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MASTERING THE FIVE SKILLS OF DISRUPTIVE INNOVATORS

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THE INNOVATOR'S DNA

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Introduction

INNOVATION. It's the lifeblood of our global economy and a strategic priority for virtually every CEO around the world. In fact, a recent IBM poll of fifteen hundred CEOs identified creativity as the number-one "leadership competency" of the future.[1] The power of innovative ideas to revolutionize industries and generate wealth is evident from history: Apple iPod outplays Sony Walkman, Starbucks's beans and atmosphere drown traditional coffee shops, Skype uses a strategy of "free" to beat AT&T and British Telecom, eBay crushes classified ads, and Southwest Airlines flies under the radar of American and Delta. In every case, the creative ideas of innovative entrepreneurs produced powerful competitive advantages and tremendous wealth for the pioneering company. Of course, the retrospective $1 million question is, how did they do it? And perhaps the prospective $10 million question is, how could I do it?

The Innovator's DNA tackles these fundamental questions—and more. The genesis of this book centered on the question that we posed years ago to "disruptive technologies" guru and coauthor Clayton Christensen: where do disruptive business models come from? Christensen's best-selling books, *The Innovator's*

Dilemma and *The Innovator's Solution,* conveyed important insight into the characteristics of disruptive technologies, business models, and companies. *The Innovator's DNA* emerged from an eight-year collaborative study in which we sought a richer understanding of disruptive innovators—who they are and the innovative companies they create. Our project's primary purpose was to uncover the origins of innovative—and often disruptive—business ideas. So we interviewed nearly a hundred inventors of revolutionary products and services, as well as founders and CEOs of game-changing companies built on innovative business ideas. These were people such as eBay's Pierre Omidyar, Amazon's Jeff Bezos, Research In Motion's Mike Lazaridis, and Salesforce.com's Marc Benioff. For a full list of innovators we interviewed whom we quote in this book, see appendix A; virtually all of the innovators we quote, with the exception of Steve Jobs (Apple), Richard Branson (Virgin), and Howard Schultz (Starbucks)—who have written autobiographies or have given numerous interviews about innovation—are from our interviews.

We also studied CEOs who ignited innovation in existing companies, such as Procter & Gamble's A. G. Lafley, eBay's Meg Whitman, and Bain & Company's Orit Gadiesh. Some entrepreneurs' companies that we studied were successful and well known; some were not (for example, Movie Mouth, Cow-Pie Clocks, Terra Nova BioSystems). But all offered a surprising and unique value proposition relative to incumbents. For example, each offered new or different features, pricing, convenience, or customizability compared to their competition. Our goal was less to investigate the companies' strategies than it was to dig into the thinking of the innovators themselves. We wanted to understand as much about these people as possible, including the moment (when and how) they came up with the creative ideas that launched new products or businesses. We asked them to tell us

about the most valuable and novel business idea that they had generated during their business careers, and to tell us where those ideas came from. Their stories were provocative and insightful, and surprisingly similar.

As we reflected on the interviews, consistent patterns of action emerged. Innovative entrepreneurs and executives behaved similarly when discovering breakthrough ideas. Five primary discovery skills—skills that compose what we call *the innovator's DNA*—surfaced from our conversations. We found that innovators "Think Different," to use a well-known Apple slogan. Their minds excel at linking together ideas that aren't obviously related to produce original ideas (we call this cognitive skill "associational thinking" or "associating"). But to think different, innovators had to "act different." All were questioners, frequently asking questions that punctured the status quo. Some observed the world with intensity beyond the ordinary. Others networked with the most diverse people on the face of the earth. Still others placed experimentation at the center of their innovative activity. When engaged in consistently, these actions—questioning, observing, networking, and experimenting—triggered associational thinking to deliver new businesses, products, services, and/or processes. Most of us think creativity is an entirely cognitive skill; it all happens in the brain. A critical insight from our research is that *one's ability to generate innovative ideas is not merely a function of the mind, but also a function of behaviors.* This is good news for us all because it means that *if we change our behaviors, we can improve our creative impact.*

After surfacing these patterns of action for famous innovative entrepreneurs and executives, we turned our research lens to the less famous but equally capable innovators around the world. We built a survey based on our interviews that taps into the discovery skills of innovative leaders: associating, questioning, observing, networking, and experimenting. To date, we have

collected self-reported and 360-degree data on these discovery skills from over five hundred innovators and over five thousand executives in more than seventy-five countries (for information about our assessments for individuals and companies, go to our Web site: http://www.InnovatorsDNA.com). We found the same pattern for famous as well as less famous leaders. Innovators were simply much more likely to question, observe, network, and experiment compared to typical executives. We published the results of our research in *Strategic Entrepreneurship Journal*, the top academic journal focused on entrepreneurs (details of our study are reported in appendix B).[2] We also published our findings in an article titled "The Innovator's DNA," which was the runner-up for the 2009 *Harvard Business Review* McKinsey Award.

We then turned to see what we could learn about the DNA of innovative organizations and teams. We started by looking at *BusinessWeek*'s annual ranking of innovative companies. This ranking, based on votes from executives, identified companies with a reputation for being innovative. A quick look at the *BusinessWeek* lists from 2005 to 2009 shows Apple as number one and Google, number two. OK, intuitively that sounds right. But we felt that the *BusinessWeek* methodology (executives voting on which companies are innovative) produces a list that is largely a popularity contest based on *past* performance. Indeed, do General Electric, Sony, Toyota, and BMW deserve to be on the list of most innovative companies today? Or are they simply there because they have been successful in the past?

To answer these questions, we developed our own list of innovative companies based on current innovation prowess (and expectations of future innovations). How did we do this? We thought the best way was to see whether investors—voting with their wallets—could give us insight into which companies they thought most likely to produce future innovations: new products, services, or markets. We teamed up with HOLT (a division of Credit Suisse Boston that had done a similar analysis for *The Innovator's*

Who Is Classified as an Innovator?

Perhaps one of the most surprising findings from the past thirty years of entrepreneurship research is that *entrepreneurs do not differ significantly (on personality traits or psychometric measures) from typical business executives.*[a] We usually meet this finding with skepticism, since most of us intuitively believe that entrepreneurs are somehow different from other executives. Note that our research focused on *innovators* and, in particular, *innovative* entrepreneurs rather than entrepreneurs. Here's why. Innovative entrepreneurs start companies that offer unique value to the market. When someone opens a dry cleaner or a mortgage business, or even a set of Volkswagen dealerships or McDonald's franchises, researchers put them all in the same category of entrepreneur as the founders of eBay (Pierre Omidyar) and Amazon (Jeff Bezos). This creates a categorization problem when trying to find out whether *innovative* entrepreneurs differ from typical executives. The fact is that most entrepreneurs launch ventures based on strategies that are not unique and certainly not disruptive. Among entrepreneurs as a whole, only 10 percent to 15 percent qualify as "innovative entrepreneurs" of the kind we're discussing.

Our study includes four types of innovators: (1) start-up entrepreneurs (as we described earlier), (2) corporate entrepreneurs (those who launch an innovative venture from within the corporation), (3) product innovators (those who invent a new product), and (4) process innovators (those who launch a breakthrough process). Our process inventor category includes folks like A. G. Lafley, who initiated a set of innovative processes at Procter & Gamble that sparked numerous new product innovations. In all cases, the original idea for the new

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business, product, or process must be the innovator's idea. While these different types of innovators have numerous similarities, they also have some differences, as we will show in the chapters that follow.

a. This is evident in the conclusions of numerous studies on entrepreneurs, including the following:

> "After a great deal of research, it is now often concluded that most of the psychological differences between entrepreneurs and managers in large organizations are small or non-existent" (L. W. Busenitz and J. B. Barney, "Differences Between Entrepreneurs and Managers in Large Organizations," *Journal of Business Venturing* 12, 1997).
>
> "There appears to be no discoverable pattern of personality characteristics that distinguish between successful entrepreneurs and non-entrepreneurs" (W. Guth, "Director's Corner: Research in Entrepreneurship," *The Entrepreneurship* Forum, winter 1991).
>
> "Most of the attempts to distinguish between entrepreneurs and small business owners or managers have discovered no differentiating features" (R. H. Brockhaus and P. S. Horwitz, "The Psychology of the Entrepreneur" in *The Art and Science of* Entrepreneurship, 1986).

Solution) to develop a methodology for determining what percentage of a firm's market value could be attributed to its existing businesses (products, services, markets). If the firm's market value was higher than the cash flows that could be attributed to its existing businesses, then the company would have a *growth and innovation premium* (for our purposes, we'll just call it an *innovation premium*). An innovation premium is the proportion of a company's market value that cannot be accounted for from cash flows of its current products or businesses in its current markets. It is the premium the market gives these companies because investors expect them to come up with new products or markets—*and* they expect the companies to be able to generate high profits from them (see chapter 7 for details on how the premium is calculated).

It is a premium that every executive, and every company, would like to have.

We unveil our list of the most innovative companies—ranked by innovation premium—in chapter 7. Not surprisingly, we found that our top twenty-five companies include some on the *BusinessWeek* list—such as Apple, Google, Amazon, and Procter & Gamble. These companies averaged at least a 35 percent innovation premium over the past five years. But we also learned that companies such as Salesforce.com (software), Intuitive Surgical (health care equipment), Hindustan Lever (household products), Alstom (electrical equipment), and Monsanto (chemicals) have similar premiums. And as we studied these firms in greater detail, we learned that they are also very innovative. As we examined both our list and the *BusinessWeek* list of innovative companies, we saw several patterns.

First, we noticed that compared to typical companies they were far more likely to be led by an innovative founder or a leader who scored extremely high on the five discovery skills that compose the innovator's DNA (their average discovery quotient was in the eighty-eighth percentile, which meant they scored higher than 88 percent of people taking our discovery skills assessment). Innovative companies are almost always led by innovative leaders. Let us say this again: *Innovative companies are almost always led by innovative leaders.* The bottom line: if you want innovation, you need creativity skills within the top management team of your company. We saw how innovative founders often imprinted their organizations with their behaviors. For example, Jeff Bezos personally excels at experimenting, so he helped create institutionalized processes within Amazon to push others to experiment. Similarly, Intuit's Scott Cook shines at observing, so he pushes observation at Intuit. Perhaps not surprisingly, we discovered that the DNA of innovative organizations mirrored the DNA of innovative individuals. In other words, innovative *people*

systematically engage in questioning, observing, networking, and experimenting behaviors to spark new ideas. Similarly, innovative *organizations* systematically develop *processes* that encourage questioning, observing, networking, and experimenting by employees. Our chapters on building the innovator's DNA in your organization and team describe how you too can actively encourage and support others' innovation efforts.

Why the Ideas in This Book Should Matter to You

Over the last decade, many books on the topic of innovation and creativity have been written. Some books focus on disruptive innovation, such as Clayton Christensen's *The Innovator's Dilemma* and *The Innovator's Solution*. Others, such as *Ten Rules for Strategic Innovators* (Govindarajan and Trimble), *Game Changer* (A. G. Lafley and Ram Charan), and *The Entrepreneurial Mindset* (Rita McGrath and Ian MacMillan), examine how organizations, and organizational leaders, encourage and support innovation. Others look more specifically at product development and innovation processes within and across firms, such as *How Breakthroughs Happen* (Andrew Hargadon) and *The Sources of Innovation* (Eric von Hippel). Other books on innovation look at the roles individuals play in the innovation process within companies, such as *The Ten Faces of Innovation* and *The Art of Innovation* (both by Tom Kelley of IDEO), or *A Whole New Mind* (Daniel Pink). Finally, other books like *Creativity in Context* (Teresa Amabile) and *Creativity* (Mihaly Csikszentmihalyi) examine individual creativity and, more specifically, theories and research about creativity. Our book differs from the others in that it is focused squarely on individual creativity in the business context and is based on our study of a large sample of business innovators, including some big-name innovators such as Jeff Bezos (Amazon.com), Pierre Omidyar (eBay), Michael Lazaridis

A Disclaimer . . . Sort of

We think it is important to remember three significant points as you read *The Innovator's DNA*. First, engaging in the discovery skills doesn't ensure financial success. Throughout the book, we tell stories of people who were manifestly successful at innovating. We focus on the success stories because we are all more naturally drawn to success than failure. However, in our sample of five hundred innovators, only two-thirds launched ventures or products that met our criteria of success. Many were not successful. The innovators developed the right skills—questioning, observing, networking, and experimenting—that produced an innovative venture or product, but the result was not always a financial success. The point is that the discovery skills we describe are necessary, indeed critical, for generating innovative business ideas, but they don't guarantee success.

Second, failure (in a financial sense) often results from not being vigilant in engaging all discovery skills. The more financially successful innovators in our sample demonstrated a higher discovery quotient (scored higher on the discovery skills) than less successful ones. If you fail with an innovation, it may be that you didn't ask all the right questions, make all of the necessary observations, talk to a large enough group of diverse people, or run the right experiments. Of course, it is also possible that you did all these things but an even newer technology emerged or some other bright innovator came up with an even better idea. Or maybe you just didn't excel at executing on the idea or have the resources to compete with an established firm that imitated your invention. Many factors can prevent a new product or business idea from gaining traction in the market. But the better you are at asking the

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right questions, engaging in the right observations, eliciting ideas and feedback through networking with the right people, and running experiments, the less likely you are to fail.

Third, we spotlight different innovators and innovative companies to illustrate key ideas or principles, but not to set them up as perfect examples of how to be innovative. Some innovators we studied were "serial innovators," as they had developed quite a number of innovations over time and appeared motivated to continue doing so. Others benefitted by being in the right place at the right time to make a critical observation, talk to a key person with particularly useful knowledge, or serendipitously learn from an experiment. They made an important discovery once, but they might not necessarily be capable or motivated (perhaps due to financial success) to continue generating innovative ideas. In similar fashion, we have found that innovative companies can quickly lose their innovative prowess, while others can quickly improve it. In chapter 8, we show that Apple's innovation prowess (as measured by its innovation premium) dropped dramatically after Jobs left in 1984, but then jumped up dramatically a few years after he returned to lead the company. Procter & Gamble was a solid innovation performer before Lafley took the helm, but increased its innovation premium by 30 percent under his leadership. The point is that people and companies can change and may not always live up to our lofty expectations.

(Research In Motion/BlackBerry), Michael Dell (Dell), Marc Benioff (Salesforce.com), Niklas Zennström (Skype), Scott Cook (Intuit), Peter Thiel (PayPal), David Neeleman (JetBlue and Azul airlines), and so on. The premise of our book is that we explain how these big names got their "big ideas" and describe a process

that readers can emulate. We describe in detail five skills that anyone can master to improve his or her own ability to be an innovative thinker.

Ask yourself: Am I good at generating innovative business ideas? Do I know how to find innovative people for my organization? Do I know how to train people to be more creative and innovative? Some executives respond to the last question by encouraging employees to think outside the box. But thinking outside the box is precisely what employees (and executives) are trying to figure out. We've even watched some executives answer the "How do I think outside the box?" question with another equally generic (and unhelpful) answer, "Be creative."

If you find yourself struggling with actionable answers to these questions, read on to gain a solid grasp of five skills that can make all the difference when facing your next innovation challenge. All leaders have problems and opportunities sitting in front of them for which they have no solution. It might be a new process. It might be a new product or service. It might be a new business model for an old business. In every case, the skills you build by putting into practice the innovator's DNA may literally save your job, your organization, and perhaps your community. Indeed, we've found that if you want to rise to the highest levels of your organization—to a business unit manager, president, or CEO position—you need strong discovery skills. And if you want to lead a truly innovative organization, you likely will need to excel at those skills.

We hope that *The Innovator's DNA* will encourage you to reclaim some of your youthful curiosity. Staying curious keeps us engaged and our organizations alive.[3] Imagine how competitive your company will be ten years from now without innovators if its people didn't find any new ways to improve its processes, products, or services. Clearly, your company would not survive. Innovators constitute the core of any company's, or even country's, ability to compete.