INNOVATION: THE SOUL OF ENTREPRENEURSHIP

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ABSTRACT

Innovation of some type is a hallmark of the entrepreneurial psyche. Research has indicated that it is a characteristic of the entrepreneur. This treatise indicates how to create an environment conducive to innovation and indicates that sometimes only psychic rewards are gained through its endeavor. However, some element of innovation is necessary for survival.

INTRODUCTION

Innovation is the Soul of Entrepreneurship. How dare we make this assertion you may ask? Aristotle defined the soul “as the core essence of a being” (Soul, 2007) and that is how we feel about the essence of entrepreneurship: innovation truly is an economic engine, the vital essence of true entrepreneurship.

Innovation typically involves creativity, but is not identical to it: innovation involves acting on a creative idea to make some specific and tangible difference in the domain in which the innovation occurs (Amabile, Conti, Coon, Lazenby & Herron, 1996). Amabile et al. (1996) proposed the following definition:

"All innovation begins with creative ideas . . . We define innovation as the successful implementation of creative ideas within an organization. In this view, creativity by individuals and teams is a starting point for innovation; the first is a necessary but not sufficient condition for the second."

In our view, innovation is the tangible expression of creativity. From an entrepreneurial
perspective, innovation is the creation of a new product or service, or a new method or combination. The marriage of innovation and entrepreneurship requires one to visualize the process. First is the vision, the idea, the concept which gradually materializes in our minds and our hearts; an idea that we simply know is great. It can be described as that “Eureka!” moment of true discovery. We create or develop these ideas and concepts in our minds, we refine and develop them, generally through discussion with others. Finally, we must translate those ideas and concepts into reality. If innovation is to have more than psychological value, it must become more than thought. It must become tangible.

Yet if we stop here, then where is the value to humanity? Is our creation something we feel compelled to share, or will we be satisfied with the secret knowledge of our own creation? Is our creation of potential value to others? If so, then could we find both psychic and financial reward from its becoming? Entrepreneurship is the process of this translation. We create an enterprise which brings our concept to life. Now, we can enjoy the psychic reward of creation while we share our great discovery with the world.

TYPES OF INNOVATION

Creativity has many forms as we see in the literature. Paul Torrance (1979), an early writer in the field, described four elements of creativity. Fluency refers to the production of a great number of ideas or alternate solutions to a problem. Fluency implies understanding, not just remembering information that is learned. Flexibility refers to the production of ideas that show a variety of possibilities or realms of thought. It involves the ability to see things from different points of view; the ability to use many different approaches or strategies. Elaboration is the process of enhancing ideas by providing more detail. Additional detail and clarity improves
interest in, and understanding of, the concept. Last is originality which involves the production of ideas that are unique or unusual. It involves synthesis or putting information about a concept together in a new way (Torrance, 1979). While these elements of creativity connote pure ideas, their translation into a tangible innovation usually results from either elaboration or originality.

This means that the translation of an idea into reality typically involves the creation of a new product or service or the enhancement of an existing product or service. In the realm of business, we often see entrepreneurial firms innovate as evidenced by originality while in larger firms creation of a new use for an existing product or service, the combination of existing products or services in new ways or simply the enhancement of the ingredients, packaging, advertising or message, are the preferred methods of innovation. In fact, in an early study Edwards and Gordon (1984) reported that small businesses produced 2.4 times the innovations of their larger cousins and the pre-eminence of small firms in innovation is still evident in a 2005 study conducted by Baumol (2005).

As early as 1934, Joseph Schumpeter, often identified as the “father of entrepreneurship,” called innovation, “creative destructionism.” He elucidated upon this commentary by enumerating the aspects of innovation-generating creative destruction in an industry: new markets or new products; new equipment; new sources of labor or raw materials; new methods of organization or management; new methods of inventory, transportation, communication, advertising or marketing, etc. (Schumpeter, 1934).

Schumpeter’s (1934) view is complementary to Torrance’s (1979) perspective of elaboration and originality. He went on to explain that these innovations could destroy old markets, old products, old services, old ways of doing business. Hence the creation of the
innovation resulted in the destruction of its predecessor.

**APPLICATIONS OF INNOVATION**

In large measure we owe our national standard of living to the fruits of creativity. The innovations that have taken tangible form over the years constitute all of the products and services which we enjoy. Collectively, these innovations create and continue to evolve the economy of the nation, and of the world. A powerful perspective, but one which suggests an important question. How were all of these fabulous innovations translated into workable components of the economy? The *applications* of innovation hold special significance for us.

There are several paths to innovation application. One which is frequently overlooked is gifting of the intellectual property. We frequently forget about the vast impact of freeware, open source software, the sharing of ideas, research, insights and breakthroughs. Conferences, academic publication, informal discussion groups, and a myriad of idea communication and distribution networks have evolved in the United States and the world. These innovation sharing networks continue to be a powerful factor in the evolution and application of technology, knowledge and innovation of all types and in virtually all fields; perhaps the most powerful. One could argue that the Internet itself is simply an outgrowth of the desire to share ideas and insights: the ultimate network.

The virtually complete absence of financial incentives involved in these networks form no impediments to the application of innovation. Some people might even suggest that the absence of financial incentives enhances the innovation process. It is the sharing of ideas and the exchange of insights that drives innovation, so the more minds we involve in the process, the more powerful the results and the more rapidly the innovation emerges. If we have people who
are focused on making money from an innovation, they tend to be more reticent about sharing ideas and tend to take steps to protect the intellectual property.

The pervasiveness of this view among academic and philanthropic groups and networks of social entrepreneurs makes it clear that psychic rewards are real and are real drivers of the creation of innovation. Being the parent, even just one of the parents, of an innovation brings a vast sense of satisfaction. Humans have an innate need to create and that drive is the real source of the individual payoff for the work and effort involved in innovation. The power of these psychic rewards is incalculable.

However, the actual application of innovation in society is not purely the result of altruism. It takes money to perfect an innovation and distribute it to consumers of that innovation. This is commercialization: casting the innovation in tangible form which is ready for consumption and delivering it for consumption to the people of the community, region, nation and world.

Clearly the profit motive is a powerful one, but not the only one. Consider electricity. Virtually everyone in the United States can afford electricity. That is largely the result of low cost production, but it required the efforts of a great number of local rural cooperatives to develop the last miles of power lines for delivery to less profitable venues.

The point is that society cannot enjoy an innovation without commercialization of that innovation. It is equally clear that the commercialization process has the potential to create profit, and sometimes, vast wealth. The pursuit of such wealth is a potent driver of creativity and innovation, although that pursuit may not be as powerful as the psychic driver.

Consider the interest in patents. The idea that one can invent something and license it for
commercialization to a large firm is so pervasive in our society that it is almost a cliché. In reality, this seldom happens. Only a tiny number of inventions, less than 3%, are actually licensed to large firms on a royalty basis and make money for their inventors (Stim, 2006). There are really very few inventors who are making a living in research and development. Most of the people we think of as inventors, were, and are, actually entrepreneurs.

We know that large firms do actively engage in research and development, investing money in the process, with the idea of commercializing innovations which result for the benefit of the company. Yet, there is really very little real innovation which flows from this process in most industries. There are exceptions, of course, like pharmaceuticals, but by and large, original innovations flow disproportionately from entrepreneurial enterprises (Edwards & Gordon, 1996; Baumol, 2005).

American folklore makes it clear that the best way for innovation to reach the people is for the innovator to create an enterprise to commercialize it. That is the American Dream; to become an entrepreneur. The pioneers that settled our nation were not just fleeing religious persecution, they were seeking the opportunity for economic self sufficiency. It is no accident that our early history demonstrated the power of that drive as our people covered the world with Yankee trading ships. We were founded as, and we are today, a nation of entrepreneurs.

**ENTREPRENEURSHIP: THE ULTIMATE EXPRESSION OF INNOVATION**

It is generally accepted that entrepreneurs “serve as agents of change; provide creative, innovative ideas for business enterprises; and help businesses grow and become profitable” (Kuratko & Hodgetts, 1998). In an early work in 1984, Carland, Hoy, Boulton and Carland proposed to define an entrepreneur as, “an individual who establishes and manages a business for
the principal purpose of profit and growth... characterized principally by innovative behavior and [who] employs strategic management practices”. In contrast, they defined a small business owner as, “an individual who establishes and manages a business for the principal purpose of furthering personal goals” (Carland et al., 1984). That definition enjoyed initial widespread acceptance, and has recently emerged again as potentially useful. In 2003, a group of Australian researchers noted that the Carland et al. (1984) definition embodied five basic dimensions: establishment status (venture founder or non-founder); profit importance; growth orientation; innovative behavior; and the use of strategic management practices (Johnson, Newby & Watson, 2003). Their research demonstrated that the most important and powerful differentiating factor was innovation.

In a later paper, Carland, Carland and Stewart (1996) defined entrepreneurs much more simply as those who have “…the ability to see what is not there”. They actually believe that such vision must be coupled with the drive to make the vision real. In essence, this perspective of the entrepreneur suggests that he or she has the intuition and insight to recognize an opportunity to establish products, services, and industries where none now exist; and, also has the ability to create an opportunity to establish products, services and industries.

This ability to see into the future, to dream of possibilities, and to dare to act is that series of attributes that drive entrepreneurs to turn dreams into reality. This, indeed, is innovation in action: a tangible, profitable, creation which drives the wealth and welfare of people and nations. At every phase, innovation is the driving force: the ultimate expression.
FINANCIAL ASPECTS OF ENTREPRENEURSHIP

Most economists seem convinced that innovators do not reap financial rewards for their efforts. In a sample of 1,091 patented inventions, Astrebro (2003) reported that the average internal rate of return on a portfolio investment of those inventions would yield only 11.4%. Even worse than the mean data, Astrebro (2003) reported in this highly respected study that the median return on such a portfolio was actually negative. Even that statement fails to capture the seriousness of the study. Of the 1,091 patents, only 75 patents (7%) actually reached the market; which means that 93% never saw the light of day. Further, sixty percent (60%) of the patents which did reach the market, lost money. This leaves only 30 patents (2.7%) which actually made money. Of those, six (6) inventions created real wealth for their creators, with the top return at the 1,400% level. The net result of the study suggested that one half of one percent of inventions really are successful (Astebro, 2003).

Astrebro’s (2003) findings were consistent with virtually all of the other studies, and there have been a number of these studies. Nordhaus (2004) estimated that innovators capture only about 2.2% of the returns from an invention, and Baumol (2002) had similar findings in his study.

If we accept the findings of these respected researchers, then we are left with a burning question in our minds: So, why innovate? If the financial rewards for innovation are as rare as a lightning strike, then is all of the creative effort driven by psychic rewards? Is the only thing that propels innovation, the need to create?

We cannot accept that proposition because it would imply that most commercializations occur through the process of businesses sifting through the various networks of academics,
idealists, social entrepreneurs, and inventors to find marketable innovations among the gifted intellectual property. That is not what happens. There might be an occasional innovation that an enterprise discovers from the mountain of developments that are being gifted to society each day, but most innovations are brought to market for one of two reasons. Either the sponsoring enterprise is virtually certain of financial success, or the sponsoring enterprise is an entrepreneurial venture engaged in the great social experiment of proving the viability of a new innovation.

**INNOVATION IN ENTREPRENEURIAL ENTERPRISES**

We all know that not every entrepreneurial enterprise is innovative. You can probably name a dozen ventures near your home which seem to do exactly the same things as everyone else. However, it is clear that those entrepreneurial enterprises which practice innovation grow more strongly and become more vibrant (SBA, 1995).

There are numerous studies which demonstrate that entrepreneurial ventures disproportionately produce new products and services. Many of these studies use patent activity as a proxy for innovation in general because it is easier to measure. One impressive study sponsored by the Office of Advocacy of the U.S. Small Business Administration examined 194,000 patents filed by more than 1,000 firms between 1996 and 2000 (SBA, 2007). In comparison to patents produced by large firms, the study concluded that a patent filed by a small business was more than twice as likely to be among the top one percent of most frequently cited patents; that small firms represent one third of the most prolific patenting companies; and, that small firm research is substantially more high tech or cutting edge and twice as closely linked to scientific research (SBA, 1999). This study clearly demonstrates the value of small firms in
producing economic wealth for the United States.

We have already talked about the tendency for true breakthrough innovations to arise in entrepreneurial enterprises. From airplanes to hydraulic brakes to pacemakers to safety razors to zippers (SBA, 1995), we owe much of our standard of living not to the safe, secure, risk-free research and development efforts of major companies; we owe it to entrepreneurs with limited resources and big ideas! There was a great entrepreneurial movie produced by George Lucas in 1988 called *Tucker: The Man and His Dream* (Schulman & Seidler, 1988). Francis Ford Coppola had long admired Tucker and when he asked Lucas to produce the film under his direction in 1988, the team won three Academy Award nominations and produced a film for the ages. In the closing scenes of the film, set in 1948, Tucker, the developer of the most innovative car in history, had actually built 51 automobiles, but was facing bankruptcy and prison time for securities fraud. The Tucker Car Company died along with his dream for a breakthrough in the automobile industry, but Tucker tosses off the loss with perfect aplomb, “*Those are just machinery! It’s the idea that counts, Abe! And, the dream!*” (Schulman & Seidler, 1988). An earlier, and much less frequently cited quotation occurs in the film when the manager of Tucker Cars is on the witness stand testifying against Tucker. This manager had been installed by stockholders to hold back the tempestuous Tucker, and to protect their investment. An experienced manager, he explained to the jury, “*A well managed company doesn’t innovate! Unless, of course, it is forced to by its competition!*” (Schulman & Seidler, 1988).

Tucker did not live to see his innovations become commonplace in modern automobiles, but one wonders if he really cared. After all, he built the car of his dreams: 51 of the beauties, 44 of which are still operational today! If you believe in psychic rewards even in the slightest, then
you know he has to still be smiling somewhere!

Tucker made and lost several fortunes in his life, and when it ended he was trying to raise money to start yet another company in Brazil. The interesting thing about the entrepreneurial psyche is that it doesn’t seem to matter whether money is made or lost; the drive to innovate survives. Steve Jobs sold all but one share of his stock in Apple on the day he was fired for a reputed $130 million. The next day he started NeXt, the company he sold back to Apple 17 years later when he became CEO again (Jobs, 2007). Such legends ignore the millions of serial entrepreneurs throughout history who lost everything in a venture, and pulled themselves up to launch yet another dream. Ted Turner may have thrown himself into philanthropic work, yet he has three business ventures ongoing, including a new one he started in 2007 (Turner, 2007). Money is a tool in the hands of an entrepreneur and the best way to use that tool seems to be in driving more innovation.

The stories of these macroentrepreneurs (Carland & Carland, 1997) may be the stuff of legend, but ask an entrepreneur in your neighborhood what he or she is doing differently from the competition and you are likely to initiate a discussion of innovations tried, abandoned, and adopted in a continuous effort to make the venture more viable and more successful. Entrepreneurs do not just go to work every day and wait for the weekend. Entrepreneurs are immersed in their ventures and that immersion drives their interest in innovation and their need to continuously create. Listen to managers talk and compare that to the conversation of entrepreneurs to see the disparity in their perspectives. Managers talk about their last vacations, last weekend, next weekend, their next vacations; they talk about their lives outside the business. Entrepreneurs talk about their lives inside their businesses and their conversation is peppered
with stories of the business and their efforts in it; frequently punctuated with descriptions of innovations.

New methods of competition and the validity of new products and services are played out on the entrepreneurial stage and when the give and take in the market place makes it clear that a new wave is coming, entire paradigms shift. Industries die and new industries are born. It is a complex interplay between small businesses and large. The small tend to lead the way and prove the concepts; the large tend to devour the small then apply economies of scale to drive down costs and expand the application of the innovation to the masses. But, we must never lose sight of the fact that the originating innovation is almost always entrepreneurially based.

THE ENTREPRENEURIAL MINDSET

The process is clear: entrepreneurs initiate business ventures. What is not clear is why they do so. The debate continues to rage about entrepreneurial behavior and this singular act of individual volition which is so vital to a nation’s economic health and well being. The drives and personalities continue to be debated. In 1988, Bill Gartner asked, “Can one know the dancer from the dance?” (Gartner, 1988). Is it even important to try? A rejoinder to Gartner in 1988 was proffered by Carland, Hoy and Carland (1988) who thought that one could not understand the dance without understanding the dancer. Surprisingly, this debate in the entrepreneurship literature continues to this very day, and researchers still cannot reach a consensus about the entrepreneurial mindset, or even the necessity to understand that mindset (Johnson et al., 2003).

According to Carland et al.(1988), the dance takes on the personality of the dancer. It is the dancer who interprets the dance and each artist makes the process his or her own. They suggest that if we seek to understand the entrepreneurial process, we must have insight into the
entrepreneurial psyche. This is especially true if we wish to design educational and training programs which can actually help prospective and practicing entrepreneurs.

We have talked a bit about psychic rewards and the continuous emphasis on innovation, but does that mean that the potential for financial return is not a major factor? Baumol (2005) reports that there is systematic evidence dating back to the 1970s that self employed people make significantly less money than employees with similar qualifications. However, virtually all of the studies that deal with issues involving entrepreneurship and entrepreneurial ventures are cross-sectional in nature. That is, they are not longitudinal studies and may not be reflective of the underlying realities.

For example, consider how real wealth generally comes calling in a business venture. The folklore may suggest that it revolves around “going public.” In reality, that is the path chosen by only a few ventures. By far the majority of the entrepreneurs who become wealthy do so by selling the enterprise. These sales are private sales, consequently, real information about the financial ramifications is not captured in economic databases and is absent from cross-sectional studies.

We are left with the question, how often does it happen? How many entrepreneurs really do make a great deal of money? How many actually outperform their employee brethren? We don’t have an answer for that, but we do know that it does not matter. What matters is whether entrepreneurs have a perception of the potential for profit. Behavior is driven by perception, after all. So, if there is widespread belief that real wealth opportunity exists in entrepreneurship, that perception could well influence behavior.

Anecdotally, we believe that the perception of the potential for financial returns is
widespread among entrepreneurs. We have consulted with hundreds of entrepreneurs over the last 30 years. It is certainly true that there are many people who have settled into a family-owned business and who appreciate the ability to make a living doing things they enjoy while making their own decisions about their lives. However, there are also many people who truly believe that real wealth is just around the corner. We believe that the potential for profit is a major driver of behavior. Even the entrepreneurs who talk about pending wealth, however, always mention the life style. In no other profession, they say, do you actually determine your own fate and define your own destiny. In no other profession do you get to prove the validity of your own ideas, and have the potential for great wealth. These are powerful motivators!

ENvironment FOR CREATIVITY

Typically, innovation does not occur on demand and yet that is what we often hear in the corridors of the large corporations. “We need a new product, a new idea, a new market!” “Quick, let’s brainstorm!” While some of us have many ideas, others of us have fewer. Idea people usually are not as qualified to evaluate their ideas for commercialization. It is almost as if we have dreamers and doers and we need a marriage between the two to turn those dreams into reality. That is one of the reasons for the power of an entrepreneurial team. But, again, creativity does not happen at the snap of a finger. We need to have the right environment, the right culture, the right philosophy and the right people.

Most of the stories of truly innovative ventures have all of the best of these “rights.” Take IDEO (Kelley & Littman, 2001), Mars (Brenner, 1999), Google ((Vise & Malseed, 2005), and Southwest Airlines (Freiberg & Freiberg, 1996), as examples. They are quite successful companies who began much as you, some with more money and some with less, with a dream of
providing the best products or services that they could provide while having fun and being profitable and helping others.

Each of these ventures created an open environment: one in which questions were welcome, discussion was expected, ideas were respected and possibilities were challenged. The structure allowed for openness and communication with the founders. There were no ivory towers, but constant engagement and lots of fun. Open areas, not enclosed rooms, gave the opportunity for the cross-fertilization of ideas, much as that process originally occurred in Edison’s Invention Factory (Beals, 1999).

Edison provides a wonderful role model for the marriage of innovation and entrepreneurship. A great practical joker, he encouraged fun, and experimentation, and had a healthy respect for those who had tried and failed. Many of the founders of the most innovative companies embraced failure as it not only showed initiative, but also resulted in learning on the part of the individuals who had attempted the impossible but discovered something else. Edison pursued invention for the purpose of creating commercializable products. His failure to find a market for his first invention, an electric vote counting machine, led him to vow never to waste time inventing things that people would not want to buy (Beals, 1999). We suspect that he was still prey to the psychic rewards of innovation, but recognized the need to make money to keep his stream of innovations flowing. His remarkable career was more about entrepreneurship than invention as he created a network of companies to exploit the products that flowed from his “invention factory.” Among these was the Edison General Electric Company, which became General Electric.

One of the adages which seems to be responsible for the immense success of Stanford
University graduates, Brin and Page of Google fame, has become a favorite of ours. The command is to “…create a healthy disregard for the impossible” (Vise & Malseed, 2005). With such direction, how could one not innovate!

**IMPLICATIONS**

This paper is our attempt to light a candle against the darkness for practitioners and academics. Innovation is necessary for the true success of a business and yet daily we erect barriers to it existence; we suggest that there is a right way to do things; we direct others to come up with new ideas that are foreign to us and which we know that we are not going to adopt; we cry out for ways to combat the competition while continuing to follow the status quo. To fully light up the darkness, we must break down those barriers and we must embrace innovation and begin the process of teaching its elements to our students and our practitioners. We must help entrepreneurs to understand that “success can sow the seeds of its own destruction” (Grove, 1999). Doing things the way they have always been done breeds complacency and complacency breeds the ultimate demise of the company for lack of attention. We must believe in innovation, we must work at it and we must teach it.

**CONCLUSION**

Oliver Wendell Holmes (Holmes, 2007) is credited with the following observation: “A mind once stretched by a new idea never regains its original dimensions” And yet we find that years of disuse has led to stagnation in the creative psyche of so many people. In business, creativity was frowned upon as a non-serious pursuit for many years, until the realization that new products, services and processes came from creative minds. But the inverse of Holmes’ insight was found to be prevalent; i.e., that minds not used in creative pursuits become atrophied.
and inactive. Then, when asked to “come up with a great new idea,” there is frustration and impotence.

We need to exercise our minds and do it daily in pursuit of new and wonderful thoughts. A few enterprises are adapting strategies to support the development of these new mental pathways. These include retreats in which employees engage in creative activities as well as using flex-time for the pursuit of original endeavors.

Most exercises and activities can be fun. Brain teasers, incomplete drawings, creative problem solving exercises, problem identification and brainstorming can be quite useful to stretch the mind. The key at the initial stages is to be playful, not judgmental. Too often in business, the urgency expressed to “come quickly to commercialization” prevents really good ideas from being explored. Judgment expressed too early can result in satisficing rather than excelling. Experimentation is to be applauded and yet it is seen as expensive in most large companies and failure can lead to career limiting results.

The IDEO philosophy (Kelley & Littman, 2001) is that individuals in both large and small enterprises can be innovative and creative. You need to create a fun environment, a playful attitude, the encouragement of wild ideas, the recognition of the value of collaboration of diverse minds on a task and the understanding of the role of failure.

What a better world it would be if we could encourage creative thinking, stretching minds to embrace truly great ideas for the betterment of mankind! Innovation carries its own rewards, but financial success is a great companion. Entrepreneurship is the greatest vehicle we know to allow us to simultaneously envision, dream, analyze, create and profit. It is a life journey like none other. Innovation is its heart and soul, and in no other enterprise can you live your life as
your intuition dictates and enjoy the success that your mind creates. We encourage you to:

*Dare to Dream!*
REFERENCES


