

THE INNOVATION INTENT

The word *innovator* conjures up a plethora of personalities, among them the usual suspects: Leonardo da Vinci, Albert Einstein, Richard Branson. We have a tendency to lump all innovators into a single category: creative geniuses. However in order to understand where ideas come from, it is first important to distinguish the different forms of creative expression and the different types of innovators—artistic creativity (for example, Pablo Picasso), scientific creativity (for example, Marie Curie), and conceptual creativity (for example, James Dyson, the inventor of the Dyson vacuum cleaner, the cleaner that “doesn’t lose suction”)—since these three forms require different skills and have very different goals. By understanding these differences, you can avoid the predictable fender benders often associated with innovation: botched business ventures, failed product launches, and disastrous investment decisions. In order to put the innovation intent into context, I will share a personal experience with you that led to my own eureka moment about the field in which I work: innovation. If you have ever attended a creativity seminar, this experience may sound familiar.

Karaoke is a dodgy affair and ought to be heavily regulated. Care and use requirements should read as follows: *Karaoke is to be used only while intoxicated or while in the presence of a heavily sedated audience. Furthermore, karaoke is designed for entertainment purposes only and should not be used for practical applications. Break the rules, and face stiff fines.* There I was, minding my own business, when I was suddenly launched into the midst of a dozen complete strangers singing Gloria Gaynor’s “I Will Survive.” If you could have seen us: howling like caged animals with heads thrown back in ecstasy and fists pumping wildly. Survival was certainly on my mind, but

so too was spontaneous combustion. You might conclude that I was involved in some sort of premarital ritual, but this was not the case. Quite the contrary, I was attending a creativity seminar: a day-long event designed to help participants “think differently.” The room had a romper room feel to it: games, toys, beanbags. You get the picture. At one point, we even paused for an ice cream break. The session facilitator had arranged for the Good Humor man to swing by in his ice cream truck just in time to inspire our palates. I had a Bomb Pop, the original cherry-, lime-, and blue-raspberry-flavored frozen treat.

And then it happened. Aha! I was indeed beginning to think differently. While licking the remains of my cherry-, lime-, and blue-raspberry-stained fingers, I suddenly realized the extent to which creativity and innovation are profoundly misunderstood.

In an attempt to reduce inhibitions, a hallmark of creativity, many purveyors of innovation employ games such as these to promote new ways of thinking. Their belief is that divergent thinking (thinking outside the box) will increase as inhibitions retreat. This is absolutely true; however, where they run into trouble is how they go about promoting creativity. Promoting *artistic* creativity (the creation of unique objects) by virtue of song and dance may be temporarily entertaining, but it is not necessarily the most effective method for encouraging *conceptual* creativity (the art of problem solving). It does include an element of fun and when used in moderation can be effective. However, one could argue that public displays of artistic expression may heighten inhibitions for many people, particularly when done in the company of strangers or even coworkers.

Since creativity is a function of both cognition and emotion, the feeling of anxiety that these stunts often produce works to narrow our attention (cognitively) and motivates us (emotionally) to withdraw from creative collaboration (“I’ve got to get out of here!” may be the overwhelming thought). Anxiety and creativity are strange bedfellows. Robert Sternberg, a leading researcher in intelligence and creativity, has found that “a creative person

is willing to tolerate this anxiety [of trying to reach a solution] long enough to reach an optimal or near-optimal solution.” For others, however, crawling into the nearest box (versus thinking outside it) is a more likely response. These techniques often fail to surface relevant ideas not because they are silly but because they are designed on the premise that all creativity is art. The goal is to create something unique versus creating something that serves a relevant purpose or solves an existing problem.

This myth is deeply rooted in a shared misunderstanding of applied creativity, that is, innovation. It is so widely misunderstood that many of us even have an image in our mind of what innovators should look like. By way of example, during a Webcast interview in Monterrey, Mexico, at Tecnológico de Monterrey, one of Mexico’s leading universities, I was once asked by Carlos Cruz, the president of innovation and institutional development at the university, whether I could identify an innovator based on that person’s physical appearance. He then went on to say that when we met, he expected me to be wearing jeans and to be a bit disheveled in my appearance—the romantic vision of an artist—and was surprised to see me wearing a suit and tie. This image of “the innovator” that we carry around in our minds is not necessarily a mythological image; it simply reflects our shared misunderstanding of the difference between artistic creativity and conceptual creativity. After I had responded to his question, which I will share with you shortly, Cruz then shared with me why he asked me the question: he too wears a suit and tie and is often asked the same question. After all, the word *innovation* is in his job title. This collective misunderstanding of innovation is so widespread that we even have a stereotypical image for what an innovator should look like: a hybrid of Albert Einstein and Andy Warhol. Herein is the problem.

Although all art involves creativity, not all creativity involves art. For example, surgeons get creative once they discover an unanticipated problem during a procedure. So too do entrepreneurs once they’ve burned through their seed funding. As far as I know, there

have been no documented cases of karaoke-inspired heart surgery, and although many entrepreneurs may not be able to paint, they are certainly no strangers to bootstrapping. The creativity employed by entrepreneurs, new product developers, physicians, parents, and all those others charged with finding innovative solutions to existing problems is not artistic creativity; rather, it is conceptual creativity. These two forms of creativity are vastly different.

Art includes all unique objects, including music, that are admired for their aesthetic principles. Artistic creativity consists of the ability to render things that attract attention for their inherent beauty or simply because of their mere existence, as Michelangelo's *David* does. Artistic creations may be unique, but are they relevant to solving any particular problem? It really doesn't matter. Artistic creations do not have to be relevant to anything or anyone. The *Mona Lisa* is to be admired, but it doesn't have to solve a problem. It is art—and great art at that. But conceptual creativity has a goal: to solve a problem or fill an unmet need, want, or desire. For example, figuring out how to get potable water to those living in sub-Saharan Africa is a problem. Ethos Water has in part figured it out. For every bottle of Ethos designer water that a person buys at Starbuck's or elsewhere, five cents goes directly to support water programs throughout the world. Ethos is a uniquely relevant solution to an unmet need and a conceptual innovation. It is not art. An example of a technological solution to this same problem is the LifeStraw, a ten-inch drinking straw with a charcoal filter that filters out bacteria and parasites. A person can use it to drink safely from a possibly contaminated water source. It's the same problem with two creative solutions.

This common misunderstanding between artistic creativity (inventing unique things) and conceptual creativity (solving problems) is one of the primary reasons that so many new ideas fail in the marketplace. The reason so many people and organizations fail at innovation is that they focus too much on artistic creativity when attempting to introduce new ideas. They end up introducing

novelty, not solutions. Ideas that fail are often unique and therefore succeed as art; however, they are rarely relevant and therefore fail as concepts. Ultimately they are admired but not consumed.

Ford Motor Company's famous \$400 million flop, the 1958 Edsel, was admired for its novelty but rejected for its concept. In fact, it didn't have one. Consumers did not understand what it was, how it was different from existing products including Ford's own Mercury brand, or why they should buy it. It did not solve a problem or create a relevant opportunity for its intended audience. It was not a concept. It was art (and dangerous art at that, as Ralph Nader's *Unsafe at Any Speed* revealed). Although most organizations, including Ford, certainly do not intend to create art when developing and introducing new products, new services, and new ventures, they often do because they confuse artistic creativity with conceptual creativity. This goes well beyond semantics to the heart of what people believe about creativity.

As an educator and adviser to organizations on creativity and innovation, I often hear the phrase, "I'm just not creative." From Chicago to Shanghai, this declaration knows no cultural boundaries. However, it is not true. Just because you may not be able to sing, dance, or play an instrument does not mean you are not creative. You may not be *artistically* creative, but you are likely *conceptually* creative. Think about it this way. When was the last time you had a problem and solved it? Perhaps you ran out of a key ingredient while cooking and had to make do. Or you were forced to jury-rig your car door with duct tape. Or during the Q&A portion of the presentation of your life, you had to improvise almost all of the answers. Regardless of the problem you had, how you solved it was an act of creativity. If you have ever solved a problem, you are conceptually creative. So give yourself credit: you have the capacity to create.

My definition of conceptual creativity is simple: creativity is what makes a dog paddle. Once the barking stops, the swimming begins. When we have to figure things out, we do.

The difference between successful innovators and would-be innovators begins with their intent. In order to succeed at innovation, do not focus on being creative; rather, focus on solving problems. Committing to innovation in the absence of a well-defined problem is like a surgeon committing to surgery in the absence of a diagnosis. Bloody failure is imminent. Therefore, the application of conceptual creativity as a tool must always begin by identifying and defining a problem. This encompasses nurturing curiosity about the problem, identifying constraints associated with solving the problem, challenging prevailing conventions about what solutions are possible, and making unorthodox connections between disparate domains. In turn, conceptually creative thinking gives rise to new ideas. Given this distinction, *thinking differently* is a distraction inasmuch that it simply suggests that you must think “in some other way” from how you are currently thinking. This cliché does nothing to help you learn how to think more creatively. And therefore my focus is not so much on getting you to think differently as it is getting you to thinking more deliberately and in specific ways about the mind-set and the methods of creative problem solving. For example, one such way of thinking involves making unorthodox connections between seemingly disparate pieces of information—what I call *thinking sideways*. This type of information processing is a hallmark of creative thinking. All humans have the capacity to think sideways; you need only be deliberate about how you go about it.

For example, contrary to popular opinion, Henry Ford did not invent the assembly line; rather, he borrowed it from Chicago’s meatpacking industry. He then combined it with the concept of interchangeable parts, an idea that Eli Whitney introduced in 1801 when he suggested that the U.S. Army could assemble new pistols from the parts of broken ones. And he subsequently combined both of these ideas with yet a third idea: continuous-flow production, an idea first used in the tobacco industry in 1882 to make cigarettes. In blending these disparate ideas together, a great idea was born:

modern manufacturing. Andrew Hargadon, assistant professor of technology management at the University of California, Davis, deftly illuminates Henry Ford's real creative genius: "Ford's system was revolutionary in its impact on the automobile industry, on manufacturing, and on society . . . *because* its origins drew on existing technologies." The future is happening all around you. But if you look only straight ahead, in the direction that conventional wisdom and "futurists" suggest you look, you'll never see it coming. But if you look around you (sideways) and behind you (historically), the future will become increasingly apparent.

Why study history? Because there is no such thing as a new idea. For example, the disposable camera is a one-hundred-year-old idea with a twist. At the turn of the nineteenth century, photographers would send off the entire camera for their film to be developed and receive the camera back along with the developed photographs. Today they simply throw away the camera.

Although there is no such thing as a new idea, there are such things as new concepts. You can think of concepts as idea systems. Although the individual components of the concept may not be new, the combination of ideas—what you cannot see—is where the money is. For example, Henry Ford envisioned the invisible (the assembly line). It was not the assembly line *per se*; rather it was the concept of manufacturing. It was not the greasy mechanical parts moving across the shop floor; rather, it was the manifestation of many existing and disparate microconcepts. Ford arrived at his aha moment not just by thinking differently, but rather by thinking deliberately. Specifically, he thought sideways: outside his category of cars but not outside his competency of manufacturing. By combining three very different ideas he had observed in other industries and throughout history, Ford created a concept that was both unique and relevant: the modern automobile manufacturing plant. Most important, the pursuit of novelty was not the motivating factor driving Ford's process innovation; rather, it was the pursuit of an answer to his problem: to make cars

better, faster, and cheaper. Henry Ford was not an artist. He was a conceptually creative thinker.

Conceptual creativity demands that an idea perform on three levels. First, the idea must be directly aligned with a well-defined problem. For example, making cars in large quantities was not cost-effective; this was an internal constraint for Ford the entrepreneur and his company. Second, the idea must be unique in its response to the problem. Continuous work flow and interchangeable parts were unconventional methods in automobile manufacturing. It is important to note here that an idea does not necessarily have to be new to the world to be innovative; it must be unique only to the situation. In this case, how Ford applied these two ideas to automobiles was in fact new. And third, for an idea to be conceptually creative, it must be relevant to its intended audience. In this case, the intended audience was an internal audience: Ford's employees. By having the work come to them, labor became more productive, and thus the plants became more efficient.

In hindsight, Ford's concept seems sophomorically straightforward. That's because it was. It was not new. It was simply an idea that no one else could see, comprising three disparate ideas that were brought together to solve a problem. In practice, individuals and organizations often fail to "get creative" when they fail to align these three requirements: a *unique* and *relevant* solution to an existing *problem*. More often than not, in the pursuit of innovation, individuals are distracted by the romantic vision of the purely new-to-the-world idea. In pursuit of the creatively romantic, we ultimately put far too much effort behind identifying the unique character of an idea versus solving a problem. Subsequently we introduce artwork instead of concepts.

Ironically, although Henry Ford was a brilliant concept creator, among the most famous "artists" in the world is the very company he founded, Ford Motor Company. You may be wondering how a company that bears Henry Ford's name produced one of the most spectacular new product failures in history. It is worth

noting that Henry Ford passed away a decade prior to the launch of the Edsel. In fairness, although many factors contributed to the Edsel's demise, it is safe to say that Ford the company got lost in the art of innovation (versus the concept of innovation). Over time, the company became infatuated with the products it sold and appeared to have forgotten the problems it should have solved. In fact, in the case of the Edsel, there was no problem, and therefore the Edsel became a very, very expensive piece of art. Unfortunately, Ford is not alone. This confusion between artistic and conceptual creativity is often blurred. If your intent is to create for creation's sake, then by all means, strike up the band and sing! But if your goal is to meet an unmet need, solve an unsolved problem, or create an opportunity where one does not exist, different questions must be asked and different puzzles solved.

This brings us to the third form of creativity: the process of scientific discovery. Although scientific discovery is often discussed in the context of creativity, science is very different from both art and concept. In science, there are definitive answers. Unlike Picasso's *Guernica* (art) and Apple's iPhone (concept), the double-helix, electricity, and benzene are not things that people engineered. These things existed long before we had the maturity of mind to discover them. Furthermore, unlike art and concept, scientific discovery involves absolute truths. And unless Congress repeals the laws of physics, truth is not going to change anytime in the near future. In the simplest terms, scientific creativity involves discovery (truth), whereas conceptual creativity involves bringing something into being (ideas). With this distinction in mind, although I cannot promise to make you the next Thomas Edison, Mary Kay Ash, or Aaron Spelling (America's most prolific television producer, who could have held master classes on both conceptual and artistic creativity), the following chapters will improve your creative capacity.

In order to attempt to solve this riddle, let's begin by taking a step back in time. History is our most forgotten teacher.

Summary Points and Creative Exercises

- Not all creativity has the same objectives or uses the same thought processes. In order to mitigate failure with innovation, try not to confuse artistic creativity (the ability to render things revered for their aesthetic beauty) with scientific discovery (the uncovering of things that already exist) with conceptual creativity (creating uniquely relevant solutions to existing and emerging problems).
- There is no such thing as a new idea. It has all been done before. Look for ways in which to apply existing and preexisting ideas from other places, industries, or categories to your situation.
- Innovation is not the result of thinking differently. It is the result of thinking deliberately (in specific ways) about existing problems and unmet needs. These specific ways are discussed throughout this book in the context of precursors to creative insight.