The Business Case for Curiosity

Most of the breakthrough discoveries and remarkable inventions throughout history, from flints for starting a fire to self-driving cars, have something in common: They are the result of curiosity. The impulse to seek new information and experiences and explore novel possibilities is a basic human attribute. New research points to three important insights about curiosity as it relates to business. First, curiosity is much more important to an enterprise's performance than was previously thought. That's because cultivating it at all levels helps leaders and their employees adapt to uncertain market conditions and external pressures: When our curiosity is triggered, we think more deeply and rationally about decisions and come up with more-creative solutions. In addition, curiosity allows leaders to gain more respect from their followers and inspires employees to develop more-trusting and more-collaborative relationships with colleagues.

Second, by making small changes to the design of their organizations and the ways they manage their employees, leaders can encourage curiosity—and improve their companies. This is true in every industry and for creative and routine work alike.

Third, although leaders might *say* they treasure inquisitive minds, in fact most stifle curiosity, fearing it will increase risk and inefficiency. In a survey I conducted of more than 3,000 employees from a wide range of firms and industries, only about 24% reported feeling curious in their jobs on a regular basis, and about 70% said they face barriers to asking more questions at work.

In this article I'll elaborate on the benefits of and common barriers to curiosity in the workplace and then offer five strategies that can help leaders get high returns on investments in employees' curiosity and in their own.

The Benefits of Curiosity

New research reveals a wide range of benefits for organizations, leaders, and employees.

Fewer decision-making errors.

In my research I found that when our curiosity is triggered, we are less likely to fall prey to confirmation bias (looking for information that supports our beliefs rather than for evidence suggesting we are wrong) and to stereotyping people (making broad judgments, such as that women or minorities don't make good leaders). Curiosity has these positive effects because it leads us to generate alternatives.

More innovation and positive changes in

both creative and noncreative jobs.

Consider this example: In a field study INSEAD's Spencer Harrison and colleagues asked artisans selling their goods through an e-commerce website several questions aimed at assessing the curiosity they experience at work. After that, the participants' creativity was measured by the number of items they created and listed over a two-week period. A one-unit increase in curiosity (for instance, a score of 6 rather than 5 on a 7-point scale) was associated with 34% greater creativity.

In a separate study, Harrison and his colleagues focused on call centers, where jobs tend to be highly structured and turnover is generally high. They asked incoming hires at 10 organizations to complete a survey that, among other things, measured their curiosity before they began their new jobs. Four weeks in, the employees were surveyed about various aspects of their work. The results showed that the most curious employees sought the most information from coworkers, and the information helped them in their jobs—for instance, it boosted their creativity in addressing customers' concerns.

My own research confirms that encouraging people to be curious generates workplace improvements. For one study I recruited about 200 employees working in various companies and industries. Twice a week for four weeks, half of them received a text message at the start of their workday that read, "What is one topic or activity you are

curious about today? What is one thing you usually take for granted that you want to ask about? Please make sure you ask a few 'Why questions' as you engage in your work throughout the day. Please set aside a few minutes to identify how you'll approach your work today with these questions in mind."

The other half (the control group) received a message designed to trigger reflection but not raise their curiosity: "What is one topic or activity you'll engage in today? What is one thing you usually work on or do that you'll also complete today? Please make sure you think about this as you engage in your work throughout the day. Please set aside a few minutes to identify how you'll approach your work today with these questions in mind."

After four weeks, the participants in the first group scored higher than the others on questions assessing their innovative behaviors at work, such as whether they had made constructive suggestions for implementing solutions to pressing organizational problems.

When we are curious, we view tough situations more creatively. Studies have found that curiosity is associated with less defensive reactions to stress and less aggressive reactions to provocation. We also perform better when we're curious. In a study of 120 employees I found that natural curiosity was associated with better job performance, as evaluated by their direct bosses.

Reduced group conflict.

My research found that curiosity encourages members of a group to put themselves in one another's shoes and take an interest in one another's ideas rather than focus only on their own perspective. That causes them to work together more effectively and smoothly: Conflicts are less heated, and groups achieve better results.

More-open communication and better team performance.

Working with executives in a leadership program at Harvard Kennedy School, my colleagues and I divided participants into groups of five or six, had some groups participate in a task that heightened their curiosity, and then asked all the groups to engage in a simulation that tracked performance. The groups whose curiosity had been heightened performed better than the control groups because they shared information more openly and listened more carefully.

Two Barriers to Curiosity

Despite the well-established benefits of curiosity, organizations often discourage it. This is not because leaders don't see its value. On the contrary, both leaders and employees understand that curiosity creates positive outcomes for their companies. In the survey of more than 3,000 employees mentioned earlier, 92% credited curious

people with bringing new ideas into teams and organizations and viewed curiosity as a catalyst for job satisfaction, motivation, innovation, and high performance.

Yet executives' actions often tell a different story. True, some organizations, including 3M and Facebook, give employees free time to pursue their interests, but they are rare. And even in such organizations, employees often have challenging short-term performance goals (such as meeting a quarterly sales target or launching a new product by a certain date) that consume the "free time" they could have spent exploring alternative approaches to their work or coming up with innovative ideas.

Two tendencies restrain leaders from encouraging curiosity:

They have the wrong mindset about exploration.

Leaders often think that letting employees follow their curiosity will lead to a costly mess. In a recent survey I conducted of 520 chief learning officers and chief talent development officers, I found that they often shy away from encouraging curiosity because they believe the company would be harder to manage if people were allowed to explore their own interests. They also believe that disagreements would arise and making and

executing decisions would slow down, raising the cost of doing business. Research finds that although people list creativity as a goal, they frequently reject creative ideas when actually presented with them. That's understandable: Exploration often involves questioning the status quo and doesn't always produce useful information. But it also means not settling for the first possible solution—and so it often yields better remedies.

They seek efficiency to the detriment of exploration.

In the early 1900s Henry Ford focused all his efforts on one goal: reducing production costs to create a car for the masses. By 1908 he had realized that vision with the introduction of the Model T. Demand grew so high that by 1921 the company was producing 56% of all passenger cars in the United States—a remarkable success made possible primarily by the firm's efficiency-centered model of work. But in the late 1920s, as the U.S. economy rose to new heights, consumers started wanting greater variety in their cars. While Ford remained fixated on improving the Model T, competitors such as General Motors started producing an array of models and soon captured the main share of the market. Owing to its single-minded focus on efficiency, Ford stopped experimenting and innovating and fell behind.

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These leadership tendencies help explain why our curiosity usually declines the longer we're in a job. In one survey, I asked about 250 people who had recently started working for various companies a series of questions designed to measure curiosity; six months later I administered a follow-up survey. Although initial levels of curiosity varied, after six months everyone's curiosity had dropped, with the average decline exceeding 20%. Because people were under pressure to complete their work quickly, they had little time to ask questions about broad processes or overall goals.

Five Ways to Bolster Curiosity

It takes thought and discipline to stop stifling curiosity and start fostering it. Here are five strategies leaders can employ.

1. Hire for curiosity.

In 2004 an anonymous billboard appeared on Highway 101, in the heart of Silicon Valley, posing this puzzle: "{first 10-digit prime found in consecutive digits of e}.com." The answer, 7427466391.com, led the curious online, where they found another equation to solve. The handful of people who did so were invited to submit a résumé to Google. The company took this unusual approach to finding job candidates because it places a premium on curiosity. (People didn't even need to be engineers!) As Eric Schmidt, Google's CEO from 2001 to

2011, has said, "We run this company on questions, not answers."

Google also identifies naturally curious people through interview questions such as these: "Have you ever found yourself unable to stop learning something you've never encountered before? Why? What kept you persistent?" The answers usually highlight either a specific purpose driving the candidate's inquiry ("It was my job to find the answer") or genuine curiosity ("I just had to figure out the answer").

IDEO, the design and consulting company, seeks to hire "T-shaped" employees: people with deep skills that allow them to contribute to the creative process (the vertical stroke of the T) and a predisposition for collaboration across disciplines, a quality requiring empathy and curiosity (the horizontal stroke of the T). The firm understands that empathy and curiosity are related: Empathy allows employees to listen thoughtfully and see problems or decisions from another person's perspective, while curiosity extends to interest in other people's disciplines, so much so that one may start to practice them. And it recognizes that most people perform at their best not because they're specialists but because their deep skill is accompanied by an intellectual curiosity that leads them to ask questions, explore, and collaborate.

To identify potential employees who are T-shaped, IDEO pays attention to how candidates talk about past

projects. Someone who focuses only on his or her own contributions may lack the breadth to appreciate collaboration. T-shaped candidates are more likely to talk about how they succeeded with the help of others and to express interest in working collaboratively on future projects.

To assess curiosity, employers can also ask candidates about their interests outside of work. Reading books unrelated to one's own field and exploring questions just for the sake of knowing the answers are indications of curiosity. And companies can administer curiosity assessments, which have been validated in a myriad of studies. These generally measure whether people explore things they don't know, analyze data to uncover new ideas, read widely beyond their field, have diverse interests outside work, and are excited by learning opportunities.

It's also important to remember that the questions candidates ask—not just the answers they provide—can signal curiosity. For instance, people who want to know about aspects of the organization that aren't directly related to the job at hand probably have more natural curiosity than people who ask only about the role they would perform.

2. Model inquisitiveness.

Leaders can encourage curiosity throughout their

organizations by being inquisitive themselves. In 2000, when Greg Dyke had been named director general of the BBC but hadn't yet assumed the position, he spent five months visiting the BBC's major locations, assembling the staff at each stop. Employees expected a long presentation but instead got a simple question: "What is the one thing I should do to make things better for you?" Dyke would listen carefully and then ask, "What is the one thing I should do to make things better for our viewers and listeners?"

The BBC's employees respected their new boss for taking the time to ask questions and listen. Dyke used their responses to inform his thinking about the changes needed to solve problems facing the BBC and to identify what to work on first. After officially taking the reins, he gave a speech to the staff that reflected what he had learned and showed employees that he had been truly interested in what they said.

By asking questions and genuinely listening to the responses, Dyke modeled the importance of those behaviors. He also highlighted the fact that when we are exploring new terrain, listening is as important as talking: It helps us fill gaps in our knowledge and identify other questions to investigate.

That may seem intuitive, but my research shows that we often prefer to talk rather than to listen with curiosity. For instance, when I asked some 230 high-level leaders in

executive education classes what they would do if confronted with an organizational crisis stemming from both financial and cultural issues, most said they would take action: move to stop the financial bleeding and introduce initiatives to refresh the culture. Only a few said they would ask questions rather than simply impose their ideas on others. Management books commonly encourage leaders assuming new positions to communicate their vision from the start rather than ask employees how they can be most helpful. It's bad advice.

Why do we refrain from asking questions? Because we fear we'll be judged incompetent, indecisive, or unintelligent. Plus, time is precious, and we don't want to bother people. Experience and expertise exacerbate the problem: As people climb the organizational ladder, they think they have less to learn. Leaders also tend to believe they're expected to talk and provide answers, not ask questions.

Such fears and beliefs are misplaced, my recent research shows. When we demonstrate curiosity about others by asking questions, people like us *more* and view us as *more* competent, and the heightened trust makes our relationships more interesting and intimate. By asking questions, we promote more-meaningful connections and more-creative outcomes.

Another way leaders can model curiosity is by acknowledging when they don't know the answer; that

makes it clear that it's OK to be guided by curiosity. Patricia Fili-Krushel told me that when she joined WebMD Health as chief executive, she met with a group of male engineers in Silicon Valley. They were doubtful that she could add value to their work and, right off the bat, asked what she knew about engineering. Without hesitation, Fili-Krushel made a zero with her fingers. "This is how much I know about engineering," she told them. "However, I do know how to run businesses, and I'm hoping you can teach me what I need to know about your world." When leaders concede that they don't have the answer to a question, they show that they value the process of looking for answers and motivate others to explore as well.

New hires at Pixar Animation Studios are often hesitant to question the status quo, given the company's track record of hit movies and the brilliant work of those who have been there for years. To combat that tendency, Ed Catmull, the cofounder and president, makes a point of talking about times when Pixar made bad choices. Like all other organizations, he says, Pixar is not perfect, and it needs fresh eyes to spot opportunities for improvement (see "[How Pixar Fosters Collective Creativity](#)," HBR, September 2008). In this way Catmull gives new recruits license to question existing practices. Recognizing the limits of our own knowledge and skills sends a powerful signal to others.

Tenelle Porter, a postdoctoral scholar in psychology at

the University of California, Davis, describes intellectual humility as the ability to acknowledge that what we know is sharply limited. As her research demonstrates, higher levels of intellectual humility are associated with a greater willingness to consider views other than our own. People with more intellectual humility also do better in school and at work. Why? When we accept that our own knowledge is finite, we are more apt to see that the world is always changing and that the future will diverge from the present. By embracing this insight, leaders and employees can begin to recognize the power of exploration.

Finally, leaders can model inquisitiveness by approaching the unknown with curiosity rather than judgment. Bob Langer, who heads one of MIT's most productive laboratories, told me recently that this principle guides how he manages his staff. As human beings, we all feel an urge to evaluate others—often not positively. We're quick to judge their ideas, behaviors, and perspectives, even when those relate to things that haven't been tried before. Langer avoids this trap by raising questions about others' ideas, which leads people to think more deeply about their perspective and to remain curious about the tough problems they are trying to tackle. In doing so, he is modeling behavior that he expects of others in the lab.

3. Emphasize learning goals.

When I asked Captain Chesley "Sully" Sullenberger how

he was able to land a commercial aircraft safely in the Hudson River, he described his passion for continuous learning. Although commercial flights are almost always routine, every time his plane pushed back from the gate he would remind himself that he needed to be prepared for the unexpected. "What can I learn?" he would think. When the unexpected came to pass, on a cold January day in 2009, Sully was able to ask himself what he *could* do, given the available options, and come up with a creative solution. He successfully fought the tendency to grasp for the most obvious option (landing at the nearest airport). Especially when under pressure, we narrow in on what immediately seems the best course of action. But those who are passionate about continuous learning contemplate a wide range of options and perspectives. As the accident report shows, Sully carefully considered several alternatives in the 208 seconds between his discovery that the aircraft's engines lacked thrust and his landing of the plane in the Hudson.

It's natural to concentrate on results, especially in the face of tough challenges. But focusing on learning is generally more beneficial to us and our organizations, as some landmark studies show. For example, when U.S. Air Force personnel were given a demanding goal for the number of planes to be landed in a set time frame, their performance *decreased*. Similarly, in a study led by Southern Methodist University's Don VandeWalle, sales professionals who were naturally focused on

performance goals, such as meeting their targets and being seen by colleagues as good at their jobs, did worse during a promotion of a product (a piece of medical equipment priced at about $5,400) than reps who were naturally focused on learning goals, such as exploring how to be a better salesperson. That cost them, because the company awarded a bonus of $300 for each unit sold.

A body of research demonstrates that framing work around learning goals (developing competence, acquiring skills, mastering new situations, and so on) rather than performance goals (hitting targets, proving our competence, impressing others) boosts motivation. And when motivated by learning goals, we acquire more-diverse skills, do better at work, get higher grades in college, do better on problem-solving tasks, and receive higher ratings after training. Unfortunately, organizations often prioritize performance goals.

Leaders can help employees adopt a learning mindset by communicating the importance of learning and by rewarding people not only for their performance but for the learning needed to get there. Deloitte took this path: In 2013 it replaced its performance management system with one that tracks both learning and performance. Employees meet regularly with a coach to discuss their development and learning along with the support they need to continually grow.

Leaders can also stress the value of learning by reacting positively to ideas that may be mediocre in themselves but could be springboards to better ones. Writers and directors at Pixar are trained in a technique called "plussing," which involves building on ideas without using judgmental language. Instead of rejecting a sketch, for example, a director might find a starting point by saying, "I like Woody's eyes, and what if we…?" Someone else might jump in with another "plus." This technique allows people to remain curious, listen actively, respect the ideas of others, and contribute their own. By promoting a process that allows all sorts of ideas to be explored, leaders send a clear message that learning is a key goal even if it doesn't always lead to success.

4. Let employees explore and broaden their interests.

Organizations can foster curiosity by giving employees time and resources to explore their interests. One of my favorite examples comes from my native country. It involves Italy's first typewriter factory, Olivetti, founded in 1908 in the foothills of the Italian Alps. In the 1930s some employees caught a coworker leaving the factory with a bag full of iron pieces and machinery. They accused him of stealing and asked the company to fire him. The worker told the CEO, Adriano Olivetti, that he was taking the parts home to work on a new machine over the weekend because he didn't have time while performing

his regular job. Instead of firing him, Olivetti gave him time to create the machine and charged him with overseeing its production. The result was Divisumma, the first electronic calculator. Divisumma sold well worldwide in the 1950s and 1960s, and Olivetti promoted the worker to technical director. Unlike leaders who would have shown him the door, Olivetti gave him the space to explore his curiosity, with remarkable results.

Some organizations provide resources to support employees' outside interests. Since 1996 the manufacturing conglomerate United Technologies (UTC) has given as much as $12,000 in tuition annually to any employee seeking a degree part-time—no strings attached. Leaders often don't want to invest in training employees for fear that they will jump to a competitor and take their expensively acquired skills with them. Even though UTC hasn't tried to quantify the benefits of its tuition reimbursement program, Gail Jackson, the vice president of human resources when we spoke, believes in the importance of curious employees. "It's better to train and have them leave than not to train and have them stay," she told me. But according to the Society for Human Resource Management's 2017 employee benefits report, only 44% of organizations provide or support cross-training to develop skills not directly related to workers' jobs.

Leaders can reward people for learning as well as performance.

Leaders might provide opportunities for employees to travel to unfamiliar locales. When we have chances to expand our interests, research has found, we not only remain curious but also become more confident about what we can accomplish and more successful at work. Employees can "travel" to other roles and areas of the organization to gain a broader perspective. At Pixar, employees across the organization can provide "notes"—questions and advice—that help directors consider all sorts of possibilities for the movies they are working on.

Employees can also broaden their interests by broadening their networks. Curious people often end up being star performers thanks to their diverse networks, my research with the University of Toronto's Tiziana Casciaro, Bill McEvily, and Evelyn Zhang finds. Because they're more comfortable than others asking questions, such people more easily create and nurture ties at work—and those ties are critical to their career development and success. The organization benefits when employees are connected to people who can help them with challenges and motivate them to go the extra mile. MIT's Bob Langer works to raise curiosity in his students by introducing them to experts in his network. Similarly, by connecting people across organizational departments and units, leaders can encourage employees to be curious about their colleagues' work and ways of doing business.

Deliberate thinking about workspaces can broaden networks and encourage the cross-pollination of ideas. In

the 1990s, when Pixar was designing a new home for itself in Emeryville, across the bay from San Francisco, the initial plans called for a separate building for each department. But then-owner Steve Jobs had concerns about isolating the various departments and decided to build a single structure with a large atrium in the center, containing employee mailboxes, a café, a gift shop, and screening rooms. Forcing employees to interact, he reasoned, would expose them to one another's work and ideas.

Leaders can also boost employees' curiosity by carefully designing their teams. Consider Massimo Bottura, the owner of Osteria Francescana, a three-Michelin-star restaurant in Modena, Italy, that was rated the Best Restaurant in the World in 2016 and 2018. His sous chefs are Davide di Fabio, from Italy, and Kondo Takahiko, from Japan. The two differ not only in their origins but also in their strengths: Di Fabio is more comfortable with improvisation, while Takahiko is obsessed with precision. Such "collisions" make the kitchen more innovative, Bottura believes, and inspire curiosity in other workers.

5. Have "Why?" "What if…?" and "How might we…?" days.

The inspiration for the Polaroid instant camera was a three-year-old's question. Inventor Edwin Land's daughter was impatient to see a photo her father had just snapped. When he explained that the film had to be

processed, she wondered aloud, "Why do we have to wait for the picture?"

As every parent knows, *Why?* is ubiquitous in the vocabulary of young children, who have an insatiable need to understand the world around them. They aren't afraid to ask questions, and they don't worry about whether others believe they should already know the answers. But as children grow older, self-consciousness creeps in, along with the desire to appear confident and demonstrate expertise. By the time we're adults, we often suppress our curiosity.

Leaders can help draw out our innate curiosity. One company I visited asked all employees for "What if...?" and "How might we...?" questions about the firm's goals and plans. They came up with all sorts of things, which were discussed and evaluated. As a concrete sign that questioning was supported and rewarded, the best questions were displayed on banners hung on the walls. Some of the questions led employees to suggest ideas

for how to work more effectively. (For more on the importance of asking good questions before seeking solutions, see "[Better Brainstorming](#)," HBR, March–April 2018.)

In one study, my colleagues and I asked adults working in a wide range of jobs and industries to read one of two sets of materials on three organizational elements: goals, roles, and how organizations as a whole work together. For half the workers, the information was presented as the "grow method"—our version of a control condition. We encouraged that group to view those elements as immutable, and we stressed the importance of following existing processes that managers had already defined. For the other half, the information was presented as the "go back method." We encouraged those employees to see the elements as fluid and to "go back" and rethink them. A week later we found that the workers who'd read about the "go back method" showed more creativity in tasks than the workers in the "grow method" group. They were more open to others' ideas and worked more effectively with one another.

To encourage curiosity, leaders should also teach employees how to ask good questions. Bob Langer has said he wants to "help people make the transition from giving good answers to asking good questions" (see "[The Edison of Medicine](#)," HBR, March–April 2017). He also tells his students that they could change the world, thus boosting the curiosity they need to tackle

challenging problems.

Organizing "Why?" days, when employees are encouraged to ask that question if facing a challenge, can go a long way toward fostering curiosity. Intellectual Ventures, a company that generates inventions and buys and licenses patents, organizes "invention sessions" in which people from different disciplines, backgrounds, and levels of expertise come together to discuss potential solutions to tough problems, which helps them consider issues from various angles (see "Funding Eureka!" HBR, March 2010). Similarly, under Toyota's 5 Whys approach, employees are asked to investigate problems by asking Why? After coming up with an answer, they are to ask why *that's* the case, and so on until they have asked the question five times. This mindset can help employees innovate by challenging existing perspectives.

CONCLUSION

In most organizations, leaders and employees alike receive the implicit message that asking questions is an unwanted challenge to authority. They are trained to focus on their work without looking closely at the process or their overall goals. But maintaining a sense of wonder is crucial to creativity and innovation. The most effective leaders look for ways to nurture their employees' curiosity to fuel learning and discovery.

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