's experience was siloed in a specific division or market, she or he will need to develop close and open relationships with executives from other parts of the organization.

Leading former peers and being less accessible to former reports. In nearly all cases CEOs who rose from within have to lead people who were formerly their equals (and on rare occasions, their superiors). The upside of that is knowing team members' styles and capabilities well. In an ideal situation, everyone might also be fully supportive of the promotion.

But it's not always so easy. New leaders might be confronted with would-be competitors who lost out on the top job or executives with whom they've clashed in the past. At Michelin NA, Wilkerson knew that two close colleagues had also been candidates for the CEO role. "I needed to get to them before my appointment was announced," he recalls. "I needed to share the news personally and get them on my team. Doing this gained their commitment. They were both gracious and ended up being instrumental in my and the company's success."

If you've been promoted to CEO, you must take this a step further, rapidly assessing all direct reports and other key stakeholders and beginning to build "your" team. This means "reenlisting" the people you really want to keep through early, direct conversations and figuring out as quickly as possible if there are some with whom you can't work. Each former peer deserves individual consideration, says Jumonville. "I had to walk the journey with each one," she notes.

Part of the process entails helping former peers and reports recognize that your relationships with them have changed and probably can't be as cozy and collegial—or, on the flip side, as competitive or combative—as they were before. You'll need to explain that personal feelings will play no role in the decisions you make; your priority is to do what's best for the entire organization. "Now, all of a sudden, you're making changes that directly impact their jobs—taking their cheese," one CEO comments. But you can't let prior relationships cloud your judgment.

Establishing the right pace of change. CEOs appointed from within often have a long list of things they want to do now that they (finally!) are in charge. They've usually had years to learn all about the organization, examine its flaws, and make mental notes about what they would do differently if given the chance. These leaders want to attack issues and plant a flag early in their tenure. However, it's important to think about priorities and timing before acting on pent-up desires. Why? Because the business might not be ready for the level of change the new CEO wants to drive. This is especially true if the board and the executive team think the company is in a "sustaining success" situation or in need of only minor realignment—the most likely scenarios when an insider is elevated to the top job. There also is the risk of change fatigue (and failure) if a CEO tries to do too much at once.

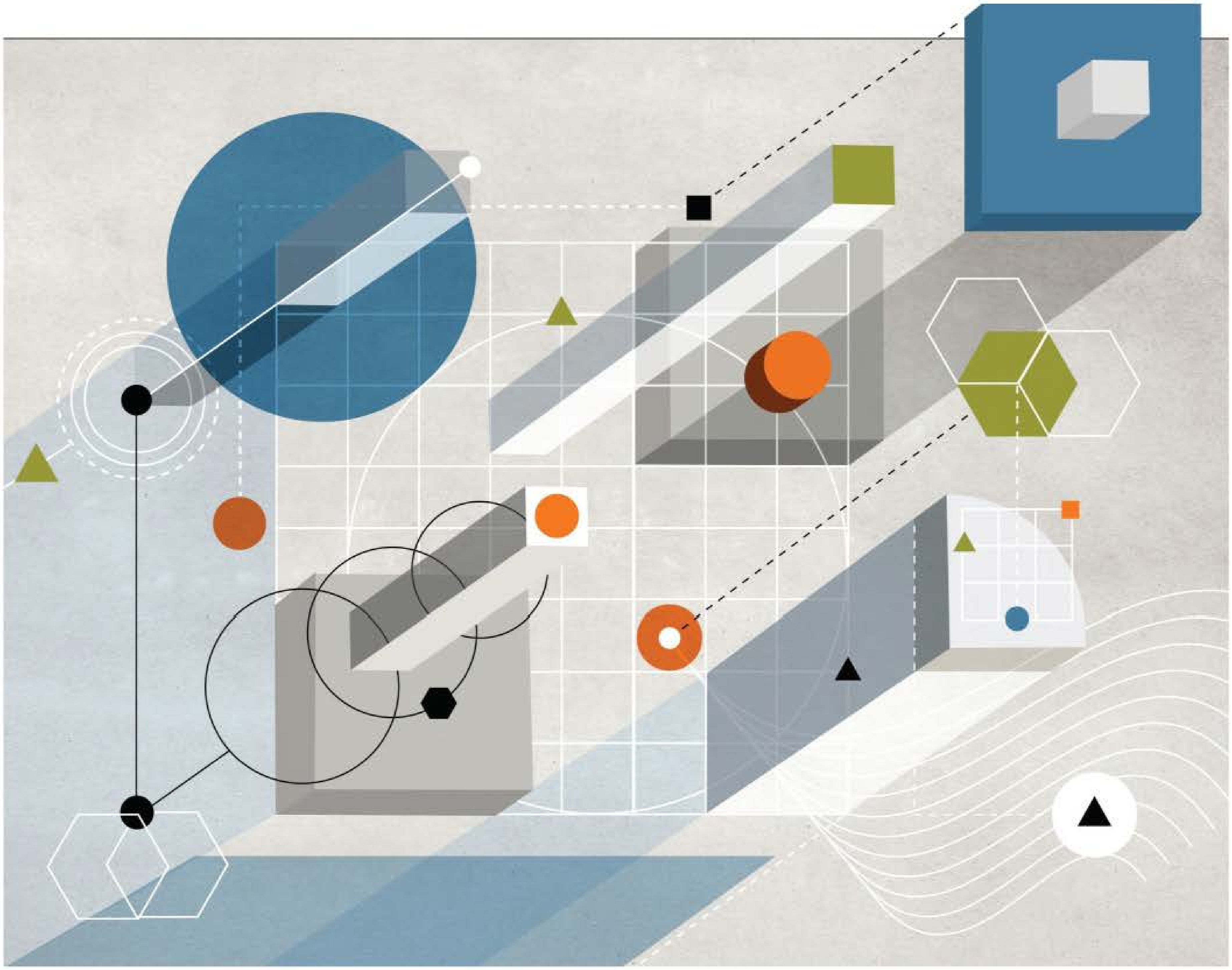
Verinder admits to being very—perhaps overly—ambitious in his early days as CEO: He built a new hospital, launched a graduate medical education program, and opened a cancer center and a trauma center. "It's all ended up pretty well," he says, "but I'm glad I had such a strong team around me."

When Pastides took over at his university, the school's trustees wanted to know his plan for change and how quickly he could implement it. But first he needed to be sure the organization would support his ideas. His solution was an expedited four-month strategic-planning process called Focus Carolina, announced in his first month in office. Despite its accelerated timetable, the process drew input from all key constituencies on campus. "I needed a balance between coming in and making change immediately and a long, drawn-out planning process," he recalls.

Another CEO remembers: "In my previous role I worked very closely with our customers, and I saw many opportunities for us to expand our capabilities to meet client needs. The board was also excited, so we charged ahead. But looking back, the pace of change put tremendous stress on individuals and on our resources. If I had to do it again, I would have managed their expectations differently and introduced the strategic initiatives in a staged cadence."

Managing the departure of the outgoing CEO. When the previous chief executive is leaving on good terms, as often happens when an insider replaces him or her, there are benefits: The transition can be carefully planned and executed with no discontinuity or confusion. But any transfer of power presents challenges, especially if there is

Lack of feedback can lead incoming chief executives to make substantial mistakes that undermine their credibility.



overlap between the outgoing and incoming leaders. (See "The Successor's Dilemma," HBR, November–December 1999.)

Insiders who are named CEO have to devote significant effort to ensuring that their predecessors' exits are as clear-cut and smooth as possible—especially if the outgoing leader expresses any ambivalence about the transition or is struggling to let go. Otherwise, people will be uncertain about who's in charge, which undercuts what should be a celebration of the old CEO's accomplishments and the rapid consolidation of the new CEO's leadership.

Upon taking the helm of a large consultancy, one new chief executive had to deal with the fact that the previous co-CEOs were on the board of directors during his first six months. "We were a little bit lost because you had three CEOs in the room," he recalls. "You're trying to make changes while not throwing anyone under the bus."

This is not to say that there should be no overlap between outgoing and incoming leaders. Wilkerson had a productive six months with his predecessor at Michelin. But "then when he left, he truly left, which was a great gift," Wilkerson says. "He left town and gave me the opportunity to lead."

HOW THE ORGANIZATION CAN HELP

The primary responsibility for making a successful transition rests with the new CEO, of course. But the organization can and should do a lot to provide support. As happens when most executive posts are filled, external hires tend to get much more onboarding than internal ones. In a 2016 survey of 125 HR executives, Michael found that 41% thought their companies did a good job of onboarding external executive hires. But only 27% felt their firms did a good job with internal executive transitions.

Far too often, insider CEOs are left to sink or swim in their new roles, regardless of how ready they are or the size of the leap they're making. Externally hired CEOs, in contrast, usually get a lot of assistance, including briefing books, detailed transition plans, and supporting transition teams. There's no reason why chief executives promoted from within shouldn't get the same opportunity to succeed and to accelerate their ability to quickly create value. (See "Internal Hires Need Just as Much Support as External Ones," HBR.org.)

The board, the senior management team, and top executives in HR and communications all have important roles to play. The board should offer coaching or counseling. Research has shown that this can halve the time it takes to get executives to full performance. Tommy Inzina, the president and CEO of the health system BayCare, was initially apprehensive about working with a coach (not one of us, by the way) but learned to appreciate the ability to discuss not just immediate concerns but also long-term industry trends and what kind of leader he wanted to be.

Members of the leadership team need to understand the challenges and the stress facing the new CEO and, where possible, offer both professional and personal support. They can also give extra assistance to the executive who moves into the new leader's previous role (say, the incoming COO or CFO), to ensure that this person is functioning well and the CEO can turn full attention to more-important matters.

HR and communications executives can help internally promoted CEOs "reintroduce" themselves to their organizations and cement their stature at the top of the hierarchy. They should develop and implement a strategic communications plan that is equal parts internally and externally focused. (See "It's All About Day One," HBR, June 2013.) A key element in Inzina's transition to the top job after having been CFO and COO was something BayCare called "CEO branding," in which his HR and communications team helped him devise a strategy for how he wanted to be perceived as the new leader: as visible, approachable, visionary, and focused on quality as the organization's "true north." The rollout included monthly videos about him and his vision for BayCare, regular town hall meetings, and breakfasts with small groups of employees. The videos in particular were "a big win" in helping people get to know him.

Finally, the organization must provide early, structured feedback from all key stakeholders on how the new CEO is doing. There's a strong tendency to hold off on offering criticism and give new CEOs, especially inside appointees, time to find their footing. Boards have limited visibility, and executive teams are understandably reluctant to voice concerns until the issues are really serious. But lack of feedback can lead incoming chief executives to make substantial mistakes that undermine their credibility, and the longer this goes on, the more difficult it becomes for the CEO to correct course.

We recommend doing a formal, structured transition-progress assessment 90 to 120 days after the CEO has assumed the role. You can have a coach or a consultant do stakeholder interviews or use a 360-like review instrument supplemented by interviews to get a broad, rigorous combination of quantitative and qualitative input. Regardless, the feedback should be delivered by someone experienced in distilling the key findings and "holding up the mirror" in ways that result in positive change rather than provoke defensive entrenchment of counterproductive behaviors.

THE SUCCESS OF internal CEO transitions cannot be taken for granted. The sooner a newly promoted chief executive appreciates the challenges involved—and, with organizational support, develops a plan to overcome them—the sooner he or she can get on with the business of leading.

HBR Reprint R2002D

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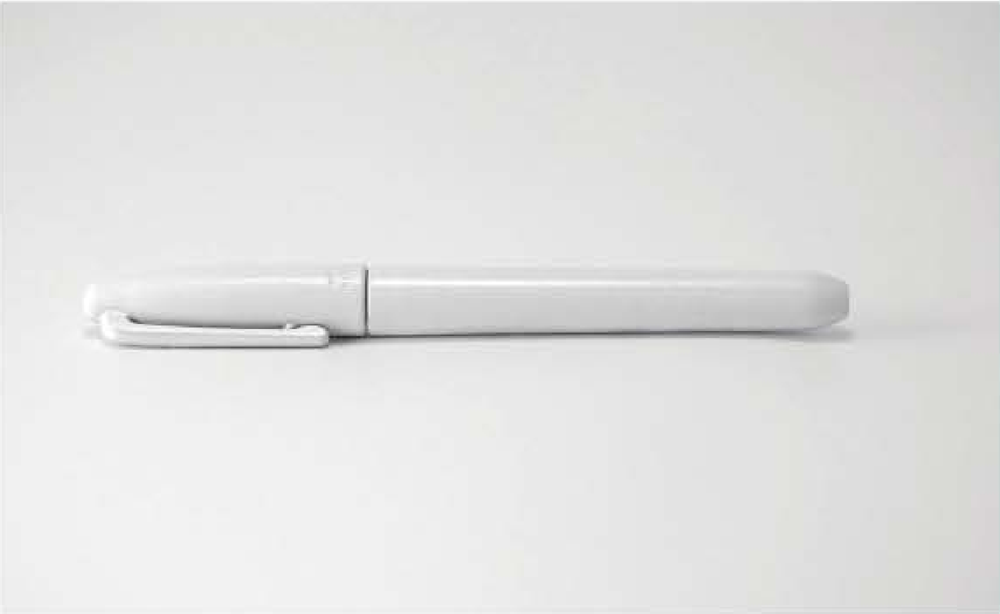
Pricing Policies That



Protect Your Brand

MARKETING

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How to prevent unauthorized discounting

PHOTOGRAPHER **ANDREW MILLER**

IDEA IN BRIEF

THE PROBLEM
Lured by rock-bottom online prices, customers often end up dealing with unauthorized resellers that do not provide the services intended for the product, eroding brand equity and the viability of resellers desired by the brand. Unauthorized resellers may mistreat customers by making false claims and selling recalled, out-of-date, or counterfeit products.

THE REMEDY
But brands have a potent defense: minimum resale price and minimum advertised price policies that discourage anyone from selling or promoting a firm's products at an unauthorized discount.

THE POLICIES
This article lays out the four steps essential to designing and enforcing policies with teeth that stay on the right side of antitrust law.

When customers seek out online deals, it seems like a win for everybody: Brands, retailers, dealers, and distributors sell more goods, and buyers get a bargain. **What's not to like?**

ABOUT THE ART

In Andrew Miller's series Brand Spirit, he painted 100 iconic objects white to remove all visual branding. The products are instantly recognizable even when their logos, colors, labels, and environmental context have been removed.

Here's the problem: In the struggle to compete against rock-bottom online prices, brick-and-mortar stores are often forced to cut the services and inventory that customers expect. They may drop low-margin products and dispense with the in-store displays and staff training that have historically helped differentiate the brands they sell. They may even raise prices on certain brands and other goods that are less available online or begin charging for services that were once free. Customers lured by deep discounts may end up dealing with unauthorized, or "gray market" digital resellers that make false product claims or sell inferior or counterfeit products. They may also find that warranties on products purchased from gray-market resellers are invalid. All of this can erode brand equity, harm customers, and undermine authorized sellers.

For brands selling in the United States and Canada, there is a potent countermeasure: crafting and enforcing policies that discourage anyone from advertising or selling a firm's products at an unauthorized discount. Brands that do this well—among them Apple, Bose, Samsung, Olympus, and Viking—retain their shine in part because their offers and sale prices, within narrow ranges, don't vary. You can scour the web for a discounted iPhone 11, but you'll almost certainly come up empty-handed. The scarcity of deals on certain products may frustrate consumers, but smart policies ultimately protect them as much as they benefit brands.

Drawing on Ayelet's decade of pricing-policy research and Gene's experience creating policies for hundreds of B2B and B2C brands, we'll describe how best-in-class companies design and enforce policies with teeth. And we'll discuss how to stay on the right side of antitrust law, a critical point when the line between enforcing a legitimate policy and price-fixing is easy to unwittingly cross.

Where to Focus

Because of price-fixing concerns, many countries, including Australia and those in the European Union, have banned efforts to set or influence resale prices. In the U.S. and Canada, however, companies can legally implement pricing programs in two ways: by agreement (in which a brand and a reseller agree on minimum selling or promotional prices) and unilateral policy (in which the brand independently determines prices). The latter is a much more flexible approach from a business perspective, allowing brands to adopt and change policies at any time without having to get resellers' consent. In addition, unilateral policies, if done properly, carry little risk of running afoul of U.S. antitrust law at the federal and state levels. Under Canadian law, the distinction between agreements and unilateral policies is unimportant; however, the flexibility of unilateral policies encourages their use there too. Because unilateral policies are the best choice for pricing programs in both countries, we'll focus on them in this article.

Pricing policies come in two broad types. Minimum resale (or retail) price (MRP) policies allow a manufacturer to set the lowest price at which a product can be advertised and sold. Minimum advertised price (MAP) policies constrain advertised offers only. Either type can apply to all resellers (digital and brick-and-mortar retailers, distributors, and dealers) or to digital resellers only.

If adopted and enforced unilaterally, MRP and MAP policies have been lawful in the United States for more than a century. (MRP agreements generally have been lawful for a decade or so, while MAP agreements have had this status since at least 1987.) Canada has generally allowed policies and agreements since 2009. (See the exhibit "The Legal View.") It should be noted, however, that pricing policies can still raise price-fixing flags and draw antitrust scrutiny in the United States if they are determined to in fact be agreements between a brand and a reseller on the selling price.

A unilateral policy is simply an announcement by the brand and must not be part of any agreement or negotiation between the parties. The brand is not "fixing" minimum advertised or selling prices; rather, it is "suggesting" or "recommending" them. Resellers are free to price as they wish, but if they price below a brand's minimum, they can be punished by the loss of discounts, allowances, rebates, and even access to the brand. The minimum price may be just a suggestion, but the cost of ignoring it can be high. This may sound like legal hairsplitting, but it helps keep all involved out of trouble, as even a whiff of collusion on price can spark an investigation.

Of course, brands really have leverage only with their authorized resellers—those with whom they have a contract

> A recent study found that unauthorized resellers violated MAP policies about half the time; even authorized resellers had a 20% violation rate.

that spells out the terms of the relationship or to whom they otherwise sell directly. Unauthorized resellers that buy branded products from third-party sources and dump them on the market tend to be unconcerned about pricing policies, because losing financial incentives or product access is an empty threat. After all, they don't receive such incentives anyway and shouldn't be selling the brand in the first place. Being cut off is likewise not a concern, since they already have back-channel access to the brand. (Not surprisingly, a key part of effective pricing-enforcement strategy involves choking off supplies to gray-market resellers and applying other legal remedies, such as pursuing them for trademark infringement or deceptive advertising.)

Best Practices

Unilateral pricing policies can be effective weapons if they're done right—but often they aren't, with the results you'd expect. A recent study one of us (Ayelet) did of eight manufacturers that use MAP policies found that unauthorized resellers violated policies about half the time; even authorized resellers had a 20% violation rate.

Here we lay out the four key steps—planning, drafting, implementing, and monitoring and enforcing—essential to a successful pricing-policy program. The process may seem daunting, but the first three phases, if done well, are undertaken only once and have a relatively long shelf life. As a result, companies should not require long-term specialized legal and business help in those areas. In contrast, monitoring and enforcement are ongoing endeavors, and brands often use outside services that alert them of violations and otherwise assist with enforcement.

Let's look now at best practices in each phase, with the understanding that brands should tailor MRP and MAP policies to their particular circumstances.

Planning. Generally, the more desirable a brand is, the more inclined resellers will be to discount it to attract customers (what retailer wouldn't want to promote that it has Coach handbags or Goodyear tires for less?). Thus the more valuable a brand is perceived to be, the more important it is to have a strong policy. Of course, if resellers don't value the brand enough to fear the ultimate sanction—having their supply cut off—then having a policy will make little difference. When Birkenstock, a relatively small brand, challenged Amazon about its lax approach to unauthorized resellers and then stopped direct sales to Amazon and forbade its authorized resellers from selling there, Amazon seemed to just shrug. Numerous unauthorized resellers of Birkenstock products still appear on the platform.

After determining that a policy makes sense, brands must ensure that key internal stakeholders embrace the long-term goals of preserving brand equity and maintaining a diverse group of resellers, even at a cost. Those objectives may clash head-on with short-term revenue and profit goals, as well as volume-based sales-force compensation structures, particularly when enforcing the policy means cutting off violators that are important to the brand. From senior management down, everyone with skin in the game, including marketing, sales, and finance, must be committed.

Finally, brands must make sure that those responsible for communicating the policy to resellers and enforcing it have the tools, budget, and resolve to do so. If, as is all too common, resellers are unaware of a brand's policy or think it won't be enforced, it might as well not exist.

Drafting. Because creating a solid policy generally benefits from specialized legal or business expertise, most brands get some outside help at this stage. Our review of hundreds of MRP and MAP policies has revealed more variation than consistency. Some are as short as a single page, but the better ones are more comprehensive, providing clear guidance to resellers about what the brand permits (such as free shipping) and forbids (such as product bundling). Policies may be flexible or rigid, specific or vague, friendly and colloquial or more threatening and legalistic.

At a minimum, a policy should be written, not oral. Don't laugh. Some companies treat their policies like folklore shared around a campfire and communicate them as such to resellers. This raises legal and business risks, including the suggestion that the brand isn't serious about violations. A policy also must be clear about to whom it applies (wholesalers, ultimate resellers such as retailers or dealers, or all of these), where it applies, the specific products it covers, what activities constitute violations, what conduct is acceptable, and the consequences of stepping over the line.

The Legal View

To combat unauthorized online discounting, companies in the U.S. and Canada may craft MRP and MAP policies or agreements, but they should know that these countermeasures receive varied treatment under the law. They are either lawful, unlawful, or subject to the "rule of reason," which starts with a presumption that the practice is lawful and requires the challenger to prove that the conduct in question is unreasonably anticompetitive.

PROGRAM TYPE	METHOD USED	LEGAL TREATMENT: United States (Federal level and 45 states)	LEGAL TREATMENT: United States (5 states (CA, NY, MD, IL, and MI))	LEGAL TREATMENT: Canada
Minimum resale price (MRP)	Unilateral policy	Lawful (not subject to antitrust statutes that prohibit price-fixing)	Lawful	Rule of reason
	Agreement	Rule of reason	Illegal/ unenforceable	Rule of reason
Minimum advertised price (MAP)	Unilateral policy	Lawful	Lawful	Rule of reason
	Agreement	Rule of reason	Rule of reason	Rule of reason

Note: Utah prohibits all MRP and MAP agreements and policies for contact lenses.

Regardless of the type of policy, failing to follow its pricing constraints is always a violation, but many other behaviors related to price or advertising, such as couponing, free shipping, or bundling, may be permissible and thus should be addressed. Policies may also address nonprice issues such as how the brand is marketed (for example, use of approved images and trademarks in advertising), which reseller sites the brand may appear on, and whether exporting is permitted. It's important to be explicit in these matters—especially with regard to the penalties for violations.

Simple enough, it would seem. But many policies fall short on even these basics. Ayelet's study of nearly 500 MAP policies, for example, found that just 41% of them were clear about the consequences of violations. Lack of clarity, particularly when it relates to enforcement, can make companies seem timid or indecisive, inviting resellers to see what they can get away with.

The goal is to get compliance without having to actually enforce the policy. The brand should be explicit about what it *will* do if a reseller breaks the rules, not what it "may" do or "reserves the right" to do. Consequences should be automatic and sufficiently painful that resellers won't be tempted to play games. A common policy mistake is to suggest that violations will be met with only a wrist slap, by alluding to unidentified "sanctions" or "rebukes."

Garmin uses appropriately strong language in its MRP policy. After declaring that it will cancel all orders from first-time violators for a period of six months, it states that "a second occurrence *will result* [emphasis added] in the indefinite discontinuation of any further sales…to the dealer or distributor."

The most effective policies make it clear that violators risk being cut loose. While some policies threaten to cut off rule breakers for a first violation, the more common approach involves escalating penalties with each infraction. For example, a reseller might get a takedown notice for the first violation, a 60-day loss of access to some or all of a brand's products for the second, and so on. Many companies use a three- or four-strikes-and-you're-out penalty structure, with the ultimate violation resulting in a complete cutoff. Ayelet's research shows that compared with policies whose consequences for violations are vague, those with specific, escalating threats substantially reduce rule breaking. However, permitting too many "strikes" (typically, more than four) can backfire by implying that the brand isn't serious about enforcement.

Regardless of the number of violations allowed, brands should send an unambiguous message that it is watching by pouncing on the first infraction and any that follow. Some brands periodically forgive violations across the board, wiping the slate clean for all rule breakers and even stating in their policies that they'll do so at specified intervals. (For example, the MAP policy of one plumbing-fixture manufacturer states that violations are forgiven every 18 months.) While granting a surprise amnesty may be reasonable on occasion, the better approach is to stay silent on this topic, as publicizing a schedule for forgiveness invites violations, particularly just before they will be absolved.

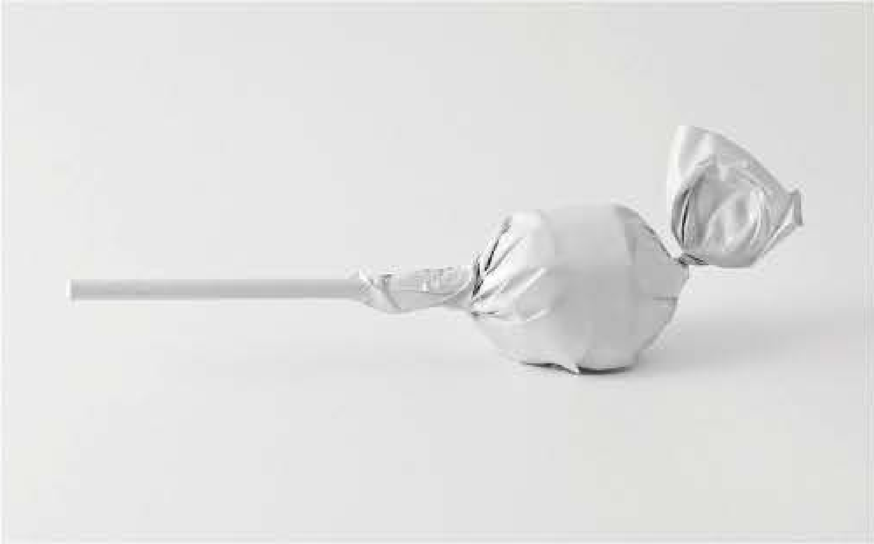
Finally, while a policy must be clear, it shouldn't be so rigid that it ties the brand's hands or so onerous that the brand is reluctant to enforce it. The better policies incorporate some flexibility, such as providing for the temporary relaxation of provisions on an account-specific or across-the-board basis to allow for seasonal or other promotions as well as coupons or rebates provided by the supplier.

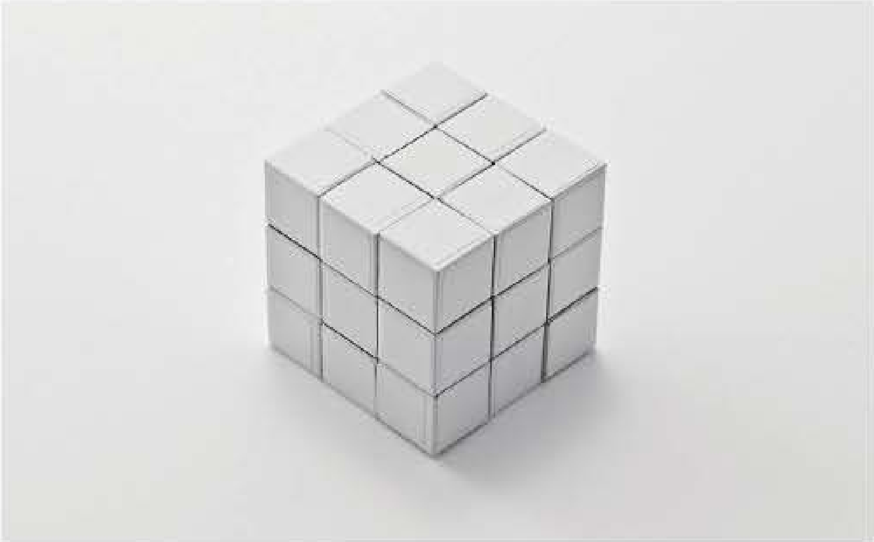
Implementing. As noted, companies should use unilateral policies. It's easy to inadvertently create an agreement that appears to fix prices. Sloppiness on this point can get a brand into trouble. For example, if a brand states without qualification in its contract with authorized resellers that the latter must follow "all" the brand's policies, that blanket statement would by definition include the brand's pricing policy and so constitutes an agreement on price. To avoid allegations of price-fixing, brands should explicitly exclude pricing policies from those its resellers must abide by.

Likewise, asking for or accepting pledges of compliance from a reseller or seeming to negotiate on price in any way is a no-no. For example, in 2015, Costco accused Johnson & Johnson of turning a unilateral MRP policy for disposable contact lenses into an agreement by allowing resellers to negotiate various changes to it, triggering protracted litigation involving much of the contact lens industry. In the same year, Utah outlawed all MRP and MAP policies and agreements for contact lenses.

A good way to reduce the risk of stumbling into an inadvertent agreement is to appoint a single, well-informed policy administrator to whom all reseller queries and comments are directed. This person, typically a channel or sales support employee, either is granted a great deal of autonomy or acts as a trusted spokesperson for communications between an internal policy committee and resellers. This model helps ensure consistent communication, interpretation, and enforcement, while heading off risky one-on-one discussions about prices between, say, a sales rep and a favored buyer in which the rep may find it hard to resist offering the buyer a deal—in the process, coming to a potentially troublesome agreement on price. Keeping sales personnel and resellers apart on resale pricing is particularly important, as sales force incentives (the greater the sales, the bigger the paycheck) and policy requirements (cutting off violators) can conflict. Salespeople are there to sell, not to be the policy police.

Monitoring and enforcing. Enforcing rules is important in getting compliance. This is as true with MRP and MAP policies as it is with speed limits. Research by Ayelet shows that sending a notice to resellers when they're discovered





violating a policy results in improved compliance, and as might be expected, compliance falls when violation notices are discontinued. One brand implemented a new policy using notification emails that led to the termination of two violating resellers. The brand saw a 40% to 80% reduction in violation rates by authorized resellers within a few months.

Clearly, getting resellers to abide by a pricing policy requires credible threats backed by a demonstrated willingness to act. That, of course, necessitates catching rule breakers in the first place. That's not easy. A brand with hundreds or thousands of authorized resellers may find that many are advertising not only on their own websites but also on one or more third-party sites such as Amazon. In addition, the brand's products may be on thousands of brick-and-mortar shelves, with price promotions appearing on television, in circulars, in stores, and elsewhere.

It's impossible for brands to constantly track all this activity, so many rely on outside companies with specialized expertise—such as TrackStreet and PriceSpider/ORIS Intelligence (for online offers) and Numerator and the Advertising Checking Bureau (for online and brick-and-mortar offers). Between us we've worked with all of these and more. Brands also use mystery shoppers to spot-check actual selling prices. Some supplement their efforts with what one company calls the "snitch network"—resellers who rat out violators. (That's lawful, as long as there is no agreement with the complaining reseller on price.) At least one automotive aftermarket brand we know with a respected MRP policy regularly conducts random reseller audits and enjoys a high compliance rate in part because of it.

If a reseller is caught, brands should swiftly send clearly worded violation notices that carefully reference the violation (including proof of it, such as a screenshot, where possible). The brand should outline what it expects of the reseller in response (such as removing the offending offer within 24 hours) and state the penalty to be imposed if it fails to comply.

Above all, brands must enforce their policies uniformly. Failure to do so will undermine their credibility and jeopardize efforts to prevent resale price erosion. Moreover, differences in treatment can create a "rebuttable presumption" (something assumed to be true unless shown otherwise) that a brand cut agreements with those given a break. This means that for any given offense a brand must be prepared to levy the same punishment on its biggest or best customer as it would on others. Again, this requires that senior management and all internal stakeholders be on board with the policy. Birkenstock made sure to do this before pulling its products from Amazon as a penalty for its allowing unauthorized resellers to peddle discounted Birkenstock merchandise there.

Of course, a brand can still announce an across-the-board policy reset at any time, if it wishes. Alternatively, after cutoff, the brand may resume selling to those that it believes have learned their lesson, while continuing to deny other resellers access to its products. Such selective reinstatement is permissible because a brand generally can choose its customers and has no obligation to sell to everyone that wants its products.

Getting the Balance Right

Ultimately, pricing policies are about maintaining and improving brand equity, and decisions about them must be consistent with company values. Determining the "right" minimum prices is an art form that takes into account brand positioning and goals, resellers' margin needs, and the competitive environment. Prices set too high will discourage sales, while those that are too low leave money on the table and can harm a brand's valued resellers by allowing unhealthy discounts.

There's no question that online commerce will continue to grow. It also seems likely that a small number of powerful digital resellers will increasingly dominate the relationship between brands and their ultimate users, potentially disrupting the historic and mutually beneficial affiliations between brands and their favored authorized resellers. Well-crafted, well-enforced pricing policies can be instrumental in helping to regain and maintain this balance.

HBR Reprint R2002E

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OPERATIONS

A MORE SUSTAINABLE SUPPLY CHAIN

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COMPANIES TEND TO FOCUS ON THEIR TOP-TIER SUPPLIERS, BUT **THE REAL RISKS COME LOWER DOWN.**

PHOTOGRAPHER **EDWARD BURTYNSKY**

OPERATIONS

ABOUT THE ART

Edward Burtynsky's photographs explore the manufacturing landscapes of China and their central role in the global supply chain.

IN RECENT YEARS

a rising number of multinational corporations have pledged to work only with suppliers that adhere to social and environmental standards. Typically, these MNCs expect their first-tier suppliers to comply with those standards, and they ask that those suppliers in turn ask for compliance from *their* suppliers—who ideally ask the same from *their* suppliers. And so on. The aim is to create a cascade of sustainable practices that flows smoothly throughout the supply chain, or, as we prefer to call it, the supply network.

It's an admirable idea, but it's been hard to realize in practice. Many of the MNCs that have committed to it have faced scandals brought about by suppliers that, despite being aware of sustainability standards, have nevertheless gone on to violate them. Consider the embarrassing scrutiny that Apple, Dell, and HP endured not long ago for sourcing electronics from overseas companies that required employees to work in hazardous conditions, and the fallout that Nike and Adidas suffered for using suppliers that were dumping toxins into rivers in China.

What's more, all those scandals involved first-tier suppliers. The practices of lower-tier suppliers are almost always worse, increasing companies' exposure to serious financial, social, and environmental risks. In this article we describe various ways that MNCs can defuse the ticking time bomb those risks represent.

WHERE THE PROBLEMS ARE

To understand the situation and develop ideas for tackling it, we conducted a study of three supply networks. Each was headed by an MNC considered to be a "sustainability

IDEA IN BRIEF

THE PROBLEM
Many multinational corporations have committed themselves to using suppliers with sustainable social and environmental practices, but suppliers—especially those low in the supply chain—often don't comply with standards. This poses serious financial, social, and environmental risks.

THE RESEARCH
The authors studied the supply networks of three MNCs considered to be sustainability leaders. They discovered a set of best practices—but also saw how difficult it can be to enforce standards.

THE SOLUTION
Awareness is key. Companies should consider adopting the best practices featured in this article, such as establishing long-term sustainability goals and including lower-tier suppliers in an overall sustainability strategy.

leader"—one in the automotive industry, one in electronics, and one in pharmaceuticals and consumer products. (For the specific selection criteria, see the "About the Research" sidebar.) We also studied a representative set of each MNC's suppliers—a total of nine top-tier and 22 lower-tier suppliers, based variously in Mexico, China, Taiwan, and the United States. What we discovered was that many were violating the standards that the MNCs expected them to adhere to. The hoped-for cascade effect was seldom occurring.

We found problems in every country we studied. In Mexico we visited five lower-tier suppliers; all lacked environmental management systems, and four lacked procedures for handling red-flag social problems such as sexual harassment, retaliation by supervisors, and hazardous labor conditions. At three of the companies, temporary workers made up nearly 50% of the workforce, and turnover rates sometimes reached 100%, making it difficult to implement viable environmental, health, and safety programs. In China and Taiwan we visited 10 lower-tier suppliers, all of which had marginal environmental practices, dangerous working conditions, and chronic overtime issues. In the United States we studied seven lower-tier suppliers and found that three had high concentrations of airborne chemicals and a lack of systematic accident reporting.

The pattern is worrisome. Remember, all those suppliers were connected to model firms that were working proactively to encourage sustainability. If exemplary MNCs are having trouble ensuring good practices among their lower-tier suppliers, then "regular" firms, in all likelihood, are faring even worse at this.

The problem, ironically, often starts with the MNCs themselves. They frequently place orders that exceed suppliers' capacity or impose unrealistic deadlines, leading supplier factories to demand heavy overtime from their workers. When we asked a representative at one supplier why his company had violated a 60-hour workweek limit, he gave us a frank explanation: "We didn't want to tell our customer that we can't produce its products on time, because otherwise it's going to try to find someone else that can. But our customer didn't give us enough notice to hire enough skilled people to do the job."

First-tier suppliers, for their part, rarely concern themselves with their own suppliers' sustainability practices. That's often because they're struggling with sustainability issues themselves. The noncompliant company we cited above, for example, doesn't try to enforce a strict 60-hour workweek limit with any of its suppliers. "We don't comply with this requirement ourselves," the representative told us, "so how could we ask our own suppliers to do so?"

For MNCs, there are special challenges in governing lower-tier suppliers. There's often no direct contractual relationship, and a particular MNC's business often doesn't mean that much to the lower-tier supplier. If American and Japanese automakers rely heavily on a certain seat maker, for example, they can demand that it adhere to their sustainability standards. But that seat maker may have a hard time getting *its* suppliers to follow suit. Suppose it does business with a foam manufacturer that has many other big customers in the electronics, appliance, and health care industries—each of which has different sustainability standards. The foam manufacturer has little incentive to conform to the automakers' sustainability requirements, because the automakers account for only a small fraction of its total business.

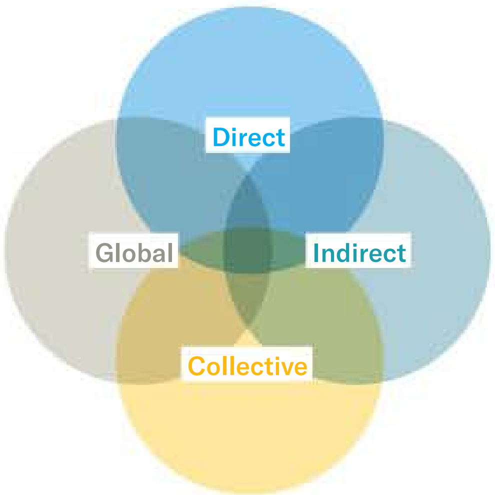
Furthermore, most lower-tier suppliers are not well known, so they receive relatively little attention and pressure from the media, NGOs, and other stakeholders. Even when they do attract attention (for sexual harassment problems, for example, or chronic overtime demands), we found that they do not feel the need to address the issues involved. They tend to act only when MNCs intervene.

Lower-tier suppliers are also the least equipped to handle sustainability requirements. They often do not have sustainability expertise or resources, and they may be unaware of accepted social and environmental practices and regulations. They are also frequently located in countries where such regulations are nonexistent, lax, or not enforced at all. And typically they don't know much about the sustainability requirements imposed by MNCs—but even if they do, they have no incentive to comply. This may explain why most of the lower-tier suppliers in our study lacked programs to dispose of toxic waste and in fact had no environmental management program whatsoever.

MNCs, too, are handicapped by ignorance. They frequently don't even know who their lower-tier suppliers are, let alone where they're located or what capabilities they have (or don't have). Many of the 22 lower-tier suppliers in our study are small or medium-size private firms that provide little information to the public—characteristics that, in effect, make them almost invisible. Several directors of the three MNCs we studied viewed this as a big problem. "The demon in this place," one of them said, "is the [lower-tier] suppliers that I know the least about." Another said, "I don't have control over the ones that pose the highest risks, so I'm losing sleep over them."

Managing Lower-Tier Supplier Sustainability

Ideally, multinational corporations will use a combination of approaches—direct, indirect, collective, and global—to encourage sustainable practices throughout their supply networks. Some specific strategies within each type of approach are listed below.



Direct

- Evaluate first-tier suppliers by using sustainability performance indicators that capture their requirements for lower-tier suppliers.
- Survey suppliers on their environmental, health, safety, and labor practices and on their procurement practices.
- Work with major first-tier suppliers to map the firm's supply network.

Indirect

- Provide training and foster peer learning among first-tier suppliers to help them improve their procurement practices with lower-tier suppliers.
- Select high-performing suppliers to pilot new sustainability initiatives.
- Reward suppliers for cascading sustainability requirements to lower-tier suppliers.

Collective

- Commit to developing and complying with industrywide sustainability standards, and help suppliers become full members of industry organizations.
- Via industry organizations, share resources with competitors and major suppliers to achieve sustainability goals.
- Encourage first- and lower-tier suppliers to take advantage of sustainability training programs offered by industry organizations.

Global

- Work closely with relevant NGOs and international institutions interested in improving supply chain sustainability.
- Use tools and data that those organizations provide for dealing with suppliers (contracts and scorecards).
- Recognize suppliers that excel in programs sponsored by NGOs and international institutions.

All these concerns mean that lower-tier suppliers are unquestionably the riskiest members of a supply network. If they have poor or dubious sustainability performance, then an MNC that does business with them can endanger its reputation and suffer profound repercussions—losing customers, being forced to find new suppliers, or having its supply chain disrupted. To reduce such risks, MNCs need to include both first-tier and lower-tier suppliers in their sustainability programs.

BEST PRACTICES

The three MNCs in our study have taken a number of steps to promote suppliers' social and environmental responsibility:

- They have established long-term sustainability goals.
- They require first-tier suppliers to set their own long-term sustainability goals.
- They include lower-tier suppliers in the overall sustainability strategy.
- They task a point person on staff with extending the firm's sustainability program to first- and lower-tier suppliers.

These are all beneficial measures that other companies should consider adopting. Firms can also borrow some of the specific strategies that our MNCs use to spread good practices throughout their supply networks. (See the exhibit "Managing Lower-Tier Supplier Sustainability.") These fall into four broad categories:

Direct approach. The MNCs we studied set and monitor social and environmental targets for their first-tier suppliers regarding second-tier suppliers. The automotive corporation, for instance, has a strong commitment to supplier diversity. It requires its first-tier suppliers to allocate 7% of their procurement spending to minority suppliers. Some first-tier suppliers were already meeting that target; others have made substantial changes to do so (for example, by changing performance criteria for their purchasing managers). The first-tier suppliers we interviewed noted that the MNC periodically checks to see if the target is being met and creates opportunities to help them network with minority lower-tier suppliers.

Another MNC annually surveys its first-tier suppliers to gather information not only about their health, safety, labor, and environmental practices but also about the sustainability

performance of their lower-tier suppliers. The surveys seem to be having the desired effect: They've prompted first-tier suppliers to engage in internal discussions about whether they should and could alter their procurement practices (to adopt industrywide sustainability standards, for example). And on two occasions, firms have made changes to comply with MNC requirements (such as using key performance indicators to monitor supplier sustainability).

Additionally, the three MNCs work with their major suppliers to map the connections and interdependencies in their supply networks, including those at the lower-tier level. This allows them to identify potentially risky lower-tier suppliers and to work with the major suppliers to deploy customized risk-mitigation programs where needed.

Indirect approach. The MNCs we studied delegate elements of lower-tier-supplier sustainability management to their first-tier suppliers. This approach is effective because the MNCs are hands-on: They offer training to suppliers and provide some incentives for implementing sustainability practices. Most of the first-tier suppliers we interviewed told us that such training had led them to make substantial changes in their manufacturing processes and to begin asking *their* suppliers to adopt similar sustainability standards.

The three MNCs have also created preferred-supplier programs aimed at fostering peer learning about sustainability. One corporation, for instance, invites its most socially and environmentally responsible suppliers to join an exclusive group that enables them to strengthen relationships with the MNC and exchange best sustainability practices with one another. Several of these suppliers have started to set their own sustainability requirements for the suppliers they use.

To further encourage first-tier suppliers to cascade the MNCs' sustainability requirements into their own supply networks, MNCs can use supplier sustainability awards, long-term contracts, and preferred status.

Collective approach. Our MNCs collaborate with their competitors and major suppliers to develop and disseminate industrywide sustainability standards. They recognize that a single MNC cannot be expected to fight alone against the problematic labor or environmental practices of global suppliers. Doing so would be not only prohibitively expensive but also unfair, because in most sectors, the major corporations use many of the same suppliers.

All the procurement employees we interviewed said they needed more training to properly pursue supplier sustainability on behalf of their firms.

The MNCs we studied are all founding members of industry associations focused on developing sustainability standards, providing assessment tools, and offering training to first- and lower-tier suppliers. One notable association is the Responsible Business Alliance (RBA), whose members include Intel, HP, IBM, Dell, Philips, and Apple.

Collaborative initiatives have many benefits. They can increase efficiencies for suppliers, who can use a standardized self-assessment or audit to satisfy many customers and thus avoid duplication. These initiatives can also draw in more suppliers, because suppliers that have many customers with the same sustainability requirements tend to be more willing to participate. And collaboration can make sustainability initiatives more feasible, because industrywide training is subsidized by members.

Additionally, when MNCs help their first-tier suppliers become full members of an industry association, those suppliers must then comply with industry standards, which means they have to assess their own suppliers' sustainability. The RBA, for example, requires its full members to conduct approved audits annually for at least 25% of their own high-risk facilities *and* 25% of their high-risk suppliers' facilities. (Risk here is assessed along labor, health and safety, environmental, and ethical dimensions.)

Industry associations have a unique power over both first- and lower-tier suppliers, as most of their members are major players in their sectors. Consider the electronics maker Flex, a full member of the RBA and a first-tier supplier for many MNCs. A second-tier electronics supplier is unlikely to refuse a request from Flex for a compliance audit, because it knows that Flex itself has passed this audit and that most other top-tier electronics suppliers, to stay competitive, will probably start issuing similar audit requests.

Global approach. The MNCs we studied make a point of collaborating with international organizations and NGOs that share their goals. For instance, all three corporations have joined the United Nations Global Compact, an international effort to promote corporate social responsibility. The three MNCs also participate in the Carbon Disclosure Project's (CDP's) Supply Chain Program, a global data-collection platform in which suppliers disclose information about their carbon emissions. Firms such as Microsoft, Johnson & Johnson, and Walmart use this platform to engage their suppliers in being transparent about their environmental impact. Several participating suppliers told us that as a result, they are now collecting previously unsolicited information and making investments to try to reduce their carbon footprints.

The progress is encouraging: According to the CDP's 2019 supply chain report, 35% of the program members engaged with their suppliers on climate change in 2018, up from 23% the year before. Additionally, the report noted, "as suppliers become more mature in their understanding of sustainability issues and advance their approaches for taking action, there is evidence that they too are improving in their efforts to cascade positive change downwards through their own supply chains." This is occurring not only because MNCs have asked their suppliers to disclose their carbon emissions but also because that information influences how the MNCs contract with suppliers. One of the corporations we studied has created an award to recognize the suppliers that have improved the most in terms of CDP Supply Chain Program performance. Another MNC includes the program's ratings in its supplier scorecard and monitors those ratings annually.

ROOM FOR IMPROVEMENT

The MNCs in our study have successfully addressed some of the problematic sustainability practices of their suppliers. But as we've already noted, there's plenty of room for improvement in what they're doing. In our research, we identified a few critical shortcomings in their operations when it comes to developing sustainability beyond first-tier suppliers.

First, the MNCs' engineering and procurement units often preapprove lower-tier suppliers, but their vetting criteria don't include social and environmental considerations. In other words, engineering and procurement address only the first of the proverbial three Ps of sustainability (profit), focusing on such issues as cost, quality, delivery, and technology, while overlooking the second and third Ps (people and the planet). Not surprisingly, that can lead to situations in which preapproved lower-tier suppliers violate the sustainability requirements of the MNCs they work with. The first-tier suppliers are then in a tough spot. Like it or not, they have to work with preapproved suppliers—but they are held accountable if those companies mistreat workers or harm the environment. As one exasperated manager said while describing this conundrum, "I am just using the supplier you asked me to use!"

Such predicaments are not uncommon. Different functional units of an MNC (engineering, procurement, sustainability) may pursue different agendas in interacting with first- and lower-tier suppliers—with results that do systemic damage to the corporation's overall sustainability effort and undermine its credibility. To avoid this, MNCs should set convergent sustainability goals and align the incentives for *all* functions that interact with first- and lower-tier suppliers.

A second problem is lack of sustainability training and incentives for procurement officers. All of the 52 procurement employees we interviewed (at MNCs and at suppliers) said they needed more training to properly pursue supplier sustainability on behalf of their firms. Arguably, they need more incentives as well: Companies must reward them for hitting all three Ps—that is, not just cost, quality, and delivery goals but also social and environmental ones. Our research suggests that isn't yet happening in a meaningful way. For the procurement professionals we interviewed, cost savings were unquestionably the top priority, followed by quality improvement and on-time delivery. Social and environmental concerns were notably absent. We should add that although companies at every level of the supply network need to provide more training and incentives for their procurement officers, supplier firms are likely to do so only if MNCs lead the way.

A third shortcoming we observed is that although our three MNCs devote considerable effort to developing their first-tier suppliers' sustainability capabilities, they have little direct contact with their first-tier suppliers' procurement personnel. As a result, those people are poorly informed about the MNCs' sustainability requirements and cannot communicate them clearly to their own suppliers, much less enforce them. To alleviate that problem, MNCs could invite suppliers' procurement personnel to their sustainability training sessions (along with environmental, health, and safety personnel) and encourage them to participate in industrywide sustainability training. Alternatively, MNCs could engage the top executives at their first-tier suppliers and explain the importance of building a sustainable supply network, with the goal of motivating them to catalyze the dissemination of sustainability requirements to lower-tier suppliers.

MANY MULTINATIONAL CORPORATIONS sincerely want to embed fair labor practices and environmental responsibility throughout their supply networks. A good way to start is by adopting the sustainability strategies used by the three MNCs in our study. But all corporations can and should do more. They should send their suppliers a more consistent message that economic, social, and environmental requirements are *all* important. They should make the same message clear to their procurement officials and create incentives for them to pursue not only economic goals but also environmental and social goals. Those officials should take a hands-on approach to collecting data about suppliers' capacity, monitoring indicators of their sustainability performance, and engaging with them in continuous improvement projects. The MNCs should also work directly with their suppliers' procurement units on the best ways to disseminate sustainability requirements throughout their supply networks. The danger of not acting is clear: A supply chain is only as strong as its weakest link.

About the Research

We focused our study on three "exemplary" multinational corporations that met five selection criteria: (1) They were included in the Dow Jones Sustainability Index. (2) They were members of the Carbon Disclosure Project (CDP) and the United Nations Global Compact. (3) They had been involved in industrywide supply-chain sustainability efforts. (4) They were certified as having a large percentage of plants with effective quality-management systems (ISO 9001), environmental management systems (ISO 14001), and safety-management systems (OHSAS 18001). (5) They were members of the Billion Dollar Roundtable (firms spending at least $1 billion with minority- and women-owned suppliers).

We also interviewed representatives of industry associations (including the Responsible Business Alliance and the Automotive Industry Action Group) and NGOs (including the CDP and the Centre for Reflection and Action on Labour Rights) to gain a more comprehensive view of how each of these stakeholders helps MNCs disseminate their sustainability agendas throughout their supply networks.

For more information about the research, see "The Missing Link? The Strategic Role of Procurement in Building Sustainable Supply Networks," by Verónica H. Villena, *Production and Operations Management* (May 2019), and "On the Riskiness of Lower-Tier Suppliers: Managing Sustainability in Supply Networks," by Verónica H. Villena and Dennis A. Gioia, *Journal of Operations Management* (November 2018).

HBR Reprint R2002F

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LEADERSHIP

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FLORAL ARTIST
AZUMA MAKOTO

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BECOMING A BETTER CORPORATE CITIZEN

How PepsiCo moved toward a healthier future

ABOUT THE ART

The Japanese floral artist Azuma Makoto is known for his botanical sculptures. He has frozen his arrangements in ice, launched a bonsai tree into space, and plunged bouquets into the sea. In his series "Undersurface Flowers," Makoto submerged flowers in water to show the usually hidden roots of the plants in counterpoint to the blooms above.

Capitalism is under pressure. People all over the world believe that CEOs manage companies for the short term because of a single-minded focus on shareholders. The emergence of activist investors, who focus on quickly extracting outsize returns, has created even more angst about how companies are run. To address these issues, academics, think tanks, corporate leaders, and NGOs have started talking about how to reform the capitalist system so that it works for everyone. In August 2019 the Business Roundtable issued a statement signed by 181 CEOs who committed to focusing on *all* stakeholders.

Commendable and courageous, indeed. But the truth is that change is tough for well-established companies. Most are not start-ups that began with a social purpose, as Whole Foods and TOMS Shoes did. Nor were they set up, as Grameen Bank was, to solve social problems. At companies that have performed well, sometimes for decades, it's natural for employees to continue the behaviors that have led to strong results. Success, more than failure, prevents a company's transformation.

PepsiCo is one of the few established global companies that have produced superior financial returns while meeting the needs of all stakeholders. It has always invested for the long term and delivered results in the short term. The layer that I, Indra Nooyi, added was a focus on sustainability—by which I mean satisfying multiple stakeholder interests to ensure the long-term viability of a company. (For ease of storytelling, we will use the pronoun "I" in this article when referring to Indra Nooyi.)

At the very outset, having grown up in an emerging market where I saw multinationals being a force both for good and for not so good, I wanted PepsiCo's contribution to society to be rooted in its core business model. I did not want us to fund charitable programs to make ourselves feel or look good. Our social responsibility had to evolve away from corporate philanthropy and toward a deep sense of purpose that would also drive shareholder value. *We needed to change the way we made money—not just give away some of the money we earned.*

I came to call this new approach Performance with Purpose (PwP). It is based on four pillars: delivering superior financial returns (financial sustainability); transforming the product portfolio by reducing the sugar, salt, and fat in our products while dialing up more-healthful, more-nutritious foods and beverages (human sustainability); limiting our environmental impact by conserving water and reducing our carbon footprint and plastic waste (environmental sustainability); and lifting people by offering new types of support to women and families inside the company and in the communities we serve (talent sustainability).

IDEA IN BRIEF

THE PROBLEM

There's a growing sense that corporations need to be focused more on long-term sustainability and less on short-term profitability. However, it's difficult for well-established companies to make that shift, because it requires that well-entrenched organizational routines change.

ONE SOLUTION

Under Indra Nooyi's leadership, PepsiCo adopted a program called Performance with Purpose. The aim was to put environmental goals and customer and employee well-being on a par with financial goals.

THE TAKEAWAY

It hasn't been easy—but the program has been a success. Lessons learned include the need for strong board support; constant, consistent communication; early symbolic actions; and new capabilities.

In my 12 years as CEO, PwP was my primary focus, and PepsiCo made tremendous progress. Our portfolio of more-healthful options grew from about 38% of revenue in 2006 to roughly 50% in 2017. We reduced water use in our operations by 25% from 2006 to 2018 and provided safe drinking water to 22 million citizens in the communities we served. We almost tripled our investments in R&D to expand our nutritious offerings and minimize our environmental impact. Women held 39% of senior management roles by 2018. After PwP was implemented, net revenue grew by 80%, and PepsiCo stock outperformed both the Consumer Staples Select Sector Index and the S&P 500. (See the exhibit "PepsiCo's Financial Performance.")

Those results mask the difficulty of implementing a purpose-driven strategy. PwP was viewed as transformational—but many questioned why we were doing it at all. And even when the will was there, the dominant logic of the business didn't simply disappear. For instance, a bright young team from PepsiCo's core business that had been put in charge of the "good for you" orange juice brand Tropicana tried to extend it into a sugary carbonated orange drink. The team hadn't yet understood that PepsiCo needed to limit the introduction of treatlike products. Changing decades' worth of marketing habits was tough too. When a newly hired senior executive pointed out that the child obesity crisis in the United States demanded a change in how PepsiCo marketed soft drinks to children, especially in schools, one company veteran went as far as to accuse the newcomer of being a saboteur and a traitor.

In this article we capture some lessons from PepsiCo's transformation journey for CEOs seeking to implement a purpose-driven strategy at their own companies.

ANCHOR YOUR TRANSFORMATION IN A VIEW OF THE FUTURE

In shaping our approach, we decided to start from the outside. I asked a team of senior executives to identify future events that would affect our businesses. They pointed to several megatrends, many of them universal in impact, including changes in the world's demographics, a preoccupation with health and wellness, scarcity of water and other natural resources, constraints created by global climate change, the rise of activism, and a talent market characterized by shortages of key people.

Coming out of that exercise, we recognized that we wouldn't be able to deliver superior financial performance if we didn't transform our portfolio to offer more-healthful products—which many consumers were demanding—in addition to treats. If we didn't reduce water and plastic usage, our costs would go up, and we wouldn't get a license to operate in many societies. If we didn't create a company where people could bring their whole selves to work, we couldn't hope to hire or retain the best and brightest people.

Companies wishing to pursue a purpose-driven strategy ought to embrace the same approach. Leaders should consider setting up a team that reports directly to the CEO and scouts out the megatrends that will affect the organization. Members of the team should be carefully selected so that they're not wedded to the status quo and can think outside-in; otherwise the result will be incremental thinking from people who are worried that the current model will be disrupted. After analyzing interactions between the megatrends and drawing a composite of what the future might look like, the team must answer key questions such as: What innovations to the business model will be necessary? What investments does the company need to make? What talent does it need to develop or hire? This process will help CEOs future-proof their companies by developing "future back" strategies in contrast to the "current forward" model.

ENSURE THAT THE BOARD IS YOUR ALLY

We realized early that PwP would require the support of PepsiCo's board of directors. I created a detailed, multipage document to show the board how the megatrends analysis should shape our strategy and how PwP would future-proof the company. We were lucky that vocal board members such as Alberto Ibargüen, the head of the Knight Foundation; Sharon Percy Rockefeller, a leader and policy maker in the public broadcasting community; Daniel Vasella, the former CEO of Novartis; Victor Dzau, then the head of Duke University Medical Center; and Dina Dublon, the former EVP and CFO of JPMorgan Chase, embraced PwP and even challenged me when they felt that an action was inconsistent with it. For example, the board heavily scrutinized acquisitions in the "treat" space and rejected some of them because they would take us backward. Such was the board's commitment.

As members retired, the board recruited their replacements with PwP in mind. The Ford Foundation's Darren Walker brought an NGO and global society mindset to PwP, while David Page, director of the Whitehead Institute for

Taking bold actions early is critical for showing the organization that the purpose-driven strategy is not just the flavor of the day.

Biomedical Research, enhanced our science-based capabilities. Each board member played a valuable role in PwP's implementation.

The board realigned my compensation structure so that it was based on PwP-related metrics as well as on EPS targets. That step is critical: It's how the board becomes the force that holds the CEO responsible for delivering on a purpose-led strategy. Not only will the CEO not be able to deviate without the directors' involvement, but by setting targets, the board makes itself accountable to all stakeholders, not just shareholders.

The board's support was particularly useful when an activist investor bought an equity stake in PepsiCo in 2012 and demanded that the company be broken up. The investor criticized PwP and wanted the company to focus on sugary beverages and salty snacks, cut costs, and return money to investors. I listened carefully to him and studied every one of his ideas. At the end of the day, though, our board—under the leadership of Ian Cook, the lead director and then-CEO of Colgate-Palmolive—wrote an open letter stating that the company was on the right track. We stayed the course. Three years later the investor sold the PepsiCo stock he had bought at $70 for $105—a 50% gain thanks to PwP.

BE THOUGHTFUL ABOUT THE LANGUAGE YOU USE TO COMMUNICATE YOUR TRANSFORMATION

A global company must communicate its purpose-driven strategy in a way that everyone everywhere can understand. But it shouldn't trivialize the message. Many at PepsiCo initially wanted PwP to be framed as "4 Ps: performance, product, planet, and people." That was simple language, which we knew we needed, but it sounded to the executive team like a marketing campaign rather than a serious commitment to ensuring human, environmental, and talent sustainability along with strong financial performance. We wanted all stakeholders, especially our employees, to understand that *sustainability* was critical for the company's future.

The succinct phrase "Performance with Purpose" provided a broad canvas for growth in an elegant fashion. It signaled that if PepsiCo didn't act purposefully to tackle rising health concerns such as diabetes and obesity and environmental issues such as water scarcity and plastic usage, its businesses would find it tough to grow. The problem would be most pronounced in China, India, and Mexico, where most of PepsiCo's future growth was likely to occur but the social license to do business is difficult to retain.

It's wise to test the framing of a purpose-driven strategy in one or two countries before rolling it across the global organization, because countries will respond to the message in subtly different ways. Mexico was one country we used for a test. At PepsiCo Mexico, after much discussion, then-chairman Pedro Padierna and his executive committee localized PwP with the tagline *"Desempeño con Sendito,"* which roughly translates to "performing to obtain something meaningful in a sustainable manner."

By conducting numerous focus group sessions, we learned that this language best captured what PepsiCo wanted to communicate in Mexico. Not only did the idea go down well there, but PepsiCo Mexico never forgot that Mexico was the first nation outside the United States to hear about the new strategy. PwP remains a priority for the country's top management today.

MODEL THE NECESSARY NEW BEHAVIORS WITH EARLY ACTIONS

Taking bold actions early is critical for showing the organization that the purpose-driven strategy is not just the flavor of the day. Three things will send a clear message: creating high-profile leadership positions and filling many of them with outsiders; overturning decisions that would have made it through in the "old days"; and letting some people go.

One of the first things I did after articulating PwP was to create the role of chief scientific officer and appoint Mehmood Khan, an endocrinologist at Mayo Clinic and then the head of R&D for Takeda Pharmaceutical, to fill it. That sent a powerful signal throughout the organization and our industry that we were committed to building the radically different capabilities the company needed to execute its purpose-driven strategy.

Although we announced PwP in 2006, Khan didn't sign on until a year later. By the time he had figured out the nature and structure of the R&D capabilities he wanted to create, it was 2008. His budgetary ask, a significant increase over the previous year, came just as the U.S. stock market crashed and the Great Recession began. Even so, I worked to give him every penny he needed that year and the next. It reinforced the message throughout the organization that PwP was here to stay.

Another new-to-PepsiCo position was that of chief design officer. Realizing that any successful transformation must be consumer focused—not just CEO driven—we knew that design thinking would be critical to our success, so we brought on Mauro Porcini from 3M. (See "How Indra Nooyi Turned Design Thinking into Strategy," HBR, September 2015.)

Over time I recruited several other executives from outside the company for key senior leadership positions, including Laxman Narasimhan and Vivek Sankaran, partners at McKinsey; Brad Jakeman, from the video games developer Activision Blizzard; and Cathy Tai in China, who came to us from Apple. Jon Banner, who joined us after a storied career at ABC, brilliantly framed our messaging as EVP for communications. Each of them played a major role in the company. The positional power and capabilities of those senior executives challenged the status quo and catalyzed change quickly.

Interestingly, *not* creating or filling what might be seen as a key role also sends a powerful message. For example, I did not appoint a chief sustainability officer. If the company made such an appointment, I felt, PwP would become that person's responsibility more than anyone else's, and I wanted it to belong to everyone. So I used an expanded leadership team, consisting of all the executives in the top two levels, to drive the transformation. PepsiCo's board-level sustainability committee wasn't established until 2017, well after PwP had put down roots in the company.

Another action that communicated volumes was a late-in-the-game decision to call off a major new product launch. One of the teams in PepsiCo's snack business, waking up to a growing demand for energy foods, had decided to launch a caffeine-based snack. The team formulated a product, identified a brand name, and designed the packaging and labels. Just days before the planned launch, the product came to the notice of a senior executive who was not comfortable that the company would introduce a highly caffeinated snack that children might consume. He stopped its development, despite the costs that had already been incurred and

in the face of enormous internal pressure—a decision I personally endorsed.

Critics will always emerge, especially in the upper echelons of an organization. It's important to involve them and engage in a transparent dialogue with them, pointing to the existential threat that the company may face tomorrow. It's equally important to incorporate their legitimate concerns in implementing the strategy. However, if detractors aren't converted within a reasonable period of time, they should not be allowed to continue to serve on the management team.

DEVELOP THE CAPABILITIES THAT ADVANCE THE PURPOSE-DRIVEN STRATEGY

To execute PwP, PepsiCo had to build fresh capabilities in several areas, particularly R&D and product development. Historically, PepsiCo's R&D had consisted of people trained in the physical sciences, either food science or food engineering, but Khan hired for vastly different backgrounds—such as molecular biology, physiology, pharmacology, nutrition, and computer modeling—and from companies outside the food and beverage industry: businesses such as pharmaceuticals, personal care, beauty care, and oil refineries. He also appointed as many women as men to senior positions in R&D and set up research centers around the world, including Shanghai and Mexico City. That changed PepsiCo's R&D capabilities in terms not just of talent but also of cultural background, gender, ethnicity, and location.

The results were quick in coming. PwP led to the reduction of salt, sugar, and fat levels in all our core products without any deterioration in taste—a very difficult undertaking. It also allowed us to create and acquire more-healthful beverages—Bubly sparkling water, LifeWtr purified water, Naked Juice fruit and vegetable smoothies, KeVita fermented probiotic and kombucha beverages, Wimm-Bill-Dann's dairy products (in Russia), and, most recently, CytoSport Muscle Milk—and snacks including Stacy's Pita Chips, Sabra hummus, Off the Eaten Path baked snacks, SunChips whole-grain versions, Bare Snacks baked fruit and vegetable snacks, and Health Warrior plant-based nutrition bars.

PepsiCo launched the first plant-based polymer packaging for its products some years ago. The polymer starts on a farm and becomes plastic packaging that's biocombustible and biodegradable because it's made from renewable materials such as switchgrass, pine bark, and corn husks. Over time PepsiCo hopes to use by-products from its own food business—orange peels, potato peels, oat hulls—to manufacture "green plastic." That would be a scientific breakthrough that few people would associate with a food and beverage company.

PepsiCo has even developed new machines to produce more-healthful products. Some years ago Cheetos were taken out of America's schools because they didn't meet the USDA's nutrition criteria. They had no positive nutrients, such as whole fibers, and there was no way at the time to introduce whole fibers into an extruded snack without clogging the extruders and shutting them down. No company wanted to work on the problem, so PepsiCo's R&D center assembled a group to computer model the physics and chemistry of the extrusion of starches and cellulose fibers at high temperatures and high pressure. Two years later the engineers cracked the problem, designing an extruder that wouldn't jam when whole grains were introduced. By 2016 we had relaunched Cheetos with whole grains, and the product made its way back into schools. That was good not only for business but also for organizational morale.

One handy tool that PepsiCo developed is called ReCon (for "resource conservation"), a multistep process for precisely measuring water usage and wastewater discharge in factories. It allows scientists to figure out how and where they can reuse or recycle wastewater. The company has developed similar tools for greenhouse gases, solid waste, and electricity. Reducing consumption and waste has helped improve the company's bottom line. In fact, senior executives informally call ReCon PepsiCo's 23rd billion-dollar brand for good reason.

LOCALIZE THE EXECUTION OF THE STRATEGY

Although a purpose-driven strategy must be common to all countries in which the company operates, each market should have the freedom to tailor the approach to its needs: freedom within a frame. Food and taste preferences are culture-specific, and environmental problems are local. For instance, water is less of an issue in Russia than in Mexico, a water-starved country. Because conserving water reduced costs and ensured a regular supply, PepsiCo Mexico could justify investments in the latest generation of water-treatment plants. By recycling 65% of the water they used, the three plants in Mexico City reduced their reliance on expensive municipal water.

That set the tone—and the pace—for PwP in Mexico. The next front was fried snacks. PepsiCo Mexico acquired a well-known local cookie company, Gamesa, which became the global center for PepsiCo's baked products, and the company recruited a large number of R&D people to push the envelope in baking technologies and products. Another goal was to tackle salt levels in its snacks. To lower them, PepsiCo Mexico retooled the supply chain for flavors: Rather than sourcing complete flavor packs that contained salt, it started buying only the core flavors and mixing them with pulverized salt, reducing the amount of salt used.

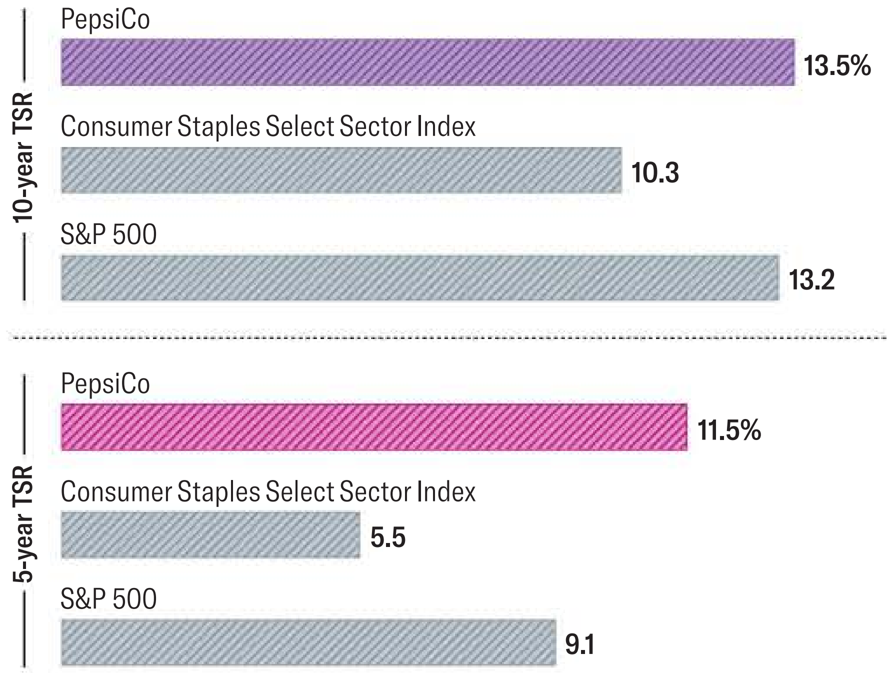
Buoyed by these process successes, PepsiCo Mexico went on to modify its products by replacing ingredients, using more-natural ones, and adding nutritious elements. It developed extruded products from corn cereal; reformulated the popular Mafer line by roasting peanuts instead of frying them; and launched a new line under the Quaker brand—from cereal that included chia and other ancient grains to pancake mixes made with Quaker Oats. A typical breakfast in Mexico is a *licuado,* the equivalent of a smoothie.

The company marketed the idea of transforming a regular breakfast into a super breakfast by adding Quaker Oats and provided branded containers to the small shops that sell *licuados* in every Mexican city. What was good for consumers' health became a successful line of business.

PepsiCo Mexico effectively leveraged partnerships, too. Its snack foods business found it nearly impossible to switch from expensive, imported, and not-so-healthful palm oil to sunflower oil because the latter wasn't reliably available or competitively priced. The company worked with the Mexican government and the Inter-American Development Bank to provide incentives and training for farmers to once again grow sunflowers in provinces that had stopped doing so. As a result, more than 50,000 hectares of land are under sunflower cultivation today, saving the country—and consumers' hearts—from palm oil imports and providing PepsiCo Mexico with an inexpensive, dependable, and local source of raw materials.

PepsiCo's Financial Performance

The company's annualized total shareholder return (TSR) over time compares favorably with the performance of the Consumer Staples Select Sector Index and the S&P 500. During Indra Nooyi's tenure as CEO, the company also improved the healthfulness of its offerings and its environmental performance.



Note: TSR is an annualized measure that includes the effects of capital gains and dividends. The 10-year and 5-year TSRs are calculated beginning April 23, 2009 (2.5 years after Nooyi took office), and ending on April 22, 2019, and beginning April 23, 2014, and ending on April 22, 2019, respectively, taking into consideration that a new CEO needs time to begin producing measurable results. Source: FactSet as of April 22, 2019.

FIND SUPPORT OUTSIDE THE COMPANY

CEOs cannot execute a purpose-driven strategy without building coalitions of support and finding ways to respond to external critics. Whenever powerful NGOs such as Oxfam and Rainforest Alliance picketed PepsiCo headquarters, attacking the company's agricultural practices or human rights record, I would make it a point to meet with the demonstrators, hear them out, and present a counterpoint. Walking even a yard in their shoes mattered. The NGOs would go away appreciating that they had been given a patient hearing and be more open to PepsiCo's ideas and initiatives in the future.

Companies will need to figure out how to get a second chance. They will have to proactively deal with skeptical NGOs that argue that purpose-driven strategies are nothing more than window dressing. They should learn to engage with those critics, explain that they are trying something new, and candidly admit that they are coming late to the table. Listening closely, reframing NGOs as partners, and showing that the company takes criticism seriously can often diffuse a tense situation.

In addition to personal interaction, data can help dispel NGOs' negative views about business. Using facts and conclusions based on scientific results, Khan, Dan Bena (then the senior director of operations development), and Banner persuaded several skeptical NGOs to work with the company.

CEOs must also figure out how to join forces with other companies—even rivals—in their industry. In 2010 PepsiCo and several other leading companies in the food and beverage industry created the Healthy Weight Commitment Foundation. Its members promised to offer consumers low-calorie options and to remove 1.5 trillion calories from their products by 2015. As it turned out, by 2012 they had surpassed that target by more than 400%.

EMBED PURPOSE IN THE ORGANIZATIONAL DNA

A purpose-driven transformation may start out as the CEO's passion, but it will not survive unless it is embedded in the organizational DNA. That requires several kinds of reinforcement, through communication, resource allocation, goal setting, and recognition and rewards.

Communicating the ideas and ideals of PwP constantly to every stakeholder was critical to making it stick. From

2007 to 2017, PwP was on almost every cover of the company's annual reports. One of my objectives was to highlight its continuing importance, but those covers also subtly signaled that PwP had become the entire organization's agenda, not just mine.

I used many external forums to describe PwP and amplify the message, and every senior executive spoke about it publicly to build support among external stakeholders. Khan, Bena, and other subject-matter experts were designated PepsiCo ambassadors; they traveled the world talking to various constituencies about specific aspects of PwP.

Resource allocation, too, must be tied to purpose. In fact, we insisted on a sustainability sign-off for every capital expenditure. Each proposal had to state what the sustainability impact of the investment would be, what trade-offs were being made, whether it would meet PepsiCo's sustainability targets, how it would meet them, and if not, why not. The sustainability committee reviewed every proposal, and if the project wasn't given the green light, it went right back to the drawing board. We set aside a percentage of the annual corporate budget in a sustainability investment fund, drawing from it to subsidize or defray the costs of innovation. That enabled the business units to experiment and test sustainability-related ideas without having to worry about the internal rate of return that normally applied. What was heartwarming was that our CFO, Hugh Johnston, drove this initiative—unusual for a finance chief.

We set PwP-related goals for everyone, from senior executives and country heads all the way down to midlevel managers. Those targets were used to evaluate performance and help determine annual bonuses. Even the R&D centers and the market-facing functions had PwP goals that were linked to performance evaluations and compensation.

Amid formal target setting and resource-allocation battles, it is easy to forget that purpose is fed by passion—and that the latter must be refueled from time to time. Companies must celebrate wins, showcase purpose-driven initiatives that are working, and energize the organization to believe that transformation is possible. PepsiCo gave global, regional, and national awards every year, even during the worst of times, lauding those who had delivered on their PwP goals—a highly visible action that helped keep people motivated. At the same time, we never forgot our traditional businesses. We celebrated both.

Finally, nothing bakes purpose into an organization more than leadership's embodiment of it. Executing a purpose-driven transformation is a long and arduous process, and senior executives are likely to stay the course only if the purpose matters deeply to them. PepsiCo was fortunate: Several top leaders—including its former president Zein Abdalla and me—grew up in emerging markets that suffer from water shortages. As a child, I watched people waiting in line every day to collect water and store it for later use. So did Zein. We could relate to water shortages in a personal way. That lent authenticity to what PepsiCo wanted to do for the environment.

We also identified some long-tenured PepsiCo employees—Abdalla, Padierna, Sanjeev Chadha (then CEO of Asia, the Middle East, and North Africa), and Al Carey (then CEO of North America), among others—and gave them a central role in implementing PwP. It's tough for old-timers to forget the past, but the few who are willing to change can bring credibility to the process. They can also help newcomers build bridges to the rest of the organization and become much-needed internal ambassadors for PwP.

It doesn't end there, of course. Many senior executives who have left PepsiCo continue to advance purpose-driven initiatives on their own or at other companies. Further proof, if it was necessary, that PwP has been embedded in PepsiCo's DNA came when the board, in selecting Ramon Laguarta as my successor, chose someone who deeply believes in the power of PwP and calls it "winning with purpose." Not only is Laguarta building on the past, but he has committed the company to delivering on fresh initiatives related to food waste and plastic recycling to ensure that PepsiCo is adequately future-proofed.

IT'S NOW 14 years since PwP was birthed. I look back at PepsiCo and am proud of the company it is today and will be in the future. It has succeeded both commercially and ethically. It has learned to balance the short term and the long term, carefully thinking through the level and the duration of returns. A real sense of purpose is integrated into the company's core operations. So to anyone who doubts whether it's possible to build such a company, I say, "We did it at PepsiCo, and you can do it too." It's the only way to make capitalism work for everyone.

HBR Reprint R2002G

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RISK MANAGEMENT

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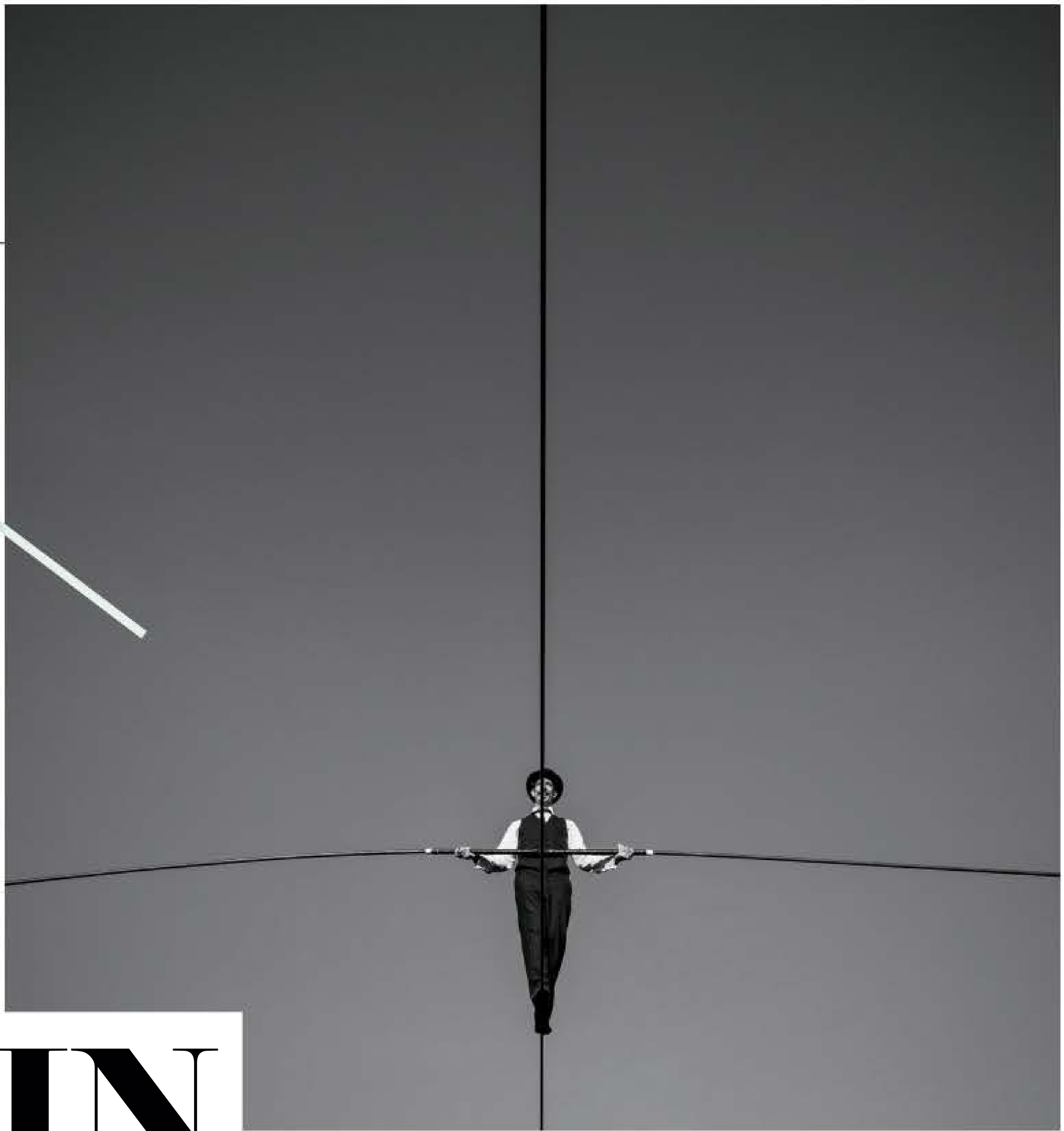
YOUR COMPANY IS TOO RISK-AVERSE

Here's why and what to do about it.

PHOTOGRAPHER **TIM BOOTH**



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IDEA IN BRIEF

THE PROBLEM
In theory, companies create value for stakeholders by making risky investments. In practice, however, managers in large corporations routinely quash risky ideas in favor of marginal improvements, cost-cutting, and "safe" investments.

THE CAUSE
Most managers in large organizations are significantly more risk-averse than CEOs, who consider each investment in the context of a greater portfolio.

A NEW APPROACH
This article explains how loss aversion works, presents an analysis of just how much value managers' attitudes toward investment risk leave on the table, and offers suggestions for changes in practices and systems.

IN THEORY,

companies are supposed to create value for stakeholders by making risky investments. And as long as no single failure will sink the enterprise, those investments may be quite large. It won't matter if even a significant percentage of them fail so long as the success of other bets compensates, which usually happens. It's an approach to investment that's supported by economic theory going back to the 1950s work of Nobel laureate Harry Markowitz on portfolio optimization.

In current practice, however, executives in large corporations are reluctant to propose and advocate for risky projects. They quash new ideas in favor of marginal improvements, cost-cutting, and "safe" investments. Research studies long ago established this pattern. In a classic HBR article, for example, Syracuse University professor Ralph O. Swalm presented the results of a remarkable study of risk attitudes

By separating decisions from execution, you can assign accountabilities to different people and tailor incentives appropriately.

RISK MANAGEMENT

among 100 executives. He concluded that the findings "do not portray the risk-takers we hear so much of in industrial folklore. They portray decision-makers quite unwilling to take what, for the company, would seem to be rather attractive risks." Our research confirms that this pattern persists.

In this article, we examine the phenomenon of risk aversion and avoidance and demonstrate how corporate incentives and decision-making practices exacerbate the problem. We present an analysis of just how much value executives leave on the table as a result and offer suggestions for mitigating the bias toward low-risk investments.

The Psychology of Loss Aversion

Economists and psychologists have long been aware that decision makers tend to place greater weight on the economic losses that could result from their decisions than on the potential equivalent gains. In 1979, Daniel Kahneman (a coauthor of this article) and the late Amos Tversky brought that concept to the forefront of management practice. (Their pioneering work in behavioral economics won Kahneman the 2002 Nobel Prize for economics.) Scores of empirical studies and experiments have further demonstrated the prevalence of loss aversion and identified its key features.

In a 2012 McKinsey global survey, for example, two of us (Koller and Lovallo) presented the following scenario to 1,500 managers: You are considering a $100 million investment that has some chance of returning, in present value, $400 million over three years. It also has some chance of losing the entire investment in the first year. What is the highest chance of loss you would tolerate and still proceed with the investment?

A risk-neutral manager would be willing to accept a 75% chance of loss and a 25% chance of gain; one-quarter of $400 million is $100 million, which is the initial investment, so a 25% chance of gain creates a risk-neutral value of zero. Most of the surveyed managers, however, demonstrated extreme loss aversion. They were willing to accept only an 18% chance of loss, much lower than the risk-neutral answer of 75%. In fact, only 9% of them were willing to accept a 40% or greater chance of loss.

What's more, the size of the investment made little difference to the degree of loss aversion. When the initial investment amount was lowered to $10 million, with a possible gain of $40 million, the managers were just as cautious: On average, they wouldn't make the investment if the chance of losing was higher than 19%. And once again, only 9% were willing to accept a chance of loss greater than 40%. This indifference to the size of the investment seems perverse, because a relatively small investment is unlikely to present an existential threat to the enterprise and should, therefore, give managers scope to assume more risk.

Why are managers in large, hierarchical organizations so risk-averse? Swalm's tentative conclusion was that corporate incentives and control processes actively discourage managers from taking risks—a conclusion he felt was supported when managers he interviewed acknowledged that although their risk aversion was bad for their companies, it was good for their careers. We share his belief. CEOs are evaluated on their long-term performance, but managers at lower levels essentially bet their careers on every decision they make—even if outcomes are negligible to the corporation as a whole.

Consider how most investment decisions are made. A team with an idea for an investment puts together a business case for the project, which is then presented to a capital projects committee made up of the top managers of the unit. The champions of the project explain how it aligns with the company's strategy and provide financial models that assess the shareholder value it will create. The committee makes a decision on the basis of whether it judges the financial models and their underlying assumptions to be plausible.

Now consider the fact that this committee probably evaluates relatively few investment proposals. It is not unlikely, therefore, that if it were to allow a greater probability of failure for its investments, few or none of its decisions in a given time period would end in a successful outcome. The managers making the decisions would be held accountable for those outcomes and their reputations—possibly even their jobs—would be at risk. For all but the largest investments, the consequences of project failure would be far higher for the managers than for the company as a whole.

If this is true, we would expect that senior executives will be more open to investing in small projects than lower-level managers are. And that does appear to be the case. In a recent workshop, Nobel laureate Richard Thaler asked 22 heads of magazines owned by a large publisher if they would accept a hypothetical 50-50 investment that would pay $2 million to the parent company if it was successful or lose $1 million if unsuccessful. Only three said they would accept the investment; the rest declined. In contrast, the CEO "wanted them all" to be accepted; he had a broader view of the possibilities and risks and realized that when the investments were pooled together, the risk profile was much more attractive.

The Value Left on the Table

In economic theory, unless a failed investment would trigger financial distress or bankruptcy, companies should aim to be risk-neutral, because investors can diversify risk across companies. Pure risk neutrality is unrealistic, of course, even for CEOs. Like the rest of us, they don't want to lose their job over one bad, very large investment. But for investments that don't threaten the firm's viability, CEOs tend to be (as Thaler found) relatively risk-neutral, not only because they consider the size of the investments relative to the company's resources but also because they recognize that the overall risk of a diversified portfolio is lower than the average risk of individual projects.

Unfortunately, as we've shown, companies regularly forgo smart investments because of managers' aversion to risk. Suppose that each of your company's 20 product lines has an opportunity to invest $10 million with a 50% chance of receiving $30 million and a 50% chance of losing the full $10 million. In other words, each investment has an expected value of $5 million: (gross gain of $30 million × 50%) + (gross loss of $0 million × 50%) – initial investment of $10 million. Under the typical investment process, each unit head is likely to pass up the opportunity despite the positive expected value because they aren't willing to bear a 50% risk and the pain of losing $10 million.

From the company's perspective, that's a profoundly dysfunctional outcome. If the risk types of all the investments are uncorrelated, the simple math of probability (applying standard probability tables) will quickly tell you that there is only a 6% chance that the company as a whole would lose any money at all. Additionally, there is a 41% chance of earning more than $100 million (after deducting the $200 million investment) and a 75% chance of earning at least $40 million.

This is not just theory. A technology company we advised carried out an aggregation of all its projects and their risks. First, using standard deviation of expected returns, executives estimated the expected value of each project proposal and the risks associated with each. They then built portfolios of projects and identified the project combinations that would deliver the best balance of risk and return. Executives could see that portfolios in general had higher returns than most projects deemed "low risk" and much lower risk than most of the projects with the same higher return as the overall portfolio. Taking a portfolio approach allows you to accept high-risk/high-return projects that you might otherwise turn down and reject low-risk/low-return projects that you might otherwise accept.

So how much money is left on the table owing to risk aversion in managers? Let's assume that the right level of risk for a company is the CEO's risk preference. The difference in value between the choices the CEO would favor and those that managers actually make is a hidden tax on the company; we call it the risk aversion tax, or RAT. Companies can easily estimate their RAT by conducting a survey, like Thaler's, of the risk tolerance of the CEO and of managers at various levels and units.

For one high-performing company we worked with, we assessed all investments made in a given year and calculated that its RAT was 32%. Let that sink in for a moment. This company could have improved its performance by nearly a third simply by eliminating its own, self-imposed RAT. It did not need to develop exciting new opportunities, sell a division, or shake up management; it needed only to make investment decisions in accordance with the CEO's risk tolerance rather than that of junior managers.

Creating an Aggregated Investment System

How do we change the practices and incentives around investment decisions so that managers become less risk-averse? To put it more bluntly, how do we ensure that managers don't make decisions on the basis of personal (or local) consequences should their investments fail?

Make risky decisions in batches. The first step is to establish a process in which projects are evaluated simultaneously with others on the basis of their collective value and risk. Ideally, a company would apply a portfolio optimization model that incorporates risk correlations across potential investment projects, as did the tech company we cited above. This approach would identify the least-risky portfolio for an overall target rate of return and risk given the investment opportunities available.

A simpler approach is to rank all projects across the company on the basis of their expected net present value (NPV) or some version of it, such as PV/I (present value divided by investment). PV/I is a common return measure that will be familiar to most managers, regardless of the business unit they belong to. Here's how the approach might work. Let's assume a company has five business units, each with 10 projects needing investment, for a total of 50 projects. Each unit proposes its 10 projects, presenting a careful risk assessment and a range of possible outcomes.

The corporate staff then ranks the projects across the company from highest to lowest in terms of expected value, ignoring risk. They accept projects, starting with the most value-creating project and continuing down the list, adding up the investment amounts required. Once the maximum amount of spending the company is comfortable with is reached, all projects left on the list are turned down, regardless of the business unit they belong to.

Next, the corporate staff examines the overall risk profile of the accepted projects. If the risk types of the projects are largely uncorrelated, the overall risk of the portfolio will be lower than the risks associated with almost all the individual projects. If the risk of certain projects is correlated, increasing the overall riskiness of the portfolio, corporate staff can swap in less-correlated projects from the remaining options on the list.

This selection process may well result in an uneven allocation of investments. One business unit might have eight projects approved, while another might have only two greenlighted. That information is useful in its own right: If one unit regularly finds itself without projects on the list, that could indicate that it might be better off as part of another company or that its strategy should be narrowed to focus on generating cash rather than pursuing growth through new projects.

Ranking should be done annually at the very least, and preferably more frequently, depending on the length of projects. One company we know makes most of its investment decisions during designated weeks throughout the year so that it is regularly evaluating portfolios. If projects need decisions outside the normal cycle, the corporate staff can show the impact on the overall portfolio of adding them.

It might be argued that ranking or annual optimization imposes a certain amount of rigidity on the organization or prevents managers from reacting quickly to new opportunities or information. That may be true in certain instances, but many companies have found work-arounds. Some set up reserves to fund unexpected initiatives. Others require stage-gating: If circumstances change or projects don't meet predetermined milestones, the funds allocated to them during the annual process are shifted elsewhere.

Large, multibillion-dollar companies with many more than 50 projects across nonhomogenous units can easily modify the approach to handle the added complexity. Suppose a company has 25 business units and most of the projects are relatively small. It might allocate resources to business units rather than projects. Each unit would submit several investment-opportunity tranches, each reflecting a different investment goal. For example, a unit might submit a request for a tranche of $200 million just to "keep the lights on," a second tranche of $150 million to maintain market share and growth, and a third tranche might provide $100 million for new products or services or for enhancements to customer service. Each tranche would have an estimated value and risk profile. They would be ranked across the company, and some units would receive all three tranches, others two or one or none.

Companies could also adopt a hybrid approach that combines allocations to business units and critical strategic projects (particularly new projects that address potentially large threats or opportunities, for which some degree of risk aversion might make sense). Strategic projects, whether or not they belonged to a particular unit, would be included along with the ranking of the business unit tranches. This approach ensures that critical projects get the attention of corporate leadership and that their funding is considered in a corporate context. One way to distinguish between normal and strategic projects is to have the CFO, in concert with the

To improve performance by nearly a third, the company needed only to make investment decisions in accordance with the CEO's risk tolerance rather than that of junior managers.

CEO, determine a project size below which risk neutrality is the goal. Projects larger than the designated size would be considered strategic.

Of course, simply introducing batch processes isn't enough to fully counteract loss aversion. For corporate staff and executives to make good decisions, they need high-quality input from the units on the prospects and risks of the investment opportunities. A common understanding of risk types is especially important, as executives will look to minimize correlation of risks between individual projects in a portfolio.

Bring risk out into the open. In our experience, few project teams perform explicit risk assessments. They usually present a project to management with a set of cash-flow projections. They might include upside and downside cases, but nothing too drastic will be shown, and the returns will be close to the base case. The idea is to sell the project to management, and too much discussion of risk could frighten the horses. At one company we advised, the corporate team had performed a sophisticated Monte Carlo risk assessment on an array of projects, creating an appearance that it was transparent about discussing risk. Yet when we looked closely at the Monte Carlo output, we realized that in every case, the reported probability of negative NPV was zero.

We recommend that companies consider four or even five scenarios to achieve a good understanding of the risks. They should also abandon the practice of presenting a base case and up-or-down options, as the base case can too easily be seen as the default or most likely option, resulting in insufficient consideration given to the other scenarios. An even number of scenarios is helpful, because it lessens the chance that the middle case will be viewed as the default.

The first step in the risk assessment is to estimate the overall probabilities of each outcome. Executives are often reluctant do this, because assigning probabilities can appear imprecise or subjective—but subjective probabilities are better than none. And they will get better at it with experience. It is often useful to have a number of executives assign probabilities, particularly those not advocating for the project. They will have less at stake, may be more objective, and may have a broader set of experiences. When many executives assign probabilities, the range of outcomes tends to be more extreme, which can help trigger useful discussions. And of course, the project champion should not be responsible for deciding which probability is accurate—that is a recipe for disaster.

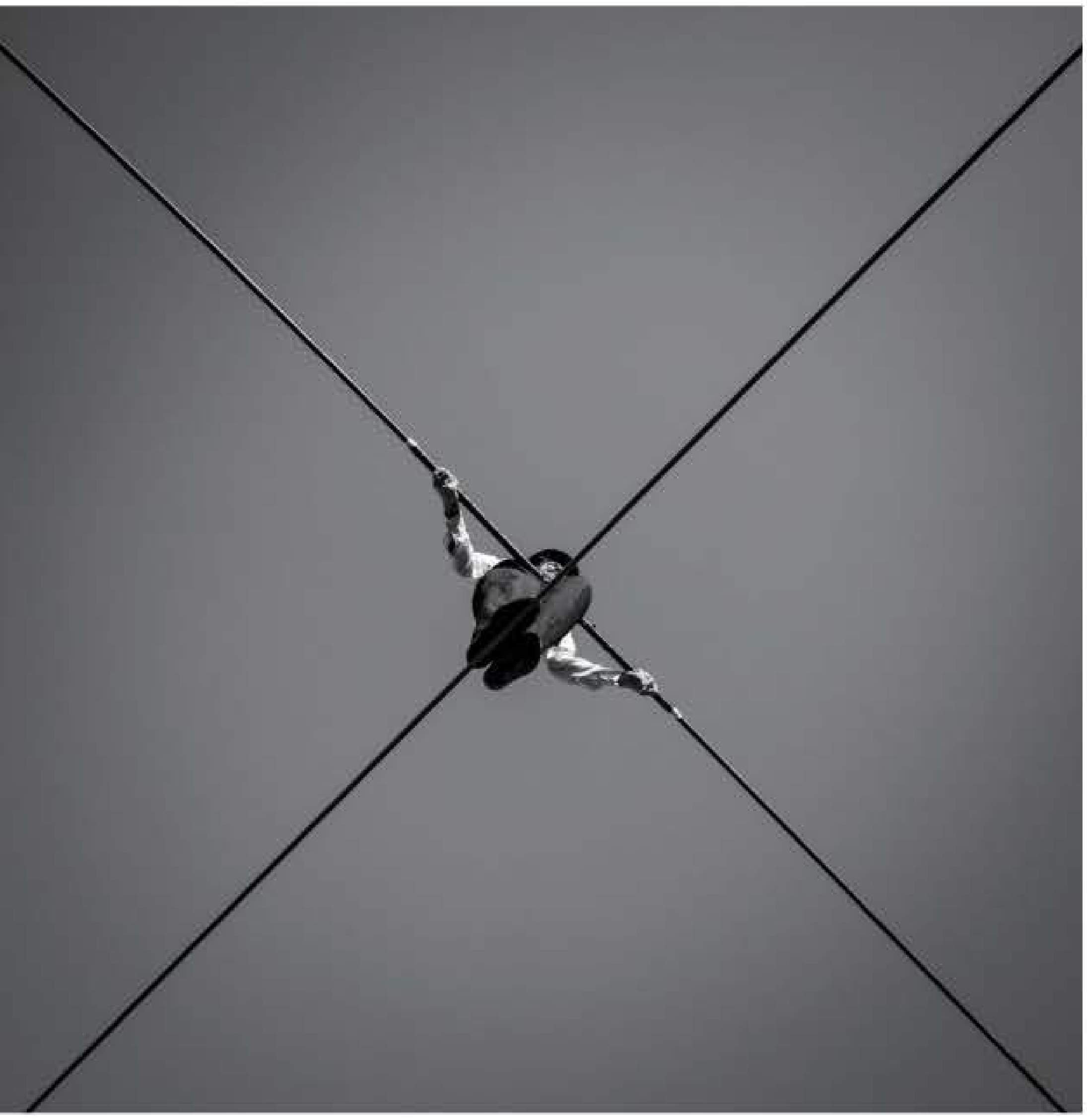
In one large company we know with long time horizons, a decision science team developed forecasts for the business unit heads, whose compensation was based in part on the amount of capital they invested in projects. Guess what? The team invariably was "guided" (by the unit heads, who had ultimate authority over the forecasts) to revise their projections upward, which meant that more projects were approved. This phenomenon is not uncommon.

Next, teams should explicitly identify the critical risk factors that influence outcomes. If a team was investing in a pioneering process plant, for instance, it would need to consider product price risk, environmental risk, technological risk, currency risk, and, of course, execution risk. This last is worth calling out, because most companies don't explicitly factor in execution risk—that is, human error on the part of managers carrying out the project, such as slow decision-making that leads to missed deadlines. To be sure, execution is controllable, and individuals can be held accountable for it, which may be why many companies don't explicitly consider it a risk factor. But no organization is free of human error, so it is important to factor it in. Not doing so at the outset makes it likely that after a failure, more of the blame than is warranted will fall on execution.

When risks are specified in advance and agreed to by the whole team, executives are better able to identify the causes of project failure (and success). They can more easily determine whether an investment decision was good or bad, regardless of the outcome, which in turn makes it easier to take risks in the first place. It is important not to penalize poor outcomes, only bad decisions. Confusing the two is a great part of what makes managers risk-averse, which brings us to our next point.

Make risk less personal. The final step in lowering risk aversion is to reduce employees' personal risk in proposing projects that are outside the box. The simplest way to do that is to reward people whose projects are approved by senior management, regardless of the ultimate outcome of the project. A more sophisticated and preferable approach is to decouple the decision to pursue the project from its execution.

In this approach, if a new plant fails to earn an adequate return because demand is lower than expected, the failure is



attributed to the decision to build the plant. If the plant fails because the project leader made construction errors that led to higher costs, the failure is attributed to execution.

By separating the decision from the execution, you can assign accountabilities to different people and tailor incentives appropriately. Accountability for decisions can be attributed to senior executives or to members of an investment committee, who have an incentive to maximize the value of the portfolio without being overly concerned about the risk of a single project. The execution risks, such as the cost and time involved in getting a plant up and running, can be assigned to the project leader, whose risks are mostly under her control.

We find that it also helps to consider longer time frames when evaluating decision-making performance. Managers often have too few projects in a given year for any single one to be assessed accurately or even fairly. One investment bank we know pushes accountability for projects up the hierarchy so that senior executives are responsible for many projects in a single year. Those executives' bonuses are highly variable from year to year, depending on how their project portfolios perform. Managers' bonuses, by contrast, are based on the performance of the multiple teams they participate in and are stretched out over three years. The longer time frame allows failures to be offset by successes so that penalties for managers with poorly performing projects are less severe.

Recognizing the inevitability of—or celebrating—failures is another practice that enables a culture of risk-taking. W.L. Gore, for example, gives "Sharp Shooter" trophies to managers outside product development who kill projects by identifying potential snags that the project team overlooked. The project team then writes up what it learned from the experience and how it could have made the decision to kill the project faster.

Finally, smart companies always make postmortems an important element of the management system. One company we know conducted them on its acquisitions and found that while the strategies were often sound, the executives assigned to integrate the acquired companies and carry out the strategies often lacked the resources necessary to be successful. Postmortems can also prevent companies from penalizing executives who executed well even though the external environment didn't behave the way the company had hoped.

MANAGERS CAN CONTROL how their own behavior shapes an investment decision. But outcomes depend greatly on other people's decisions—decisions by competitors, regulators, and consumers. They are also influenced by factors beyond human control: natural disasters, commodity price spikes, the economic cycle. That means there is a strong element of chance in any investment, for which it is unreasonable to hold managers accountable. At a certain point, therefore, companies need to switch from processes predicated on managing outcomes to those that encourage a rational calculation of the probabilities. It's a switch that will deliver quick returns: Organizations that make inconsistent risk choices up and down the corporate hierarchy are leaving a lot of free money on the table.

HBR Reprint R2002H

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HUMAN RESOURCES

CREATING A *trans* INCLUSIVE WORKPLACE

How to make transgender employees feel valued at work

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HUMAN RESOURCES

for most of us, work is stressful in and of itself. Imagine carrying the added emotional weight of having to deny and suppress one of the most fundamental aspects of who you are—your gender identity—because it doesn't conform with society's norms regarding gender expression. And imagine how it would feel if you revealed your authentic self to those you work with and see every day, only to have them reject, ostracize, or ignore you as a result. (Maybe you do not have to imagine at all.)

These issues are pervasive for many trans people, who often experience stigma and discrimination, hostility, and pressure to "manage" their identities in social settings—including the workplace—to suit the expectations of others. Such experiences can set in motion a host of psychological responses that have devastating consequences for trans individuals' emotional well-being, job satisfaction, and inclination to remain with an employer.

Despite a growing global awareness of the struggles trans people face, many employers remain ill-equipped to create the policies and workplace cultures that would support trans employees. Part of the problem is a lack of knowledge about these challenges. Indeed, even companies that are LGBTQ+-friendly usually focus more on the "LGB" than on the "TQ+."

The overriding reason to address this issue is that it's simply the right thing to do. Nobody who works hard and contributes to an organization's success should ever have to feel stigmatized and fearful of coming to work each day. But that's not the only reason. A failure to adopt trans-specific policies and practices can cost businesses dearly in the form of higher turnover, decreased engagement and productivity, and possible litigation. Discriminatory behavior in general also hurts the company's brand.

Fortunately, research on how employers can more effectively attract, retain, and promote the well-being and success of their trans employees is growing. Although we are not members of the trans community, we've spent the past seven years learning from a diverse population of trans people in the course of our research as organizational psychologists specializing in gender-related issues. We've interviewed and surveyed more than 1,000 trans employees from a range of industries and professions throughout North America. In this article we share their voices and experiences and outline what we've learned.

THE ROOTS OF STIGMA AND DISCRIMINATION

Why do trans individuals so often face stigma and discrimination? The answer resides in how people are socialized to understand and enact gender. A large body of scholarly research in social and developmental psychology has demonstrated that gendered behavior is *learned*: From a young age, boys and girls are encouraged to display stereotypically gendered behaviors and discouraged from displaying non-normative ones. Just think about the tradition of giving pink items to baby girls and blue items to baby boys. The preference for these colors has no biological roots; in fact, pink was once considered the more "masculine" color. Yet over time little boys come to prefer blue and little girls come to prefer pink; they are subtly rewarded for liking their respective colors and may even be chastised for liking the other color. Moreover, children pick up on subtle signals from their parents and important others who enforce gender stereotypes. For example, when donning female garments during dress-up, girls might be told they look pretty, while boys might be told they look silly. Children seek to fulfill gender expectations in order to secure parental and, later, peer acceptance. As we grow up, it becomes difficult to distinguish between expressions of gender we actually prefer and those we have been socially rewarded for.

As a result of this socialization, gender norms provide perhaps the most basic organizing framework by which people define themselves and others. And because they are widely shared and deeply rooted, they are extremely difficult to change. Thus trans people face a unique quandary. For example, when a trans woman—whose sex was assigned male at birth and who knows herself to be female—adopts typically female clothing and jewelry, she breaks with expectations regarding how she should define and express her gender.

Unfortunately, such situations most often mean that trans individuals are stigmatized—that is, socially devalued—providing a basis for discrimination against them. Studies suggest that the costs of that stigma and discrimination are steep. For example, a 2015 survey of 27,715 trans individuals

A failure to adopt trans-specific policies can lead to higher turnover, decreased engagement and productivity, and possible litigation.

residing in the United States revealed that a staggering 77% of those who had held a job in the year prior took active steps to avoid mistreatment at work, such as hiding their gender identity, delaying their gender transition (or living as their true selves only after work and on weekends), refraining from asking their employers to use their correct pronouns (*he, she, they, ze*), or quitting their jobs. Sixty-seven percent reported negative outcomes such as being fired or forced to resign, not being hired, or being denied a promotion. And nearly a quarter reported other types of mistreatment based on their gender identity or expression—for example, being required to present as the sex assigned to them at birth to keep a job, having private information about their trans identity shared without permission, or being denied access to bathrooms that align with their gender identity. Such experiences may be compounded for a trans person who holds more than one stigmatized identity—for example, a black trans woman.

Research also suggests that stigma and discrimination can result in ruminative thoughts, a negative self-image, hopelessness, social isolation, and alcohol abuse or other dysfunctional coping behaviors. Such responses pave the way for even greater mental health challenges, including major depression and anxiety.

In one of our own investigations, we collected daily survey data from 105 trans employees in the United States across two workweeks. The results revealed that 47% of participants experienced at least some discriminatory behavior on a daily basis at work, such as being the target of transphobic remarks, being ignored, or being pressured to act in "traditionally gendered" ways. They reported robust increases in hypervigilance and rumination at work the day following such an experience. The extent to which they had to be "on guard" around their coworkers and try to make sense of negative events predicted their emotional exhaustion during the workday.

In another study, this one involving 165 trans employees from various industries and occupations in North America, we replicated those results and extended them to other outcomes, including diminished job satisfaction and a greater desire to quit. One trans woman, an educator, who felt deeply unsupported by the administration after she reported being harassed, told us, "Students were being removed from my class, rumors were spread about me, and it just wasn't a great place to be working anymore." Another trans woman, who worked in retail, recalled that her direct supervisor joked about trans individuals and that customers would tell her not to bring her "lifestyle" into the workplace. As a result, she said, "I'm constantly aware of who is around me at all times. And when I'm around other people, it makes me very unsettled." A trans man in the business sector echoed this intense sense of distress: "Most of my stress that comes from work is related to just anxiety and worry [about interactions with coworkers], just constantly wondering about things that have happened and what might happen."

Employers should be aware of the business costs of ignoring these issues. A March 2012 report by the Center for American Progress indicated that companies in the United States lose an estimated $64 billion annually as a result of having to replace employees who departed because of unfairness and discrimination; many of those individuals were members of the LGBTQ+ community.

IDEA IN BRIEF

THE PROBLEM
Trans people often experience stigma and discrimination, hostility, and pressure to "manage" their identities in social settings, including the workplace.

WHY IT OCCURS
Despite a growing global awareness of these struggles, many employers remain ill-equipped to develop policies and workplace cultures that support trans employees.

WHAT TO DO
Research and interviews or surveys of more than 1,000 trans people suggest four things companies can do: adopt basic practices of trans inclusivity involving bathroom use, dress codes, and pronouns; support gender transitions; develop trans-specific diversity trainings; and utilize resiliency interventions.

HUMAN RESOURCES

Hostility and discrimination also increase absenteeism, undermine commitment and motivation, and decrease productivity. A recent study by the Human Rights Campaign found that employee engagement declines by as much as 30% in unfriendly work environments. Although the study focused on LGBTQ+ employees more broadly, its findings are no doubt representative of trans people's experiences. In addition to hiding who they are at work, which LGB individuals often must do with respect to their sexual identity, trans people must hide their gender expression, including how they dress, speak, and present themselves.

Discriminatory workplaces also prevent companies from attracting and retaining top talent. When employers, whether knowingly or unknowingly, fail to address prejudicial behavior, they send a potent message about their indifference and develop an external reputation for being an unwelcoming place to work. (According to the Level Playing Field Institute, one in four people who experience unfairness in the workplace report being highly unlikely to recommend their organization to others.) Furthermore, laws relating to gender identity and expression, although still severely lacking in the aggregate, are evolving at the local, state, and federal levels—creating greater obligations for employers. Without comprehensive strategies for addressing issues around gender identity and expression, organizations risk being sued. Those legal actions can be expensive to litigate, distracting to business activities, and damaging to a company's reputation, in addition to involving costly payouts. But it is our hope that companies will approach trans inclusivity from a moral and ethical standpoint rather than a purely economic one.

SUPPORTING YOUR TRANS WORKFORCE

Organizations should not wait for the courts to determine that trans individuals are fully protected under the law. (See the sidebar "Gender Expression and Employment Law.") Instead they should proactively incorporate gender-identity-specific nondiscrimination policies and practices throughout their businesses. That involves two key issues: protecting and promoting the rights of people of all gender identities and expressions, and increasing employees' understanding and acceptance of their trans colleagues. In a meta-analysis we conducted with Cheryl Maranto and Gary Adams, we found strong links between the degree to which employers enact these practices and the job attitudes, psychological well-being, and disclosure decisions of LGBTQ+ community members. In another study, focused specifically on trans employees, Enrica Ruggs and her coauthors found that the presence of trans-supportive policies was positively related to participants' openness about their identities and their decreased experiences of discrimination at work. However, such effects are likely to occur only when leaders model these policies consistently in both words and behavior. Also, it should be noted that effective diversity and equity practices have been found to positively impact the productivity of all employees.

Here are four practices that we recommend employers adopt. Further resources can be found through professional associations such as the Society for Human Resource Management and nonprofit organizations such as the Human Rights Campaign, Out & Equal, and the Transgender Law Center.

1 ADOPT BASIC TRANS-INCLUSIVE POLICIES

An extensive body of social psychology research suggests that human beings are highly attuned to signals regarding the value ascribed to them by others. To one degree or another, we all have a basic need to belong and a prewired, unconscious monitoring system that tracks the quality of our relationships. When we detect signs of social devaluation (apathy, disapproval, or rejection), we experience negative emotions and a loss of self-esteem. When we detect signs of social valuation (praise, affection, or admission to a desired group), just the opposite occurs. Thus inclusive policies and practices—such as those related to bathroom access, dress codes, and pronoun and name usage—send vital messages to trans employees about their value as organizational members.

Bathroom access. Instituting gender-neutral bathrooms or encouraging trans employees to use bathrooms that align with their gender identity is one important way to signal to those employees that they are valued. Diversity trainings should educate other employees on the importance of being accepting and welcoming when they find themselves in a company bathroom with a trans coworker. One of our participants, a trans man working in business, said, "When I started using the men's room at work, a number of men didn't like it. An engineer, a cisgender man in his forties who didn't work with me directly, went out of his way to make me feel safe and welcome in the men's room, and I was extremely grateful."

Some have suggested that allowing employees to use bathrooms that align with their gender identity will increase the risk of sexual harassment and assault against women.

But a 2018 report published in *Sexuality Research and Social Policy* suggests that such incidents in bathrooms are rare, regardless of any gender-identity policy on bathroom usage. In fact, harassment and assault generally are most often perpetrated by straight, cisgender males against straight, cisgender females.

Dress codes. Some organizations, including Accenture, have begun to regionally implement gender-neutral dress codes. By making explicit that all employees may select from a range of options, such as dress shirts, pantsuits, and skirt suits, companies can help destigmatize varying expressions of gender. Such policies may also aid in recruitment and retention by signaling that normativity is not expected.

Pronoun and name usage. Another way to signal to trans employees that they are valued is to pay serious attention to their preferred names and correct pronouns. Many trans people identify on the traditional binary scale—as either male or female—and thus use *he, him,* and *his* or *she, her,* and *hers* as pronouns. Yet many others who also fall under the broad category "trans"—such as genderqueer, gender-fluid, and nonbinary individuals—use alternative pronouns, such as *they, them,* and *theirs* or *ze, zir,* and *zem.*

It's clear from our conversations and research that the "misgendering" of trans employees, whether intentional or unintentional, is relatively common at work. A onetime slipup—such as using an incorrect pronoun for a colleague who has recently transitioned—may be considered an honest mistake. (One should apologize, move on, and make sure to get it right the next time.) Using the right pronouns and names on a regular basis can be more meaningful than one might think. When asked to reflect on courageous acts coworkers had performed in support of the rights of trans employees, many of our participants recalled instances in which a cisgender employee guided others on proper pronoun usage. A simple "Katie uses 'she' as a pronoun" works, as does a gentle correction: "Have you seen him?" "Yes, I saw her in the conference room."

Employers can address this issue in several ways. First, they can keep records of employees' chosen names and correct pronouns; this helps ensure that whenever possible, appropriate terms will be used for personnel and administrative purposes, such as directories, email addresses, and business cards. Second, encourage all employees to use name badges and email signatures that include their desired names and correct pronouns; this enables people to learn those names and pronouns and cultivates awareness of the varying gender identities that colleagues may possess. Third, take advantage of training programs, onboarding initiatives, and employee handbook content to make clear that proper pronoun usage is part of creating an environment in which all employees feel valued and respected. Goldman Sachs, for example, recently launched an internal campaign to make employees more aware of the importance of pronouns and to encourage them to proactively share their pronouns with colleagues.

Gender Expression and Employment Law

Laws regarding gender and gender expression are constantly evolving and differ according to location. In the United States no federal law prohibits discrimination against trans people, and only 19 states have explicit protections for trans workers. Additionally, the Religious Freedom Restoration Act of 1993 makes it more difficult for trans employees to file discrimination complaints against employers who justify their practices on religious grounds. Using religious freedom as a rationale, certain states have enacted laws to revoke or prohibit equal protections for trans individuals. Although gender expression has been covered in some court cases under the broader sex-discrimination protections within Title VII of the Civil Rights Act, in the absence of a federal law it remains up to the courts to decide case outcomes according to their interpretations of prior case law. Indeed, the U.S. Supreme Court in 2019 began deliberating over whether Title VII sex protections extend to LGBTQ+ populations.

At the global level, laws regarding gender expression vary widely. Many countries, including the United Kingdom, Spain, and South Africa, have trans-specific antidiscrimination protections. However, being trans is punishable by law in countries such as Saudi Arabia, Nigeria, and Malaysia. In many other countries, as in the United States, being trans is neither punishable nor protected, leaving oft-discriminated-against trans people in a state of uncertainty regarding their status as equal citizens under the law. When doing business in a global environment, it is vital to be mindful of how protections may vary and what this may mean for the safety and well-being of trans employees. Even when operating within intolerant cultural contexts, it is important to practice inclusivity consistently.

HUMAN RESOURCES

2 SUPPORT GENDER TRANSITIONS

Transitioning is not a single event but, rather, a *process,* which begins with a deeply personal decision that usually results from years of soul-searching. The decision to come out, or disclose, at work is also complicated. People weigh the positive consequences of doing so (freedom from living a "double life" and expression of one's true self) against the negative ones (potential rejection and career ramifications). One of our study participants, a trans woman in the transportation industry, told us, "After nearly a year of soul-searching, research, therapy, support group attendance, and deep personal reflection, I 'came out' to my supervisor as transgender....I finished talking, paused, and waited for her reply. My heart was in my throat. I knew this meeting might forever change the way she thought of me, and that I could not un-say what had been said."

Then the woman recounted her boss's reaction: "After a few moments, her very first words were 'We're not just a team here, we're a family, and this is your home. You have the right to be who you are and to be treated with respect and dignity. I will do everything I can to make sure your transition is as smooth and trouble-free as it can be.' She then got busy arranging meetings with the head of the department and the head of HR."

Someone deciding to transition chooses what that process will look like and how long it will take. A transition may involve gender-confirmation surgery (not all trans people undergo medical procedures). Some gender-fluid individuals spend their lives transitioning between and within various gender expressions, as they continually reinterpret and redefine themselves. Employers must develop a comprehensive approach to managing gender transitions—one that focuses on the employee but also on cultivating a work environment conducive to the transition process.

First, helping transitioning employees who elect medical procedures to cover costs—and making sure they have access to health care benefits that are gender-identity-specific—can reduce the stress and anxiety of coming out at work. Such commitment sends a highly affirming message to trans employees about their value.

Second, it is paramount that employees be asked what they need during their transitions and how they would like the process handled. Only by listening to and collaborating with them can employers ensure that people are not inadvertently "outed" without permission or before they're ready.

Third, if approached by an employee, an HR manager can provide information concerning where to learn more about treatment options, organizational support groups, and other available resources and can develop strategies to help the employee manage work/life issues that may arise during the process. Including direct supervisors in such meetings, if the employee feels comfortable with this, can promote empathy and aid in crafting flexible and informed plans adapted to each individual's unique needs. Google, Cigna, and Chevron have implemented such initiatives.

Fourth, and equally important, our research suggests that leaders and managers must proactively cultivate a supportive work environment. The period of transitioning is particularly sensitive; indeed, individuals may be ostracized or pressured by peers to suppress their identities during this time, increasing their susceptibility to depression, anxiety, and even suicidal thinking. Moreover, any trans person seeking surgery will be questioned by the surgical team about the existence of support networks, which are often required for someone who is seeking gender-confirming procedures. Thus having supportive policies and plans in place will remove one or more barriers to care for trans employees.

Authority figures who model trans-inclusive behaviors on a consistent basis are crucial to creating a supportive environment. Many of our participants said they would not have felt comfortable inquiring about transition benefits, much less been successful in their transitions, if senior leaders and frontline managers had not shown support, which tends to have a trickle-down effect on lower-level employees. Top leaders can do this in various ways, such as by attending or presenting at conferences about trans-specific issues, publicly championing gender-inclusive dress codes and bathroom usage initiatives, and using preferred names and correct gender pronouns.

Of course coworkers play a key role as well. In a recent study using interview and survey data from 389 trans employees and conducted with Larry Martinez, Enrica Ruggs, and Nicholas Smith, we found that those who were relatively far along in their transitions were more satisfied with their jobs, felt a greater sense of "fit" in their workplaces, and reported less discrimination than those who had not transitioned or were less far along in the process. We also found that this effect was explained *not* by participants' sense of consistency between their inner gender identity and their outward expression of gender—what is referred to as *action authenticity*—but, rather, by the perception that coworkers had the same understanding of their gender that the participants did, which is known as *relational authenticity*. One participant, a trans man who works as a museum curator, said, "There was a point where people started seeing me as just one of the guys. And I think that at that point I started feeling like I fit in a lot better. It's the individuals [coworkers] who make that possible." In a poignant example from a separate study, a trans woman in manufacturing reported a moment at a company function: "I appeared in a dress for the first time at a party. One of the housekeeping aides grabbed my hand and pulled me onto the dance floor in front of everyone. His courage in accepting who I was in front of all our coworkers can bring me to tears to this day."

To help in cultivating supportive relationships, work groups should be told when those who are transitioning will be out of the office, whether they will return part-time, and what work will have to be covered during their absence. Emphasizing the need for coworkers to show sensitivity, provide emotional support, and act in ways that affirm the gender identity of their colleagues is crucial. For example, people can make it clear that they are available to talk about any issues related to transitioning or gender expression—while following trans employees' lead about when and where to have those conversations. That approach enhances feelings of support and care and allows trans employees to be comfortable having honest conversations with their colleagues. Even well-intentioned employees may be nervous about their ability to support a colleague through a transition, and employers can help ease some of their anxiety by taking the above steps.

3 DEVELOP TRANS-SPECIFIC DIVERSITY TRAINING

More general training on gender-identity topics is also essential. Although media coverage has helped facilitate conversations about gender identity and expression, corporate diversity trainings still have room for improvement. We offer two recommendations:

1. Include contact with those who identify along the trans identity spectrum. A large body of research on the "contact hypothesis" suggests that providing opportunities to build relationships with specific groups—to hear their stories, appreciate their challenges, and gain empathy—is critical for shifting attitudes and behavior toward them. However, it is not the responsibility of members of the LGBTQ+ community to educate others or to be visible in this way; "out" trans employees should be included in trainings only if they are willing. If they're not, many corporate training firms and LGBTQ+ nonprofit organizations offer training of this nature.

2. Help cisgender employees develop the skills to become informal champions of their transgender colleagues. Research suggests that many people lack the knowledge and confidence to challenge prejudice. That's why some companies have sought to equip their employees, especially leaders, with concrete strategies for stepping out of their comfort zones and engaging in "courageous conversations" regarding difficult diversity-related topics. For example, an employee who witnesses biased behavior is encouraged to respectfully but directly call it out. That might mean pulling someone aside to explain the potential damage from a biased comment, or having coffee with someone to tactfully share why a behavior was noninclusive. The chairman of PwC launched the CEO Action for Diversity & Inclusion coalition to normalize diversity-related conversations across top-level leaders in large companies. At Bank of America employees are encouraged to discuss gender, race, and other identity-related issues in a respectful, learning-focused manner.

These efforts pay off. In a forthcoming study we will report that cisgender employees who challenge noninclusive policies and behavior send an important message of inclusion to their trans colleagues. Our findings suggest that these behaviors may come in three related forms: *advocacy,* such as taking the initiative to publicly support trans causes; *defending,* such as protecting trans coworkers from judgment or hostility; and *educating,* such as spreading awareness of trans issues in the organization. We found that trans individuals who had recently witnessed these behaviors tended to report an increased sense of worth as organizational members, were more satisfied with their jobs, and were less emotionally depleted by work.

One trans man in government recalled feeling immense gratitude toward his assistant when she spoke out after he was treated poorly by a manager. "This came about as I sat at a lunch table at an empty chair," he recalled. "When he saw I was sitting there, [he] jumped up like he had sat next to a very large spider. She [my assistant] voiced, 'Scott, that was so rude'—twice! That brought me to an island of relief." Courageous acts like this predicted individuals' job satisfaction and well-being a full six weeks later.

Despite the good intentions of many cisgender employees, however, trans people may not always want others to represent their interests, especially when those others lack in-depth knowledge of the various issues, challenges, and nuances surrounding their work and life experiences.

Gender Identity and Expression: A Glossary

People have differing language to describe who they are and how they want to label their identities. The terms below are frequently used, but we acknowledge that these and other definitions are constantly evolving. Further, it's important to note that individuals know their own identity best and should always be consulted about how they'd like to be referred to. (For more, see the Human Rights Campaign's glossary of terms.)

CISGENDER

A gender identity that aligns with the sex assigned at birth.

GENDER EXPRESSION

The ways in which people—trans or not—choose to convey their gender identity through dress, verbal communication styles, and other outward behavior.

GENDER FLUID

Refers to people who feel more male, more female, or some combination of the two at various times, and who therefore express their gender identity more dynamically over time.

GENDER IDENTITY

How one understands one's own gender, regardless of the sex assigned at birth.

GENDERQUEER

A gender identity and expression that are not tied to a traditional male/female view of the gender spectrum. Those who identify as genderqueer may identify as men or women, as neither, or as some combination of the two.

TRANS

An umbrella term for cases in which gender does not align with societal expectations regarding the sex assigned at birth. Some people who fall under the umbrella decide to transition; others do not, because they don't define themselves according to the traditional male-female binary or because they have a more fluid view of their identity over time.

TRANSGENDER

A gender identity that does not align with the sex assigned at birth. For example, a transgender woman is someone whose sex assigned at birth was male.

And research suggests that employees who possess a "savior mentality" (that is, are motivated by a desire to be perceived as good people) may end up doing more harm than good. Accordingly, HR practitioners should train employees to appropriately ask whether trans colleagues prefer to speak up for themselves. (If they wish to be, trans employees should be involved in this training.) The simple act of consulting before taking action gives a trans person agency and autonomy in deciding how the situation should be handled.

4 UTILIZE INTERVENTIONS TO BUILD RESILIENCY

Research also supports the idea that trans individuals can benefit from interventions to help them manage their stress. In a recent two-week experience sampling study of ours, we found evidence to suggest that mindfulness—a state of nonjudgmental attention to present-moment experiences—can insulate trans employees from emotional exhaustion the day after experiencing a stigmatizing event at work. This effect was explained by a reduction in defensive, distrustful patterns of thinking such as hypervigilance and rumination.

Unfortunately, it's not realistic to assume that prejudice toward trans employees will be eliminated quickly and easily through workplace initiatives. Such changes take time. And although the main goal of employers should be to root out prejudice at a structural level through formal diversity policies and practices, it's also important to offer tools—such as mindfulness training, cognitive behavioral training, and self-compassion training—for reducing the harmful outcomes that stigma creates in marginalized populations.

ONLY WHEN PEOPLE feel totally authentic and connected with their organizations can they achieve their full potential at work. Trans employees are no exception. Yet few companies have succeeded in creating an inclusive work environment for people who don't identify with societal gender norms. We hope that the research and the proactive steps we've outlined will help change that. Employers that get this right aren't just being savvy from a business standpoint. They are also crafting a corporate legacy—one in which human dignity is prioritized and doing the right thing by employees is regarded as fundamental to success.

HBR Reprint R2002J

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Beyond Silicon Valley:

How Start-Ups Succeed in Unlikely Places

IDEA IN BRIEF

THE CONSENSUS
Technology start-ups typically become successful by setting out to "disrupt" an existing industry, using injections of capital to grow as rapidly as possible, and tolerating high risk in a rush for market domination.

A NEW PATH
Entrepreneurs far from superstar innovation cities demonstrate that start-ups can achieve outsize success by following a different path.

THE FRONTIER APPROACH
Frontier start-ups take a more balanced approach to growth in which they charge for the value they create from the get-go, build resiliency into their models, focus on growth and profitability, and take a long-term outlook. In emerging markets, they are more likely to tackle fundamental societal challenges and to invest in their workforce.

High-growth tech start-ups are the business miracle of recent decades. So-called unicorns—private venture-backed companies valued at $1 billion or more—have changed the fabric of our lives and transformed the way we do business. These firms, concentrated in capital- and talent-rich cities such as Palo Alto, London, and Tel Aviv, are a source of inspiration for entrepreneurs and corporate managers around the world.

ABOUT THE ART

Influenced by ideas of planetary exploration, photographer Reuben Wu uses a modified drone to illuminate and reimagine remote locations at night.

Most seem to follow the same playbook: Begin with a plan to "disrupt" an existing industry, use injections of capital to grow as rapidly as possible, and tolerate high risk in a rush for market domination.

But that is not the only way to launch a thriving start-up. As a venture capitalist, I have worked for the past decade with high-growth tech companies in unlikely locations far afield from any innovation hot spot. Some are in developed economies (in cities such as Winnipeg and Provo), but many are in emerging economies (in Jakarta, Lagos, Nairobi, Guadalajara, and São Paulo, for example). Entrepreneurs outside tech hubs take a different approach from the one favored in Silicon Valley—and are achieving outsize success.

Start-ups operating amid conditions of relative scarcity, where capital and talent are hard to come by and economic shocks are more likely to occur, face unique pressures. Yet many have become superstars in their own right. Their formula involves a more balanced approach to growth, a focus on solutions to real problems, and investment in their workforce for the long term. These "frontier innovators" hold important lessons for companies of all sizes and in all locations—including Silicon Valley itself.

BALANCED GROWTH

In Silicon Valley, the quest for growth all too often trumps sustainable unit economics and profitability. It is not unusual for start-ups to burn through millions of VC dollars a month as they chase ambitious growth targets, often subsidizing user costs to drive acquisition numbers. The hope is that in highly competitive winner-take-all markets, a firm's revenue will increase exponentially as it dominates its market, and profitability will eventually sneak past zero and then grow rapidly. This strategy works well for start-ups that successfully make it through to the other side: If the number of users takes off, start-ups can indeed become very large, very fast.

But while it is acceptable in Silicon Valley to burn through capital, innovators on the frontier are less likely to tolerate losing money on each customer. It's not that they aren't trying to scale—many of these businesses benefit from the same network effects that make Silicon Valley titans so wildly successful. But they tend to avoid the high-risk grow-or-die approach: They focus on both growth and profitability, build resiliency into their models, charge for the value they create from the get-go, and take a long-term outlook.

This is true even in wealthy markets. Mike Evans, the cofounder of food-delivery service Grubhub, a Midwest start-up, told me that when the company was starting out, he and other managers ignored what he called "growth-centric vanity metrics" and instead made sure that the business was sustainable (either profitable or close enough to achieve profitability through minor cost cutting) each time they set out to raise money. Even in its early days, it charged restaurants a commission for every sale made on the site, and customers paid a delivery fee. When Grubhub did take on outside capital, it raised comparatively meager amounts. In 2014, the company went public; it is currently valued at more than $6 billion. (Ironically, it is only as a successful public company that Grubhub has had to subsidize customer acquisition to compete with new, VC-backed entrants such as Uber Eats and DoorDash.)

Even companies in emerging markets that serve very poor customers charge for their services from the start rather than subsidize the business until they've achieved scale. They're able to do this because existing solutions are often so dysfunctional that customers are willing to pay for reliable, safe, and efficient products. Take Zoona, a Zambian start-up whose iconic lime-green booths dot many African cities. The company, which offers basic financial services to unbanked consumers, advertises its product around the values of "easy, quick, safe"—not "free" or "cheap." It is offering a money transfer business for people without a lot of money, and its customers will pay for a service they trust. Despite the fact that over 60% of the Zambian population lives in poverty, Zoona serves more than one million customers and is expanding into other African nations.

It takes time—and resiliency—to build an industry from scratch, and this too makes a growth-at-all-costs approach untenable. One of the leading technological innovations to emerge from Kenya is M-Pesa, a platform that allows its users to send and receive money through their mobile phones, as well as access other financial products through a network of over 100,000 agents. For M-Pesa's customers, the concept of having money stored in a format other than cash was a complete novelty. Thus, giving cash to a stranger with the promise that it would be sent via mobile phone to

> Too often, Silicon Valley start-ups are force-fed capital only to collapse under the weight of hypergrowth.

its intended recipient was unthinkable. To overcome this, M-Pesa had to invest in educating its customers.

In the mythologized view of Silicon Valley, start-ups rush to develop a minimum viable product, raise capital, and lay waste to entrenched inefficiencies in the process. But in my experience, a more balanced approach to growth doesn't hinder innovation. Take the case of Qualtrics, a Provo-based start-up founded in 2002. The company was run out of the basement of one of the founders in its early years. Profits, rather than outside capital, were used to fund growth. This was an extremely abstemious approach, caused partly by the local ecosystem—Utah had limited venture capital at the time and was off the map for many Silicon Valley investors—but was also a result of the founders' unique, long-term view toward innovation. Qualtrics's first line of business was to offer schools access to online surveys. Over time and without pressure from investors, the company refined and tailored its products and services for large, corporate clients.

Qualtrics did eventually raise capital after 10 years of bootstrapping, when it was a highly successful company. As its cofounder and CEO Ryan Smith told me, "This is not a five-year game. It is a 20-year game. In the early days we had a good business, but our big breakthrough came in years 13 through 17, when we switched to enterprise." For Smith, giving new initiatives time to mature was critical. "Everything took longer than we expected. The ability to wait and the flexibility to stick with it was crucial," he says. Qualtrics was acquired by SAP in 2019 for $8 billion.

Of course, some firms don't have the luxury of choosing a balanced approach to growth and instead are forced to keep an eye on the top and the bottom lines. For example, entrepreneurs far from innovation clusters lack access to large amounts of venture capital, nor is there an investment class that will put up with growth without profitability for long periods. But evidence is beginning to show that balance holds own advantages. A slew of aborted IPOs and scandals in Silicon Valley involving coddled founder-CEOs has shone a spotlight on the "foie gras effect," as an article in the *New York Times* put it, in which start-ups are force-fed capital only to collapse under the weight of hypergrowth.

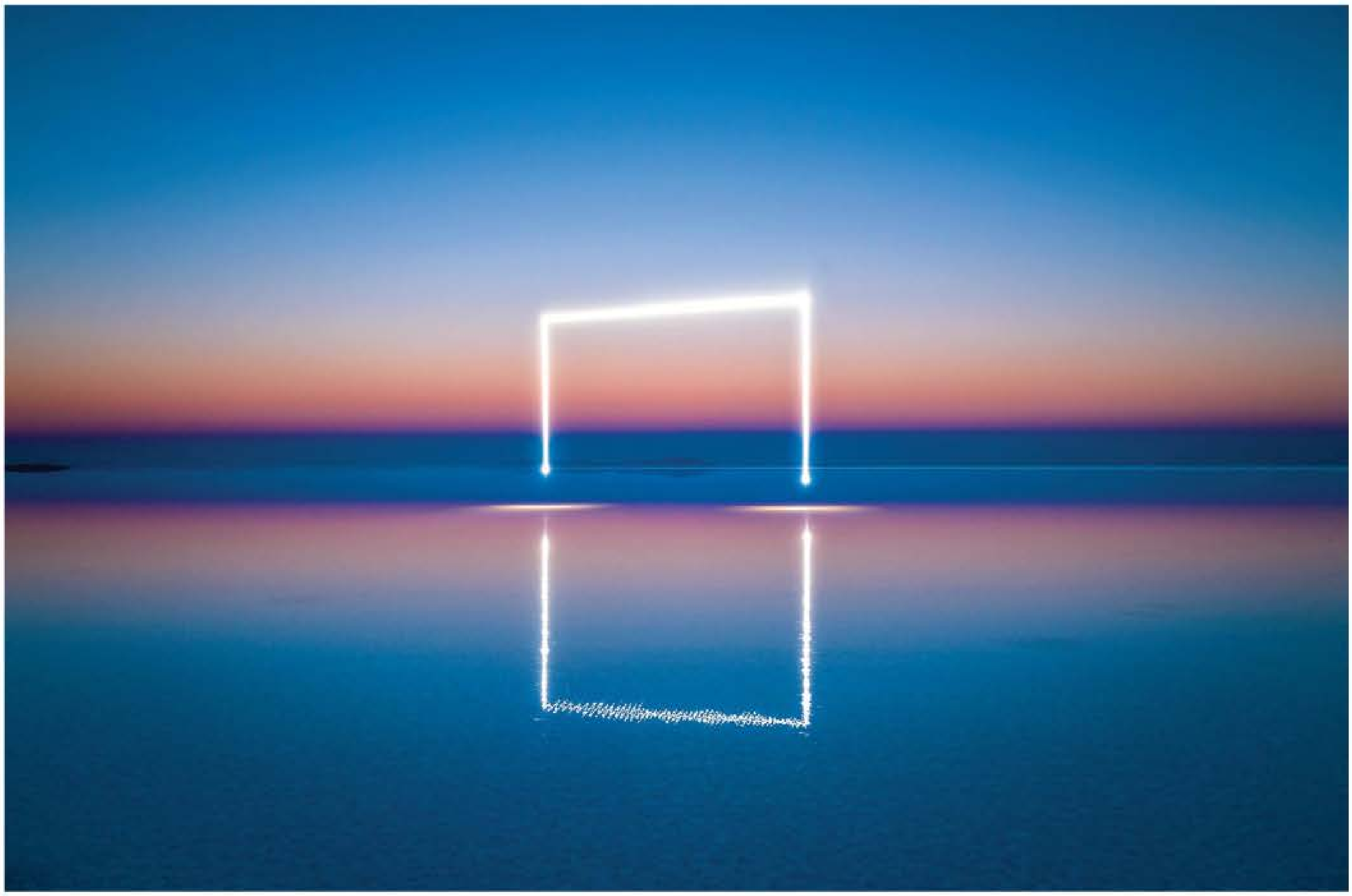
Venture capital can be a powerful tool that helps start-ups accelerate at critical moments. But too much of a good thing can distort the market. A study by PitchBook found that venture capital returns in the Midwest are among the best in the country, in part because companies there ingest less capital. Research from the AllWorld Network, an organization cofounded by Harvard Business School professor Michael Porter, determined that entrepreneurs in emerging markets have a better survival rate than those in the United States.

SOLVING REAL PROBLEMS

A disproportionate number of the frontier start-ups I have worked with focus on providing services that meet universal human needs. That's especially true for emerging market companies. A study by Village Capital determined that out of the nearly 300 unicorn start-ups in the United States, only 18% were focused on health, food, education, energy, financial services, or housing. Conversely, my analysis of leading start-ups in Latin America, sub-Saharan Africa, and Southeast Asia reveals that far more (up to 60% of a sample in sub-Saharan Africa) target those basic human needs.

By offering basic services, companies have the opportunity to become necessary to untapped customers. Take OkHi, a technology-driven start-up that creates postal and delivery addresses in the developing world. Some 50% the world's population lives in slums, favelas, shantytowns, and other areas where the government does not designate official street names or numbers for residents. To solve this problem, OkHi offers crowdsourced digital addresses—a unique combination of a GPS point, a location's photo, and text descriptors. A diverse group of partners (restaurant chains, appliance retailers, and public services) can access the database for a small fee. When they look up an address, they are given turn-by-turn directions to the GPS point and then are oriented to the proper home using the qualitative descriptors and photos.

Within existing industries, entrepreneurs often set up operations in new ways that improve people's lives. For example, Delhi-based start-up Rivigo focuses on the Indian logistics system. Road, rail, and coastal shipping is 30% to 70% more expensive in India than in the United States, costing India's economy an estimated $45 billion every year. The country also suffers from an acute shortage of drivers, because of inefficiency in the system. For example, a driver might travel several days to a delivery location and upon arrival find that return shipments are unavailable.



Rivigo uses a logistics model that centers on the drivers (referred to as "pilots") to transform the system. Rather than having to drive the entire length of a trip, they take their loads only five or six hours to a relay point. Another pilot then continues to the next relay point, and so on to the final destination. Each pilot swaps his or her load with the next pilot in the chain and drives the new load back to his or her original location, where it will again be transferred to another driver. Rivigo's complex daisy chain allows pilots not only to return home each day but to earn more: Thanks to the company's investment in shipment tracking and demand planning, the trucks are driven at higher capacity and with greater regularity, increasing wages for drivers. The strategy is working. By the fall of 2018, Rivigo had some 10,000 trucks in its network, serving suppliers in 500 micromarkets, and had expanded its logistics services to include cold freight storage, express brokerage, and a freight marketplace.

Typically, companies that create truly new offerings have a long, arduous path to growth that may include educating customers about how to use the product or service. But there are advantages to addressing basic needs in a new way. The market—and thus the payoff—can be enormous: Consider the billions of structures without fixed addresses available to OkHi, or the billions of unbanked people in the world available to M-Pesa. And first movers often find that once they gain people's trust, their consumers welcome the addition of high-margin services to the platform. Indonesia's Gojek started as a ride-hailing app for low-cost motorbike taxis. Many of its early customers were unbanked, so they paid for rides in cash. Because Gojek introduced many customers to online services, the platform became an ideal place to offer a range of financial products. Today, drivers act as human ATMs: Riders deposit and withdraw money from GoPay, Gojek's mobile payment ecosystem, directly through their drivers. Customers can then use GoPay to make payments and accumulate savings. Beyond financial products, the app offers more than 20 services, including food delivery, shipping, doctors' appointments, massages, and cell phone minutes. "In the mornings, we drive people to work," Gojek founder Nadiem Makarim told me. "At lunch, we deliver meals to them at the office. In the late afternoon, we drive people back home. In the evenings, we deliver ingredients and meals. And in

between all this, we deliver e-commerce, financial services, and other services."

INVESTING IN GLOBAL TALENT

Silicon Valley has one of the richest talent pools in the world. Every year, Stanford and Berkeley each graduate about 1,500 engineering students, who refill and expand the ranks of the 150,000 computer scientists and software developers working in California. But an unintended consequence is that Silicon Valley and other innovation clusters now have high employee turnover built into the business model. Companies operate under the assumption that employees are replaceable—highly skilled labor is as abundant as workers' opportunities—and thus high churn is an accepted by-product. In their book *The Alliance,* Reid Hoffman, Ben Casnocha, and Chris Yeh even go so far as to suggest that Silicon Valley start-ups should think of employees as being on "tours of duty."

Away from innovation clusters, however, recruitment is a universal pain point. In a study of 628 entrepreneurs in emerging markets, 75% of those whose firms were rapidly growing identified lack of available talent as the biggest barrier to their business. One way frontier innovators overcome shortages is to build distributed workforces that tap the best talent everywhere. Fully remote working arrangements (an extreme form of the distributed workforce) are increasingly prevalent among start-ups outside Silicon Valley.

Zapier, a website automation venture founded in Missouri, was an early pioneer. Its staff of 250 is scattered across 25 states and 17 countries. Wade Foster, Zapier's cofounder and CEO, says that the strategy has a serious advantage: "You have access to a worldwide talent pool. If you restrict yourself to 30 miles from your headquarters, you're going to have a hard time hiring." In the first year since instituting a "delocation" package, Zapier's job application rates have increased 50%, and employee retention is up as well.

In emerging markets, a distributed workforce is often a forced choice. The founders of Zola, which provides solar power to off-the-grid homes in Africa, initially struggled to find the right place to start their business. Tanzania, the first market they focused on, lacked the necessary infrastructure and specialized talent base. The battery and solar panel expertise they required was clustered in Silicon Valley. It also made sense to source hardware components from Asia. So the founders spread their operations across the globe: The initial product was developed in Tanzania, in close proximity to users; R&D then moved to San Francisco. Manufacturing is done in Asia, operations oversight is in Amsterdam, and distribution on the ground takes place in Africa.

Another response to a lack of readily available talent has been for companies to build and train their own pipelines. Shopify, an e-commerce enabler based in Ottawa, launched a "dev degree" in partnership with nearby Carlton University. It marries traditional education with on-the-job experience. Over four years, students complete an honors degree in computer science and gain some 4,500 hours in practical work experience at Shopify. The company covers the four-year tuition cost and pays the students a salary for the time they work. All graduating students receive offers to work at Shopify full-time. Although still in its infancy (the first cohort graduates in 2020), the program seems to be working. Impressively, gender diversity in the program is much more balanced than in traditional engineering programs. In recent cohorts, 50% of students are women, compared with fewer than 20% in computer science degrees on average.

Perhaps because innovators at the frontier invest so much more in finding and training candidates, they take a longer-term view of the employer-employee relationship. As Brittany Forsyth, senior vice president of human resources at Shopify, explained to me, "unlike companies in San Francisco, where talent is plentiful and as a result people move around from company to company, we want our employees to know that they can do their life work here. We want them to know: If you invest in us, we can invest in you."

Finally, frontier innovators take a different approach to retention, focusing less on workplace perks and more on incentives that reinforce values such as global connectivity. Branch, which makes microloans to customers in emerging markets, is headquartered in Silicon Valley but offers employees the option to work from any of its many global offices and pays for flights between locations. Teammates are thus better integrated across the geographies, know their colleagues around the world, and understand the different local markets. Basecamp, a start-up headquartered in Chicago whose workforce is almost entirely remote, offers its employees annual travel vouchers for vacations so that they have the opportunity to connect with their families and to travel.

Stock options, Silicon Valley's de facto financial retention tool, are challenging to replicate on the frontier—in part because exits (in the form of either IPOs or acquisitions by larger firms) take longer and are less proven. My analysis of start-ups across Asia, Africa, and Latin America found that the time to exit is, on average, 13 years—about double the average exit time in Silicon Valley (though among unicorns there, exit times have increased as well). To complicate things, in many emerging markets stock options are not well understood by employees, and sometimes the legal structure for them does not even exist. As a result, many founders are experimenting with new models of employee ownership that are better aligned with the frontier context.

Lyndsay Handler, the former CEO of Fenix International, an energy start-up based in Uganda, created phantom shares called "Fenix Flames." Part of her motivation was to channel the commitment of many of her employees back into the company while offering them a financial benefit. "Many of our employees in Africa were not rich by any standard," Handler told me, "yet they were asking to invest their savings in the company." The Fenix Flames approach resembles direct stock ownership more closely than options, which means the shares both are easier to understand and benefit employees even if the company doesn't have exponential growth. Handler granted Fenix Flames to every employee, all the way down to the installers in remote Ugandan villages. The shares represented a transformative financial gain for many when the company was later sold to Engie, the French energy giant.

It is too early to tell what the best emerging practices for employee ownership will ultimately look like, and models are bound to evolve further. It is clear, however, that the entrepreneurs of the frontier will continue to experiment with perks and compensation designed to retain employees over longer-term horizons.

THUS FAR, COMPANIES in tech clusters like Silicon Valley have overshadowed a growing and impressive cohort of high-growth ventures that have taken root elsewhere. But that is changing. Successful start-ups on the frontier have critical lessons to teach us—indeed, their model may prove to be the most enduring.

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Harvard Business Review

Big Idea

The Big Idea
Why Business Needs to Help Strengthen Democracy

March 2020
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Experience

Advice and Inspiration

MANAGING YOURSELF

FIRING WITH COMPASSION

Dos and don'ts

by Joel Peterson

IN EARLY 2007, after nearly a decade of growth, JetBlue was struggling. A Valentine's Day ice storm at New York's Kennedy International Airport had stranded hundreds of passengers on the tarmac for hours and revealed glaring weaknesses in JetBlue's operating systems. After much deliberation, the board concluded that JetBlue's brilliant founder and largest shareholder, David Neeleman, was no longer right to lead the company. We needed a new CEO.

As lead director at the time, I would be the one to deliver the news to David. With another director, I went to his office and told him, clearly and directly, that we'd decided to replace him and briefly explained why. To soften

Illustrations by MICHAL BEDNARSKI

the blow, we asked him to stay on as chairman of the board. David was upset. He said we were making a mistake. We listened but were resolute. When he finished, we moved the discussion to next steps, including the public announcement of the leadership change.

More than a decade later, David continues to think we made the wrong decision. But he and I have maintained a long-running, cordial professional relationship. I still consider him to be the greatest commercial airline entrepreneur of all time, and I personally invested in his launch of Azul, a low-cost airline based in Brazil, where he was born.

How can you fire someone in a fair and decent way? As a longtime operating executive, board member, and investor in hundreds of start-ups, I've had to terminate many dozens of people over the years—and I've always tried to do it while preserving their dignity and self-esteem and, often, my connection with them. I also teach a leadership course on difficult conversations at Stanford, and some former students joke that the class is mostly about the right way to fire people. I base those lessons primarily on my own experience, because research studies on the topic are few and far between.

Of course, I still get anxious before I tell someone that he or she is being let go. But with time I have become more adept at this vital and underappreciated task of management, and I want other bosses to do the same. The best leaders are just as good at removing people from jobs for which they're unsuited as they are at putting rising stars into the right positions. It isn't possible to be error-free in hiring—and even if it were, organizations change, roles shift, and you may find that even highly skilled employees can't adapt. Although laying someone off because of a reorganization or a business downturn is different from firing someone for poor performance, many of the tips in this article still apply.

The key to effective, humane firing is to focus on how you treat people during the process. Every situation is different, and no matter what your HR executives or corporate lawyers may tell you, there's no standard script for letting someone go. Too many termination "best practices" are driven by fears of being sued. We must instead treat people with fairness and empathy. Here's how:

1

DON'T WAIT FOR A "FIRING OFFENSE"

Good managers are compassionate, which leads many to procrastinate, repeatedly giving underperformers "one last chance." Some bosses wait for a dramatic event or an ethical breach to clearly justify the firing. Avoid this trap. Building a top team requires constantly assessing the organization and its members—to identify who can grow into a larger role and whose skill development isn't up to par. Document the smaller, quieter moments of underperformance and establish a trend line. Try coaching, training, and other methods to fix the problem. But recognize when someone has become a "net drainer," whose performance and attitude are infecting the rest of the team. When that situation can't be fixed quickly, it's time to act.

In her book *Radical Candor,* Kim Scott, formerly an Apple University faculty member and a manager at Google, lists four lies managers tell themselves to avoid firing people: (1) The person's performance will get better. (2) Having somebody in the role is better than having nobody while we look to fill it. (3) It's smarter to transfer the person to another department than to fire him or her. (4) Firing the person will be bad for morale. "Most managers wait far too long to [fire people] because they have fooled themselves into believing it's unnecessary," Scott writes. My advice is the same: Don't fool yourself—and don't wait.

2

DO BE WILLING TO FIRE FRIENDS OR FAMILY

One reason organizations have anti-nepotism policies is that once you've hired a friend or a relative, it can be challenging to fire him or her. People also routinely develop genuine friendships on the job, and those relationships can complicate a manager's duty to make personnel changes. Nonetheless, there can be no sacred cows. Good leaders separate the personal from the professional. They clearly and frequently communicate to any friends and family members on their teams that they cannot provide protection should those people underperform. And when the time comes, they act as decisively as they would with any other employee.

3

DON'T SURPRISE PEOPLE

This is a mistake we made with David at JetBlue: The board had previously given him glowing reviews and hadn't adequately warned him that we were considering replacing him, so when we did, it came as a shock. Don't make the same mistake. Everyone—from the C-suite to the lower ranks—deserves frequent feedback. This is especially true if people are falling short of goals.

If someone is surprised at being fired, it's a sign that you've failed not in the termination conversation but in your evaluation and review processes. Few dismissals happen over a single event. The vast majority should come only after several discussions between boss and employee and perhaps the implementation of a performance improvement plan (PIP) in which the problem is clearly documented and the underachiever put on notice. In many cases, people put on a PIP will start to look for other jobs, which may make it unnecessary to fire them. Ensuring that you've given detailed critiques over time and offered a PIP is also a good way to head off any threat of a lawsuit. "In my experience," explains Patty McCord, the former chief talent officer at Netflix, "people sue their employers because they think they've been treated unfairly...because they weren't told the truth when they should have been about their performance or their fit." She's right.

4

DO PREPARE AND PRACTICE

Rehearsing for difficult conversations may be the single best way to prepare for them. It may be useful to role-play with an HR person or someone else who can run through a range of reactions to see how you handle each scenario.

But don't underestimate the usefulness of preparing on your own. Before entering a termination discussion, I engage in a series of self-talk exercises designed to reinforce the necessity of the action and put myself in the right mindset. Some of them emphasize the need to act with grace and gravitas. (*"Letting this person go is one of my most important tasks. I will do it with the utmost sensitivity."*) I also remind myself that as a manager, I deserve some of the blame for the person's failure, owing to poor hiring or coaching. (*"This results from my mistakes as well as hers."*) And, to avoid becoming defensive, I focus on the optimal outcome. (*"I want to help this person find a place where he can maximize his potential—a place that better fits his skills, personality, ambitions, and style of working."*)

5

DON'T HAND OFF THE DIRTY WORK

No one likes to fire people. No one likes *being* fired either. (I know this firsthand: It has happened to me.) But the only thing people like less than being fired by the boss is being fired by an HR director or a hired gun. Remember the George Clooney and Anna Kendrick characters in the movie *Up in the Air*? Many companies hand responsibility for firing to outsiders like them instead of to employees' bosses. To me, that is a cold, harsh, and uncaring practice—one I'll never use.

That's not to say you can't have an HR person involved. It's smart to go over a termination conversation with an HR professional ahead of time; he or she has more expertise and experience in this task than most other managers and will be able to offer you good advice. In some situations you might also want that person to accompany you to the termination meeting to serve as a witness and answer technical questions about severance or benefits continuation, about which you may lack knowledge. My preference is to begin the conversation one-on-one; after I've done the hard part, I ask HR to join.

Not doing your own firing is a failure to "clean up after yourself." Eventually the whole organization will pick up on your inability to face tough issues.

6

DO DELIVER THE MESSAGE IMMEDIATELY AND CLEARLY

When you've decided to let someone go, schedule a meeting and deliver the message within the first 30 seconds of sitting down: "We've decided to make a change/terminate your position/replace you." To drag it out—which many managers do out of discomfort at delivering painful news—invites misunderstanding and awkwardness. It also gets in the way of moving promptly to next steps—organizing the departure in a way that is most helpful to the employee and least disruptive to the organization. Throughout the discussion, play it straight: Attempts at humor or displays of emotion or commiseration risk causing offense or misunderstanding. The sooner you deliver the basic message and shift the discussion to severance, benefits, and the transition plan, the better.

7

DON'T OVEREXPLAIN THE DECISION

A termination meeting is a time to communicate a decision—not to debate it, defend it, or negotiate it. It's natural for people being fired to seek more information—to repeatedly ask variants of the question *Why?* You needn't offer an elaborate answer; instead, give a simple explanation for the decision—whether it's due to performance issues, needed cutbacks, or the elimination of roles or functions. If you've done a reasonable job of providing feedback, coaching, and context on the dynamics of your workplace before this conversation, the employee already has sufficient information. But this conversation isn't about rationale; it's about logistics, including announcing the decision internally and externally and explaining severance arrangements. If the person insists on defending himself, avoid the temptation to engage.

8

DO BE HUMAN

Good bosses aren't automatons. They should recognize that employees who are being fired will feel an unpleasant mix of emotions. They should listen patiently to any reactions and carefully calibrate their responses. It's natural to feel sympathy or regret that you're firing someone, but expressing those emotions may encourage an attempt to leverage sympathy and debate the decision. As they deal with their own emotions, bosses must recognize the difference between empathy and compassion (which are useful in this context) and sympathy or sorrow (which can be counterproductive).

Depending on your prior relationship and the context, you might want to follow up once both parties' immediate feelings abate. Offer to set a time and place outside the office to meet and talk about the person's coming job search, potential target companies, people in your network who might help, what you'll say during a reference check—and perhaps your advice on how to be successful in the next position. Be aware, however, that such a meeting may not be feasible. Research has shown that people tend to develop negative feelings toward those who communicate bad news, even when it's done with consideration and kindness. That said, I've usually been able to maintain friendly to neutral relationships with people I've fired.

Managers should also realize that even though the formal employment relationship is ending, the departing employee probably has many personal relationships with coworkers. If those people believe you haven't dealt fairly or courteously with the person being let go, morale and engagement are likely to suffer. Failing to treat a fired employee graciously can also come back to hurt the business: Some industries are small, and the person you're firing today may work for a customer or a supplier tomorrow.

> A termination meeting is a time to communicate a decision—not to debate it, defend it, or negotiate it.

Particularly in knowledge-intensive industries, relationships with ex-employees are valuable, which is why many organizations maintain "alumni associations" made up not only of those who moved on voluntarily but also those who weren't given an opportunity to stay.

9

DON'T SHIFT THE BLAME

Another common mistake people make when firing an employee is to imply that "the devil made me do it" or "I'm just the messenger." In this scenario, the manager blames the decision on someone else—the board or some higher-level executive—and seeks to avoid incurring the terminated employee's anger. That is a cop-out. Most firing decisions are made with at least some collaboration; at the CEO level it's always a collective decision by the board. But even in those cases, the one communicating the decision should feel and express personal responsibility for it—and not pass the buck.

10

DO BE GENEROUS

It is usually wise for the organization to offer a generous severance package—and bosses should use their influence to get the best one possible. You are buying peace (because someone who accepts a severance package waives the right to litigate), assuaging some of the guilt you may feel, and giving the terminated employee a fair chance to start over. Although the specifics may vary according to the position being left, a good package should contain (a) financial severance, (b) professional outplacement assistance, (c) specific information about compensation for vacation pay and other earned benefits, (d) specific information on continuing health insurance, (e) a plan for providing references, (f) an agreed-upon internal and external communication plan (ideally, one that allows for a resignation rather than an official firing), and (g) the signing of a legal release.

The benefits of being generous include not only saving on potential legal fees but also reducing internal strife, since other employees upset about the firing will find news of the nice exit package reassuring. In general, severance should accord with the employee's tenure. But as you make this judgment, recognize that when a newcomer fails to perform, some of the blame falls on the hiring manager; that should make the company more willing to cover some of the terminated individual's financial losses.

FIRING SOMEONE IS never a pleasant experience. You needn't learn to enjoy it—only sadists do. You needn't even get to the point where it doesn't cause anxiety. But if you want to be an effective leader over the long term, you must become able to do it well.

HBR Reprint R2002L

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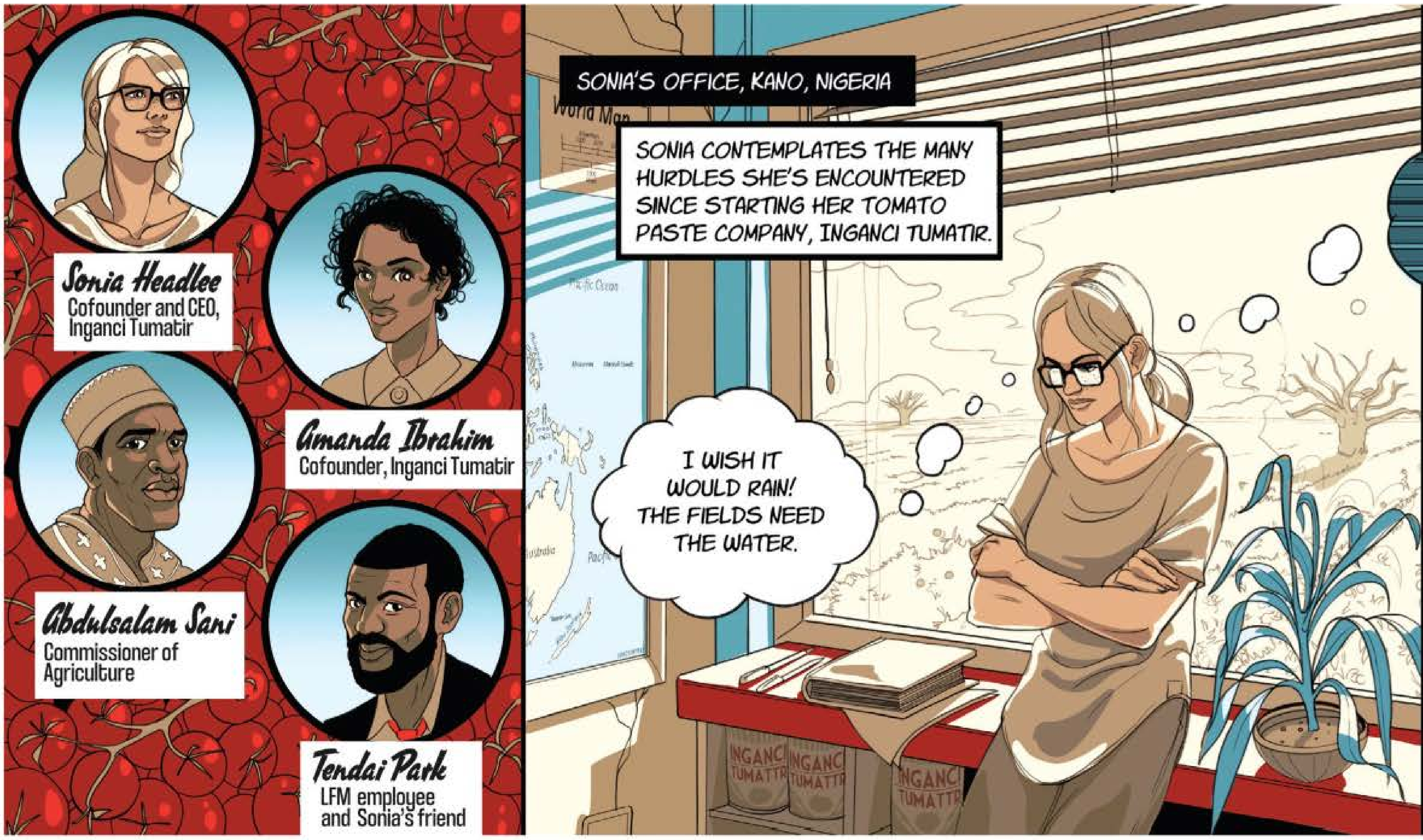


CASE STUDY
Pursue Your Dream or Move On?

by Sophus A. Reinert

HBR's fictionalized case studies present problems faced by leaders in real companies and offer solutions from experts. This one is based on the HBS case study "Kickstarting Tomato Jos in Nigeria" (case no. 718027-PDF-ENG), by Sophus A. Reinert and Risa Kavalercik, which is available at ***HBR.org****.*

THE SUN GLEAMED through the window of Sonia Headlee's office in the rural region of Kano, Nigeria. She tried to appreciate the blue sky, but she was desperate for the rainy season to begin. Her fields needed the water. This was just one of the hurdles she'd encountered since starting Inganci Tumatir three years earlier.

There had been successes too: She and her cofounder, Amanda Ibrahim, had bought land for a small farm, selected a processing factory, and completed their first run of Inganci's signature product: Nigerian-made tomato paste from locally grown fruit. But they had yet to make a sale under their own label. The company name had been misspelled on their packaging, giving them no choice but to sell their paste to a competitor.

Amanda had left the company a few months earlier to join a London-based consulting firm. That had always been the plan—but Sonia missed working with her, especially now.

The two liked to joke that Inganci was born in the parking lot of a grocery store. In two years as section mates at business school, they'd gotten into the habit of going food shopping together. One Saturday they were talking about economic development in West Africa. Sonia had joined the Peace Corps in Liberia after college, and Amanda was half Nigerian, although she'd lived all over the world because her Nigerian father and Swedish mother worked for the UN. Both women were excited about a West Africa market-sizing project they'd been assigned.1

Illustrations by RYAN GARCIA

Sonia remembered the conversation vividly.

"There are almost 1.5 million smallholder tomato growers in rural Nigeria, and most barely break even," she'd told Amanda.

"Why?" her friend asked.

"Seasonality that leads to price volatility and market glut. Insect infestation.[2] Competition from China-subsidized exporters. Greedy middlemen. Underinvestment in human capital."[3]

"Sounds like a perfect storm," Amanda said.

"Or a perfect opportunity."

Sonia then shared her idea for a tomato paste company that would control the whole value chain of its product, from seedling to sachet—all based in Nigeria. Amanda was immediately on board. If they could show that a Nigerian company could reduce postharvest loss and increase farmers' yields, they could reduce what they calculated was a $900 million production gap in tomatoes.[4] They wrote a business plan, found investors in the United States and Nigeria, and moved to Kano after graduation.

They had anticipated difficulties, of course, but Sonia hadn't been fully prepared for just how hard it would be. Nigeria ranked 131st of 189 in overall "ease of doing business," according to the World Bank. There were infrastructure-related problems too: roads that had been poorly constructed and were even more poorly maintained; unpredictable spurts of power from the grid, which had to be supplemented with generators; and a lack of centralized waterworks. They also had to contend with the government's rigid protocols and antiquated paper trail systems, second-guess every transaction with vendors and sometimes even their own employees—who were always looking to make a few extra naira—and navigate a mixed local reception to their idea.

Closing the shades in her office now, Sonia thought about her new plan to farm corn as a cover crop in the rainy months. It was hard to imagine mustering the energy to get through another season, but she wasn't ready to give up.

"All start-ups face obstacles," she said out loud. She'd been giving herself a lot of pep talks lately. "Especially ones in emerging markets."

She wanted to see her vision for Inganci—and for transforming a piece of Nigeria's food industry—through. But was that foolhardy? She had alternatives, including a lucrative offer for an analyst job at LFM Capital, a Nairobi-based investment group focused on funding small businesses across several African countries. Could she have the same—or even a greater—impact from inside a firm like that? Or was she considering it only because it offered a way out of her current difficulties?

She shook her head to banish those thoughts. She could ponder her future later. Right now she had work to do.

"WE NEED MORE LIKE YOU"

The following day Sonia met with Abdulsalam Sani, the commissioner of agriculture in Kano. He'd been a supporter ever since Amanda and Sonia had first visited the region to inquire about buying farmland. Today he welcomed Sonia into his office with a vigorous handshake.

"I hope you haven't been scared off by the label issue," he said. "These things happen."

Sonia wasn't sure how much he knew about the debacle, but she was familiar with how fast word traveled in the small region.

"It was a setback," she replied. "But we're already preparing for next season."

"And you'll plant corn for the rainy months, yes?"

She nodded. He'd heard a lot.

"I want to know how we can support your work," he said. He smiled. "That's why I asked you here. We need more people like you—more Sonias in Nigeria."

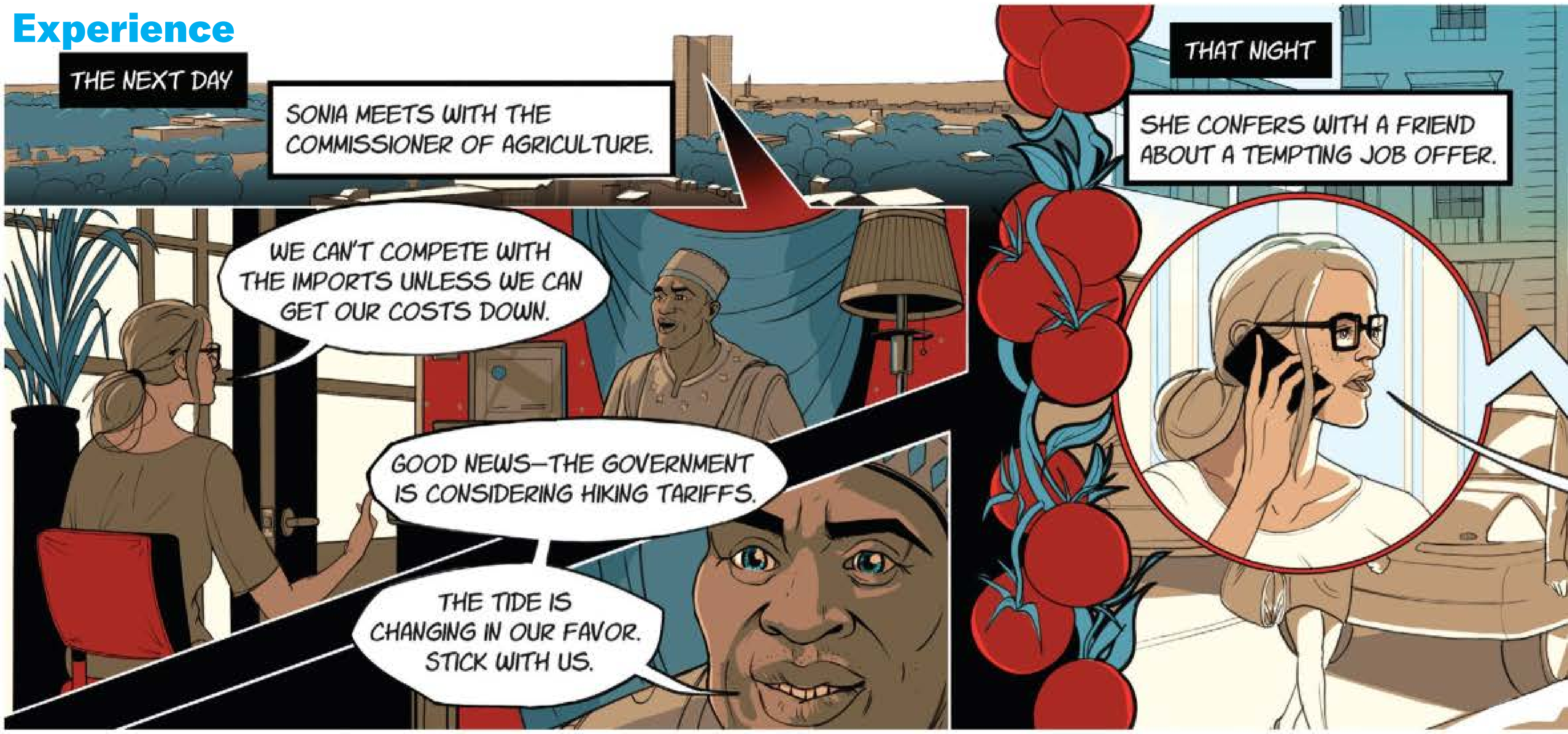
Case Study Classroom Notes

1. *Nigeria is frequently grouped with Brazil, Russia, India, China, and South Africa in the so-called BRINCS economies.*

2. *In the spring of 2016 Kaduna State declared a state of emergency after moths destroyed many tomato fields. Farmers dubbed the outbreak "tomato Ebola."*

3. *With more than 90 million citizens living in poverty, Nigeria has one of the world's highest poverty rates.*

4. *Nigeria is the second-largest producer of tomatoes in Africa and the largest importer of tomato paste in the world.*



5. Is Sonia the right person to run this company? Would it be better to pass it on to a Nigerian?

6. Would a tariff on imports help? Or would it lead to price hikes that could make Nigerians unable to afford tomato paste—a staple in their diet?

7. The cost of transporting some products within Nigeria is reportedly higher than that of shipping them from the United States or China.

His attitude was a welcome contrast to that of some other Nigerians, who seemed suspicious of a white American woman who wanted to do business in Africa.[5] Those people would be happy if she shut down Inganci, left town, and went to LFM, she mused.

"So tell me, Sonia: How can I help?" The question brought her back to the conversation at hand.

"You know as well as I do that there are major hurdles: logistical, political, cultural—" she began.

"Welcome to doing business in Nigeria!" the commissioner interjected.

"The issue I'm most concerned about is pricing, especially given how low the importers have gone. Unless we can get our costs down, we won't be able to compete."

"I have good news. I heard that the government is considering hiking tariffs on key foods by up to 50% to help domestic producers compete with Chinese imports."[6]

"That would help, though it could go even further."

"I agree. Apparently the president was heard at a cabinet meeting calling for a total ban on tomato paste importation to encourage local manufacture and protect the health of Nigerians."

This was indeed positive news, but it was just one piece of the puzzle. The informal "taxes" levied on companies by a seemingly endless string of local, state, and federal organizations, along with the extremely high cost of moving goods within the country, made operational expenses much higher than they needed to be.[7] For Inganci to succeed, either the government would have to reduce all that bureaucracy or the margins on the product would have to dramatically increase. Sonia often wondered whether the company would ever do as well as she and Amanda had predicted in their spreadsheets.

Looking the commissioner in the eye, she had to believe that it would. He clearly did.

"The tide is changing in our favor, Sonia. Stick with us."[8]

THE BIG GUNS

"Congrats on the offer!"

Sonia had called one of her business school friends, Tendai Park, for advice. Tendai had been working at LFM Capital since graduation. For the past year he'd been urging Sonia to consider the firm; he had even helped lay the groundwork for the offer she'd received. She was relieved to have an insider's take on the company.

"Time to join the big guns," Tendai joked. LFM was becoming well-known across the region; backed by several prominent impact investors, it had the resources to make a big difference for many African entrepreneurs. Sonia had been offered other

chances to pursue a path beyond Inganci. She'd been approached about growing tomatoes for a large factory and courted to run the tomato paste brand of a multinational. Some investors had suggested she join forces with a large Nigerian incumbent to grow her production capacity more quickly, while local officials had advised her to engage only in processing, which would gain her big tax advantages. She'd declined those opportunities, but the offer from LFM had her thinking twice.

"Yes, it's tempting," she said. "They told me I'd need to relocate to Nairobi, but I could continue working in Nigeria and focus on the food sector across markets."

"You'd close Inganci, though?"

"Yes, I think I'd have to."

"But you'd be funding so many more start-ups. We missed out on investing in you, I know, but now we have all this money to put to work. Don't you want to be part of that?" Sonia had suspected Tendai would push her to accept the offer, but she'd thought he would be a little more subtle. "Think about it. You'd have guaranteed financial security, a much nicer lifestyle, even a chance to get back to the States once in a while—and a position from which to influence African agriculture on a grander scale."[9]

"But I wouldn't be an on-the-ground entrepreneur anymore. I'd be answering to higher-ups."

"I get that. LFM is a good place to work, though, and I'm not sure that our bosses here are any more difficult to deal with than Nigerian bureaucrats. There's always some degree of selling out. Your vision all along was to encourage food security and economic development. You'll have a much bigger impact if you do that with LFM's cash and influence. Our leaders meet regularly with Nigerian, Ghanaian, and Kenyan policy makers. You could have a seat at those tables."

"I wanted to achieve that by building Inganci to the point where I could leave it for greener pastures. We're not there yet."[10]

"Will you ever get there?" Tendai asked, not unkindly. "You've said it yourself. Can any domestic producer truly compete with the Chinese importers? And if they can supply Nigeria with cheap tomato paste, is the average citizen really better off with more-expensive local products?"

"Theirs isn't homegrown," she said. "Nigerians deserve quality—and to benefit from the production of the food they eat."

"You don't have to be a martyr, Sonia. I know your investors and supporters have had your back, but they'll understand your decision. You have to ask yourself: Am I the right person to take on this challenge? And is Inganci the right organization?"

8. *About 23% of sub-Saharan Africa's GDP comes from agriculture, and experts believe that much of the continent's agricultural potential is still untapped.*

9. *Over the past decade the production of fresh tomatoes in Nigeria has grown by 25%, from an estimated 1.8 million tons to 2.3 million tons.*

10. *What criteria should founders use to decide if or when it's time to close their businesses?*

"WILL YOU BE DISAPPOINTED?"

After hanging up, Sonia switched to WhatsApp's text function.

Sonia: You up?

Amanda: Of course; it's only 10. What's going on?

Sonia: Just talked with Tendai. He thinks I should go to LFM.

Amanda: Misery loves company?

Sonia: No, he seems really happy there. And thinks I would be too. Will you be disappointed if I pull the plug?

Amanda: A little, of course. But I'd understand. It would be a relief in some ways. For you, I mean.

Sonia: I'm just not sure I could live with myself.

Amanda: Well, I sold out, and I haven't been struck down by lightning, so don't worry too much. :)

Sonia: :) You're doing important work, just in a different way, and that was always your plan. Mine was to see this through.

Amanda: Plans change. But FWIW it doesn't sound like you're dying to go to LFM.

Sonia: Maybe I'm just not letting myself get excited about it. The firm might have a bigger impact. But I'm torn.

Amanda: Do you have to decide tonight?

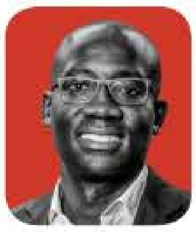
Sonia: No.

Amanda: Then get some sleep. Tomatoes don't grow themselves.

SOPHUS A. REINERT *is a professor of business administration at Harvard Business School.*

Should Sonia accept the offer from LFM Capital or stick with her vision for Inganci?

THE EXPERTS RESPOND



ACHA LEKE *is the chair of McKinsey & Company's Africa practice and a coauthor of* Africa's Business Revolution.

Although I admire and respect Sonia's entrepreneurial ambitions, I would urge her to seriously consider the offer from LFM.

Sonia needs to do some deep thinking about why she wanted to start Inganci Tumatir. Is her dream to start and run her own business? To help smallholders? To transform agriculture in Nigeria? A job at LFM could pave the way for her to achieve all those things.

As someone still early in her career, Sonia could benefit from the training and development she'd get in a large, established company like LFM. She would not only learn effective investment, problem-solving, people management, and business-building processes but also gain exposure to a variety of industries and countries in Africa and a huge network of investors, operators, and government officials. The experience would give her new—and maybe better—ideas about opportunities in Africa and probably make her a better entrepreneur should she want to start another venture in a few years.

It sounds as though LFM's mission aligns with hers: to help small-business owners. At the investment firm she could do that on a much larger scale and with structure, support, and guaranteed financing. And she might still be able to focus on Nigeria or agriculture or both.

On the personal side, I think she would feel less isolated. She'd be surrounded by like-minded peers and based in Nairobi, which offers a vibrant community of locals and expats. Plus she'd be earning a good income instead of constantly raising funds from investors while making very little herself.

This might not be an either/or decision. Pulling the plug on Inganci is just one option should Sonia go to LFM. Another is putting the start-up on hold and relaunching it in a few years. Sonia could also hire someone to run Inganci in her stead. She could provide strategic guidance as an adviser or a board member—and, with her LFM salary, possibly lend financial support—but not handle the day-to-day operations.

That's the model I've followed. I joined McKinsey right out of graduate school. I've been at the firm for 20 years, and I've launched, advised, and funded a number of start-ups on the side. This means I'm not only consulting to clients but also helping to grow institutions that could transform the continent. The key is finding the right partners: people who will commit to leading those institutions on a daily basis and who understand the local dynamics. Those partners also need operational skills they don't teach in business school—skills Sonia is just beginning to pick up.

My advice to Sonia: Reflect on the purpose of your life, and then figure out whether LFM can help you achieve it faster and more effectively than Inganci can.

MIRA MEHTA *is a cofounder and the CEO of Tomato Jos.*

If building a successful agricultural business in Nigeria is Sonia's dream, she should pursue it.

I know exactly what she's going through, because her story is based on mine. I started my tomato paste company in 2014. I thought I'd be running a large, profitable organization by now, but everything has taken twice as long as I expected. We now aim to launch our product in 2021—seven years after I started! It's been a long and challenging journey. But if we can get a homegrown and -made product onto the shelves and into the hands of consumers ahead of our competitors, who are far better resourced, I'll feel an immense sense of accomplishment.

I'd counsel Sonia to stick with Inganci for a few reasons. First, she seems to have a passion for entrepreneurship in general and this venture in particular. She believes in the business and her ability to run it. It's her baby, and she's clearly not ready to leave it.

Second, the best time for her to manage this kind of start-up is now. She's single, and there's no mention of college debt, so her financial constraints seem minimal. Her friends might be living lavish lifestyles in the United States, Europe, and elsewhere in Africa, but when else will she be able to live in Kano and build something from the ground up? The LFM job, and others like it, will probably still be there in a few years. Maybe then, after having proved her start-up mettle, Sonia will be offered a VP or director position instead of coming in as an analyst.

Third, I think the best kind of learning happens on the ground. There will be mistakes and setbacks, of course, but those teach you resilience. And as a start-up CEO, you gain invaluable real-world experience. It's a lot harder to learn how to be a hands-on manager while working at an investment firm.

Fourth, the psychological rewards of running a small business are huge. I came to Nigeria to create greater economic opportunity for its citizens, and nothing inspires me more than seeing my staff members develop their skills and watching our farming partners learn techniques and strategies that will help them commercialize other crops. I'm not sure Sonia will feel that same high writing checks from Nairobi.

Assuming that Sonia decides to press on with Inganci, she can do a few things to increase her chances of success and enhance her well-being. These include continually reviewing her business plan to ensure its viability, hiring a strong local team to whom she can delegate some tasks (thereby avoiding decision fatigue), and—although this is easier said than done—controlling her entire supply chain, from farm to factory to distribution. She should recognize that progress may come more slowly than she'd like, and should take more time to recharge and connect with friends so that she feels less lonely and stressed.

They say that every start-up is a failure until it succeeds, and because you never know when success will come, you just have to keep pushing. If I'd realized at the outset that I'd spend the first two years living in a converted chicken coop with no electricity while taking no salary, and that it would be seven years before we had a product to sell, I might not have had the courage to launch. But now that I'm in, I'd never give it up. Sonia is in too. She loves it, and she should stay.

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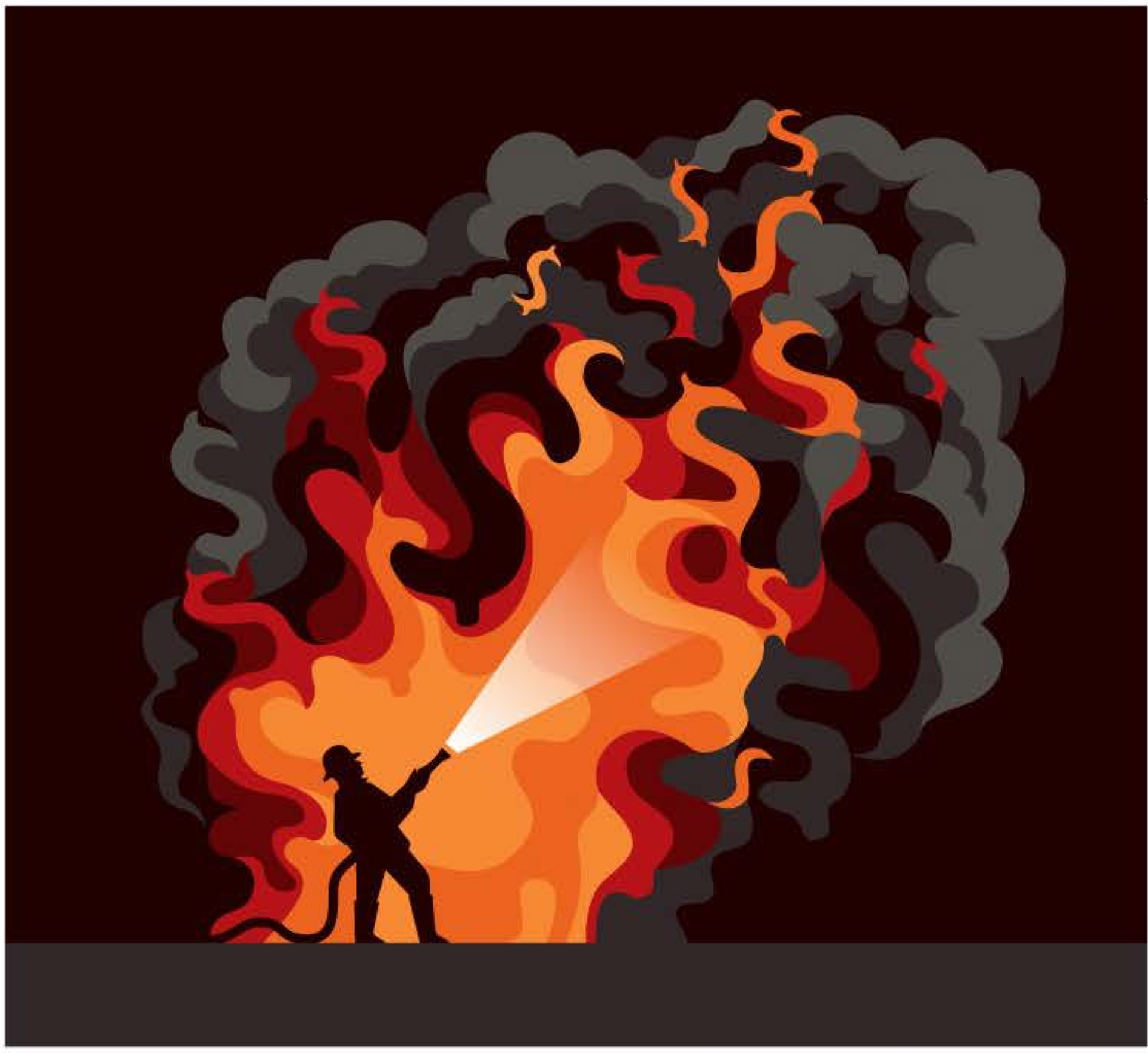


ONE LAST CHANCE TO FIX CAPITALISM

To avert upheaval we need policy change and private-sector leadership.

by Scott LaPierre

ROUGHLY TWO-THIRDS of the way through ***Reimagining Capitalism in a World on Fire,*** Rebecca Henderson's prescription for reversing some of the damage business has done in the past half-century, the Harvard Business School professor rates the chances that environmentally iffy industries might effectively self-regulate. "This is a story of hope followed by despair," she says, "followed by the glimmerings of renewed hope."

That pretty much sums up the sweep of emotion I felt recently as I curled up with some sobering, often damning nonfiction on the current state of capitalism and finance. In my head, the working title of this article went from the chirpy "Fixing Capitalism" to the slightly panicked "Can Capitalism Be Fixed?" to the downright baroque "Capitalism Sure as Heck Better Fix Itself, Because No One Else Can, So Here Are Some Last-Ditch Ideas."

For anyone still unsure that big, important things are now broken, several new titles paint a convincing portrait of grossly unsustainable inequality, corrupt political processes, and a looming crisis—much of it stemming from a financial system that for 40 years or so has prioritized short-term profit over all else and systematically removed any checks on its own worst impulses in pursuit of that goal.

How Money Became Dangerous reminds us that the financial sector was once a quaint service industry, humbly facilitating the greater economy's stability and growth. The banker Christopher Varelas, who began a long career at Salomon Brothers as a summer intern in 1989, takes us on an autobiographical, picaresque tour of modern finance's original sins (written with Dan Stone), showing, for example, how the shift from private partnerships to public corporations irresistibly tempted banks to make bigger and bigger bets with what was now other people's money. "Should we be expected to be good," Varelas asks early on, "if no longer constrained by the threat of losing one's own capital?" His answer is yes, but he

Illustration by HARRY HAYSOM

and his fellow bankers wrestle with exactly how to be good in a system that incentivizes greed.

After all, in less-scrupulous hands this dynamic has led directly, if unsurprisingly, to some very bad behavior. In ***Sabotage: The Hidden Nature of Finance,*** the political economists Anastasia Nesvetailova and Ronen Palan of City, University of London point out that a truly efficient, fair, and competitive market would provide little opportunity for profits beyond operating costs; therefore companies—or, more precisely, their leaders—strive to win by bending, breaking, or changing the rules. These authors offer some delectably vile case studies, from the Royal Bank of Scotland's swindling of its own customers to Bear Stearns's demise at the hands of unethical rivals, to illustrate the point: "[I]f you want to make money—real money—in finance, you need to find ways of sabotaging either your clients, your competitors or the government." The highest achievers here manage to sabotage all three of them at once.

To return to Varelas's adjective, this type of market manipulation is dangerous, and most immediately so to the people it exploits. While those at the very top of the finance superstructure have enjoyed huge gains, inordinate amounts of risk and loss have been offloaded onto middle- and lower-class workers.

High-interest credit cards, mortgages, and car loans are the least-exotic examples of how finance, in the words of the sociologists Ken-Hou Lin and Megan Tobias Neely, "nips income away from consumers and revenue away from the producers and merchants." In ***Divested: Inequality in the Age of Finance,*** Lin and Neely argue that today "the sole purpose of money is to make more money," as opposed to creating something of value. Meanwhile, "spider webs" of personal debt have replaced the social safety net, leaving a great many of us in a more-precarious financial position. Outsize profits, salaries, and bonuses "are not driven by this sector's contributions to the economy," the authors add, "but by the concentration of market power, political entanglement, and the private intermediation of public policies." So the average consumers of financial products are, in effect, paying a lot more for a lot less—the exact opposite of what free markets are thought to deliver.

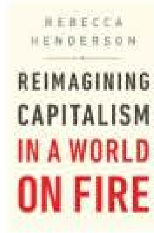
The overall picture that emerges is one in which wealth is being redistributed—from the poor and the middle class to corporations and the superrich, who use the spoils to further cement their advantage. Historically, this process has not reversed on its own. Looking to the past for guidance, we can find good news and bad news. The good news: Throughout history, inequality and economic dysfunction have swelled to crisis points, and we've usually managed to reform. The bad news: That has generally happened after a violent rupture.

In ***Capital and Ideology,*** Thomas Piketty's magisterial survey of the central role that ideas and discourse have played in alternately justifying and questioning societies' inequities, we are reminded that political uprisings, financial collapses, and wars—think the French Revolution, the Great Depression, and World War II—are what drive change. To address extreme inequality, Piketty says, "societies need institutions capable of periodically redefining and redistributing property rights." If those are lacking, or fail, it "only increases the likelihood of more violent but less effective remedies."

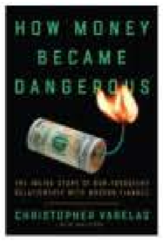
So, about those glimmerings of renewed hope? All the economists and historians mentioned here agree that the single most important step is re-empowering governments, though they diverge on whether that means more-effective regulation, progressive taxation, wealth taxes, or other measures. "In a nutshell, markets require adult supervision," Henderson writes.

But unless political paralysis and regulatory capture somehow magically disappear, it will be up to future-minded business leaders to start putting out the inferno. Henderson offers inspiring case studies (counterpoints to those in *Sabotage*) of purpose-driven executives who manage to create value for multiple stakeholders (including, yes, shareholders) without rapacious extraction, exploitation, or environmental damage.

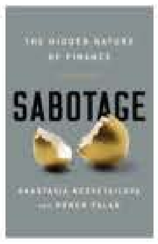
And this is the heart of her fix for capitalism. She wants managers to have better tools for measuring businesses' true (too often hidden) costs and more-nuanced, inclusive metrics for describing success. The message is clear: It will take good, determined individuals to force the system to recalibrate before an upheaval. Private-sector leaders—especially those who have profited from the market's decades of inefficient value creation and wealth distribution—should be leading the charge.



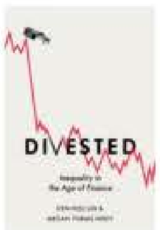
Reimagining Capitalism in a World on Fire
Rebecca Henderson
PublicAffairs, 2020



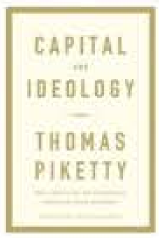
How Money Became Dangerous
Christopher Varelas and Dan Stone
Ecco, 2019



Sabotage
Anastasia Nesvetailova and Ronen Palan
PublicAffairs, 2020



Divested
Ken-Hou Lin and Megan Tobias Neely
Oxford, 2020



Capital and Ideology
Thomas Piketty
Harvard, 2020

How Money Became Dangerous: Ecco

SCOTT LAPIERRE *is a senior editor at HBR.*

Executive Summaries March–April 2020

SPOTLIGHT

THE COMPLETE SPOTLIGHT PACKAGE IS AVAILABLE IN A SINGLE REPRINT.
HBR Reprint R2002B

Productive Innovation

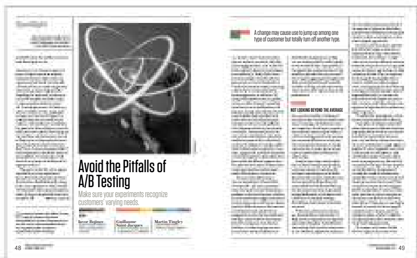
In today's digital world, more and more companies are turning to experiments to discover ways to create or improve online experiences. In this issue HBR looks at what it takes to develop the capacity to do large-scale testing and use it to lift firm performance. | page 39

Building a Culture of Experimentation

Stefan Thomke | page 40

Online experiments can be a game changer when it comes to marketing and innovation. By running some 25,000 tests a year, for instance, Booking.com has transformed itself from a small start-up to the world's largest accommodation platform. Today scaling up an organization's experimentation capabilities is critical, but many firms struggle to do it—not because of technology but because of culture.

To break down cultural barriers, companies need to create an environment where curiosity is nurtured, data trumps opinions, any employee can launch tests, all experiments are ethical, and a new more-democratic model of leadership prevails. Ultimately, executives have to be able to confront the possibility that they are wrong daily and willing to give their people greater autonomy.



Avoid the Pitfalls of A/B Testing

Iavor Bojinov, Guillaume Saint-Jacques, and Martin Tingley | page 48

Online experiments measuring whether "A," usually the current approach, is inferior to "B," a proposed improvement, have become integral to the product-development cycle, especially at digital enterprises. But often firms make serious mistakes in conducting these tests: They focus on the average, instead of looking at how a change impacts different customer segments. They forget that customers are connected and that their interactions can affect test outcomes. And they run tests for too short a period, failing to recognize that customers' reactions can change over time. This article describes how to avoid all those traps by applying techniques that LinkedIn and Netflix have used to produce better insights.

"The Power of These Techniques Is Only Getting Stronger"

A conversation with Pinterest's Jeremy King | page 54

Jeremy King has spent much of the past three decades helping firms such as eBay, Walmart, and his current employer, Pinterest, use experimentation and data to improve decision-making. In this article he shares what he's learned about the need to balance precision with serendipity, how to promote "data democracy," and the importance of investing in the right training for employees.

HOW I DID IT

Tilray's CEO on Becoming the First Mover in a Controversial Industry

Brendan Kennedy | page 33

The author was working at a Silicon Valley bank in 2010 when some entrepreneurs pitched him on a "medical-cannabis technology company." He didn't know what to make of it, because he'd never considered cannabis to be a legitimate industry. But he and two friends began researching the issue. They recognized nascent signs that marijuana legalization—first for medical use, and then for recreational use—seemed likely to spread.

Kennedy and his cofounders did extensive on-the-ground research in the hills of northern California and southern Oregon, the fields of Colorado and Washington, and the barns of British Columbia. They went to Jamaica, to Israel, and to Amsterdam. Slowly they created an investment thesis and worked to raise money.

Then, in 2013, the government of Canada reached out to them for help creating a competitive private-sector supply chain. In response, the three incorporated Tilray, applied for a license, bought land, and built a cultivation facility. By April 2014 they were a licensed producer of medical cannabis products in Canada.

Today they spend a lot of time with policy makers, regulators, and doctors around the world, demonstrating why cannabis should be mainstream medicine. Tilray currently exports to 13 countries.

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MANAGING YOURSELF

Firing with Compassion

Joel Peterson | page 135

The author, chairman of JetBlue and an adjunct professor at Stanford, has fired plenty of people during his long career—and he's been fired himself. In this article he outlines an empathetic approach in which the manager recognizes that he or she played a role in the employee's failure to perform—and that this difficult conversation, which should not be outsourced to the HR department, is something a manager should strive to handle well. The person you're firing today could become a key contact at a supplier or a client tomorrow.

Peterson offers specific steps—and mistakes to avoid—to help this tricky process go as smoothly as possible:

- Don't wait for a "firing offense."
- Do be willing to fire friends or family.
- Don't surprise people.
- Do prepare and practice.
- Don't hand off the dirty work.
- Do deliver the message immediately and clearly.
- Don't overexplain the decision.
- Do be human.
- Don't shift the blame.
- Do be generous.

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Features

ORGANIZATIONAL CULTURE

What's Really Holding Women Back?

Robin J. Ely and Irene Padavic
page 58

Ask people to explain why women remain so dramatically underrepresented in the senior ranks of most companies, and you will hear from the vast majority a lament that goes something like this: High-level jobs require extremely long hours, women's devotion to family makes it impossible to put in those hours, and so their careers inevitably suffer.

Not so, say the authors, who spent 18 months working with a global consulting firm that wanted to know why it had so few women in positions of power. Although virtually every employee the authors interviewed related a form of the standard explanation, the firm's data told a different story. Women weren't being held back because of trouble balancing work and family; men, too, suffered from that problem and nevertheless advanced. Women were held back because they were encouraged to take accommodations, such as going part-time and shifting to internally facing roles, which derailed their careers.

The real culprit in women's stalled advancement, the authors conclude, is a general culture of overwork that hurts both sexes and locks gender equality in place. To solve this problem, they argue, we must reconsider what we're willing to allow the workplace to demand of all employees.

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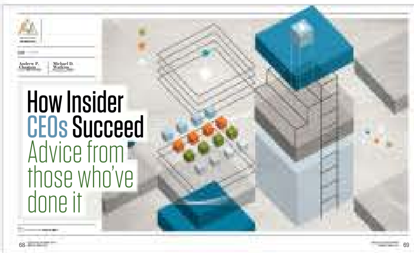
LEADERSHIP



How Insider CEOs Succeed

Andrew P. Chastain and Michael D. Watkins | page 68

CEOs who are hired from outside the company tend to get far more attention, not to mention support with the transition to their new role, than CEOs promoted from the inside do. Leaders who come from within the firm, it's assumed, already know the organization, its strategy, and its management, so they should adjust easily to their new roles. But in reality, they face hurdles that are just as big, albeit different, from the ones outsider CEOs face.

In their research and consulting work, the authors have identified insiders' five key challenges: operating in the shadow of their own past; making early decisions that surprise and disappoint supporters; overseeing former peers; pacing change; and managing the outgoing CEO. In this article, they draw on interviews with dozens of internally promoted executives to provide advice for navigating each of those issues. The result is a primer for leaders who step into the top job from within; the management teams, boards, and HR and communication departments that want to offer support; and even leaders lower down in the hierarchy who are dealing with succession issues.

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MARKETING

Pricing Policies That Protect Your Brand

Ayelet Israeli and Eugene F. Zelek Jr. | page 76

When customers seek out online deals, it seems like a win for everybody: Brands, retailers, dealers, and distributors sell more goods, and buyers get a bargain. What's not to like?

Here's the problem: Lured by rock-bottom online prices, customers often end up dealing with disreputable digital resellers that mistreat them, which can erode brand equity and undermine authorized sellers.

For brands selling in the United States and Canada, there is a potent countermeasure: crafting and enforcing pricing policies that discourage anyone from advertising or selling a firm's products at an unauthorized discount.

This article lays out the four steps essential to designing and enforcing policies with teeth that stay on the right side of antitrust law.

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OPERATIONS

A More Sustainable Supply Chain

Verónica H. Villena and Dennis A. Gioia | page 84

Increasingly, multinational corporations (MNCs) are pledging to procure the materials and services they need from companies committed to fair labor practices and environmental protections. But the reality is that their suppliers—especially those at low levels of the chain—often violate sustainability standards, exposing MNCs to serious financial and social risks.

To explore this problem—and identify solutions—the authors studied the supply networks of three MNCs deemed to be sustainability leaders. These companies engage in behaviors that are worth emulating; for example, they have established long-term sustainability goals, and they try to cascade good practices all the way down to lower-tier suppliers, using a combination of direct, indirect, industrywide, and global strategies. But all MNCs have more work to do to develop sustainable supply networks. They must emphasize social and environmental responsibility, along with economic considerations, at every level of the supply chain. They must give their procurement officers better training and incentives to pursue supplier sustainability. And to encourage widespread dissemination of best practices, they need more direct contact with the procurement people at their first-tier suppliers.

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LEADERSHIP

Becoming a Better Corporate Citizen

Indra K. Nooyi and Vijay Govindarajan | page 94

PepsiCo is among the few global, established companies that have delivered superior financial performance while meeting the needs of all stakeholders. It has always invested for the long term and delivered results in the short term. The layer that author Indra Nooyi added, first as SVP for corporate strategy and then as CEO, was a focus on sustainability—defined here as satisfying multiple stakeholder interests to ensure the long-term viability of a company.

Called Performance with Purpose (PwP), it is based on four pillars: delivering superior financial returns (financial sustainability); transforming the product portfolio by making more-healthful, more-nutritious foods and beverages while reducing the sugar, salt, and fat in PepsiCo products (human sustainability); limiting environmental impact by conserving water and reducing the company's carbon footprint and plastic waste (environmental sustainability); and lifting people up by offering new types of support to women and families inside the company and in the communities it serves (talent sustainability).

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RISK MANAGEMENT

Your Company Is Too Risk-Averse

Dan Lovallo, Tim Koller, Robert Uhlaner, and Daniel Kahneman | page 104

In theory, companies create value for stakeholders by making risky investments. In practice, however, managers in large corporations routinely quash risky ideas in favor of marginal improvements, cost-cutting, and "safe" investments.

Why are managers in large, hierarchical organizations so risk-averse? Corporate incentives and control processes actively discourage managers from taking risks. Whereas CEOs consider each investment in the context of a greater portfolio, managers essentially bet their careers on every investment they make—even if outcomes are negligible to the corporation as a whole.

This article explains how loss aversion works, presents an analysis of just how much value manager attitudes toward investment risk leave on the table, and offers suggestions for changes in practices and systems.

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HUMAN RESOURCES

Creating a Trans-Inclusive Workplace

Christian N. Thoroughgood, Katina B. Sawyer, and Jennica R. Webster | page 114

Trans people often experience stigma and discrimination, hostility from others, and pressure to "manage" their identities in social settings, including the workplace. These experiences can set in motion a host of psychological responses that have devastating consequences for trans individuals' job satisfaction, turnover intentions, and emotional well-being.

Despite growing public awareness of the struggles that trans individuals often face, many employers remain ill-equipped to create policies and workplace cultures that support their trans employees. Fortunately, a growing body of research suggests how they can more effectively attract, retain, and promote the health and success of these workers. Interviews with and surveys of more than 1,000 trans people over the past six years reveal four key areas of intervention that can cultivate a more trans-inclusive workplace: (1) basic signs of trans inclusivity involving bathroom use, dress codes, and pronouns; (2) effective support for gender transitions; (3) trans-specific diversity trainings; and (4) interventions to build resiliency.

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ENTREPRENEURSHIP

Beyond Silicon Valley: How Start-Ups Succeed in Unlikely Places

Alex Lazarow | page 126

Technology start-ups typically become successful by using injections of capital to grow as rapidly as possible and tolerating high risk in a rush for market domination.

Entrepreneurs far from superstar innovation cities demonstrate that start-ups can achieve outsize success by following a different path.

Frontier start-ups take a more balanced approach to growth, build resiliency into their models, and take a long-term outlook. In emerging markets, they are more likely to tackle fundamental societal challenges and to invest in their workforce.

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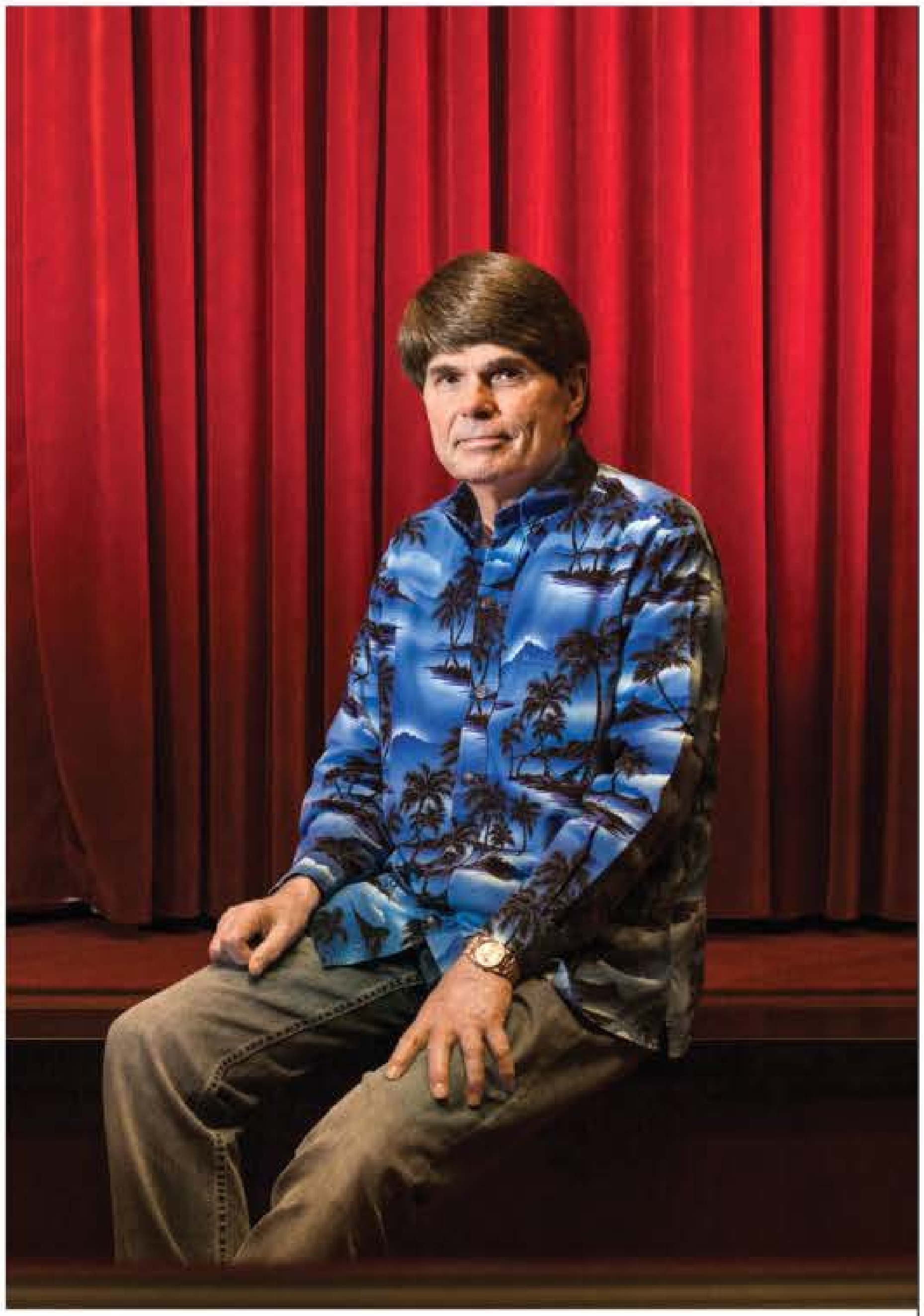
Printed in the U.S.A. *Harvard Business Review* (ISSN 0017-8012; USPS 0236-520), published every other month for professional managers, is an education program of Harvard Business School, Harvard University; Nitin Nohria, dean.

Published by Harvard Business School Publishing Corporation, 60 Harvard Way, Boston, MA 02163.

> "If something comes out in a paragraph that is just what I wanted to say, just the way I wanted to say it, and I think it will resonate with readers, that's the most exciting thing."



DEAN KOONTZ

Dean Koontz is one of the world's most prolific and best-selling writers, with more than 120 novels to his name. During a difficult childhood, books were his refuge, so he has devoted his life—from 6:30 AM to dinnertime, six days a week, for the past five decades—to creating fictional worlds across a range of genres for his devoted readers.

Interviewed by Alison Beard

HBR: Where do you find your creative energy and stamina?
KOONTZ: It goes back to what books meant to me when I was young. I came from a very poor family. My dad was a violent alcoholic. Books were both an escape and a lesson that other lives were different. They showed me the level of success the world offered. And that was plenty of motivation to change my destiny. I've never stopped being excited about books and their potential. Now, if I wrote the same one every time, which is what publishers prefer you do, I would go nuts. But I'm constantly changing things up. Going for something you haven't gone for before—something you're terrified you're going to fail at—is a medicine against boredom.

You initially used pseudonyms. When did you realize that your name had currency? In my early days, every time I did something a little bit different, agents and publishers would say, "You must have a pen name." I was naive, so I did. Then gradually I saw that something was happening around the books under my own name. I wasn't a best-selling author yet, but we were getting 30 or 40 letters a week, instead of three or four. So in the late '70s or early '80s, my wife and I decided to buy back the rights to many of my books. We had to stretch ourselves, but we could tell that enthusiasm was building. And it wasn't a delusion.

When you do get that hit book, is there pressure to do it again? The first book I had reach number one in hardcover was called *Midnight.* My publisher called me and said, "I have wonderful news." But before I could say, "Whoopee!" she said, "Now, you must understand: You don't write the kind of books that can be number one, and this will never happen again." We had four number-one books after that, and she said the same thing every time. So I didn't have pressure to keep it up, but I had to keep proving myself. Finally I said, "I have to go somewhere where they think it *is* going to happen again."

How do you work with editors? I know there are some writers who don't want to take any direction. But even though I'm obsessive-compulsive as a writer—I rewrite every page 20 or 30 times before I move to the next one, so I turn in a pretty clean manuscript—I know a good editor can always spot things I haven't thought of or make little fixes. And there's no reason not to listen with an open mind. It forces you to explain why you did things a certain way. If you can't, then you did fudge it, and you've got to revisit.

As a perfectionist, how do you ensure that you still make progress? Every time you go through that page, you'll find ways to say things better, and there's a momentum to that, too. You're not necessarily advancing the story 10 pages a day, but you're advancing its quality.

Do you foresee retiring? I don't know what I'd do if I wasn't writing. It defines me. I think talent is a grace, an unearned gift, and it comes with an obligation to use it as well as you can.

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Annie Tritt

FOR MORE FROM DEAN KOONTZ, GO TO **HBR.ORG**.