

**NATURAL
CORPORATE
MANAGEMENT**
FROM THE BIG BANG
TO WALL STREET

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Introduction

What you will find in this book and why you should read it

Two short sentences tell what this book is about.

- Business and nature are intertwined
- Business managers need to understand this linkage of business and nature if they are to do their job well

That's it!—the main idea of the entire book. Telling the whole story takes much more than two sentences—ten chapters in all—but keep these two openers in mind as you read along because they are a key that unlocks all the rest.

The business and nature connection runs much deeper than current concerns about global warming, climate change, and environmental disruptions, important as they are. All of nature's activities have both positive and negative impacts on the way companies do business, including life-supporting ecosystems that sustain a firm's long-term existence and the most destructive forces nature can unleash, such as flooding, tornadoes, tsunamis, earthquakes. In much the same way, all business activities—from profit seeking to technological productivity—depend on nature in the form of energy resources and an inborn natural drive in business leaders to succeed in the marketplace. Business and nature are truly locked into a lifelong partnership.

2 Natural Corporate Management

Nature also plays a central and highly influential role inside the business firm. You may be intrigued—even surprised—to discover that natural forces generate the profit motive, regulate market exchanges, create a firm's capital investments, set the organizational command-and-control shape of the corporation, spawn technological innovations (think iPhone, BlackBerry, YouTube, Facebook, GPS), and devise the brainy strategies that drive business corporations forward. Learning how to make practical use of these natural forces is the purpose of **Natural Corporate Management**.

To guide your reading, two key analytic concepts appear over and over again in all chapters: **Natural Corporate Management** and an **Evolutionary Cascade**. The core meaning of each idea is introduced next, followed by a brief summary of the book's chapters.

Natural Corporate Management is an expression, a manifestation, a consequence of a long—very long and ancient—evolutionary process. What managers do—their behavior, the goals they pursue for their firms, their competitive strategies, the ways they organize people and resources for production—all of these are natural phenomena in the most literal sense. Nature here means the basic, organic, bodily, physical, chemical, biological makeup of people and the natural environments they live in—a vast and highly variable, diverse, and constantly changing pageantry of natural forces. It also is literally true that managerial decisions made today reflect not just current natural forces but traces of the most primordial, time-distant aspects of the natural universe. It is a bit like astrophysicists observing the phantom-like background radiation left over from the universe's Big Bang origins. Business practices today are bathed in a similar cosmic glow stemming from the moment of our own human beginnings. As odd as it may seem, the Big Bang continues to light up actions and decisions taken in today's corporate boardrooms and executive suites.

But none of this happened overnight. Humans (and business firms) are where we are now after eons of prior development. To grasp the central message here, pretend you have accidentally hit the Delete button on all you ever knew about business. Better still, assume your computer has had a total crash, wiping out all of your files, back-ups, and memory about how and why business is done. Then you curb your momentary panic and frustration by installing a new version of what you had before, this time with a much improved and expanded perspective that, rather magically, can actually restore your old files while updating them. This new program is called an **Evolutionary Cascade** which is explained next. Once

you get the hang of it, you will begin to see business in a new light—a light powered, believe it or not, by that primordial flame called the Big Bang. Here is the story in brief.

An **Evolutionary Cascade** begins with energy, its evolution, and the way energy has shaped business from the beginning of time. Think of the cascade as a waterfall of tumbling, flowing stages of energy's evolution, each successive plume partially formed by the preceding flows. The flows are cumulative, building on one another, each sending a part of itself along to join and reinforce all the others that appear later. This **Evolutionary Cascade** constitutes a thunderous, magnificently impressive, even fearfully tumultuous and powerful display of nature's (and energy's) ability to shape anything in its path, including the practice and management of business. The key here is to grasp the cumulative continuity and functional interdependence of all parts of the cascade—an entire, holistic, nested linkage of overlapping phases, leading eventually and opportunistically to nothing less than the center of corporate decision-making, labeled **Natural Corporate Management**.

The **Evolutionary Cascade** begins at the beginning of the Universe—the Big Bang that ushered in what was to become the entire panoply of existence, life, time, and whatever meanings were to be associated with this primal event. The Big Bang was *nothing but energy*, by definition of course—after all, it was an explosive outburst of immense force. This primordial blow-out and subsequent rapid expansion were to lead toward all presently known meanings and forms of energy, including those used in business. Its primal energy driving force shaped all that was to follow the initial outburst. The Big Bang created not just a universe but, equally important, set in motion a process of change and evolution that has never stopped. As someone once humorously said of oxtail soup, “That seems like going pretty far back for soup.” The same might be said of the Big Bang and modern business. But the primal past is not as “far back” as you might imagine. It is right here in our midst. It's called the modern business corporation.

An accompanying illustration depicts the cascade's phases.



Once **Energy** evolution began, it took various forms that emerged ever so slowly. We'll skip over the earlier ones about elementary particles, the emergence of light, the formation of stars and galaxies, and other astrophysical exotica, and go directly to the emergence on Earth of **Life** itself along with the biospheres and ecosystems that sustain it. Then in successive steps on to a **Darwin** portrait of life's evolution, to the **Gene** as evolution's steering mechanism, to the appearance of **Homo** and that fertile bundle of neurons we call a **Brain** which spawned **Symbol** behavior, continuing on to **Organization** as a mode of work, to economic exchange in the **Market**, and finally arriving at the **Corporation's** doorstep. The stepped-down descriptor for each cascade phase is a signal of its proportional reach and influence—basically, the footprints of varying depth left in the sands of time by these natural forces. Keep in mind this critically important principle: *the mark of each preceding phase is present in each and all of the following phases.* An

evolutionary thread—a cumulative penetration, a continuity of function, a saturation of prior effects—runs through the entire cascade.

Standing at the end of this cascade of evolutionary phenomena, the **Corporation** might be expected to become the inheritor and carrier of each of the cascading phases. Indeed it is, and that is why managers need to grasp the meaning of **Natural Corporate Management**. They are literally the “managers” of a system embedded deeply in, and evolved from, the natural world.

So, why should you read this book?

- **Managers.** Because you need to learn what these natural forces are, how they influence your decisions at work, and what you might do about it
- **Investors, creditors.** Because you provide important forms of natural capital that make possible, or can limit, the continued existence of business firms
- **Supply chain entities.** Because the production-to-consumer functions you perform are negotiated forms of natural social contracts
- **Government officials.** Because the laws you make, the regulations you apply, and the public policies you adopt toward business have the potential of promoting or negating the natural environment in which business operates
- **Business school deans and faculty scholars.** Because a torrent of new research in the natural sciences sheds new light on old questions about the business firm, its motives, its organization, its functions, its managerial cadre, and its social and environmental impacts
- **Students.** Because you need to understand the natural forces that will shape your career choices in business and other professions
- **Public citizens.** Because your material well-being and the quality of your life depend largely on the ability and willingness of business firms to heed the role of nature in societies everywhere

A brief guide for student readers

Learning about business is the way to discover new ideas that will help you build a professional career. You will find such perspectives in this book. But, at times, you may find it a tough read, and I want you to know that I realize that and—believe it or not—I sympathize with you. To lighten your load, I have used a few examples of actual companies that illustrate a complicated concept or theory. Other times, I'll try for a puny pun or lighter moment (lol) to brighten your day and relieve the boredom—but you don't have to laugh. Best of all, the end of each chapter has a bullet-point list of key ideas found in that chapter, so if you were up late the night before class, give these pivotal points a quick look, which might fool your instructor into believing you have read the whole chapter. More help is on the way in the chapter summaries below. Most of all, keep on chugging through the assigned chapters to the end because later on you will discover these ideas to be of practical use on the job and as you develop your professional career. You have my good wishes as you travel that path to success.

Chapter summaries

Chapter 1 The Big E \approx ENERGY

The Big Bang initiated a process of energy evolution that influences and shapes Earthly life, ecosystems, economies, and business firms.

Chapter 2 The Big L \approx LIFE

The cell is the basic unit of all organic life. All life forms exist only within ecosystems, which are networks of interconnected, interdependent organisms. Business corporations operate within ecosystems, exerting significant influence both positive and negative on the diverse life forms there.

Chapter 3 The Big D \approx DARWIN

Darwin's theory of evolution by natural selection says that all forms of organic life, including humans, evolve from earlier ancestors. Business

behavior is a blend of natural selection's influence on the behavior of individuals and groups.

Chapter 4 The Big G \approx GENE

Genes are the cellular components that create, activate, and direct the form and life functions of all organisms, including humans. Business behavior is shaped by genetic influences.

Chapter 5 The Big H \approx HOMO

The *Homo* genus—human beings—first appeared on Earth around 2.5 million years ago. The decisions of today's business managers are influenced by *Homo* evolution.

Chapter 6 The Big B \approx BRAIN

The human brain regulates neural signals as humans interact with ecosystem environments. The actions and decisions of business managers are shaped by brain-centered impulses and motivations.

Chapter 7 The Big S \approx SYMBOL

Symbolic human culture is a blend of tools, symbols, and group-living patterns. A business firm's culture helps the firm adapt to the social and ecosystem environment.

Chapter 8 The Big O \approx ORGANIZATION

A business firm is organized in three ways—as a hierarchy, by technological teamwork, and as a nonlinear, complex system. Each organizational design supports the firm's profit-making operations.

Chapter 9 The Big M \approx MARKET

Markets perform two functions: reciprocal balanced exchange without gain (social reciprocity) and economic exchange for gain. Through market transactions, business firms adapt to their environments by economizing and ecologizing strategies.

Chapter 10 The Big C \approx CORPORATION

An analysis of how each cascade phase affects managerial behavior and the shaping of corporate policy and strategy. A natural theory of the firm then summarizes the book's major themes.

That's the book's introduction. Getting the rest of the story is up to you, the reader—a journey I hope you will find informative and professionally valuable.

As the evolutionary story unfolds, I wish to pose a question of special importance for one group of readers: 'Wall Street—and corporate managers everywhere—are you listening?' I hope your answer will be, "Yes."

Nature and the corporation

As this book has proposed from its beginning, the modern business corporation is a manifestation of evolving natural forces, acquiring its meaning and functions in a cumulative fashion from an onflowing **Evolutionary Cascade**. The cascade is a series of natural processes acting successively, chronologically, and influentially on one another. The collective impact on the corporation and its managers defines the functions and dynamics of corporate operations as well as the boundaries and opportunities of managerial decision-making. To emphasize the close kinship of corporation and cascade, this chapter's symbolic icon is labeled **Corporate Evolutionary Cascade**.

The idea that the corporation is none other than a natural "living entity" has been expressed by Arie de Geus, a seasoned corporate executive with Royal Dutch Shell who is noted for initiating the concept of the learning organization: "All companies exhibit the behavior and certain characteristics of living entities . . . Like all organisms, the living company exists primarily for its own survival and improvement: to fulfill its potential and to become as great as it can be." Grasping this reality "has enormous practical, day-to-day implications for managers . . . The fact that many managers ignore this imperative is one of the great tragedies of our times" (de Geus 1997: 10, 11).

This kinship of corporation and nature has thus begun to generate a new way of thinking about how corporate managers do their jobs, called in this book **Natural Corporate Management**. So, before illustrating the corporation's deep involvement in nature—and in all phases of the **Evolutionary Cascade**—a brief recap and clarification of NCM's meaning and function is provided.

Natural Corporate Management: Its core meaning

Natural Corporate Management (NCM) is a new way of thinking about the actions of the modern business corporation and the behavior of its managers. Its core premise is that corporate actions and behaviors are a direct consequence of natural forces—astrophysical, biochemical, organic, and ecological—which simultaneously promote and threaten the corporation's

economic stature and its continued existence. The most important management trait evoked by these natural forces is an emergent, growing awareness or consciousness by managers that nature is of central importance to the successful management of the corporation. **NCM** is not a managerial method or technique, nor is it a set of how-to-do-it instructions for managers. Neither does it replace or contradict current concepts of how management is understood by practitioners and scholars. **NCM** rather is a reinterpretation, a reformulation, a new perspective of what it means and requires to manage a business firm. Its novelty stems from insights generated by a steady and cumulative flow of new multidisciplinary research on the origins and evolution of human and organizational behavior. The resultant behavioral focus of this innovative approach is thus cumulative, historical, continuity-oriented, and—especially important for managers—appropriately practical, pragmatic, and empirically grounded. **NCM** might well be called a natural theory of the firm.

Natural Corporate Management permits and encourages a range of managerial actions to secure the corporation's future. In that sense, the concept is supportive of business, not negatively critical. Moreover, this nature-based corporate/managerial approach is thoroughly consistent with prevailing concepts of corporate social responsibility and ecosystem sustainability, to be discussed later in the chapter. However, **NCM** is neither predictive nor futuristic in outlook, focusing mainly on the present-day dimensions and consequences of managerial decision-making.

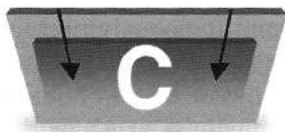
Corporate managers need, first of all, to develop a conscious awareness of the natural forces that influence corporate activities at all levels and in all operational spheres of the organization, and, second, to learn whether, how, and when to integrate this new understanding of nature into workplace behavior.

An **Evolutionary Cascade**—the cumulative, evolving natural phases described in earlier chapters—is the author and source of all the natural challenges faced by managers of the modern business corporation. As noted above, grasping that naturological reality is a first essential step if the corporation is to achieve its goals. Therefore, this chapter identifies the key natural management challenges, along with the action potentials, associated with the cascade's phases. In each phase, we shall be searching for the immediate practical impacts—behavioral and organizational—that are most relevant to corporate operations. Doing so creates a formidable agenda for responsive corporate actions.

to cope with an emerging crisis of long-term human survival and global inequality is emerging among a growing number of corporate leaders. *Reshaping* market incentives and *integrating* those new standards into corporate operations is presently a symbolic, not a significant nor a sufficiently practical, response to current human concern and aspiration. When such dysfunctional, visionary symbolism trumps technological instrumentality, human (and business) evolution falter. The ultimate choice is in corporate management's hands

Thus, in these many ways, the **Evolutionary Cascade's** first nine phases generate a comprehensive agenda of corporate opportunities, policy options, and strategic choices. We need now to pose the critical question: Is corporate management up to the task?

Phase X: THE CONUNDRUMS OF CORPORATE CHOICE



Living the sometimes tumultuous life of a corporation's executive manager is no easy task. The corporate-scape is littered with an array of those who, for one reason or another, could not and did not meet the many challenges their companies encountered. But perhaps an even greater number can be found on the upward slopes and towering peaks of economic achievement, successful for themselves and their vigorously competitive enterprises. While there are Enrons galore, there may be even more Apples exultant. The reasons can be numerous: skill, ingenuity, foresight, real-world practicality, endurance, fortitude, imagination—or even luck. I once heard a former CEO known for the long successful run of his corporation say publicly that he had been the luckiest man alive by being “in the right place at the right time.” Of course, he also made the “right” decisions “at the right time,” as many other CEOs have done to their credit.

Both the potentials of corporate achievement and the obstacles that cause some firms to stumble and fall are the outcomes of the many natural forces that surround and give life to any business corporation. Although the modern business corporation is itself not a living organism, “it” is

impelled across the eco-scape by the actions of its collective “live-in” organic inhabitants. Identifying all of the major impellers—a confluence of evolutionary processes—and judging how, and how well, they affect the firm becomes a key—perhaps *the* key—function and responsibility of corporate managerial leadership.

The core conundrums—the real puzzlers—that stand out from all the other contradictions, complexities, and confusions that nature poses to corporate leaders are four in number, each one raising the stakes to the level of cosmic corporate responsibility.

Entropy versus Life

All organic life, including the corporation’s organic collectivity, confronts entropy. Since Earthly life’s beginnings, no organic form has outrun or escaped entropy’s fatal, final grasp. Entropy trumps life. Organisms generated and activated by inflowing solar energy are nonessential though instrumental to entropy’s destination of finality. The modern business corporation has proved to be one of nature’s most effective finders, accumulators, and processors of thermodynamic energy; it is an energy transduction mechanism of perhaps unsurpassed potential. In so doing, the corporation extends not just its own life but also enriches the lives of countless others by its productivity. Today’s and tomorrow’s energy crises testify to the corporation’s central role in creating, and possibly also solving, the energy dilemma. But there is a downside. By maximizing entropic energy flows through its powerful drive to survive, the corporation at times puts at risk the lives, the quality of life, and the survival chances of its market competitors, its employees, its stakeholders, and the integrity of ecosystems around the world—all of which are thereby moved closer to a fatal entropic equilibrium. Who—which forms of organic life—shall survive and for how long? The managerial choice is stark, unyielding, inescapable.

Genotype versus Cognotype

Genes are the essence of all cellular life, forming organic phenotypes, perpetuating themselves through time, constituting the most basal form of organic energy (its mitochondrian “batteries”), and thus driving the behavior of all organic forms of life, including humans and their business corporations. The *Homo sapiens* brain—that astoundingly creative

cellular mass—is an outcome of the focused activity of genes interacting with ecosystem adaptive pressures. Ironically, a relatively flexible and creative cognotype thus owes its very existence to the inflexible genotype's drive for perpetual life. Does Gene thus trump Brain by channeling cognition to promote genetic continuity rather than human adaptive purpose? Are corporate decision-makers, policymakers, and strategists unwitting pawns doing the work of their genes rather than the presumed rational work of their brains? Is corporate purpose defined and shaped by genotypes, not by cognotypes? Does managerial planning and strategizing even matter? Can we count on genotypes to do the job unassisted by cognotypes?

Symbol versus Tool

Symbols and tools—major components of human culture—share a common trait: immense generativity and creativity, constantly expanding the range and quality of symbols' meanings and tools' instrumental usages. These capabilities—something like a “wild card” of unpredictable potential—are expressions of the *Homo sapiens* brain having variable and often contradictory adaptive effects. Instrumental tool use has long supported human adaptation to varying ecosystem exigencies; tools are one of natural selection's most potent partners. Today's business corporations are the home of modern tools/technology, sheltering technical experts and pushing them to reach the outer edges of technological innovation. The resultant technological juggernaut is matched though, and perhaps even over-matched, by symbolic creativity—a deep wellspring of human belief, meaning, and purpose bubbling up from the depths of that fertile *Homo* brain. Symbolic meaning need not be entirely instrumental, as attested by human devotion to myth-making, magical incantations, other-worldly realms, out-of-body experiences, visions, mysticism, spiritualism, cult beliefs, taboos, rituals, ceremonials, extra-natural belief, and other behaviors with imputed teleological purpose and meaning. At that fateful juncture where Symbol and Tool confront one another in human (and corporate) affairs, choices are sometimes needed. Should it be the adaptive instrumental Tool? Or the adaptively lax, or even maladaptive, *Homo*-centered Symbolic meaning? The questions are real for the corporate moguls who formulate the goals, visions, purposes, and strategies of their companies. Should tools/technology be favored for their adaptive effects

on the corporation, its workforce, and the communities it serves? Should broader symbolic human purpose be given equal standing? Should technology's potential for ecologically destructive behavior—direct threats to life, ecosystem, and human purpose—be limited? What shall it be—Tool or Symbol?

Market Efficiency versus Social Reciprocity

Modern markets are the natural inheritors of dual intertwined functions: the exchange of economic valuables at socially reciprocal rates. Market efficiency requires minimizing economic costs and maximizing economic benefits for the exchange partners. Social reciprocity requires a regard for the socioeconomic standing of the exchange partners. Mutual benefits are normally expected, shared costs a possibility. However, the economic function—an econotype—may be held hostage to the social function—a symbotype—thereby reducing the market's efficiency (by increasing costs or reducing benefits), while the social function may be compromised by an overzealous search for economic efficiency (by increasing and/or ignoring social costs and reducing social benefits). Market efficiency constitutes a natural selection pressure on corporate enterprise enabling the firm to adapt and survive. Social reciprocity signals the presence of a natural selection pressure on human sociality groups enabling them to adapt and survive. The resultant conundrum: Will natural selection let either of the exchange partners off the hook? Does market efficiency trump social reciprocity, or is it the other way around? While Adam Smith's free-market admirers abound, others favor social contracts (Donaldson and Dunfee 1999; Fort and Noone 1999; Fort 2001; Frederick and Wasieleski 2002). The debate goes on. What market price is just? Which exchange is the most efficient? Does nature care? Do managers care?

In the face of these four epic, indeed cosmic, puzzles, it is sobering to recall the relative recency and impermanence of *Homo* life and organic life generally. *Homo sapiens* is the "last person standing" in the long line of *Homo* predecessors. Massive extinctions in past ages—five in number—have eliminated most forms of then-existing organic life, and another extinction may be under way in today's world, possibly aided by corporate decisions, policies, and actions. On Earth, a far more ancient kind of evolution—thermodynamic energy—preceded the appearance of

organic life, with power to create or destroy ecosystem life webs. Organic life itself is a cosmically recent event—a youngster of only 3.75 billion years on a globe some 5 billion years of age in a Universe that began 14–15 billion years ago.

Although they are major players in this cosmic drama, corporate leaders and executives need to remind themselves of their own companies' precarious existence. One of their number, Arie de Geus, points out that the average life span of most corporations is approximately 40 years—far less than today's human life expectancy of 67 years (de Geus 1997: 2). Matt Ridley also comments on the brevity of corporate life: "Half of the biggest companies of 1980 have now disappeared by take-over or bankruptcy; half of today's biggest companies did not even exist in 1980" (Ridley 2010: 111). This suggests that natural selection, aided perhaps by rogue executive decisions, takes its toll among even the best runners in the corporate race to adapt and survive.

As they search for answers to the cosmic puzzles, corporate managers can take either of two paths to the future. Sir Martin Rees, a leading cosmologist, opines in *Our Final Hour* that "the odds are no better than fifty-fifty that our present civilization on Earth will survive to the end of the present [21st] century," succumbing to a combination of human-induced catastrophic events (Rees 2003: 8). A more cheerful view is promoted by seasoned science thinker Matt Ridley in *The Rational Optimist*: "economic evolution will raise living standards of the twenty-first century to unimagined heights, helping even the poorest people of the world to afford to meet their desires as well as their needs" (Ridley 2010: 352). A third more cautious but hopeful possibility is envisioned by two other renowned scholars: a "SEE Change" toward a "Sustainable Enterprise Economy" that would create a "balance between the public interest and free markets" (Waddock and McIntosh 2011: 19). Whatever the longer-term outcome may be, it is a sure bet that corporations will be near the center of the eventual denouement.

Corporate prominence flows naturally from nature's **Evolutionary Cascade** that has produced the corporation in all of the following forms:

- An **entropy** maximizer
- A **life-ecosystem** inhabitant
- A survivor of **natural selection**

- A **genetic** competitor–collaborator
- A **Homo**-generated economizer
- A set of **neural** algorithms
- A socioeconomic **symbol**
- An **organizational** trio
- A **market** duality
- A **living** company
- An **organic** collectivity
- A **planetary** inhabitant
- A citizen of the **cosmos**

The ultimate conclusion: This multifaceted naturological entity we call a corporation can find its way, its purpose, its mission, and its evolutionary fate by accepting and adhering to the principles of **Natural Corporate Management**, thereby embracing the entire realm of nature, planetary life, and cosmic responsiveness.