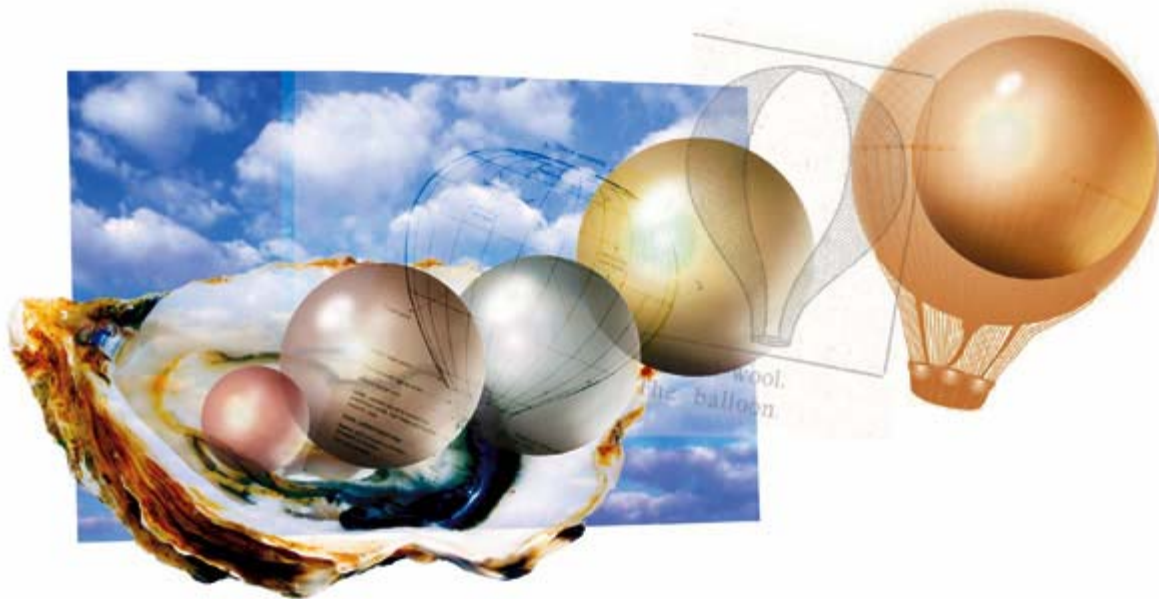


Eureka! It Really Takes Years of Hard Work



By JANET RAE-DUPREE

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WE'VE all heard the tales of the apple falling on Newton's head and Archimedes leaping naked from his bath shrieking "Eureka!" Many of us have even heard that eBay was created by a guy who realized that he could help his fiancée sell Pez dispensers online.

The fact that all three of these epiphany stories are pure fiction stops us short. As humans, we want to believe that creativity and innovation come in flashes of pure brilliance, with great thunderclaps and echoing ahas. Innovators and other creative types, we believe, stand apart from the crowd, wielding secrets and magical talents beyond the rest of us.

Balderdash. Epiphany has little to do with either creativity or innovation. Instead, innovation is a slow process of accretion, building small insight upon interesting fact upon tried-and-true process. Just as an oyster wraps layer upon layer of nacre atop an offending piece of sand, ultimately yielding a pearl, innovation percolates within hard work over time.

"The most useful way to think of epiphany is as an occasional bonus of working on tough problems," explains Scott Berkun in his 2007 book, "The Myths of Innovation." "Most innovations come without epiphanies, and when powerful moments do happen, little knowledge is granted for how to find the next one. To focus on the magic moments is to miss the point. The goal isn't the magic moment: it's the end result of a useful innovation."

Everything results from accretion, Mr. Berkun says: "I didn't invent the English language. I have to use a language that someone else created in order to talk to you. So the process by which something is created is always incremental. It always involves using stuff that other people have made."

The innovator Jim Marggraff, creator of an interactive world globe called the Odyssey Atlasphere, the LeapPad reading platform for children and LeapFrog's Fly talking pen, explains that each creation built on the work that

went into making the previous one. That same process of accretion holds true for the Pulse Smartpen, introduced last week by his new company, Livescribe; he hopes that the product, which records audio while it tracks what the pen writes, will bring back computing to its pen-and-paper roots.

“The aha moments grow out of hours of thought and study,” he says. “If you look at my innovations, there’s a common theme. I take something familiar, intuitive and ubiquitous and recast it in a manner that will redefine its use to drive profound change.”

The Atlasphere grew from his dismay that one in seven American adults could not find the United States on an unmarked world map, and that one in four couldn’t find the Pacific Ocean. He sees geographic illiteracy as a big obstacle to world peace, so he packed his interactive globe with games and tens of thousands of geographic and cultural facts, all available at the touch of a stylus.

The “near touch” technology that went into the Atlasphere might have other educational benefits, Mr. Marggraff realized. A self-described “student of learning and learning systems,” he had been puzzling over how to help his 4-year-old son understand reading.

“I was pointing to the words on the page and trying to explain what a word was, but I’d watch him and realize that he didn’t have any idea what I was talking about,” he says. “This black-ink thing here is called a letter — I realized this was all very abstract.”

Mr. Marggraff likes to go to bed with one or more problems on his mind. “Typically, I’ll fall asleep chewing on it and then I’ll wake up at 4 in the morning with some sort of solution,” he says.

That’s a common theme in innovation, according to Mihaly Csikszentmihalyi, a psychologist at the Claremont Graduate University in California. “Cognitive accounts of what happens during incubation assume that some kind of information processing keeps going on even when we are not aware of it, even while we are asleep,” he writes in “Creativity: Flow and the Psychology of Discovery and Invention.”

This time, Mr. Marggraff awoke at 4 in the morning determined to “flatten out” the globe so he could use the Atlasphere’s near-touch technology on a single page and, ultimately, within a specially designed book to help children learn how to read. Though some would call this an epiphany, it took years of trial and error to make the Leap-Pad a reality.

“There’s an aha moment followed by a ton of work to figure out what it is that’s actually going to work,” agrees Douglas K. van Duyne, co-founder of Naviscent, a Web usability consulting firm. “It goes back to that old saw that invention is 1 percent inspiration and 99 percent perspiration. The idea of epiphany is a dreamer’s paradise where people want to believe that things are easier than they are. It takes a huge amount of determination and effort to follow through.”

Businesses want to believe that a brilliant mind or a brilliant idea can make or break their innovation efforts, Mr. Berkun says. The myth of epiphany has a long history because it’s appealing to believe that there is a short, simple reason that things happen. The myth has staying power because there is a tiny core of truth within it.

“But as soon as you dig into what happened five minutes before that magic moment, or a day, or a week, or a month,” he says, “you realize that there is a much more complicated story in the background.”

THAT more complicated story most often begins and ends with a determined, hard-working and open-minded person trying, and failing, to find a solution to a given problem.

“Successful entrepreneurs do not wait until ‘the Muse kisses them’ and gives them a ‘bright idea’: they go to work,” Peter F. Drucker says in “Innovation and Entrepreneurship.” “Altogether they do not look for the ‘biggie,’ the innovation that will ‘revolutionize the industry,’ create a ‘billion-dollar business’ or ‘make one rich overnight.’”

Those entrepreneurs who start out with the idea that they'll make it big — and in a hurry — can be guaranteed failure.”

It's not that these magical moments of epiphany don't happen. In small ways, they happen all the time. But they're not nearly as important as what the innovator did before — or ultimately does after — the magic light bulb goes on. As the French scientist Louis Pasteur once said, “Chance favors the prepared mind.”

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