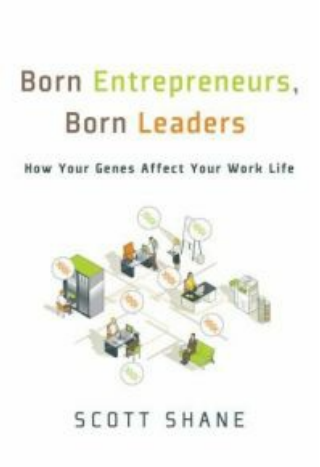

Book Born Entrepreneurs, Born Leaders

How Your Genes Affect Your Work Life

Scott Shane
Oxford UP, 2010
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Recommendation

Have you been able to move ahead in life because of your efforts and determination? Certainly, your strong character and hard work helped get you where you are today. But your genetic heritage also played a significant role in your workplace accomplishments. It did not directly cause your life's path, but it influenced your behavior, your choices and the success you have realized. With a different genetic makeup, you might have ended up in another job or lifestyle. The science of this is irrefutable; someone lucky in the genetic lottery has a much better chance to do well. Economist Scott Shane explains all this in his iconoclastic report on genes and their indirect effects on workplace success. Though it is not an easy read, given its somewhat stilted syntax, *BooksInShort* suggests this unsettling, yet eye-opening, book to anyone who really wants to know what makes people tick.

Take-Aways

- Your genes provide instructions for the construction of your body's cells.
- Genetics affect much more than height, eye color, body type and intelligence.
- Genes determine 50 to 60% of an individual's personality.
- Genes do not directly cause behavior; they influence behavior.
- Most people don't know this proven scientific fact because few reporters cover it.
- The idea that genes correlate with success runs counter to the prevailing notion that people get ahead due to hard work.
- Science finds few genetically derived differences in work-related performance among races or ethnicities.
- No single gene governs any individual personality characteristic – that involves a combination of genes.
- In the future, companies may hire job candidates based on their DNA profiles.
- Learning your own genetic profile can provide worthwhile insights into your choices and behavior.

Summary

Your Genes Help Determine Your Success

Genes affect everything about you, including intelligence and personality. This means your professional accomplishments do not depend solely on how hard you work, or on your education, training or expertise. Some of your professional results are due to your genetic makeup. Your success depends on your capabilities, temperament and behavior, which correlate with your DNA. While genes do not directly cause behavior, they do influence it.

> "DNA affects pretty much all aspects of behavior, from educational performance to job satisfaction to entrepreneurship to voting preferences, and so on."

Business writers seldom report about these scientifically verifiable findings. The fact that your genetics can profoundly affect your career – and thus your subsequent success or failure – does not fit with the prevailing philosophy that "free will and self-made behavior" are the primary reasons people succeed. Most folks easily accept that genetics determine hair color, height, eye color and so on. But they do not like to think that their genes play a role in their behavior or their attainment of status and goals. Nevertheless, genes affect work behavior, which in turn affects whether people do well in life.

> "DNA accounts for one-third of the difference between you and your co-workers in many aspects of work life, from job satisfaction to income level."

Environmental factors – that is, "everything other than one's genes" – also strongly shape behavior. However, these elements, including "life experiences, health, education" and other factors, are not the only influences determining why people act as they do at work and elsewhere. Genes figure heavily into the equation. For instance, people with a certain genetic orientation are more likely to become entrepreneurs. While no single gene generates entrepreneurial brio – or any other individual personality factor – DNA does affect career behavior "in complex ways that combine the effects of a number of genes."

> "Genetic effects on personality and...attitudes and abilities highlight the fallacy of assuming that everyone has an equal chance of...achieving high earnings, getting a promotion or even being satisfied with a job."

Research indicates that while the human genome contains 20,000 to 25,000 genes, only 59 genes, taken together, account for "38% of the difference between people in novelty seeking, 32% of the difference in harm avoidance, 41% of the difference in reward dependence and 32% of the difference in persistence." How do scientists determine these findings? They use two methods of scientific research: the study of "behavior genetics" and "molecular genetics."

Genes Under the Microscope

Genes are "spiral-shaped particles" that represent the primary heredity determinants. They are composed of DNA (deoxyribonucleic acid), which has four basic varieties – "A, G, C and T" – known as bases. The human body contains "about three billion base pairs of DNA." Deoxyribonucleic acid provides instructions to the body on how to make protein molecules, the building blocks that determine the structure and function of cells. Think of genes "as templates for proteins."

> "The effect of our genes on our work life isn't discussed very much in business publications."

DNA does not directly affect behavior, but its influence concerns your brain, your central nervous and glandular system. These bodily systems play a direct role in cognition, as well as in "personality, interests [and] values." All this goes back to the base level, where "chemical reactions in the brain...influence how you feel and, consequently, behave." Thus, DNA affects the jobs you take, the leadership roles you assume, the work satisfaction you feel and similar employment-related factors.

Genetics and Environment Determine Who and What You Are

Genes affect worksite behavior and success, but you must still make your own life choices. "Genetic predisposition" can give you a leg up or hinder your chances. More than one-third of work-related differences among employees – "job satisfaction, job choice, leadership turnover, job performance and income" – have a genetic basis. Genes are important, but they obviously are not everything. Behavior also depends on environmental factors. For example, an entrepreneurial genetic predisposition means nothing if the genetically favored individual has no capital, or can't get it. This would be an example of an environmental factor.

The Infamous Nazi Association

People can be uncomfortable thinking about or discussing genetics. One reason may be that only decades ago, Dr. Josef Mengele, SS officer and Nazi physician, infamously conducted gruesome concentration camp experiments, supposedly concerning genetics and heredity. His vicious brutality gave genetics the worst possible name. However, genetics actually have nothing to do with "racial or ethnic differences in work-related behavior." Research clearly shows that factors such as personal intelligence and work-related behavior are markedly different among people of the same racial or ethnic groups, as opposed to differences between separate racial or ethnic groups.

Genetics and the Workplace

Why does this information matter to business? Genetics introduce a note of realism for managers who attempt to use incentive programs and other inducements to change employees' work performance and behavior. If workers lack the optimum genetic orientation, such programs may not motivate them. Most executives believe that increasing employees' pay or upgrading their working conditions will improve their attitudes. Yet, often such positive changes make no difference at all. Therefore, managers who understand the impact of genetics on work behavior will have a better grasp of employee motivation.

Genes and Interests

Genes do not just influence your capabilities and behavior. They also affect your particular interests. If you enjoy reading, your genes may be the reason. Genetics may shape your preference for collecting stamps, catching butterflies, and so on. Research indicates that when it comes to intellectual pursuits, 21% of the "differences between people" has to do with their genetic makeup. When it comes to "vocational interest," the Jackson Vocational Interest Survey says that the "percentage of differences that is genetic" in these areas is: "creative arts (74%), physical science (68%), engineering (61%), nature and agriculture (61%), [and] business (59%)." Genes play a dominant role in your interest in one type of job over another. However, your genes do not guarantee any one particular path.

DNA, "Job Satisfaction" and "Instinctive Choices"

Turnover is expensive for corporations. Research indicates that replacing an information technology specialist who earns around $70,000 costs corporations about $34,000. Finding and hiring a retail sales clerk costs $10,000. Thus, business leaders have a special interest in the way that genes affect job satisfaction. Genes

influence whether employees are happy or sad, or feel good or bad about their work. Genes even hold sway over political and policy attitudes, such as "whether capitalism is good [and] socialism is evil." While genes do not directly affect these preferences, they do shape "temperament, personality and cognitive abilities." These in turn influence attitudes concerning various issues, including job satisfaction.

> "Pretending that DNA doesn't affect how people act on the job isn't going to make genetic influences go away. It's just going to make people ignorant of those effects."

Corporations rise or fall based on the choices of their senior executives. Executive decision making on business strategies and solutions decide the future of businesses. Many senior executives possess sterling academic backgrounds, including MBAs from respected universities. They know the importance of calm, rational and information-based decision making. Even so, some senior executives create on-the-job strategies based on their gut feelings. Often, this is due to their specific genetic orientations.

> "It has become increasingly accepted that traits, attitudes and behaviors relevant to the workplace have a genetic component." (Researchers X. Caldu and J. Dreher, *Annals of New York Academy of Sciences*)

For example, a "combination of serotonin and the human-brain-derived neurotropic genes (BDNF) that you have" could cause you to think rapidly. Risk-taking behavior may be due to "versions of the 'worrier' (COMT) and the 'impulsiveness' (DRD2) genes." Research findings indicate that genes determine how much testosterone the body manufactures. Men with high testosterone counts are greater risk takers than men with lower testosterone counts. High testosterone affects the rationality of a person's decision making; people with high counts perform less cognitive analysis and subsequently make less rational choices.

DNA and Styles of Management

To some degree, genes account for impulsiveness. Unfortunately, lack of impulse control can be a noted failing for some executives. To illustrate, Joseph Galli, the former CEO of Newell Rubbermaid, once ripped a pen made by a competitor out of the hand of an analyst at his investor conference. The impulsive CEO then gave the analyst a Newell pen as a replacement. Research shows that the differences regarding impulsiveness between individuals are 15 to 50% genetically based. Related findings regarding the impact of genes on impulsiveness-related factors report that genes affect "50 to 66% of the difference in self-control" and "20% of the variation in the amount of time [someone] spend[s] on deliberation."

> "Genetics is about probabilities, not destiny."

Many executives need the approval of others, a symptom known as "reward dependence." In this, too, genetic predilections are a factor (approximately 33%). Researchers have determined that certain genes play a role in the need for "social approval," including "APOE," which also is associated with Alzheimer's disease; "CYP19A1," the "'sex hormone' gene" and "PNMT," the "'adrenaline' gene."

The Future of Genetic Research

As research reveals new information about genetics and their effect on workplace behavior, business reaction could be momentous. Will corporations do away with standardized hiring protocols? Might they instead secure DNA samples from job applicants, and analyze them for "genetic predispositions" regarding work- and management-related personality issues?

> "Having a version of a gene that predisposes you to a particular behavior doesn't mean that you are going to display it."

Though this might sound like science fiction, it's not so outlandish. Managers want employees who provide the best returns, do the best work and remain the longest time. It's logical that firms would select employees "genetically-inclined" to possess the traits and personality characteristics they desire. Would this be "socially desirable or...ethical?" That is the open question. Using DNA research findings to select the potential job candidates could, in the years ahead, become a viable human resources method. One roadblock: Through its "genetic nondiscrimination bill," the U.S. Congress made it a crime "to use genetic information 'to make hiring, firing and other job placement decisions'." Businesspeople need to know how genetic research may alter corporate operations in the future, "if only to prohibit" such DNA-related job screening.

What About Your DNA?

Understanding your genetic predilections can help you. For example, such knowledge could inform your choices regarding the jobs you pursue, those that will most satisfy you and those that best match your personality. And since genes can influence your basic attitudes and opinions, knowing your genetic makeup can help you guard against the internal biases that color perceptions and lead to poor decisions.

> "Your DNA influences the probability that you will behave in a particular way; it does not assure it."

How can you learn your genetic profile? Jason Zweig, a *Wall Street Journal* columnist, went to a University of Pittsburgh genetics laboratory. Because he writes about investment choices, he had the lab analyze "five of his risk-and-reward-related genes." When he received his DNA profile, he wrote, "I don't panic in bear markets, and bull markets make me uncomfortable...Those habits, I now understand for the first time, don't come naturally to me. I have been fighting my genes for years, and the reflective parts of my brain have been struggling to rein in my emotions for a lifetime." Because Zweig learned about his genetic makeup, he now can make allowances for its influence in his future investment decisions. Knowledge is power. And knowing your genetic makeup can provide you with powerful insight.

About the Author

Scott Shane is a professor of economics and entrepreneurial studies at Case Western Reserve University. He is the author of more than 60 scholarly articles on entrepreneurship and innovation management, and the author or editor of eight other books.