Why Leaders Don't Learn from Success

by Francesca Gino and Gary P. Pisano

The annals of business history are full of tales of companies that once dominated their industries but fell into decline. The usual reasons offered—staying too close to existing customers, a myopic focus on short-term financial performance, and an inability to adapt business models to disruptive innovation—don't fully explain how the leaders who had steered these firms to greatness lost their touch.

In this article we argue that success can breed failure by hindering learning at both the individual and the organizational level. We all know that learning from failure is one of the most important capacities for people and companies to develop. Yet surprisingly, learning from success can present even greater challenges. To illuminate those challenges—and identify approaches for overcoming them—we will draw from our research and from the work of other scholars in the field of behavioral decision making, and focus on three interrelated impediments to learning.

The first is the inclination to make what psychologists call *fundamental attribution errors*. When we succeed, we're likely to conclude that our talents and our current model or strategy are the reasons. We also give short shrift to the part that environmental factors and random events may have played.

The second impediment is *overconfidence bias:* Success increases our self-assurance. Faith in ourselves is a good thing, of course, but too much of it can make us believe we don't need to change anything.

The third impediment is the *failure-to-ask-why syndrome*—the tendency not to investigate the causes of good performance systematically. When executives and their teams suffer from this syndrome, they don't ask the tough questions that would help them expand their knowledge or alter their assumptions about how the world works.
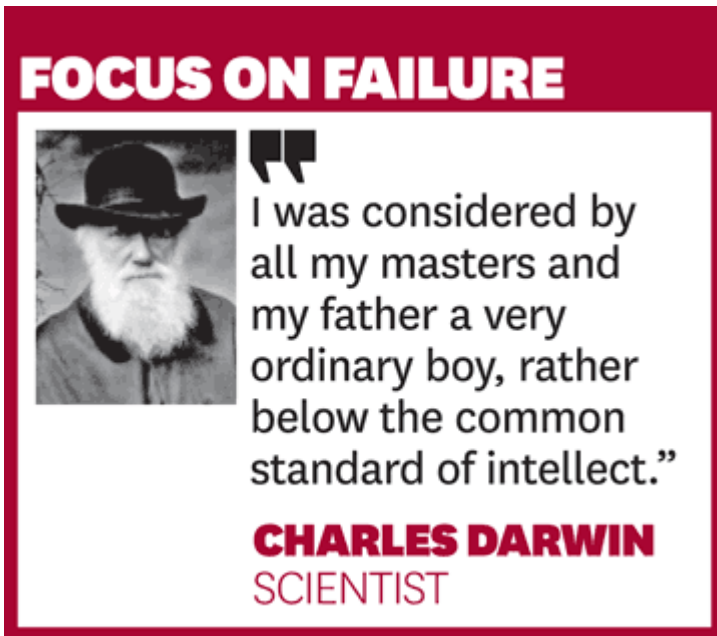
Lessons from Ducati

We began to examine the challenges of learning from success in 2004, when we did a case study of an organization with a long history of winning: the Ducati Corse motorcycle racing team. Motorcycle racing may seem a long way from the world of business, but in fact it provides a perfect laboratory for research on learning. Performance is unambiguously measurable by lap times and race results. You know with brutal precision whether you're getting better or worse. Racing is also unforgiving. The race is Sunday, and it won't wait if you're late. Finally, the racing circuit is intensely competitive: During a season a dozen world-class teams battle each week for the top spot. For an organization like Italy's Ducati, wins have a huge impact on brand equity and commercial bike sales.

In 2003, Bologna-based Ducati entered the Grand Prix motorcycle racing circuit (or "MotoGP") for the first time. Being a newcomer, it approached 2003 as "a learning season," its team director told us. The goal was to acquire knowledge that would help it develop a better bike for future seasons. To that end, the team fitted its bikes with sensors that captured data on 28 performance parameters (such as temperature and horsepower). Riders were debriefed after every race to get input on subjective characteristics like handling and responsiveness. The team looked like a model learning organization.

Then something unexpected happened: The rookie team finished among the top three in nine races and was second overall for the season, and its bike was the fastest in the field. But with each success the team focused more on winning and less on learning, and it ended up analyzing little of the data it collected. As one team member commented, "You look at the data when you want to understand what's going wrong. You do not look at the data because you want to understand why you're performing well."

The successful season caused the team members to believe Ducati could win it all in 2004. After all, if they could finish second as rookies, why shouldn't they take first now that they had some experience? This confidence manifested itself in the decision to radically redesign the team's bike for the 2004 season rather than incrementally improve the 2003 model.

FOCUS ON FAILURE

"I was considered by all my masters and my father a very ordinary boy, rather below the common standard of intellect."

CHARLES DARWIN
SCIENTIST

More than 60% of the 2004 model's 915 components were new. But at the outset of that season, it became apparent that the bike had serious handling problems and that the team had made a big mistake in changing so much at once without giving itself the time to test everything.

Interestingly, the team still finished third overall that year—thanks to extensive experiments it conducted to understand the causes of the bike's problems. Though third place wasn't bad, it was viewed as a failure, given the high expectations. And this disappointment then triggered a comprehensive and ultimately quite effective reexamination of the team's approach to developing bikes. (One big change was to have the engineering group begin developing the bike for the next season much earlier, so it could be thoroughly tested before being raced.) The team turned in solid performances in the 2005 and 2006 seasons and took the world title in 2007. In short, success led the Ducati Corse team to stop learning, and only perceived failure caused it to start again.

Success led the Ducati racing team to stop learning, and only a perceived failure caused it to start again. After its disappointing third-place finish, the team reexamined its approach to developing bikes.

After studying Ducati, we went on to conduct research in the entertainment, pharmaceutical, and software industries and performed experiments in the laboratory and in executive education classes. Again and again, we saw the same phenomenon. Ultimately, we recognized that there was a common cause: the three impediments to learning.

Making Dangerous Attribution Errors

In racing, many interdependent factors affect outcomes. Without a detailed analysis, it was impossible to know whether the Ducati team's performance in 2003 was due to its bike design, its strategy for particular races, its riders' talents and decisions, bad choices by other teams, luck, random events like the weather or crashes, or some complex combination of all those things. And without such knowledge (and given Ducati's long history of winning in other venues), it was too easy to attribute the team's excellent performance to the quality of its decisions, actions, and capabilities.

In business, likewise, any number of factors may lead to success, independent of the quality of a product or management's decisions. Yet it is all too common for executives to attribute the success of their organizations to their own insights and managerial skills and ignore or downplay random events or external factors outside their control. Imagine, for instance, that you are leading a team whose numbers are great: It's tempting to credit yourself or your team's actions for that achievement, though it may actually just be a stroke of good luck or the result of your competitors' problems.

Research (including a classic study by the psychologists Edward Jones and Victor Harris) has proved that this is normal human behavior. Moreover, when examining the bad performance of others, people tend to do the exact opposite. In exercises that we

conducted in executive education classes at Harvard, the University of North Carolina at Chapel Hill, and Carnegie Mellon University, most participants, when evaluating the success of others, minimized the role of leadership skills and strategy and maximized the role of external factors and luck.

Another study found that people also have trouble adjusting for the difficulty of the situation when judging successes. (See the sidebar "The Challenge of Discounting Easy Successes.") In business this bias can affect many critical decisions, including whom to hire or promote, which products to launch, and which practices to spread throughout the organization. Someone who has led a thriving business in a highly profitable industry, for instance, often appears more attractive than a similarly skilled or even more qualified candidate who has struggled to lead a firm in an industry in which most companies are failing.

The Challenge of Discounting Easy Successes

The inability of people to adjust for degree of difficulty when assessing accomplishments was clearly demonstrated in a study that one of us, Francesca Gino, conducted with Don Moore of Berkeley and Sam Swift and Zachariah Sharek of Carnegie Mellon. Students at a U.S. university assumed the role of admissions officers for an MBA program and were presented with information about candidates' grade point averages as well as the average GPA at their colleges. In their decisions, the participants overweighted applicants' nominal GPAs and underweighted the effect of the grading norms at different

We repeatedly observed pharmaceutical companies making these kinds of attribution errors in choosing which drugs to kill or push forward. They selected drugs whose initial tests were successful as potential winners and allocated more money to them for further testing and development. But often managers assumed a success was due to the unique abilities of their in-house scientists and didn't consider whether it could be due to greater general knowledge in that particular scientific area, which competitors might have, too.

In addition, we found that long lead times can blind executives to problems with their current strategies. Again, consider the pharmaceutical industry. Because it takes 12

schools. In other words, they didn't take into account the ease with which grades were earned.

years, on average, to get a drug from discovery to market, a company's performance today has relatively little to do with its most recent actions and decisions. Yet both managers and investors often attribute today's high performance to the company's current strategy, management, and scientists.

Falling Prey to the Overconfidence Bias

Without some confidence, we could not make decisions or tackle any kind of risky endeavor; we would be constantly second-guessing ourselves. That said, too much confidence can be a problem, and nothing inflates confidence like success. Take Alan Greenspan, who until the near meltdown of the financial system in 2008 was considered one of the best Federal Reserve chairmen in U.S. history. Afterward, it became apparent that Fed policy makers, led by Greenspan, had placed too much faith in their financial models. In testimony to Congress in October 2008, Greenspan acknowledged his own shock that the models had failed. And, of course, he was not the only one who succumbed to excessive confidence. During the housing boom, many leaders of large and small banks and managers of mortgage lending, investing, and trading operations stopped examining the key assumptions that underpinned the models they were using.

Success can make us believe that we are better decision makers than we actually are. In a simple recent study of managers in various industries, we asked members of one group to recall a time when they experienced a success in their professional lives and members of a second group to recall a time when they experienced a failure. We then asked people in both groups to engage in a series of decision-making tasks and embedded measures in the exercise that allowed us to assess their confidence, optimism, and risk-seeking behavior. Compared with the executives who'd recalled a failure, those who'd recalled a success were much more confident in their abilities, made more-optimistic forecasts of their future success, and were more likely to take bigger bets. These findings are consistent with research examining how success breeds overconfidence in other contexts. (See the sidebar "How Power Causes Us to Ignore Advice.")

How Power Causes Us to Ignore Advice

When we're in positions of authority and influence, we tend to shut out those bearing bad news.

Research that Francesca Gino recently conducted with Leigh Tost of the University of Washington and Rick Larrick of Duke University illustrated this phenomenon. In one study a group of participants (students from U.S. universities) were asked to write about a time they had power over other people, a task that significantly boosted their level of confidence. Another group were asked to write about a time other people had power over them, a task that lowered their level of confidence. Then the participants were asked to make a series of decisions with the advice from an expert. When feeling confident, people placed more weight on their own opinion than on the adviser's, even though following the adviser's recommendations would have improved their decisions.

In another study, similar feelings of confidence experienced by a team leader caused the leader to do most of the

Overconfidence inspired by past successes can infect whole organizations, causing them to dismiss new innovations, dips in customer satisfaction, and increases in quality problems, and to make overly risky moves. Consider all the companies that grew rapidly through acquisitions only to stumble badly after biting off one too many; the countless banks that made ever-riskier loans in the past decade, sure of their ability to sort good borrowers from bad; and all the darlings of the business media that had winning formulas but did not try to update or alter their strategies until it was way too late.

Failing to Ask Why

When you're confronted with failure, it's natural to ask why disaster struck. Unfortunately, success does not trigger such soul-searching. Success is commonly interpreted as evidence not only that your existing strategy and practices work but also that you have all the knowledge and information you need. Several studies, as well as our own research, show that most people tend to think this way. (See the sidebar "How Success Makes Us Less Reflective.")

How Success Makes Us Less Reflective

In a recent study we conducted in a controlled laboratory setting, students from U.S. universities were asked to work on two decision-making problems. Learning from experience on the first problem could help them perform well on the second. After submitting their solutions to the first problem, the participants were told whether or not they had succeeded. They were then given time to reflect before starting the second problem. Compared with the people who failed at the first problem, those who succeeded spent significantly less time reflecting on the strategies they'd used. This had a cost: Those who succeeded on the first task were more likely to fail on the second. They had neglected to ask why.

We have seen the same pattern in the real world. The efforts invested in understanding the causes of the recent financial crash dwarf the efforts that were made to understand why things seemed to be going so well before. In hospitals, doctors conduct rigorous "mortality and morbidity reviews" of cases that ended badly, but little systematic effort is made to understand why patients recover. Even Toyota, which built its vaunted production system around vigorous learning, was much better at uncovering the causes of its problems than of its success. This was revealed by its recent recalls, when its leaders admitted that their success in pursuing higher sales and market share had blinded them to the fact that operations had essentially compromised quality to achieve growth.

A Simple Model of Learning

To avoid the success-breeds-failure trap, you need to understand how experience shapes learning. Learning is, of course, a highly complex cognitive and organizational process, and numerous models have been developed about it in the academic literature. Drawing from those, we present a simplified model that highlights the effect that success and failure have on learning.

We start with the premise that individuals and organizations at any point in time hold certain theories, models, principles, and rules of thumb that guide their actions. Your choices about the people you hire, the projects you fund (or terminate), the features you include in new product designs, and the business strategies you pursue are all influenced by them. Sometimes theories are quite sophisticated and rooted in science or decades of practical experience. But in many other cases, they are pretty informal—and we may not even be aware that they are swaying our decisions.

Learning is the process of updating our theories. In some cases personal experience alters them. For example, Steve Jobs recounted in a 2005 graduation speech at Stanford University how the inclusion of multiple typefaces and proportional spacing on the first Macintosh stemmed from the calligraphy course he took after dropping out of college. But members of an organization also learn together. Experience with both winners (the iPod) and losers (the Newton) has caused Apple, as a company, to update its theories of what leads to successful products.

From this perspective, learning is all about understanding why things happen and why some decisions lead to specific outcomes. This understanding does not come automatically. We make a conscious choice to challenge our assumptions and models. And usually, we do so as the result of a failure. This has been true from the time we first tried to walk or ride a bicycle. We fall down, it hurts, and we try another approach. An amazing number of high-ranking executives report that early failures in their careers taught them lessons that ultimately led to their success. Failure provides a motivation for organizations to learn, too.

But what about success? Success does not disprove your theory. And if it isn't broken, why fix it? Consequently, when we succeed, we just focus on applying what we already know to solving problems. We don't revise our theories or expand our knowledge of how our business works.

Does success mean "it isn't broken"? Not necessarily. The reality is that while a success (or a string of successes) may mean you're on the right track, you can't assume this to be true without further testing, experimentation, and reflection. You should use success to breed more success by understanding it. Consider Jobs's decision to launch the iPhone, learn from that experience, and apply that knowledge to launch the iPad. Jobs and others at Apple were undoubtedly wary of plunging ahead with the iPad first because of the failure of Apple's Newton tablet in the 1990s. In a brilliant move, they recognized that a touchphone would be easier to launch, given the existing smartphone market, making it the ideal vehicle for Apple to learn about and perfect touch devices.

This example points to a better model for learning, one in which failure and success are on equal footing and both trigger further investigation that helps us revise our assumptions, models, and theories.

Five Ways to Learn

How can you avoid the traps we have discussed? Here are some approaches and strategies that you and your organization can use.
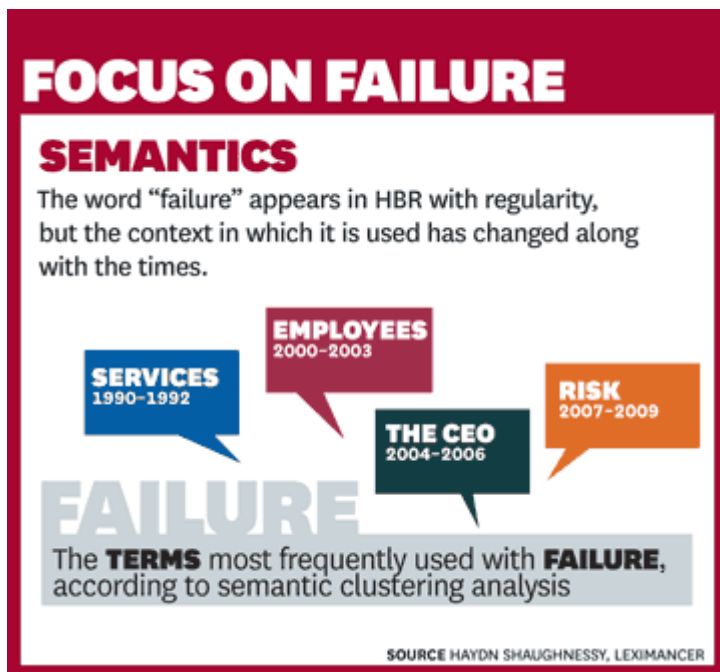
Celebrate success but examine it.
There is nothing wrong with toasting your success. But if you stop with the clinking of the champagne glasses, you have missed a huge opportunity. When a win is achieved, the organization needs to investigate what led to it with the same rigor and scrutiny it might apply to understanding the causes of failure.

Recognize that this may be an uncomfortable process. You may learn, for instance, that success was achieved only by happenstance. A biotechnology company we studied, which faced a serious shortage of capacity to produce an important new product, is a case in

point. Just when it appeared that the firm would not be able to meet demand, its leaders discovered that a competitor had put a plant up for sale—a stroke of luck that allowed the company to buy all the capacity it needed. The product launched and was extremely successful. Instead of simply rejoicing in their good fortune and moving on, the company's leaders revisited why the introduction had gone so well. That review highlighted the part luck had played. And when they examined why the company had been so vulnerable in the first place, they learned that its demand-forecasting and capacity-planning processes were broken.

The search for causes of success may also identify factors that may be hard or even undesirable to replicate. In one project we studied, a group responsible for developing the software for a complex electronic system was so far behind, it risked delaying a strategic launch. By doubling the size of the team and working 80-hour weeks, the group finished in the nick of time. The product was a major commercial hit. Even so, the company wisely conducted a detailed postproject assessment. While lauding the software development team's dedication, the assessment highlighted critical problems in its process that needed to be fixed.

FOCUS ON FAILURE

SEMANTICS
The word "failure" appears in HBR with regularity, but the context in which it is used has changed along with the times.

SERVICES 1990–1992
EMPLOYEES 2000–2003
THE CEO 2004–2006
RISK 2007–2009

FAILURE

The **TERMS** most frequently used with **FAILURE**, according to semantic clustering analysis

SOURCE HAYDN SHAUGHNESSY, LEXIMANCER

Institute systematic project reviews.

The military holds "after-action reviews" (AARs) of each combat encounter and combat-training exercise, irrespective of the outcome. As in business, the reasons for success or failure in combat often are not clear. AARs are debriefs that, when used properly, generate

specific recommendations that can be put to use immediately. Companies can employ the same process, which is relatively straightforward. Like sports coaches and players who convene right after a game to review a team's performance, AAR participants meet after an important event or activity to discuss four key questions: What did we set out to do? What actually happened? Why did it happen? What are we going to do next time?

Pixar, which has had 11 hit animated films in a row (and therefore is an organization that would be very vulnerable to the kinds of traps we have discussed), conducts rigorous reviews of the process used to make each of its films. In "How Pixar Fosters Collective Creativity" (HBR September 2008), Ed Catmull, the president of Pixar, confessed that people don't like to do them and would prefer to just celebrate victories and move on. So Pixar employs various methods to ensure that team members don't game the system and are engaged in the process. It might ask participants the top five things they would do and the top five things they would not do again. It changes the format of postmortems from time to time. It religiously collects data about all aspects of a production and uses them to "stimulate discussion and challenge assumptions arising from personal impressions" during the postmortems. Finally, it periodically conducts a review across several productions and tries to get someone with an outsider's perspective (a newly hired senior manager, for example) to head it.

The challenge, of course, is to apply the same degree of rigor whether things are going well or badly. Consider performance evaluations. We all tend to spend much more time reviewing the performance of the employee who is struggling than of the one who is cruising along. However, understanding the reasons behind the good performance of successful employees may bring to light important lessons for others.

Use the right time horizons.
When the time lag between an action and its consequences is short, it's relatively easy to identify the causes of performance. The problem is that in many cases, the feedback cycle is inherently long. In industries like pharmaceuticals and aerospace, decisions made today about new products or specific technologies to pursue will not bear fruit (or flop) for a decade or more. Unless you have the appropriate time frame for evaluating performance,

you are likely to misconstrue the factors that led to success or failure. By understanding the appropriate time dimensions, you can prevent yourself from being "fooled by randomness" (to use Nassim Nicholas Taleb's famous phrase).

Recognize that replication is not learning.
When things go well, our biggest concern is how to capture what we did and make sure we can repeat the success. Replication is important; we need to spread good practices throughout our organizations. But if the chief lesson from a successful project is a list of things to do the same way the next time, consider the exercise a failure.

> **If the chief lesson of a successful project is a list of things to do the same way the next time, consider the exercise a failure.**

Tools like Six Sigma and total quality management have taught us to dig into root causes of problems. Why not use the same approach to understand the root causes of success? Institute a phase in the process where each factor that contributed to success is classified as "something we can directly control" or "something that is affected by external factors." Factors under your control can remain part of your winning formula. But you need to understand how external factors interact with them.

If it ain't broke, experiment.
Experimentation is one way to test assumptions and theories about what is needed to achieve high levels of performance. And it should continue even after a success. This happens all the time in scientific research and in engineering. Engineers routinely subject their designs to ever-more-rigorous tests until the thing they are designing actually breaks. Organizational experiments can also be conducted to push boundaries. Of course, the costs and impact of such experiments need to be managed carefully (to avoid severe financial consequences or harming customers). The right question for leaders of learning organizations to ask is not "What are we doing well?" but rather "What experiments are we running?"

The path to effective learning involves simple but counterintuitive steps: Managers must actively test their theories, even when they seem to be working, and rigorously investigate the causes of both good and bad performance. Ironically, casting a critical eye on your success can better prepare you to avoid failure. Some may consider this to be an art. But in fact it is much more of a science.

Filippo Preziosi, general director for the Ducati Corse team, reflected on this point in the context of racing-bike design: "In racing, when you make a change, you only care whether or not it leads to superior performance. You tend to care less why something works. But over the long term you need to know why. This is the science."

A version of this article appeared in the April 2011 issue of *Harvard Business Review*.

Francesca Gino is a behavioral scientist and the Tandon Family Professor of Business Administration at Harvard Business School. She is the author of the books *Rebel Talent: Why It Pays to Break the Rules at Work and in Life* and *Sidetracked: Why Our Decisions Get Derailed, and How We Can Stick to the Plan*. Twitter: @francescagino.

Gary P. Pisano is the Harry E. Figgie Jr. Professor of Business Administration and the senior associate dean of faculty development at Harvard Business School. He is the author of *Creative Construction: The DNA of Sustained Innovation*.

This article is about KNOWLEDGE MANAGEMENT

⊕ Follow This Topic

Related Topics: Decision Making | Experimentation

Comments

Leave a Comment

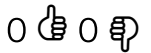Post Comment

1 COMMENTS

Marina Bella   4 years ago

""Science is finally entering the Spiritual Age. With the Sculptor Method, you can design and create the life you have always wanted. And it's easy to use."

Using the Sculptor Method for PC can get you started manifesting your desires and dreams immediately. There's no learning curve involved because the software program is intuitive — so easy to use.

Read more on website> http://bit.ly/1n2lGuZ

— Dr. Donald Schnell, Leading Authority of Spiritual disciplines, and Author of "The Initiation"

↱ Reply   0 👍 0 👎

⌄ Join The Conversation