# INNOVATION VS. INVENTION: MAKE THE LEAP AND REAP THE REWARDS


PEOPLE OFTEN USE the words "invention" and "innovation" interchangeably. This is not only incorrect, but misses a few key subtleties in meaning that can change a conversation. Invention is about creating something new, while innovation introduces the concept of "use" of an idea or method. While this difference is subtle, and these words are listed in every thesaurus that I checked as synonyms of each other, they are definitely not 100% interchangeable. An invention is usually a "thing", while an innovation is usually an invention that causes change in behavior or interactions.

Companies often claim to be a "leader in innovation", and show a large pile of patents as evidence. Patents are evidence of inventions, of having thought of something first, and documenting the new invention through a legal process. The usefulness of those inventions is not proven, so "inventions" do not always equate to "innovations." There are many patents which really do not have a use or have influenced no products or industries. Patents without a "use" are not innovation.

If innovations infer the "use" of a new idea or method, then an invention that leads to innovation is really qualified by how much it changes the behaviors of the users, the businesses, and the processes around it. Now perhaps the "Nose Pick" patent was a victim of bad marketing, poor manufacturing, or just a "right idea at the wrong time", but obviously it has not changed behavior and become a commonplace item in the 14 years since the patent was granted.

# INVENTION IS EASY — INNOVATION IS GENIUS (OR ACCIDENTAL)

Was the iPhone a great invention? We can dissect the iPhone into individual inventions and evolutionary consolidations of other gadget functions and features. There are really no ground-breaking inventions from a technical perspective, in the first (or second, or third) generation iPhones. What about the iPad? In reality, one might argue that it is merely a giant iPhone with a few updated features. Touch screens, mobile communications for voice and data, "smart-phone" applications and user interfaces, the "home" button, and tablet computing devices all existed (as

ideas and as products) many years before the iPhone. As proof, all you have to do is watch some Star Trek re-runs on TV or watch a Stanley Kubrick movie.

Was the iPhone a great innovation? Absolutely. The iPhone created an ecosystem of media content, telecommunications, licensing, application development, and unified them all under one roof. The iPad grew on that success and created a new "screen" to expand the mobile and personal experience (a very lean-in style experience) to include more "lean back" ergonomics and interaction. The iPad, I would argue, pushed Apple and iTunes from music into video and more rich-content markets (e.g. gaming).

Very few inventions are, by themselves, successful innovations. Most innovations are evolutionary changes to existing processes, uses, or functions, which are made better by one (or several) contributing inventions. The tablet is an evolution of smart phones, portable computers, touch-screen interfaces, and content/media aggregation. All of these inventions existed well before the Kindle, iPad or GalaxyTab devices.

# DRIVING INNOVATION WHILE PROTECTING INVENTION

We don't want to downplay the importance of invention. Documenting, protecting, and leveraging inventions is a cornerstone of innovation. The patent process and legal systems around the world recognize the rights of an inventor and help them by establishing a system which allows them the opportunity to exploit their inventions for financial gain for a given period of time. Invention rights owners can produce products without others blatantly copying, license their inventions to others to produce, or create combinations of inventions by partnering with other intellectual property owners.

Innovation is difficult, as it is in most cases a combination of invention, along with use, behavior, and business models. Finding a single person with technical skills to invent, an understanding of user behavior and consumption, and the business background to understand the economics and dependencies of getting the innovation to market in a sustainable and profitable manner is very rare.

Isaac Asimov (the science fiction writer) wrote an interesting letter in 1959 as part of a group doing research for ARPA (the US government's Advanced Research Projects Agency), recommending "cerebration sessions" to promote innovation beyond invention. He identified shared thinking and informal collaboration as a key component of problem solving and accelerating change. Rather than lecture sessions where the presenter proves how smart he is by showing his results and finished work products, the cerebration sessions are used to "group think" new ideas, new possibilities, and new combinations of knowledge and experience which could find new answers and new directions. It seems to me then that the purpose of cerebration sessions is not to think up new ideas but to educate the participants in facts and fact-combinations, in theories and vagrant thoughts.

> But how to persuade creative people to do so? First and foremost, there must be ease, relaxation, and a general sense of permissiveness. The world in general disapproves of creativity, and to be creative in public is particularly bad. Even to speculate in public is rather worrisome. The individuals must, therefore, have the feeling that the others won't object. –Isaac Asimov

Cerebration and group-think are key components to turning invention to innovation. Creating a corporate culture where the goals are measured in simplified KPIs and easily measured metrics might actually stifle innovation in many ways.

> But innovation comes from people meeting up in the hallways or calling each other at 10:30 at night with a new idea, or because they realized something that shoots holes in how we've been thinking about a problem. –Steve Jobs

Looking at the companies and organizations that are considered successful in innovation (Google, Apple, Tesla, Facebook), we see some common behaviors and environments. The first is the culture of cerebration, of promoting employees to share and internally market their ideas and projects. Some of this could be influenced by a higher concentration of like-minded talent, such as in Silicon Valley, where former colleagues and trusted friends have migrated from company to company while maintaining their social networks and friends of shared interests and hobbies.

But all of these companies have also created a corporate culture that recognizes the value and the opportunity of cerebration and group-think. They have created a system that operates both as a business, and as an idea factory.

We learned that the only way for businesses to consistently succeed today is to attract smart creative employees and create an environment where they can thrive at scale.

> It's best to work in small teams, keep them crowded and foster serendipitous connections. –Eric Schmidt and Jonathan Rosenberg; How Google Works

Transforming a business from invention to innovation might not be a huge change, an enormous investment, or a massive restructuring. It could be as simple as adding some simple social concepts and some new ways of managing and measuring success into the existing structure. Keys to success include leading from the front instead of "managing down", listening to and encouraging new ideas, and leveraging the years of experience and knowledge at "the top" of the company to support the teams of smart creative employees and help to push their ideas "up" to become products and innovations.

Think back in your career to when you were an eager young University graduate with dreams and ideas. How valuable would it have been to work alongside Jobs, Schmidt, Zuckerberg, Joy, Brin, Bezos, or one of the hundreds of other visionaries that we respect today? We all have the opportunity now, to take our experience and knowledge and invest that in the organization. We can take a break from our traditional leadership roles of meetings and schedules and take the time to step back, and give back, and be the leader that supports the innovation lying dormant within our own businesses.

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