

[Home](#)

Dear Reader,

We're getting ready to start a new year, and the calendar offers us the opportunity to pause and celebrate a new "chapter" of time. It is a time to slow down and review where we have been, where we want to go, what we want to achieve — or who we want to become.

In the spirit of learning of our own experience, we're sharing an interview with author Paul Schoemaker about his new book *Brilliant Mistakes*^[1] (Wharton Digital Press, Nov 2011).

Enjoy the reading,

Isabel Rimanoczy
Editor

Quote of the Month

"A mistake is just a misnomer for a learning."

Uncle Wilbur



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When mistakes are brilliant

**An interview with Paul Schoemaker
by Michael Tomczyk and LIM News**

How did you develop the concept of what you call "brilliant mistakes" leading to success?

PS: Two issues have always intrigued me. First, when the founder of Honda claims that success is 99% failure, I wonder why we label the necessary steps toward success in such a negative way? Failure and its twin sister "mistake" too often get a bad rap. Second, when executives tell me that they learned the most in their careers from mistakes, I wonder why they don't make a few more. I suggest that we should make more mistakes (given how valuable they often are), but most people deeply reject that seemingly silly notion. I was also fascinated with Thomas Watson's counter-intuitive advice, as founder and Chairman of IBM, that if you want to succeed faster, you need to make more mistakes. Our ambivalence about mistakes in business seemed an underdeveloped topic to me, especially the paradoxical notion that some errors will prove to be brilliant over time. To learn maximally from mistakes, we need to commit more errors than we deem optimal as judged within the bounds of our limited rationality. This idea may be hard to swallow. Yet, it is a quintessential insight. To my way of thinking, mistakes can be brilliant in two ways. The first is to learn from an unexpected set back so much that it starts to dwarf the cost of the mistake. The second way, which is more difficult to achieve, is to create strategies, organizations or cultures where people can make the types of mistakes where the learning benefits far exceed the cost of the mistake in due time.

What are some examples of mistakes or seeming blunders that led to spectacular successes?

PS: Mistakes have been the cause of great discoveries and revolutionary new insights. It was *bad judgment* that led the Wright brothers to try to fly: everybody knew at the time that humans couldn't fly and never would. In 1895, just 8 years before their fragile construct took to the air, Lord Kelvin, the esteemed British mathematician, physicist and president of the British Royal Society, had unambiguously declared that "heavier-than-air flying machines are impossible." It was relative *ignorance* that prompted Albert Einstein, a lowly patent clerk in a Swiss law office, to pose some silly questions about the nature of time, space and energy. Albert Einstein made at least 23 mistakes in his published (and refereed) scientific publications. Some of these were necessary to achieve his monumental insights about the deeper forces of nature. As a more mundane example, a young woman decided to date any person asking her out and in the end marrying someone she wouldn't have given a second look. She was willing to test her preconceived notions about "Mr. Right" as described in [Maria Dahvana Headley's](#) book "The Year of Yes". Companies should perhaps do likewise when hiring new talent. Hiring in your own image is seldom the best approach.

Another brilliant mistake occurred when meteorology researcher Edward Lorenz rounded some numbers by tiny fractions when typing them into his computer. This caused some strange weather patterns in his computer simulation and eventually led him to discover the butterfly effect of chaos theory. Or we just have to remember how the Beatles got signed through the back door after multiple rejections (a truly brilliant mistake by EMI) as well as Alexander's Fleming's adherence to the principle of "limited sloppiness" and discovering the world's most successful antibiotic, penicillin.

What are some approaches companies can use to leverage failure into success?

PS: I think of this in two ways. One is about how to learn more from unexpected outcomes, suggesting that every mistake is a gift of sorts. But the value of the gift is seldom apparent at first and instead needs to be discovered by asking deep questions about why our decision or prediction

was so far off the mark. This discovery process requires humility, an inquisitive mind, and tenacity in exploring the departure from expectation. The second suggestion is that at times you should make mistakes on purpose, so as to create new portals of discovery. But this needs to be done intelligently since many dumb mistakes can be made that offer little new insight, and great unnecessary pain. There are various methods for tolerating mistakes, such as the trial and error research process in pharmaceutical drug development. This is a good example of a high failure tolerance (up to 90%) that is deeply ingrained in practice. But these are not really deliberate mistakes since each is undertaken with the expectation of positive return on investment on average. Deliberate mistakes — in contrast — have a negative expected return *a priori*, but are nonetheless pursued to test hidden assumptions.

The deeper theme to consider here concerns the role of surprise in our lives, whether in the form of mistakes or good luck. I chose to hone on negative surprises, because these are, by definition, more difficult to embrace. It is easy to dwell on a positive surprise, where the outcome exceeds our expectations. We recount our good fortune to others, debate why it happened, and dream happy thoughts about Lady Fortune smiling on us. Negative surprises, such as outright failures or embarrassing setbacks, seldom enjoy such special attention. We want to forget about them as soon as possible, and are unlikely to share them with a large audience. This reaction is very human, but also very misguided. The deepest lessons reside at the far side of failure.

How can companies leverage failure, strategically, into success?

PS: Companies that want to compete on innovation are well advised to become more error-tolerant in practice and develop better methods for capturing the lessons from mistakes. Such companies should also emphasize that managers (especially younger ones) who are involved in project failures, are to be viewed as being on a fast learning track, rather than an exit track. Given the significance of failures and mistakes that have led to success, there is potential value from the lessons learned provided they are documented, captured and shared. Career development benefits should follow for those involved in the right kinds of failure, assuming they learn and apply the lessons to avoid mistakes in the future. This can be tested via performance reviews as well as actual on-the-job behavior. The deeper challenge is that leaders must learn how to celebrate the hard won lessons that come with mistakes, even if they are rather embarrassing. This president of an Ann Arbor business decided to institute a Golden Egg^[2] award to make sure his organization would extract as much learning as possible from past failures. His viewpoint was that mistakes are valuable assets that belong to the organization; they are corporate assets that the company paid for. To hide them and not share the lessons would amount to destroying shareholder wealth. At first, few managers wanted to receive the Golden Egg award, but after a while it became much sought after. Winners would proudly regale visitors in their office with the tale of their failed venture and gladly share its lessons. This president created a true learning culture.

What are some of the most surprising or unexpected findings or insights from your research?

PS: Successful people tend to have a different view about mistakes than most ordinary people. Not only are they more tolerant of them (in themselves and others), but they often embrace them. Notable examples are Steve Jobs who celebrated his mistakes during a commencement speech at Stanford, or J.C. Rowling who argued that she could not have produced the astoundingly successful Harry Potter series (books, movies, accessories) without having hit rock bottom first.

In the arts and humanities, people embrace mistakes more readily than in business, I feel. As

trumpet great Wynton Marsalis put it so well, if you are not making mistakes, you are not playing jazz — you are not trying. I believe the same applies to life, since that requires a great deal of improvisation as well. I don't think that perfectionists, or people who eschew mistakes for other reasons, realize their full potential as human beings, either for themselves or others.

A surprising conclusion is that people who are more risk-averse should make more deliberate mistakes, since they can be used as hedges. This was counter-intuitive to me at first. A strong portfolio case can be made for investing in mistakes. For a risk-averse decision maker, it may be worth putting some money in a project expected to yield a loss provided this investment offers a sufficient hedge in case other investments sour. Even though that seemingly inferior project will not raise profit expectations, it can help reduce losses in case bad scenarios happen. Similarly, a deliberate mistake can be viewed as a hedge against conventional wisdom, one that will have a high payoff when the majority view of the crowd happens to be wrong (but a loss otherwise in all likelihood).

What are a few of your own brilliant mistakes?

PS: Although there has not been that much brilliance in my own life, there are several personal examples that I would consider "brilliant" mistakes at my own level. One concerns my decision to take a two-year sabbatical with Royal Dutch/Shell's planning group in London just after having been promoted to associate professor at the University of Chicago. Many colleagues deemed this a mistake since my academic career was going well and leaving the world of scholarship might cast doubt on my commitment to research etc. This risk was indeed real, and my two-year absence from publishing probably did not help my academic career. But it also opened up new vistas about life beyond academia and led me to found my consulting firm^[3], which for 20 years now has served leading companies around the world in the fields of strategy and decision-making. The second mistake concerned our family's move from Chicago to Philadelphia without there being any single compelling reason to do so. We were quite happy in Chicago but I left nonetheless to be closer to family, friends and colleagues I had worked with in academia and business. It turned out to be a great move, without regrets and many new experiences that Chicago would probably not have offered. A third example is when our company decided — against its better judgment — to respond to Requests for Proposals (RFPs) that came in over the transom. We had good reasons to believe it would be a waste of time to pursue such RFPs, but then decided to challenge this key assumption. It turned out that we were wrong; some of these random RFPs proved quite valuable to us in terms of new clients and growth.

Any other issues you'd like to emphasize?

PS: My case for brilliant mistakes draws more on behavioral decision theory and its close cousin, behavioral economics, than portfolio theory or options thinking. Because humans have limited awareness of the limits of their mental models, and as a consequence often don't know what they don't know, the only way to overcome myopic frames, overconfidence, and incremental career progress is to innovate beyond the bounds of their presumed wisdom. So many past business mistakes — as judged by the conventional wisdom at the time — have proved to be brilliant! These include personal copiers, selling via pet stores, ATM machines, credit cards for students, organic food, fractional jet ownership, and tobacco-free cigarettes. Just as these ideas were ridiculed at the time, there are many silly ideas floating around today in business that will prove to be brilliant in the future. The challenge for managers is to recognize them, and this can only happen if leaders create sufficient space for productive mistakes to occur. In many companies, a brilliant mistake

may already have been made, but the brilliant part lies dormant because there is little appetite or capacity to mine the mistake. Since the tuition was paid, why not extract the lesson?



About the Author



Paul J. H. Schoemaker, PhD is founder and executive chairman of **Decision Strategies International, Inc.**, a consulting and training firm specializing in adaptive strategic management, executive development, and technology-based tool development. He is also research director of the **Mack Center for Technological Innovation** at the Wharton School where he often teams up with executives to tackle frontier challenges in innovation and strategy.

He is author of *Profiting from Uncertainty*, *Peripheral Vision* (with George Day), and *Chips, Clones and Living Beyond 100* (with Joyce Schoemaker). Paul has written over 100 academic and applied papers, in such journals as the *Harvard Business Review*, *Journal of Mathematical Psychology*, *Behavioral and Brain Sciences*, *Management Science*, and *The Journal of Economic Literature*.

Click here to find out more about the Brilliant Mistakes Contest!
Deadline for submissions: January 15, 2012

[1] <http://wdp.wharton.upenn.edu/books/brilliant-mistakes/>

[2] The reference to Egg stems from the expression "having egg on your face" which means having made an embarrassing error.

[3] Decision Strategies International <http://www.decisionstrat.com/>



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