CHAPTER ONE

THE ENTREPRENEURIAL PERSONALITY

"Being on the tightrope is living; everything else is waiting." Attributed to Karl Wallenda, high wire artist.

"I could have lost everything and I almost did several times." A West Coast CEO, 2004.

"...risk takers almost always recognize one another as brothers and sisters genetically linked by their desire to experience the uncertainties of the edge." Stephen Lyng, *Edgework: The Sociology of Risk-Taking*, 2005.

Entrepreneurs are different and this book is about the nature of those differences. Individuals who found their own firms view the world and its challenges differently than most others. They're more optimistic, extraverted, energetic, self-confident and visionary than the typical person and critically willing to take more risks. They'll often risk their personal financial fortunes and sometimes even their own lives in order to pursue their dreams. Entrepreneurship and risk-taking seem to be in their blood.

Even though most entrepreneurs (perhaps 75 percent) eventually fail, they are seldom deterred. Like determined boxers who have taken an uppercut and been knocked to the canvas, many of them get back on their feet and come back for more. Serial entrepreneurs, whether successful or not, often found new firms over and over again, or repeatedly develop new ventures and technologies. Inventor Thomas Edison was responsible for more than 1,000 patents in his lifetime and continued to generate remarkable innovations until his death even though hundreds of his ideas led him to discouraging dead ends. Walt Disney, an unsuccessful student as a youth, bounced through a series of ill-fated ventures before beating the odds with movies such as "Snow White" and developments such as Disney Land. Disney ignored the advice both of bankers and colleagues as he plunged ahead with these initiatives.

If individuals such as Edison and Disney are distinctive, then what really is singular about them and other entrepreneurs? What motivated Fred Smith, the founder of Federal Express, to transform the idea he originally developed for a college term paper, into a *Fortune 500* firm known around the world? Smith did so despite the oft-repeated wisdom that his professor assigned a C grade to the term paper because the professor regarded the idea as unrealistic.

USUALLY BORN, NOT MADE

Both genetic evidence and survey data support the notion that a substantial proportion of entrepreneurial behavior is genetically determined. **Put simply, much entrepreneurial behavior is inherited.** The *entrepreneurial personality* that drives risk-taking, innovation and the founding of new firms isn't something one can buy from the shelf at Wal-Mart or Macy's. Nor can the salient features of an entrepreneurial personality easily be taught or learned, whether at Harvard or even from one's parents.

The truth is that far more entrepreneurs, the people who found their own firms and put themselves, their resources, and even their families at risk, are born rather than made. The confident, driven individuals who become entrepreneurs typically have different genetic endowments than those who are not entrepreneurial. And these distinctive genetic endowments tend to produce the distinctive personality traits that characterize entrepreneurs.

Italian immigrant Amadeo Giannini, who founded the organization that ultimately evolved into the Bank of America, may not have been a "hypomaniac" (a description of entrepreneurs favored by Gartner, 2005), and certainly was not highly educated, but he was a driven, highly competitive individual who was doing vegetable produce deals in California markets before he even became a teenager. Shortly thereafter, he developed the magnificent vision that matured into the Bank of America.

Resort timeshare developed David Siegel began to deliver newspapers at age four. A few years later, his father, who owned a grocery store, gave him a box of bubble gum, which Siegel proceeded to cut into ten pieces to resell (Kroll, 2007). Steve Case, the founder of AOL, was only six years old when he began to sell lime juice from trees in his backyard. When only twelve years old, Michael Dell started a small company that sold stamps to collectors. A few years later he launched Dell Computers from his college dorm room. Walt Disney earned his "at risk" spurs as a poker player while a teenage soldier at the close of World War I.

Yes, entrepreneurs are different. Most are hard wired genetically to react differently than other individuals to external stimuli that portray risk, danger, excitement and change. **Depending upon the personality trait, up to 60 percent of a trait may be inherited from one's ancestors.** Individuals who inherit certain gene sequences are simply more likely to become entrepreneurs than others. As Canli (2006) put it, there exists a "biological basis for temperament." McCrae (2004) goes further and argues that the source of personality traits is entirely biological.

Indeed, entrepreneurial activity is a matter of probabilities and tendencies.[1] **Some individuals simply are more likely to undertake entrepreneurial activities by virtue of their personality traits.** In turn, entrepreneurial personality traits (optimism, extraversion, high energy levels, self-confidence, competitiveness, a motivating vision and willingness to take and even seek out risks) have a significant genetic basis.

It is axiomatic that one can buy an education, but one cannot buy genes. Like height, one cannot purchase entrepreneurial genes that somehow are injected into one's body, miraculously transforming personality and character.

Height as a human characteristic provides a useful analogy. The average National Basketball Association (NBA) basketball player is about seven inches taller than the typical adult male American. You can't teach height; either you're tall or you're not. But, players can be taught to make the most of their height (or lack thereof) and hopefully learn to avoid unproductive competitive situations (it's usually not smart for a 5'11" guard to attempt to dunk on Houston Rocket center Yao Ming, who is 7'6"). Practice may not make perfect, but it often helps overcome some genetic deficiencies. In addition, inspired coaching may mold or alter some players' attitudes so that they pass the ball more readily, play team defense, avoid destructive criticism of their teammates, and the like.

Even so, at the end of the day, genetic gifts have a powerful influence upon who can play well in the NBA. If that were not so, then the two authors of this book, who over the years have fancied themselves as "pretty good" amateur basketball players, would have had long and successful NBA careers. Intellectually, both of us understand what it takes to be a successful NBA player and we're willing to practice. Alas, we simply don't have the ability to take advantage of our knowledge.

In the NBA, then, genetic endowments exert a great influence over game play and players with the gifts of a Michael Jordan are rare. So also it is in the realm of entrepreneurship. Some individuals are not well situated to become entrepreneurs, but not simply because they lack financing, or have insufficient education and knowledge, or are badly located geographically. It is their own personality traits, which are at least partially dependent upon their own genetic endowments that reduce the chance they ever will ever become entrepreneurs.

Many studies indicate that entrepreneurs tend to be enthusiastic, extraverted, exuberant individuals (MacCrimmon and Wehring, 1986; Miner, 1997a,b; Pervin, Cervone and John, 2004). Extraversion is a personality trait that has been demonstrated to have a significant heritable, genetic basis (Plomin, DeFries, McClearn and McGuffin, 2001; Plomin, DeFries, Craig and McGuffin, 2003; Ridley, 2003; Canli, 2006). Either a person is extraverted, or he is not. If a specific individual is not extraverted, then this does not mean she cannot become a successful entrepreneur. It does mean she is less likely to do so.

Are all entrepreneurs extraverted? No, our own survey data and interviews covering 234 CEOs (102 of whom were entrepreneurs and founded their own firm), demonstrate that some entrepreneurs, even some very successful ones have been somewhat introverted. Rather, introversion (and for that matter, other personality traits such as risk aversion and a lack of receptivity to change) reduce the probability that an individual will act entrepreneurially, whether as the founder of a business, as a politician, as a policeman, or even as a college president.

The issue devolves into an analysis of probabilities and tendencies. **Genetic endowments do not rigidly determine entrepreneurial behavior; however, it is clear they do influence it significantly.** There are genetic bases for human behavior, but genes only “constrain” certain outcomes (Kagan’s 2003 terminology). Personality traits influence, but typically do not prohibit, a wide range of behaviors, including choice of occupation and one’s willingness to assume risks. Hence, it seems safe to say that most U.S. Marine lance corporals who volunteer for service in Afghanistan or Iraq have different personality traits than most Roman Catholic nuns teaching elementary school in Dubuque, Iowa. This doesn’t mean, however, that there may not be a few exceptions to this generalization. It’s a matter of probabilities.

Our interest (and that of our readers) is in focusing on those aspects of personality that appear to be crucial to entrepreneurial activity and later success. If certain genetically influenced personality traits are associated with entrepreneurism, then many individuals and organizations will be better off if they are aware of those relationships.

What is an entrepreneur? Casson, the foremost historian of entrepreneurship, remarks that "The term entrepreneur, which most people recognize as meaning someone who organizes and assumes the risk of a business in return for the profits" (1993, 631), appears to be have been first used by the eighteenth century Irish economist Richard Cantillon. Cantillon's French descent perhaps led him to construct this new English word based upon the French verb, *entreprendre*, "to undertake." Hence, an entrepreneur is one who starts an enterprise and assumes risk.

WHAT'S AT STAKE?

Many things in our world function on the basis of small differences in probability. The margin between success and failure often is surprisingly small. A Las Vegas game that regularly provides the casino with a one or two percent margin over costs will soon make the owners of the casino wealthy. Grocery stores that earn two percent profit on their gross sales ordinarily are quite successful, while those that only earn a one percent profit on their sales struggle and often fail. On most football teams, coaches that consistently can win six of every ten games are likely to keep their jobs, while those that can win only five of every ten games are much more likely to get fired.

What does this have to do with entrepreneurial personalities? Many companies and organizations wish they could hire an entrepreneurial leader. This is because legions of firms badly need vibrant, transformational, entrepreneurial leadership from their CEOs.

Yet, who are the individuals who actually become entrepreneurial CEOs and what are their characteristics?

One of the problems in any search for a CEO or leader is that many candidates are highly skilled at “talking story” (a Hawaiian phrase that often connotes exaggeration) with respect to their own entrepreneurial abilities, but ultimately they don’t walk their talk. They know the jargon, but ultimately shrink from their own words. After they have been appointed, many promising leaders turn out to be timid, transactional leaders whose entrepreneurial activities are minimal.

Hence, boards of directors have a strong interest in identifying those candidates for leadership who are truly entrepreneurial versus those who are not. Boards want to avoid putting round pegs into square holes and they don’t want to appoint individuals who eventually will fail. Boards have the ability to increase their chances of a successful appointment of an entrepreneurial CEO if they know what characteristics tend to typify entrepreneurs

With respect to individuals, some (perhaps many) would like to become entrepreneurs and want to know if they have what it takes. Those who speculate about becoming entrepreneurs need to know that their inherited genetic endowment has much to say about their probability of success. Yes, they can “go to school,” or observe successful entrepreneurs in action. Both of these activities are helpful. However, the evidence is compelling that it is not knowledge of accounting principles *per se* that produces entrepreneurial success, or for that matter, an understanding of the best way to write a business plan, or to build a web site. Instead, a collection of entrepreneurial personality traits is the key.

<u>Schumpeter Versus the Rest</u>. Joseph Schumpeter (1923), the Austrian-born Harvard economic historian, scenically wrote of perennial gales of creative destruction generated by entrepreneurs who innovate and create and thereby overthrow the existing state of affairs. This is a view not far from that taken more recently by Clayton Christensen in *The Innovator's Dilemma* (1997), where he described how innovators penetrate markets and overthrow industry giants, usually by entering at the low end of an industry and garnering customers and sales ignored by the leaders. Frank Knight (1921), whose work on risk and uncertainty is considered a classic, emphasizes the extent to which entrepreneurs deal with uncertain situations that often repel others. William Baumol (1990) focuses attention on the possibility of destructive entrepreneurship that increases monopoly power, influence and power rather than promoting economic growth and higher per capita incomes. Israel Kirzner (1999) views entrepreneurs as arbitragers who close gaps between what is and what could be.

Let us not be misunderstood. Knowledge, observation, experience and environment are helpful to entrepreneurs and we will have more to say about these influences. In the last analysis, however, it is the presence or absence of distinctive personality traits, especially those relating to risk-taking, that tell the tale. Reality is that successful entrepreneurs frequently have never darkened the door of a college classroom and likewise have been ignorant of many financial and economic precepts. It is easy to produce anecdotes to support this generalization. Consider J.R. Simplot, the inventor of the frozen French fry. He dropped out of school in 1923 at age 14 and started his own business, which morphed into a $3 billion operation, not the least because his company became the primary supplier of potatoes to McDonald's. Still, the evidence is far more than anecdotal. Shane (2008) has mined U.S. Census data and has found that educational attainment, per se, has little to do with whether an individual will become a business-founding entrepreneur.

At the end of the day, it is visionary, energetic, confident, extraverted, creative individuals who are not afraid of change and relish risk-taking who are most likely to become entrepreneurs. This does not mean budding entrepreneurs can be financial ignoramuses or that a simpleton is likely to become a successful entrepreneur. It does mean that academic knowledge concerning entrepreneurship seldom is the factor that determines whether or not one becomes an entrepreneur.

Similarly, we are not arguing that culture is without influence on entrepreneurship. There are significant, observable differences in the rate of entrepreneurship among countries around the world that are not a function of levels of economic development. Inside the United States, Shane (2008) and others have analyzed the relatively lower rates of entrepreneurial activity of African-Americans compared to other ethnic groups. Therefore, cultural and ethnic differences do exist. However, culture usually is trumped by genes and inherited personality traits. That is, whatever the cultural or ethnic environment, some individuals are more likely to become entrepreneurs than others.

Our points, therefore, are neither that introverted, risk-averse individuals that lack self confidence will never start their own businesses, nor that individuals from certain cultures or ethnic groups will never achieve entrepreneurial success. A wide range of individuals choose to start their own businesses. Because of their own skill, luck or other factors, it is unquestionable that some become successful entrepreneurs. Nevertheless, the evidence on these matters is clear. Simply put, the odds are stacked against individuals with certain personality traits. Some people are born with personality traits that naturally equip them for entrepreneurial activity. Further, these traits are not easily taught or acquired. In the last analysis, it these personality traits that most often separate the sheep from the goats insofar as entrepreneurial leadership is concerned.

We recognize that the theses we have just offered tend to draw hisses and boos from certain quarters. One group of critics contends that that virtually anyone in the United States can become a successful entrepreneur even though empirical evidence is quite the contrary (see Shane, 2008). These critics are taken by the notion that the traditional American Dream can be realized by anyone who is willing to work hard. And, needless to say, there is something to this. Social and economic mobility in the United States may have diminished, but opportunities remain robust, and the ability of a single determined individual to climb the ladder of success has not diminished substantially. Even so, this does not mean that business-founding entrepreneurship is the primary means for specific individuals to attain personal success. Instead, the route upward for many non-entrepreneurially inclined individuals may be an accounting degree, a career in the legal profession, or a position in public service. There are many roads to the top of the mountain and entrepreneurship is only one of them. These alternative paths will best suit individuals who are not entrepreneurially inclined and whose personality traits make them shy away from the new, the unexpected, and the assumption of risk. We regard it as self-evident that those individuals who decide upon careers as elementary school teachers in a suburban location have different personality traits (and probably different genetic dispositions) than those who become hedge fund specialists.

Our theses also predictably draw flak from the educational community. Many individuals have an almost unshakable faith that education can cure nearly any malady and hence can deal with entrepreneurial shortcomings in individuals or groups. Variants of this notion---that one can be taught to be an entrepreneur---are especially prevalent on college campuses where business majors and M.B.A. students study entrepreneurism. Yes, it's true that business majors are more likely to start a business than the typical college graduate, but candidates for business degrees are hardly a random selection of the American population. They are self-selected and hence more likely to possess the personality traits that lead to entrepreneurship. In any case, Shane (2008) reports that agriculture, architecture and law students are even more likely to start their own businesses than business majors. The bottom line is that it is much easier to teach individuals how to read balance sheets, or to manipulate supply and demand curves, than it is to teach them to become someone who relishes risk-taking and new experiences.

We would ourselves be guilty of "talking story" if we now suggested that we have the ability to discern precisely who will be, or will not be, a successful entrepreneur. We cannot insure boards of directors against bad appointments, or guarantee banks and investors that they will make wise investments in ventures that are proposed to them.

But, both responsible bodies and individuals will reduce their errors if they understand better the genetic/environmental mix that generates entrepreneurial behavior and the human personality and life characteristics that tend to reflect entrepreneurial instincts. We also can help both boards and individuals to understand that it is difficult, though not impossible, to teach critical entrepreneurial personality traits that students acquire and actually apply.

The implications of these findings for business firms, universities, governmental agencies, the military and foundations should not be overlooked. We hinted above at one of the most obvious inferences. The best business schools in the world are predicated on the belief that many essential entrepreneurial traits can be learned, either in classrooms via instruction and case studies, or by observing other entrepreneurs. The notion is that this learning can then be applied by students who will become successful entrepreneurs.

Business schools also believe that one can utilize *a priori* reasoning to illuminate behavior and forecast the future. For example, if vacationers drive their automobiles more miles each summer, then one can predict this will push up gasoline prices, unless other major influences intrude. There is nothing genetic about this theoretical conclusion, though it could be the case that the willingness of some individuals to act upon that prediction may be higher than others. *A priori* reasoning, then, is very useful and a substantial portion of the discipline of economics revolves around such deductions.

Would it be useful for an entrepreneur to be able to predict gasoline prices, or the impact of reduced capital gains taxes on investments and stock price? Certainly. Still, such *a priori* deductions will seldom be the critical factor that pushes someone across the invisible line to become an entrepreneur. Once someone has become an entrepreneur, such knowledge may help separate successful entrepreneurs from the rest, but an individual's ability to explain the price of gasoline or pizza has very little to do with her propensity to take risks and to start companies.

The view that entrepreneurial traits can be inculcated successfully also is central to the efforts of the Kauffman Foundation, which is the most influential supporter of entrepreneurial research and instruction in the United States. While the Kauffman Foundation and business schools do not discount the role of heredity in generating and energizing entrepreneurs and founders, they believe that entrepreneurial attitudes and behavior usually can be productively analyzed and modified over time.

This is a reasonable, if not popular, point of view. However, Stevenson et. al. (1999) report a National Federation of Independent Business Study of 1,994 start-up businesses that discourages the notion that entrepreneurial risk-taking can be taught**. The study found that "founders who spent a long time in study, reflection and planning were no more likely to survive their first three years than founders who seized opportunities that came by without much planning" (19).**

Business schools, governmental agencies and the Kauffman Foundation cite numerous examples of businesses that have been turned around by the application of sound managerial principles and knowledge. This beneficent result appears particularly to hold true when the principles being learned are *inconsistent* with the unrehearsed intuition of CEOs and decision makers. That is, if the principles being learned lead to conclusions that executives did not already know intuitively, then these principles can be of greater use.

In the realm of economics and finance, for example, many CEOs may be unaware of the heavily documented tendencies of CEOs and investors to hold overly optimistic views about the future and to be very reluctant to acknowledge a loss (for example, refusing to sell a stock whose price has fallen, or declining to shut down a line of business that has failed). Thus, DeBondt and Thaler (1995) aver that “Perhaps the most robust finding in the psychology of judgment is that people are overconfident.”

Consistent research and our own surveys reveal that most CEOs and entrepreneurs believe that it is *other* leaders fall prey to such difficulties, not them. For example, a study of almost 3,000 entrepreneurs revealed that fully one-third of them believed their chances of success were 100 percent (Cooper, Woo and Dunkelberg, 1988). In reality, about 75 percent of new businesses fail within five years.[2] Thus, as Stevenson et. al. (1999) pithily put it, “The great majority of start-ups fold or drag along in what one entrepreneur calls the land of the living dead” (18).

However, available data also suggest that a majority of all firm disappearances are voluntary (Cardozo and Borchert, 2003). Voluntary disappearances might occur because of sale or merger, but more likely reflect a business that is not doing well and the owner reading the handwriting on the wall. Once again, by most accountings, these latter exist might be regarded as business failures.

Similarly, both past research and our survey data indicate that while many CEOs talk boastfully about the risky decisions they make, a much smaller number actually choose to do so in meaningful situations and especially not where their own financial resources are at risk (MacCrimmon and Wehring, 1986).

Well-designed instruction can remedy misapprehensions such as these, though the evidence discourages the notion teaching often actually alters CEOs' behavior. **Our contention is not that business schools and the entrepreneurial efforts of the Kauffman Foundation are destined for failure, but instead that their efforts are much more likely to succeed if aimed at specific populations, namely, those individuals whose genetic makeup and personality traits predispose them to take advantage of such knowledge by acting in a truly entrepreneurial fashion.** Just as a farmer who hopes to reap a healthy crop of wheat must sows seeds on fertile ground rather than rocks, those who seek to stimulate entrepreneurial activity must recognize that some individuals are much more inclined to act entrepreneurially than others.

Two individuals (Mary and Jane) who otherwise are identical in terms of cognitive ability, income, family backgrounds, education, and the like, often react quite differently to entrepreneurial opportunities. Mary may relish risk-taking opportunities and an uncertain, but tantalizingly promising future, while Jane may shrink from such situations. This is a difficult, even confounding notion for some individuals to accept because they perceive that it implies that education and training can't really reach some individuals effectively, at least where entrepreneurial attitudes and activities are concerned. Nevertheless, this is the implication of behavioral genetics research (which we will examine shortly) and our own survey evidence.

Almost 50 years ago, Daniel Ellsberg (1961), later to become famous for other reasons (the Pentagon Papers episode in 1971), provided strong evidence that most decision-makers dislike ambiguity. They prefer certainty and situations where unexpected outcomes are rare. The difference between entrepreneurs and other individuals is that entrepreneurs usually thrive in ambiguous situations.

Our goal for this book is to increase the probabilities of success confronting entrepreneurs, boards of directors, and investors. One means to do this is to demonstrate what is *not* true (Popper, 1959). **That is, in this book, we "falsify" some popularly held notions about entrepreneurs and entrepreneurism and show that while this may be the conventional wisdom, they often are invalid. Knowing what is not true often is as valuable as knowing what is true. It may be comfortable to assume that the principles entrepreneurial success can both be taught to, and implemented by, nearly any intelligent, alert individual, but the available evidence discourages this notion.**

Ultimately, entrepreneurs are demonstrably different from other individuals and behave differently than non-entrepreneurial CEOs. Nevertheless, some are inclined to believe that successful entrepreneurs are simply ordinary individuals who simply have been the lucky recipients of fate. Figuratively, in this view, successful entrepreneurs are individuals who happened to be standing in a fortuitous location when a bolt of financial lightning struck.

The perception that there's not much difference between those are successful and those who fail perhaps motivated a famous retort by Ernest Hemingway's. When F. Scott Fitzgerald's casually observed, "The rich are very different from you and me," Hemingway dyspeptically responded, "Yes, they have more money," suggesting that they really aren't different.

Was Hemingway correct, at least where entrepreneurs are concerned? Is the only difference between successful entrepreneurs who have founded their own firms and other CEOs the size of their bank accounts and perhaps a bit of luck? While some individuals with egalitarian instincts might prefer to believe so—that entrepreneurs are no different than other individuals---the truth is otherwise. Entrepreneurs are profoundly different from other individuals and even from other CEOs who did not found their own firm. Some entrepreneurs may be wealthier than the rest of us[3] and some may be visibly lucky,[4] but as we shall see, those are not the major sources of the differences that exist between them and other individuals.

Shane (2008) reports that contrary to popular belief, entrepreneurism is on the decline in the United States and that numerous other countries are more entrepreneurial than the United States. He relies upon the proportion of individuals who start their own businesses as the primary basis for his conclusions. Shane also argues that media focus upon Silicon Valley entrepreneurs is misleading and unrepresentative of actual entrepreneurism in the United States, which is far more mundane. The typical entrepreneur, he says, is a married white man in his forties who may not have attended college and who starts a decidedly low-tech firm with $25,000 or less from his own savings.

Let us cast the issues in front of us in terms of dollars and cents. The value of the gross domestic product of the United States exceeded $14,080 billion ($14.080 trillion) in the fourth quarter of 2007 (BEA, 2008). This is about $46,000 for every citizen. How we generate, expand, utilize and manage this bounty must be regarded as a critical question in the twenty-first century. The United States boasts the most productive economy in the history of the world. Not just Americans, but all world citizens would be better off it we understood better the managerial and entrepreneurial parameters that have defined this splendid achievement.

How Much Does Luck Count? Gompers, Kovner, Lerner and Scharfstein (2006) examined the probability of success by several different kinds of entrepreneurs. Those who succeeded in a prior venture had a 30 percent change of succeeding in a new venture, while first-time entrepreneurs succeeded only 18 percent of the time. Those who failed previously and tried again had a 20 percent chance of success in their new venture.

HOW OUR APPROACH DIFFERS

In August 2007, we searched Amazon.com for books relating to the term "entrepreneur," and were confronted with 92,181 choices. The word "entrepreneurial" produced 50,233 possibilities. In truth, the topic of entrepreneurism has been flogged to death by thousands of writers. The usual approach to entrepreneurial study is anecdotal. The author usually focuses on one or more entrepreneurs and implicitly invites us to assume that these individuals are representative. Or, if the author does not believe the targeted entrepreneur is representative, then that entrepreneur is held up as being especially interesting, an intriguing and semi-exotic species, or the leadership equivalent of a genetic aberration that is worthy of study in its own right.

Representative is Bo Peabody's *Lucky or Smart? Secrets to an Entrepreneurial Life* (2004), which contains the reminiscences and counsel of a still young entrepreneur who has started five companies. His story is remarkable and Peabody truly is a very interesting character. And, we confess that we love great tales that chronicle the triumphs and defeats of leaders, whether or business, politics, academe, or sports. Shortly, we'll present another interesting and illuminating example below. Our purpose in this book, however, is to present *valid empirical generalizations* that can be made about large numbers of individuals who have founded their own firms. We then will compare these individuals to other CEOs who haven't founded the firm for which they work, as well as to a large group of non-profit CEOs---college and university presidents---that we have studied previously. In this book, then, we are less concerned with the idiosyncratic characteristics of a single entrepreneur and more concerned with makeup of entrepreneurs, particularly founders, as a group.

A plenitude of anecdotal studies of entrepreneurs exists and they are highly differentiated. The skillful telling of these stories often times produces best sellers. Some are autobiographies reminiscent of the after the battle books penned by military commanders who have surmounted the challenges of war and subsequently seek to share their absorbing experiences. Not so coincidentally, they seek to shape history to their own satisfaction.

Other autobiographies contain philippic passages in which the author attempts to even scores with various critics and tormentors. Whatever the intent, most of these books are ghosted by professional writers, or written with extensive professional assistance. Nearly all offer alluring stories that purport to contain broad lessons for other leaders and entrepreneurs. Representative are Iacocca's 1984 rendition of his times at Ford and Chrysler, Sam Walton's 1993 portrait of the astounding growth of Wal-Mart, Michael Dell's instructive 1999 chronicle of the emergence of Dell as a "just in time" inventory, direct to consumer vendor, Gerstner's 2002 description of how IBM was turned around, and Welch's 2001 and 2005 descriptions of his flourishing run at General Electric and what he now perceives to be the secrets of winning.

One need not read these volumes intensively to deduce the critical factors that these CEOs believe made them and their firms successful. Their paths to success are hardly national security secrets and typically involve old fashioned verities---hard work, perseverance, courage, loyalty, a willingness to take risks, the ability to prioritize, a finely honed ability to listen and communicate, a regard for employees and colleagues, and the like. To a person, each of these successful and sometimes eccentric CEOs radiated charisma, though the sources of their individual charisma were surprisingly variable. Taking a broad view, we can observe that few CEOs or CEO aspirants would go wrong if they were able to replicate such general talents and values in their own businesses. The problem, of course, is that every entrepreneurial situation is different and requires a distinctive approach that usually has precious little to do with General Electric or some other large corporation.

The admirable qualities (and their antitheses) cited in these anecdotal biographies are sufficiently generic that they usually do not provide much specific guidance to aspiring entrepreneurs and CEOs. When Sam Walton counsels the merits of a flat administrative structure and inveighs against excessive administrative salaries and perquisites, this is worthy advice, yet it does not always easily translate to idiosyncratic local situations.

For example, how much is too much flattening of the administrative hierarchy in a highly decentralized and regionalized industry such as milk production? Answers to questions such as this are not obvious. Hence, whether or not CEOs have read best sellers such as these, or even have read their own books, they often must make judgment calls based upon their intuition. Only later will they find out that their intuition served them for good or ill. Perhaps their intuition was based vicariously on Sam Walton's experiences, which may or may not have matched the local situation. In any case, Mr. Walton's advice is contradicted by other CEOs and even by empirical evidence generated by academics and analysts.

The most important insights in anecdotal CEO books have tended to be those relating to dynamic business processes that still are still evolving and far from maturation. Corporations such as Wal-Mart and Dell have become leaders in transforming purchasing processes, inventory control, supply chain management and pricing throughout the economy. We have not yet seen the last of these developments because many are intimately connected to globalization, which bodes only to increase. To be sure, no reader is going to learn supply chain management from Michael Dell's book, but she may well come to understand the central and evolving nature of supply chain management to medium and large sized corporations.

Still, it remains true that most of the insights reported in anecdotal CEO books already were well known by the time the books appeared. This underlines a generic difficulty associated with books that expatiate about the successes of CEOs and firms. By the time the books are published, the information contained within them already has been widely circulated and heralded in outlets such as the *Wall Street Journal, Business Week, Forbes* and *Fortune.* Those who can utilize such knowledge typically already possess it and have long since implemented it if they found it relevant. The function of anecdotal CEO books, then, is usually to provide a popularized, less technical, reader friendly version of past events and trends. Contrary to the advertising bluster that often accompanies anecdotal CEO books, they should not be interpreted as handbooks for CEO success.

None of this suggests that laudatory anecdotal CEO books are not useful, for they can be helpful in providing lay people with a general sense of the values, attitudes, processes and decision-making milieu in the business world. Further, as Donald Trump can confirm, captivating stories can function as a device for advertising one's products, if not one's own person. Nevertheless, most readers rapidly encounter diminishing marginal utility with respect to works in this genre because, except for the local color and anecdotes, they've heard it all before, or the lessons are too general to be applicable to a particular situation.

Yet another class of books about CEOs is written about them rather than by them. Some of these contributions are undertaken with the direct permission and cooperation of the focal CEO and therefore tend to the hagiographic. In these publications, there is a tendency to view the world through rose-colored glasses. More entertaining (though not always more accurate) are studies of CEOs that are designed as exposés. These efforts can be mightily disheartening, unexpectedly titillating, or amenably comical, but typically are designed to generate outrage at the CEO and his practices. Included here are Byrne's 1999 look at Al "Chainsaw" Dunlap, whose forte was downsizing companies with a degree of haste and brutality and Gasparino's *Blood on the Street* (2005), which examined how several of the largest and most influential Wall Street brokerage houses duped many thousands of investors. Such books ordinarily read like the script from an old 1940s Western cowboy movie; the good guys and bad guys are easily identified.

The demise of Enron, Tyco and WorldCom has produced a spate of additional books that reside firmly inside this tradition. Each of these revolves around the misdeeds of a particular CEO and these transgressions are presented as a paradigm for the threatened existence or emergence of a darker, more dangerous business climate. Skillfully angering and alarming readers about exploding Pinto automobile gasoline tanks or poisoned apples frequently is a productive book sales technique and on occasion leads to legislation designed to correct the problem. In that sense, the revelatory disclosure CEO books exercise an anodyne function because they allow the reader to "solve" a problem or dilemma.

Exposé CEO stories often are riveting and nearly always evoke appropriate levels of disgust for the egregious indiscretions of the CEOs. If one is searching for the murky underside of American business, one need go no further than these books. Nevertheless, like the volumes written about and by the most successful CEOs, this genre does not readily yield to specific advice or knowledge for an aspiring CEO, unless one considers "don't steal from stockholders" and "don't cheat the IRS" to be situation specific. While it's true that these prescriptions are rather universal with respect to CEOs, one hopes that it is not necessary to purchase a book about the chicanery of Tyco in order to comprehend these things.

We believe that the progress of science frequently is a sequential process that begins with the generation of hypotheses with testable implications that may then be subjected to rigorous statistical tests to determine their predictive and explanatory validity. The hypotheses may be innovative and perhaps challenge convention. Some may yield predictions that are not immediately testable because of data limitations.

Nonetheless, if these hypotheses can be tested empirically, we can improve our knowledge about how the world works. In our case, we want to know how CEOs behave, what they value and believe, and where this comes from. Such knowledge will better able us to isolate the key aspects of reality with respect to CEOs and improve our ability to predict CEO success or failure.

AN EXEMPLARY FOUNDING ENTREPRENEUR

Having just proclaimed that anecdotal evidence seldom leads to the valid scientific generalizations we require, we now note that anecdotes sometimes can be helpful in clarifying the issues and in highlighting critical questions. For that reason, we present a brief description of an amazing entrepreneur who for the next few paragraphs will remain nameless.

He grew up in a government housing project in Washington, contracted polio when he was eight years old and spent six years in the hospital. After his parents divorced, he bounced around the West Coast, living with relatives. By age 14, he was self-sufficient. He graduated from high school in Missoula, Montana while living with his grandmother and then went off to seek his fortune in Alaska. He worked on heavy construction there, learned the ropes and then returned to Montana, where he founded his own company, starting with a single Caterpillar tractor. His first contract involved paving a parking lot in a visitor's center in Glacier National Park. Within twenty years, he was on *Forbes Magazine's* list of the wealthiest people in the world.

Who is this inspiring man? He is Dennis Washington, the Chairman of Washington Corporations based in Missoula. Appropriately, he has served as the President of the Horatio Alger Association, whose membership is limited to entrepreneurial individuals such as Mr. Washington who have set out on their own, conquered significant odds, and achieved significant success.

Dennis Washington's didn't write dime novels in the fashion of the real Horatio Alger (1832-1899), but his story is quintessential "rags to riches" fare, involving a risk-taking, plucky, driven individual who had a vision and triumphed against the odds.[5] Today's Washington Corporation consists of more than a dozen firms involved in construction, mining, railroads and shipping. It does work all over the world and is involved in the rebuilding of the Middle East.

Now, to the point of this anecdotal exercise. On the face of it, it is difficult to argue that the Dennis Washingtons of the world really aren't a bit different from most of the rest of us. There is something about people such as Dennis Washington that is unusual. Such individuals visibly possess different personality traits, values, propensities and behaviors than most of the rest of us, and they even stand apart from the typical corporate CEO who has risen to the top through the ranks of his company. We will provide both scientific evidence and survey data to support this premise.

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[1] Genetic factors do not solely determine entrepreneurial behavior. Entrepreneurial environment can make a difference. Think about an individual whose parents isolate her in a dark room, or banish her to the proverbial desert island for the first twenty years of her existence. Whatever her genetic inheritance, she is much less likely to become an entrepreneur than most other individuals. Nevertheless, absent such abnormal circumstances, previous environmental factors are surprisingly less important to entrepreneurship than conventional wisdom suggests.

[2] At the executive level, the sources of failure of CEOs have been documented by Sidney Finkelstein (2003) in his *Why Smart Executives Fail*.

[3] Thomas Watson, Jr., of IBM grew up in a wealthy family dominated by his father, who had founded IBM. That had very little to do with his fateful decision to invest in the development of computers based mostly on diagrams and descriptions supplied by his engineers and scientists. That decision was labeled by *Fortune* as the riskiest business decision of the era (Evans, 472).

[4] The almost accidental discoveries of vulcanized rubber by Goodyear, the x-ray by Roentgen and penicillin by Fleming provide auspicious historical examples of entrepreneurial and scientific luck. In such cases, an innovator encounters something she was not looking for and did not expect, but is astute enough to recognize its potential for development (Goldenberg, Lehmann and Mazursky, 2001).

[5] Interestingly, Horatio Alger himself never did strike it rich. He only wrote about fictitious individuals who did.