

Cracking the Curiosity Code

*The Key to Unlocking Human
Potential*

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Chapter 7

Curiosity, Creativity, and Innovation

Curiosity is the engine of achievement.
Sir Ken Robinson

Throughout my career as a behavioral expert, assistant professor, and speaker about human behavior, individuals and students have asked this question: “Are curiosity and creativity the same thing? And if not, how are they related?”

Given the frequency of the question and the intensity of the discussions that have followed, and given that this book is about curiosity, I feel compelled to address this question.

Creativity or innovation is perhaps what CEOs seek most in their employees. Innovation is the key to competitive advantage, which is the key to survival. Today’s product is only as good as tomorrow’s newer and better version. How many times have we heard analysts ask, “When will Apple introduce a newer version of its iPhone?” Yes, today’s product is yesterday’s news. We want to know what’s next.

To better understand the link between curiosity and innovation, I researched work by Gregory Mirzayantz, an author, blogger, and all-round commentator on the human condition. (Get ready for a mind warp and an intellectual game of Twister.)

When asked “Are curiosity and creativity the same thing?” Mirzayantz used his best deductive logic and posed this response:

If curious people are always creative, but creative people are not always curious, then curiosity drives creativity.

But if curious people are not always creative, and creative people are always curious, then creativity drives curiosity.

What does that trail of inquiry have to do with curiosity and innovation? Perhaps Leonardo da Vinci concluded that it was his pervasive curiosity that drove him to his many creations manifested in his masterful paintings and sculptures. Many of today's corporate leaders and consultants agree that this approach remains true today.

Joe Calloway, a business author, consultant, and speaker whose clients range from Coca-Cola and Verizon to Cadillac and American Express, said, "I really believe that curiosity is like a muscle that must be used in order to stay strong."

Mike Federle, CEO of *Forbes*, said, "Add something unexpected to your regular routine. Walk a different route to work, study a subject of which you think you have little interest, examine your inner voice, and understand the narratives you create about yourself."

Scott DuPont, of the DuPont family, said, "Keep a pen and paper handy or the voice recorder on your smart phone and capture the thoughts that come to your mind—those you are curious about and may want to explore!"

Mark Sanborn, professional speaker, entrepreneur, and author of the best-seller *The Fred Factor: How Passion in Your Work and Life Can Turn the Ordinary into the Extraordinary*,ⁱ described this approach to creativity and innovation: "I am one of those people who is interested in many things. I believe creativity comes from reading, experiencing, and learning outside your field. If you're in a cafe in a new city, don't take refuge in your cellphone. Watch the people around you and notice little things about them: how they interact, how they use their bodies when

they speak, and whether they take their time or exude a sense of hurry. Once you connect with the present, breathing and noticing instead of seeking distraction, your judgments and fears will lessen, and your curiosity will blossom.”

Position yourself with something that captures your curiosity,
something that you’re a missionary about.

Jeff Bezos

To get out of this mind-twisting labyrinth and closer to understanding the relationship between curiosity and innovation, I introduce you to Faisal Hoque. Hoque is a serial entrepreneur and the founder of Shadoka, a firm dedicated to creativity, entrepreneurship, and innovation. He is also the author of *Everything Connects: How to Transform and Lead in the Age of Creativity, Innovation, and Sustainability*.ⁱⁱ In his book, he wrote, “Experiences are the fuel of creativity; and curiosity is the thirst which drives those new experiences.”

Aha! This clarifies the issue. It all begins with our curiosity. Curiosity then leads us to experiences, and those experiences then lead to creativity. So, according to Hoque, it is curiosity that drives our creativity.

When I interviewed billionaire entrepreneur Jeff Hoffman, he stated the same thing. “As we get older, some people just lose that natural childlike curiosity about the world around them. What I started to notice is the world’s greatest innovators never do . . . lose that sense of childlike wonder.”

Psychotherapist Diana Pitaru takes the view that the relationship between creativity and curiosity is symbiotic. She said that the two must work hand-in-hand, that is, without one (curiosity), you can’t have the other (creativity). Thus, if our creativity heavily

depends on our curiosity, then where would original and valuable ideas come from if curiosity didn't exist?

Albert Szent-Gyorgyi has some insight. This Hungarian biochemist won the Nobel Prize for discovering vitamin C and the components and reactions of the citric acid cycle. He said, "Discovery exists when you look at the same thing as everyone else and think something different. That isn't easy." He was known to have loved the scene in the movie *Dead Poet's Society* when Robin Williams' character climbed on his desk and asked his students, "Why am I standing on my desk? I stand upon my desk to remind myself that we must constantly look at things in a different way."

Innovation many times comes from the least likely sources. England's Great Ormond Street Hospital, which treats heart patients, was experiencing an inordinate number of casualties when patients were being transferred from one unit to another. One of the physicians was watching a Formula One race and was particularly impressed by how quickly and efficiently the pit crews serviced everything, mistake-free, in seven seconds or less.

So, he invited Formula One racing teams to come in and view the hospital's transfer procedures, and then make observations based on their own procedures. The three-step process recommended by the racing teams, once implemented, reduced the hospital's errors by more than 50 percent.

Toyota, the Japanese car manufacturer, constantly looks to its employees for innovation. It expects them to offer as many as 100 suggestions a year on how to improve processes. Similarly, Google allows up to twenty percent of an employee's time to be dedicated to curiosity and innovation. Each of them, like the Formula One pit crews, believe that by focusing on the small things, the big things take care of themselves.

Adam Markel, an international speaker and author of the best-seller, *Pivot*, said on my show, “If you want to be an innovator, either in your business or in your personal life, you’ve got to be willing to take small steps every day. Not big leaps, but small steps.”

Larry Robertson echoed the same theme in *The Language of Man: Learning to Speak Creativity*. He wrote, “Creativity requires a willingness to reconsider even the most well-worn or deeply cherished assumptions.”ⁱⁱⁱ (We will discuss this idea further in Part III.)

If necessity is the mother of invention, then curiosity is its father.
Rupal Bhadu

Now let’s throw innovation and invention into the mix.

When we hear “Necessity is the mother of invention,” that assumes someone created something to fill a need in society. In Jared Diamond’s Pulitzer Prize-winning book *Guns, Germs, and Steel: The Fates of Human Societies*, he explained that many times this is not always the reason for inventions. “In fact, many or most inventions were developed by people driven by curiosity.”^{iv} Even Edison didn’t initially consider the phonograph to reproduce music.

Innovation is at the top of many leaders’ lists for what they’d like their staff members to improve in their organizations.

To be innovative means to come up with new methods, ideas, or products. That requires asking questions and challenging the

status quo. There must be a strong desire to learn something new. The trick is how to develop that desire in people.

As we age, our natural sense of curiosity becomes a less dominant force. How can we explain that? There are a multitude of reasons, including (to name a few):

- Fear of failure
- Assuming we know things we don't
- Technology doing things for us
- Others suppressing our natural desire to explore and learn

If we want people to be curious at work, we must recognize what holds them back. How can we expect them to solve problems if we don't allow them to ask questions? How can we anticipate receiving innovative ideas if we micromanage their time and interests?

Many employees don't provide input for fear of looking stupid. Yes, we can tell them that there's no such thing as a stupid question. But if our actions don't align with our words, they'll keep their questions and ideas to themselves.

The most innovative companies encourage employees to share their passions and ideas. Companies such as Facebook, Uber, Amazon, and Google recruit employees who ask questions. As Google's CEO has said, "We run this company on questions, not answers."^v

To improve innovation at work, we need to lead by example, ask questions, and demonstrate empathy based on what we hear. We must avoid groupthink, promote learning, and reward natural curiosity. We recognize this requires persistence to ensure that we don't quit when we run into the unexpected.

Yes, we can embrace what we don't know by creating an environment that rewards curiosity and crazy questions. If we observe leaders such as Elon Musk (Tesla), Sir Richard Branson (Virgin Airlines), and Sergey Brin and Larry Page (Google), we see that they explored new areas and broke through boundaries.

How can we expect our people to explore new boundaries and create innovation if we as leaders tie their hands?

Even if your ambitions are huge, start slow, start small, build gradually, build smart.
Gary Vaynerchuk

Big Innovative Breakthroughs

Instead of looking at innovators as not following the rules or being contrary, we need to consider that crazy questions have led to big innovative breakthroughs. So we don't get placated into believing we have all the answers, we need questions such as:

- “Why not?”
- “Why doesn't this work?”
- “What are we missing?”

Rather than rewarding conformity, again we need to examine what make us hold onto it. We require brutal honesty, investment in training that brings out our natural sense of curiosity, and allowing people to create stretch goals outside what feels comfortable.

Instead of relying on technology to solve our problems, let's occasionally put technology aside and consider what we don't know about what technology can do for us. Are we getting only superficial answers when there's more to explore if we simply asked questions?

We need to question ourselves as well as our employees. We might assume that we know the answers to things we don't even understand. We must resist the desire to remain where we are, and instead look ahead to the possibilities.

To do that requires being humble, confident, self-aware, and realistic. We can embrace nonconformity and collaboration, resisting a need to control everything. If we hold ourselves back by telling ourselves we are shy or a team player, that won't produce out-of-the-box thinking. Rather, let's ask open-ended questions that require critical thinking, and then listen carefully to what we hear in response.

If we focus on others rather than ourselves, that is a big step. After all, we tend to see the world from our own stories. What if we could live in someone else's mind to see things from a fresh perspective? What new ideas could our two conjoined minds bring out?

Yes, working on our inner monologue could be a big first step. We can stop telling ourselves that we aren't creative or that other people are better at coming up with things. If we see the fun involved in learning and exploring, we could be an integral part of the innovative process. If we get out of our routines and change our environment, that could spark some new ideas.

Simple things like looking up a new word a day or writing a blog about something we don't know could open our minds to something never conceived. Spending time around diverse environments to see things from another perspective can be crucial. Let's surround ourselves with people who have done bigger things. They help us see things from a "been there and done that" perspective and can remove the taboo or fear of exploration.

We must look at failure as a learning experience and part of the process rather than as a problem. Only then can we get people to venture out of the safe zone. When we create motivational moments, we ignite emotion and improve our sense of well-being.

How has your organization gone about rewarding those who ask questions, challenge habits, and seek adventure?

Much of what I stumbled into by following my curiosity and intuition turned out to be priceless later on.

Steve Jobs

In 1941, Georges de Mestral, a Swiss engineer, was hunting with his dog in the hills of Switzerland and became annoyed when he returned home to find his clothes and his dog covered with burdock burrs. After spending hours removing the unwanted burrs, he was curious to know the quality that gave the burrs their ability to cling to clothing, fur, and other objects that passed their way.

He put one of the burrs under a microscope to examine the phenomenon more closely. He discovered that the surface of the burrs consisted of tiny hooks that could attach to any object that provided a receptive surface. That receptive surface included anything that provided a loop, such as clothing, hair, or animal fur.

de Mestral was struck by the burrs' exceptional sticking characteristics and pondered how he could apply this concept and replicate that sticky characteristic. After several experiments, he thought of creating a fabric to be used as a product fastener based on the principles of the burdock burr. He concocted a name for

the fabric by combining the French words “velours” (velvet) and “crochet” (hooks). He called the fabric Velcro.

Reflecting on Faisal Hoque’s formula, we see that de Mestral had an experience that led to curiosity, which resulted in his creation.

John Bessant, professor of innovation and entrepreneurship at the University of Exeter, has cited great discoveries of our time that occurred by accident and curiosity. Through the inventors’ perseverance and curiosity, experimental failures became game-changing innovations. Here are some examples:

A melted chocolate bar in Percy Spencer’s pocket inspired a product we use every day. While working on microwave-based radar equipment for the defense contractor Raytheon in 1945, Spencer noticed that, when activated, the technology melted a chocolate bar in his shirt pocket. His curiosity took over. After a myriad of experiments, the microwave oven was born.

In the 1930s, Kutol Products was a struggling company trying to sell its paste to clean the soot residue from coal-fired stoves and off of walls and furniture. By the 1950s, coal-based heating was becoming obsolete and so was Kutol as a company. But children, as unintended users of the cleaning solution, discovered a more lucrative use for the cleaner and saved the company. The new product was called Play-Doh.

In the 1930s, Roy Plunkett was a chemist working on chlorofluorocarbons for the chemical giant, DuPont, to improve refrigeration materials. When he returned to examine his latest experiment, he was disappointed to find that one of the canisters no longer contained the gas he had hoped for. It had a waxy build-up instead. His curiosity provoked him to further experiment with materials, and he discovered the extraordinary lubricating

qualities it was able to provide, even at high temperatures. The result was the product called Teflon.

The list could go on to include products such as Viagra, Super Glue, penicillin, and Silly Putty, all born from a curiosity that defied failure and disappointment.

What If . . . ?

Creativity demands having an open mind, which seems to be the common thread for all the inventors, entrepreneurs, and successful business leaders we've examined. And all those individuals asked the same question: "What if . . .?"

Sometimes, they asked a variation of this question, such as "I wonder what happens when . . .?" or "I wonder what you would get if you did A and B?"

Creativity is questioning the familiar or having the desire to pursue the unknown. Whether it's painters trying new blends of color, gardeners experimenting with hybrid plants, or dog breeders testing new breeds, curiosity provokes a variation of the question "What if . . .?" while providing the fuel that leads to creation.

The Virtues of Failure

Accompanying the mixture of curiosity and creativity is a dramatic reduction in the fear of failure.

Have you ever been so focused on creating a piece, repairing a machine, or solving a problem that you ignored every failed experiment along the way? You just kept on going until the problem was solved. Your failures were completely overridden by

your determination. Think about how many times you said, “Well, that didn’t work. What if I do it this way?”

I have not failed. I’ve just found 10,000 ways that don’t work.
Thomas Edison

Behaviorists tell us that the combination of curiosity and the pursuit of a creation or a solution is the antidote to the fear of failure. Whether we’re creating an invention or solving a problem, when we’re focused on the solution, we don’t dwell on the failures along the way. We just keep trying until it’s done.

Michael Gelb is an internationally renowned author and speaker on curiosity and creativity. Among other features, he conducts an online class, *How to Think Like Leonardo da Vinci*. He said, “By nature children are curious, but as we grow up much of our inquisitiveness ebbs. Almost all children in their natural state ask lots of questions. That’s how they learn so much in the first five years of life. But then we send them to school where they learn that answers are more important than questions. Creative geniuses like da Vinci, however, maintain that passionate curiosity throughout life, which results in a lifetime of creativity.”^{vi}

Innovation, or creativity, appears to be the by-product of curiosity, which may entail many failures along the way to sometimes surprising success. CEOs are well served to foster both curiosity and innovation and take the failures in stride because many times they’re worth the result.

ⁱ <https://www.amazon.com/Fred-Factor-Ordinary-Extraordinary-2004-04-20/dp/B017WQHC00>

ⁱⁱ <https://www.amazon.com/Everything-Connects-Creativity-Innovation-Sustainability/dp/0071830758>

ⁱⁱⁱ <https://www.amazon.com/Language-Man-Learning-Speak-Creativity/dp/0983757445>

^{iv} <https://www.amazon.com/Guns-Germs-Steel-Fates-Societies/dp/0393354326>, p. 242.

^v <http://www.destination-innovation.com/lead-and-create-by-asking-questions/>

^{vi} <https://www.amazon.com/How-Think-Like-Leonardo-Vinci/dp/0440508274>