



The  
Next  
Common  
**Sense**

**Mastering** Corporate  
Complexity through  
**Coherence**

**Michael Lissack & Johan Roos**

THE NEXT  
COMMON SENSE

MASTERING CORPORATE  
COMPLEXITY THROUGH  
COHERENCE

MICHAEL LISSACK AND  
JOHAN ROOS



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For more information on  
*The Next Common Sense*, coherence or  
complexity, please visit our web site:

<http://coherence.org>





## FOREWORD

**T**ake a good look around the next time you're in the bookstore. (Maybe you're standing in one right now.) Thousands of cookbooks. A wall of travel guides. Shelf after shelf on addiction and recovery. You're surrounded by titles promising to simplify the complex, whether in cooking, carousing, or coping with the stress of modern life. Step right up for easy answers.

Now, put all these books together and quadruple them. That's how many business books you may see. And like all those other instruction manuals and how-to guides, the business books promise to solve your most complex problems with easy, step-by-step solutions.

Michael Lissack and Johan Roos stand apart with *The Next Common Sense*. They make no attempt to solve your particular problem; how could they, when they haven't met you? They offer no recipes for success in your industry; why would they dare, when you know your industry a hundred times better than they ever could?

Not much of a business book, you say? If you're looking for pat solutions and easy answers, I strongly urge you to turn elsewhere – perhaps to the recovery section, for aid in curing your addiction to insipid business books. Instead, *The Next Common Sense* is about the universal rather than the particular. It is about being human as much as about being in business. It reveals how nature organizes itself while exposing the conceit of our attempting to organize ourselves much differently. It discusses the leading of one's self as much as the leading of others.

As managers increasingly recognize, the command-and-control model of organization is untenable in this era of dizzying change and

ghastly complexity. Yet even as we demand more flexibility and creativity of our organizations, the need has never been greater for unity, identity, and direction – “coherence,” as these authors call it. How shall the leaders and members of organizations cohere in such times as these? Perhaps through “the next common sense,” a concept, as the authors explain it, that calls on us to use fresh eyes and simple tools to interpret and shape a complex world.

As the greatest scientists have acknowledged, what we see depends where and how we look. Said the physicist Walter Heisenberg: “What we observe is not nature itself, but nature exposed to our methods of questioning.” Said Einstein: “Our theories determine what we measure.” Metaphors and mental models are the tools we use to shape our realities. As the science historian Thomas Kuhn said, “You don’t see something until you have the right metaphor to let you perceive it.”

This is where *The Next Common Sense* most clearly stands out: as an exploration of the power of metaphor in organization life, indeed as the foundation for the next common sense itself.

Lissack and Roos are deeply taken with landscapes as metaphors in organizations and economic life; a strange idea, you might think, until you consider that humans succeeded as a species through their skill at navigating the vicissitudes of savannas, foothills, and wetlands. Deeply held values, they suggest, can be thought of as canyons, which permit an infinite variety of action within an unbreakable boundary. In another valuable landscape metaphor, the authors present the notion of backgrounds and foregrounds as venues within which to organize our multiple roles as humans, an original and insightful concept.

Lissack and Roos also counsel us to think about thinking in terms of a child’s building blocks; a simplistic notion, you might say, until you realize that the most fundamental cognitive skill in humans – perhaps the only one we bring into the world – is the ability to perceive contrasts and to assemble them into simple structures. Our judgment and intelligence grow in accordance with our skill at recognizing patterns from among the myriad structures we’ve observed and assembled. If you are dismissive of the simplicity of the building block

analogy, bear in mind the words of the mathematician and historian Jacob Bronowsky, who once commented that “every act of imagination is the discovery of likenesses between two things which were thought unlike.” One makes such discoveries only by picking things up and seeing how they fit together.

I’ve spent more than 20 years, the better part of my life, as a business journalist. I make my living telling stories. Thus I especially enjoyed the authors’ extended treatment of storytelling as a metaphorical tool. Stories, like landscapes and building blocks, are ways of looking at the world that help define us as human. Human evolution, after all, had run its course long before we had web pages, moveable type, and even cuneiform writing as media of communications, leaving us with stories for making sense of the world and helping others do the same. (In casting modern-day eyes toward this ancient practice, the authors ingeniously discuss stories as verbal simulations. “Long before we had computers to do fancy simulation exercises on,” they note, “we had our brains.”) The discussion of storytelling provides a welcome antidote to the Powerpoint cult of business, in which issues, ideas, and experiences are reduced to bullet points on an overhead slide. Today’s most powerful breakthroughs in performance and coherence come from using technology not to tick off items on a checklist but to enrich our storytelling and to spread it more widely.

Apropos of which, this book adopts storytelling not just as a subject but as a method. The text is filled with anecdotes and accounts of effective managers putting to use the very skills that Lissack and Roos call on the rest of us to develop. We visit Southwest Airlines, IKEA, Tripod, and other exemplars of success. Though there is much discussion of chaos and complexity theory, there is no showy science or gratuitous mathematics. Though a work of philosophy by a pair of professional scholars, there’s not a speck of academic pretension.

No, you won’t find recipes, roadmaps, or 12 steps to recovery here. But as you read this book you may find yourself asking why you ever thought other authors could provide such all-purpose solutions to the unique vexations of your own organization life. You can find those answers only for yourself, only by searching through your own

senses – only through your common sense. And as others join you in the search, together you may find yourselves practicing “the next common sense.”

*Thomas Petzinger, Jr.*  
*Weekly business columnist and the author of three books,*  
*including* The New Pioneers: the Men and Women Who Are  
Transforming the Workplace and Marketplace





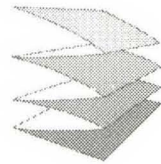
# I

## MASTERING COMPLEXITY THROUGH COHERENCE

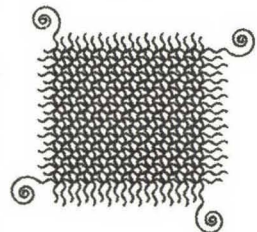
The old common sense was about dealing with the discrete elements of a **complicated** world. The next common sense is about mastering the **complex** swirl of events and situations around us through coherence. The old world was a complicated agglomeration of many discrete items. The new world is a complex one of interdependencies and interrelationships.

The complex versus complicated distinction can be explained by the roots of the words. In Latin, plic is “fold” and plex is “weave.” We fold to hide facets of things and to cram more into a crowded space – this is complicated. We weave to make use of connections and to introduce mutual dependencies – this is complex.

A flat tire on a local dairy farmer’s truck may inconvenience a few customers, but it will not affect the food markets of a big city. By contrast, closing Chicago’s O’Hare Airport because of bad weather causes havoc in the US transportation system for days. The local dairy may



Complicated



Complex

**Complicated** – *folded or twisted together; combined intricately, combined or associated so as to make intricate or difficult. Difficult to analyze or understand.*

**Complex** – *composed of two or more parts, composite, not simple, intricate. A conceptual whole made up of complicated and related parts.*

**Coherence** – *an alignment of context, viewpoint, purpose and action that enables further purposive action.*

be complicated, but the airline transport system is complex.

In a complex world, it is not enough to understand discrete events such as the dairy truck's flat tire. There are so many discrete items, events and situations that it is foolish to pursue their mastery as the way to "make sense" out of what occurs. Knowing that United Airlines owns 800 airplanes will not tell you where each of them flies and why; neither would a knowledge of the route structure or the cargo demands or passenger loads or any other discrete piece of information.

If you are to master the complex challenges offered by today's business world, your actions need to be coherent. This book offers 10 guiding principles to provide you with the sense of **coherence** you need, as well as five practical steps for putting the principles into action.

Our purpose in writing this book is to help you to be like Alexander the Great. When confronted with the legendary knot of tangled rope tied by King Gordius, Alexander knew what to do. Faced with the traditional challenge, he accepted without hesitation: the complexity of the knot did not phase him. He drew his sword and cut the Gordian knot with a single, dramatic stroke, thereby ensuring that he would rule all of Asia. Many before Alexander had tried and failed, thinking that the knot was complicated and needed to be untied. Only Alexander saw that a simple action would move through the complexity to a higher plane. Untying your own Gordian knots requires nothing more than common sense – the next common sense.

## ⋮ The arrows, not the boxes

⋮ Managers go to business school and learn "global" management concepts where the belief is that a small set of "correct ways" can lead a company along a golden road to success. It certainly worked that way for the leading companies of the 1960s and 1970s, up until the

merger boom of the 1980s. But the old style of management won't work for the new companies of tomorrow.

Today's management is all about **interactions** rather than **entities**, about the effects of relationships between people inside and outside the organization rather than about controlling entities like distinct groups of employees, customers, suppliers. Others may refer to factories, industries, companies, work units, SBUs, or teams. We will refer to all of these "things" as entities.

Entities, the things, dominated the world most of us knew before the 1990s. Interrelationships, communications and dependencies among such entities dominate the world of today. The focus of management has shifted from things to processes; from entities to interactions.

Contrast the world of the automaker of the early 1980s with the universe of America OnLine (AOL) of today. Automakers operated supply chains that culminated in assembly plants that shipped to one-brand distributors and thence to the general public. Each part of the chain could be severed and operated independently. Indeed, much of the "management revolution" that shook the auto industry in the 1980s and 1990s took the form of outsourcing and reengineering many of the individual pieces of the value chain. Lopez at GM outsourced and outcompeted each supplier along the chain. Saturn was created to reengineer the factory and to change the public's perception of the "crooked" dealer.

Let's assume you are a mid-level manager in an automaker in the mid-1980s. What guiding principles would you use to be successful? Find the lowest cost. Simplify the supply chain. Externalize cost, i.e. outsource. Demand increased productivity from staff. Streamline work practices. Manage delivery times of both product (deliver cars to dealers) and required supplies (make the suppliers hold inventory) so as to maximize quarterly financial performance with an eye on return on assets. Manipulate sales statistics to meet the targets established in the company incentive scheme. You are dealing with entities – the company, the team, the suppliers – and you have rules and regulations about how those entities conduct themselves (e.g. the workday begins at 9 a.m.).

*Interaction* – an action, process or influence that occurs among two or more entities.

*Entity* – a thing, group, team, organization or environment that we treat as a real being, whether in thought or in fact.



By contrast, Internet service provider AOL operates a complex web of network services, content provision, and memberships that depends not on entities, but on myriad interactions. Members interact with each other and demand content, the provision of which requires network services, and each generates either added demand or frustration when dialing into the network by telephone if a busy signal is reached instead of a connection. Content can be found almost anywhere on the Internet. Network services can be found independently. But the entire concept of membership is dependent on interactions. While entities can be managed in the sense of being controlled, interactions can only, at best, be guided in the sense of shaped and nurtured.

As a mid-level manager of AOL, your mission, under the banner of “Clarity, Communication, and Community,” is to increase membership “time.” What guiding principles would contribute to your success? Finding the lowest cost may risk making use of less dependable network services, which could lead to member dissatisfaction and exiting. Simplifying the supply chain is great in terms of being timely – get the news in real time – but risky in terms of deliverables – simple content is not targeted content. Externalizing costs may also be a bet on less dependable suppliers of either content or network services or both. Demanding increased productivity from creative staff is an invitation to them to leave, as is a demand that they “streamline” their work practices. Creative types do not usually understand when the boss says “your desk is a mess.” AOL tried to manipulate delivery times and sales statistics of product and supplies and Wall Street rebelled. That option is best considered foreclosed. Return on assets is rather nebulous in a company with an infinite price/earnings (P/E) ratio. So much for traditional “best practices.”

Return for a moment to this manager’s goals – the more membership time sold, the better off both the manager and the company as a whole. How is membership time sold? It isn’t. Membership time is consumed. So the manager must get out of the mindset of “sales” with its notions of product and customers and into the imagined mental models of the members, with notions of interesting, fun, informative and communicative. The manager is not a sales manager *per se*, but instead an encourager of increased consumption. But what should be encouraged?

Here is where the switch in mindset or **mental model** matters most. The manager must imagine that he or she is the member. From that perspective, what should be encouraged is what is already appealing. New ideas are great as trials but if there is no demand, away they go. No incentive pricing, no package deals and no coercive bundling. If the manager can make the member's access easier, the member is likely to increase usage. So simplify the demand chain, not the supply chain. The very use of the word member is important. Members are part of a community, not merely customers to be sold to.

*Mental model – an image inside one's head used to help make sense out of any situation.*

The notion of community is integral to the massive growth of AOL. From the perspective of community, content offerings are determined by community wants and desires, not by corporate demands; network services are provided at a level and a dependability that keep the community happy, not by cost controls; and communication is among the members, not one-way broadcasts from advertisers to a passive audience. The community perspective informs nearly every aspect of the tasks that lead to increased "sales." Only by forming this perspective on the job can the manager be assured of a reasonable chance of success. The "practices" stem from the perspective, not from the accumulated wisdom of "business greats." Those people are not the members, or at least not a large number of members, and it is the members that matter. That is just common sense if your job is to sell membership time.

## ⋮ Making sense with coherence

⋮ Finding coherence, enabling coherence, and communicating coherence are the critical tasks of management in the era of the next common sense. We call this **mastering complexity through coherence**. Such mastery is different from merely acting, no matter how powerfully. Power is not mastery. Action alone is not enough. In our interwoven world, something additional is needed: we have to have an understanding at a level separate from the actions. Such an understanding will encompass both purpose and identity.

When purpose and identity are aligned, they create a **context** from which actions can be understood as well as performed. That alignment evokes a point of view that we will call the “coherent point of view.” Coherence is necessary if actions are to make sense. Those actions then promote further development of the coherent point of view. It is this positive spiral of coherence – a set of interactions that lead to further interactions – that makes possible the where and why of how United flies, the magic of how the city gets fed, and the increasing returns that evidence why just-in-time delivery has meant big revenues for carriers such as Federal Express.

*Context – that which surrounds, and gives meaning to, a situation or event.*

By **purpose** we mean the reason for being or doing: Why am I doing what I am doing? By **identity** we mean an evolving, moving intersection of the inner and outer forces that make each of us who we are, converging in the answer to the question: Who am I? Both purpose and identity are rooted in a set of basic human values (“right versus wrong,” “good versus bad”) and filtered through a set of guiding principles (“to be honest”). These filters are not grand missions (“to be the leading biotech company in the world”) or high ideals (“the bottom line”) or instructions (“render unto Caesar”). Instead, they are simple checks and balances that what is expressed as purpose or identity matches the values from which they are drawn.

What coherence can do is enable actions to be grounded in certainty of purpose, identity, context, and further actions. Incoherence and decoherence reveal themselves by uncertainty, shame, or actions which defy sense making. Coherence is only a part of culture – in society or in an organization. Cultures provide context for being coherent or not. An organizational culture which thrives on inducing shame is incoherent. By contrast, an organization whose actions make sense to its members and stakeholders must have found a coherent viewpoint from which to guide such actions. It has coherence. In this book we will be providing examples of such coherence and of its absence.

There are many ways to see coherence:

- ❖ Coherence as a potent binding force.
- ❖ Coherence as what makes a company more than the sum of its parts.

- ❖ Coherence as glue.
- ❖ Coherence as the directional arrow on a compass.
- ❖ Coherence as allowing flexibility, sharing, communication, and linkages.
- ❖ Coherence as a process of change.

While the importance of coherence has not yet become conventional wisdom in managerial contexts, its critical role is well recognized in other fields. In psychology, for example, professional practice is based on the recognition that a unified perspective is needed to make full sense of the world as each of us perceives it. That unified perspective is described by psychologists as “coherence” and those who possess it are “coherent.” A sufficient lack of psychological coherence renders one eligible for institutionalized care.

From a biological perspective, entities are distinguished from one another by boundaries, e.g. a cell wall or skin. What is within the boundary is said to “cohere.” If an outside observer, or a self-reflective observer in the case of humans, can ascribe purpose to the location of the boundary, the entity is described as “coherent.” So, for example, cancers that serve no purpose for their host entity are incoherent with their host, but certain parasites that have a symbiotic relation to their host are considered to be part and parcel of the coherent entity.

Physics lends its own credence to the concept by positing coherence as the opposite force to entropy. If the basic tendency of all systems is to dissipate in the absence of new energy inputs, it requires energy to hold the system together. When the system has an attractive force – gravity for the solar system, psychological coherence for humans – there is less energy required to hold it together than when such forces are absent.

Biology and physics are combined in the study of ecosystems. Here, it is held that coherent organizations (meaning groups of plants or animals that occupy a given space) are nature’s most effective means of capturing the added energy of the sun and not allowing it to be merely dissipated away, as the second law of thermodynamics would otherwise suggest. Psychology rejoins the arena when we consider the

field of organizational ecology, which holds that human endeavors and groupings can be studied as a series of ecosystems. Coherence is the glue that holds the organized entities (be it an ant colony or a city) together in their ecosystems and renders them more ecologically fit for survival to the next generation. From the organizational ecosystem perspective, coherence is a vital contributor to sustainability.

And, to return to the study of business, in *The Centerless Corporation* Pasternak and Viscio write:

*Coherence is what holds the firm together. It is the glue that binds the various pieces enabling them to act as one. It includes a broad range of processes. It begins with a shared vision and shared set of values, and expands to include numerous linkages across the company. Firms are tied together with communications, management processes like planning, human resource management, and knowledge management. Coherence also includes the more structured information technology of the firm, the hardwiring of the business through which the various parts communicate.*

When making sense revolves around a point of view held in common by those who need to act, coordinated action can occur without the need for coercive control. The group becomes more effective because it no longer requires significant energy to be expended on such coercion or the threat of it. The freed-up energy can be devoted to useful tasks. At the firm level, the process is similar as it applies not only individual by individual, but also group by group, business unit by business unit.

Coherence is the antidote to uncertainty. In organizations, uncertainty is evidenced by an unwillingness to act. Once the will exists, so too does the certainty. A coherent perspective increases the willingness and reduces the periods of uncertainty.

And coherence is tolerant of that kind of ambiguity described by the scientist and writer Arthur Koestler as “the sudden interlocking of two previously unrelated skills or matrices of thought.” Just as the creative fusion of ideas can occur by holding seemingly antithetical ideas in the mind simultaneously, so creative collaboration between people can occur by an effort to retain con-

flicting cultural and disciplinary viewpoints in the mind without discarding one or allowing either to dominate.

Today's world of confusion, uncertainty, and ambiguity is a large-scale manifestation of too many emergent events, situations, and behaviors happening all at once. The reductive practices of examining individual parts, searching for individual causes, and sorting things out, fail to eliminate much of the uncertainty. In that failure lies the explanation for many if not all of the incoherent actions we each observe (be that rigging the stock market, blocking an ambulance's way, or having an extramarital affair). Uncertainty is accompanied by a perception of diminished control or power – few of us like that perception, in fact it is the source of the emotion we call shame. Shame leads to even greater search for certainty, control, and a firm place to stand (perhaps even explaining why Bill Clinton kept on “seeing” Monica Lewinsky). The vicious cycle of uncertainty, shame, and incoherent actions may seem unbreakable. But complexity science suggests a way out.

Mastering complexity means not letting complexity get the better of you. It means having a coherent viewpoint to guide action *in spite of* the confusion, uncertainty, and ambiguity that are introduced by the swirl of events and interactions going on around you. The mastery we are alluding to is that of the craftsman, not that of the M in MBA. The ability to act coherently in the face of complexity, and to do so on an ongoing basis, is the hallmark of a true master. That ability can only be gained through life experiences, as with the craftsmen of old, and not from months of lectures and a framed diploma.

The social commentator Walter Lippman noted that “mastery means the substitution of conscious intention for unconscious striving.” The master is one who carries out purposeful acts. We note that coherence is an alignment of context, viewpoint, purpose, and action that enables further purposive action. Coherence is the key to mastering complexity because it is the enabling force that allows conscious intention to replace inertia, overload, and unconscious flailing about. It is all too easy to let complexity get the better of you. Coherence offers you the alternative of mastery – but the choice is yours.

## ⋮ Complexity science is about simplicity

⋮ In a book about mastering **complexity**, it would be only natural to assert that what scientists refer to as “complexity theory” holds the answer to simplifying the vast muddle of our world. We only wish we could do so. At best such an assertion would be misleading and, at worst, might give rise to especially poor business practices with nice labels.

*Complexity* – a term used to refer to a collection of scientific disciplines, all of which are concerned with finding patterns among collections of behaviors or phenomena.

Complexity theory is a new field, although not yet a distinct one. It involves scientists from such disciplines as biology, mathematics, physics, cognition, computation, philosophy, medicine, psychology, and even human organizations. The field looks at patterns across a multitude of scales

in an effort to detect either “laws” of pattern generation or “rules” that explain the patterns observed. Much of the research is heavily mathematical and many of the “conclusions” apply only to very narrowly restricted domains.

Computers have opened up a whole new world of possible observations. Because of the rapidity with which they can do well-defined calculations and simulations, computers have made it possible to explore the consequences of interactions of relatively simple things in a way never before possible. In a variety of different disciplines, this new capability for observations makes possible significant insights into phenomena long believed to be too complex for serious analysis.

Complexity science takes its roots from the concept of emergence – the idea that wholes can be greater than merely the sum of their parts and that by changing scales it is possible to observe “new, emergent” properties of the whole. These “new” properties are the product of the interactions of the parts. Thus, a person is more than just a torso, head and four limbs; a car is more than just wheels, axles, engine and chassis; and an organization is more than just a collection of people thrown together in the same room with a few desks and telephones. When the parts interact (the body parts function together, the wheels turn by action of the engine and carry the chas-

sis along with them; or people start communicating and then acting together), something “greater” emerges.

It is this emergent behavior which complexity science studies. The parts and wholes together are referred to as systems; when they interact and adapt to changes in the environment in which they are located, such systems are referred to as “complex adaptive systems” or CAS. Most companies we know, most families we know, meet this definition of complex adaptive system. Writings abound describing the organization as a CAS and explaining why it is better to view the organization as such. However, these descriptions are not what this book is about.

Complexity science aims beyond description to discover what commonalities may lie behind emergent behavior. It is not sufficient to observe that birds often fly in flocks. That observation leaves too much room for one to assert “and the flock has a leader.” Only by the further probing of the complexity scientists do we learn that the front position in the flock rotates among the birds and that the nice, symmetric V-shape of the flock is the result of a few simple interacting rules – not the orders of a leader and the followership of a flock. As with birds, so too with people.

Complexity science allows us to study underlying rules of interactions and interdependencies with the aim of explaining how it is that complex phenomena emerge from handfuls of simple guiding principles. The aims of complexity science fit well with the demands of the struggling manager – explaining complex situations with a few simple rules would be the magic bullet that many CEOs and mid-level managers cry out for. But, and it is an important but, complexity science is not yet at the point of being able to consistently deliver outputs which match its aims. The risk to managers lies in the attraction of a magic bullet which does not yet exist.

The worlds of nature and of humans function as two inter-related but separate domains. Steven Vogel highlights these differences in his *Cat’s Paws and Catapults*. He points out that nature:

- ❖ is usually information constrained
- ❖ is involved in the continual making of things
- ❖ is not time constrained



- ❖ allows variation and selection to choose development paths
- ❖ prefers environments that are wet, structures that are flexible, and angles other than right angles
- ❖ uses highly complex composites all the time.

Humans, by contrast:

- ❖ are usually information overloaded
- ❖ make things once and have time constraints
- ❖ use intent to choose development paths
- ❖ prefer environments that are dry, structures that are stable and semi-rigid and right angles
- ❖ make as much use of homogenized, ordered, and simple materials as possible.

Vogel contends that the domains differ in kind, i.e. that they belong to different categories. To assert that scientific observations from nature are likely to find direct application in the domain of humans is unreasonable. Instead, the domains of nature and of humans operate side by side. In the mechanical realm (making things and making them work), nature can provide humans with insights and analogies, but rarely solutions. We would extend Vogel's reasoning to include the realm of management. Ant colonies, genes, bird flocks, and prairie dog towns are not human companies. Complexity science may work well in describing nature – but its role in regard to management is far more limited. You can't take concepts that are true with regard to nature and say that they are literally true with regard to organizations. Just because ants do something doesn't mean that people do the same.

Unlike those who use the science to prescribe a new theory of management, we take a different approach. **It is the method that can be applied to a different sphere, not its lessons.** We examined the mathematics of complexity science to extract a few key points about patterns in complex systems and then asked how knowledge of these points would alter what managers did day to day. By examining how application affects actions, we are using the methods of cognitive

science. Our root philosophy was the notion of a system that is capable of self-examination and change – what the late Donald Schon called “reflective practice” and what practitioners of the “learning organization” refer to as double- and triple-loop learning.

This book, and the next common sense it describes, are the outcome of that examination. The observations have been tried out on managers throughout the world as a result of our teaching, research, public speaking, and consulting.

**The old common sense was an understanding of cause and effect in the complicated world of discrete events. The next common sense is a description of cause and effect in a world of interweavings.** Complexity science tells us that the first step in understanding interweavings is to recognize parts, wholes, foregrounds and backgrounds and, most importantly, to be aware of the stance you take in recognizing these items. This is fundamental to how scientists go about their mathematical tasks and, if complexity science is to have relevance to management, it seems that the same fundamental method should apply. Thus we will not use complexity science to label this or that as complex or as a strange attractor or as a bifurcation point. Instead, we will use its investigative methods to discover the simple guiding principles that form the basis of the next common sense.

Thermo Electron’s George Hatsopoulos is a master of interweavings in the corporate world. Thermo Electron does a little of everything, from biomedical instruments such as mammography equipment and artificial hearts to power generation, radiation detection, soil recycling, and even de-inking. Hatsopoulos has grown what began as a single technology company into a multibillion-dollar empire of companies using a strategy he calls “spinouts,” where he first encourages his staff to think of innovative new products and then forms companies around them. As a result, Thermo Electron retains a web of talented people and a portion of profits from the new ventures, while its employees satisfy their entrepreneurial urges and enjoy the security a large company has to offer.

## ⋮ Guiding coherent action

⋮ Coherence alone will not make for a successful organization. Getting the members of an organization's network to function in a coherent way requires leadership. (Or, to use the complexity science jargon, self-organization will not happen without a nudge.) What do we mean by leadership? In a complicated world, leadership can take the form of command and control over discrete elements. In a complex world, leadership is about guidance, about creating and shaping context in a manner which enables others to do what they should be doing.

Leaders' effectiveness lies in their ability to make activity meaningful for those they lead. They do this not by changing behavior, but by giving others a sense of understanding of what they are doing – a coherent viewpoint. If the leader can put such understanding into words, then the meaning of what the group is doing becomes a social fact. Only with adequate words can the group now communicate about the meaning of their behavior. The best leader is the one who both makes sense of things and puts that sense into language meaningful to large numbers of people. Leadership in this sense is about helping others to be coherent and to act coherently.

Coherence results from people feeling that the actions required of them are consistent with their own sense of purpose and identity and that of the organization of which they are a part. This feeling can only occur when the values and guiding principles embodied by the corporate purposes and expressed identity align with how the person defines and embodies their sense of self.

Consider the example of the credit card agency Visa. Its member financial institutions are fierce competitors. They – not Visa – issue the cards, which means that they are constantly going after each other's customers. On the other hand, the members also have to cooperate with each other: for the system to work, participating merchants must be able to take any Visa card issued by any bank, anywhere. This means that the banks abide by certain standards on issues such as card layout. Even more importantly, they participate in a common clearinghouse operation, the system that reconciles all the

accounts and makes sure that merchants are paid for every purchase, that transactions are cleared between banks, and that customers are billed. Running this organization means reconciling a large set of tensions. Keeping the organization from flying apart requires continuous acts of leadership.

So how does Visa do it? Its first leader, Dee Hock, tells the tale:

*Within 10 years, the infant [credit card] industry was out of control. Operating, credit, and fraud losses were thought to be in the tens of millions of dollars. Life magazine ran a cover story depicting banks as Icarus flying to the sun on wings of plastic above a Red Sea labeled losses into which banks were to plunge, wings melted, and drown. In the midst of the mess, Bank of America called a meeting of licensees to discuss operating problems. The meeting disintegrated in acrimonious argument. In desperation, the bank proposed forming a committee, of which I was one, to suggest a solution to one of the critical problems.*

There was no coherent viewpoint or actions. From those committee meetings, Hock's team established a context that was highly decentralized and highly collaborative. Since command and control were not working, authority, initiative, decision making, wealth – everything possible – was pushed out to the periphery of the organization, to the members. But decentralization alone would not resolve the inherent tensions. Visa needs its central functions and so do its member banks. To develop coherence in action and viewpoint, Hock got the organizing team to articulate a few key values around which this decentralized organization could cohere:

- ❖ Power and function must be distributive to the maximum degree. This meant that no function should be performed by any part of the whole that could reasonably be done by any more peripheral part, and no power vested in any part that might reasonably be exercised by any lesser part.
- ❖ Governance should be distributive to the maximum degree, meaning that no individual, institution or combinations of either,

particularly management, should be able to dominate deliberations or control decisions.

- ❖ It must be ideally suited to lead, not follow, change, meaning that it must create conditions in which people are secure and productive when moving from the known to the unknown, expert at managing the very process of change itself.

From the clear articulation of simple guiding principles organized around values came a successful organization that still thrives more than 15 years after Hock's departure.

Coherent action requires a coherent viewpoint. But it is important to be clear about what should be cohered – values or actions. The greater the sense of coherence about key values, the more coordinated actions can be without a need for overt control. By contrast, the greater the sense of coherence about particular actions, the more rigid the overall structure and the less able it will be to cope with new events. Coherence feeds further coherence: it is self-reinforcing.

Leadership in the era of the next common sense is about helping others to act coherently. How to create a coherent viewpoint, how to enable it and how to communicate it – these are the basic tenets of the next common sense.

## ⋮ Practicing the next common sense

⋮ In this book we present 10 scenic vistas on the corporate landscape. All have elements that derive from complexity science but, more importantly, all relate to management. From each vista, you the reader are encouraged to extract simple guiding principles that make sense to you. Creating your own coherent point of view will be the takeaway from reading this book. We hope you enjoy the view!

The 10 scenic vistas are:

- 1 Use simple guiding principles.
- 2 Respect mental models, yours and others'.

- 3 Use landscape metaphors.
- 4 Combine and recombine.
- 5 Recognize your multiple roles, don't hide from them.
- 6 Create canyons, not canals.
- 7 Tell stories.
- 8 Send out scouting parties.
- 9 Post and attend to road signs.
- 10 Fuel coherence with aligned words.

**Use simple guiding principles.** Life is complex enough without adding complication to it. The guiding principles that work are those that are aligned around basic values. It works much better to be like Steelcase and say “we help people work efficiently” than to be like Novartis and have a 20-page lesson plan on how. When your employees need a week off to study your operations manual and your mission, you have a problem. If instead, like at Herb Kelleher's Southwest Airlines, they can repeat a simple mantra – “we are family” – the results will flow to the bottom line.

**Respect mental models, yours and others',** for those mental models hold the key to how the interactions among you get shaped. Every action is interpreted through your mental model and each of your next actions is based on that interpretation. As with you so, too, with the other person. But that person's model may be very different. Not only is that OK, but it matters a lot.

**Use landscape metaphors** to describe both the environment and processes taking place within it. Humans are genetically programmed to deal with landscapes – the same is not true for  $2 \times 2$  matrices, board games, accounting statements, and bubble diagrams. Don't make interpretation any harder than it need be. Landscapes have worked fine for thousands of years – go with it.

**Combine and recombine** and avoid trying to impress yourself or others with holism. The advantage of building blocks is that they come apart and can be put together in new ways. Holistic thinking does not lend itself to new combinations – after all, what would they be new combinations of? The unrelated conglomerate age ended as a flop in the 1960s. Parts and wholes, components and recombinations

*Management principles*

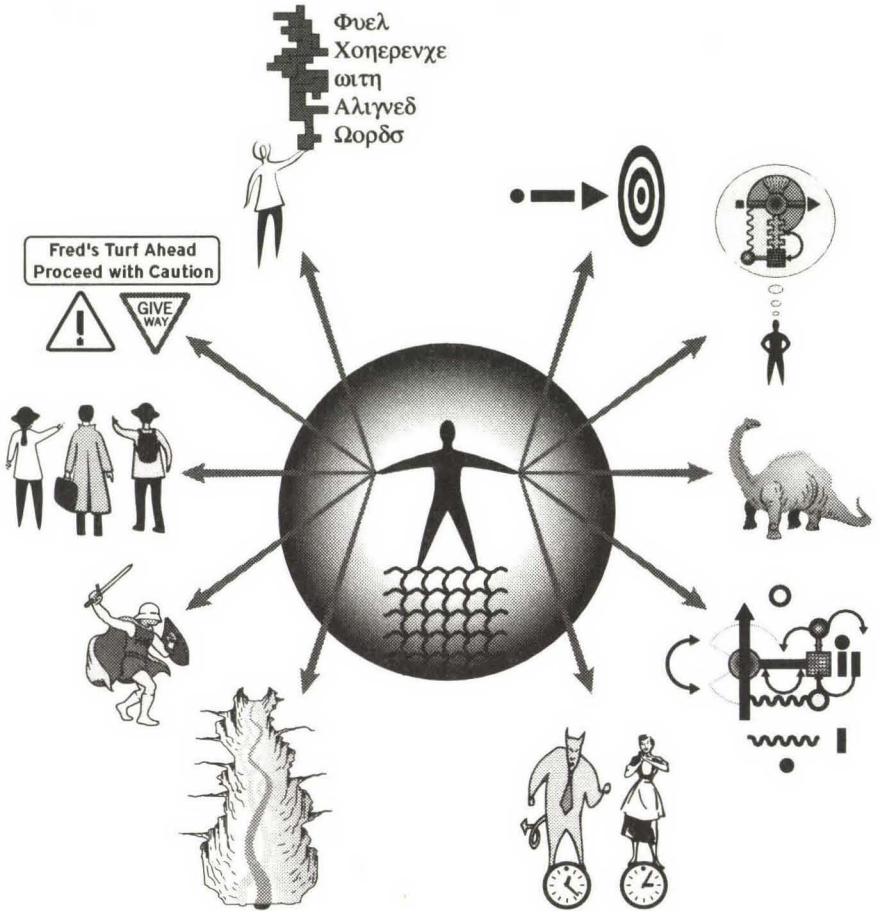
	<b>Next common sense</b>	<b>Old common sense</b>
<b>The world</b>	Complex	Complicated
<b>Management</b>	Guiding interactions	Leading entities
<b>Simple principles</b>	Adopting a global viewpoint, allowing interactions to happen	Dealing with local situations and trying to “sort things out”
<b>Mental models</b>	Recognizing that my model does not need to be yours, and things can still work	Giving lip service to difference, while giving incentives to conformity
<b>Landscape metaphors</b>	Thinking about ecosystems	Thinking about a car race or a football game
<b>Combine and recombine</b>	Asking about how parts can be combined into new and better wholes	Segregating parts to be treated as their own self-sufficient wholes
<b>Multiple roles</b>	Allowing people to be themselves	Insisting that the company come first

<b>Canyons not canals</b>	Guiding viewpoints not controlling actions	Controlling actions in an attempt to control outcomes
<b>Tell stories</b>	Providing meaningful context and allowing employees to draw their own conclusions	Providing bullet lists of conclusions and demanding that employees fill in the necessary details
<b>Scouting parties</b>	Asking what can be learned from the environment and, on finding a good idea, using it	Asserting that we know best and that all good ideas are invented here
<b>Road signs</b>	Recognizing individual contributions and promoting leverage	Staking out territories and allowing individuals to post “no trespassing” signs
<b>Align words</b>	Using words to create meaningful context	Assuming that words all have one global meaning – the boss’s meaning

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# Coherence is Mastering Complexity



– recognize the first and you are well on your way to finding the second.

**Recognize your multiple roles, don't hide from them.** In each role, what is called to the foreground will differ, as will the context we label background. To assert otherwise is to risk dropping your 18-month-old at the important client's for daycare and taking the babysitter to a \$200 lunch. The babysitter will wonder what is up, you won't get the big contract and your boss will be a mite perturbed. Not only do you have multiple roles, but so does everyone around you. When the roles are aligned, purposeful action happens easily. When they are not ... the babysitter gets the Dom Perignon.

**Create canyons, not canals.** Rivers need lots of room, yet when bounded by canyon walls they are still free to explore. Not so with a canal. Millions, if not billions, of dollars go into keeping that river right where it is. As with rivers, so too with other flowing processes, like new product development, recruiting, marketing, and customer service. Building a canal for these flows is locking them into a reality that will be outdated before the canal even opens. Imagine if your finance department insisted that everyone had to use those 386 computers until the full end of their 10-year accounting life. Canyons work better – they require more digging but less maintenance.

**Tell stories** to allow others the benefit of shared experiences. Merely repeating conclusions or instructions will not do the trick. Stories allow others to relate to fact, context and emotion and to bring their own interpretation to what they hear or read. Conclusions and instructions provide no room for the person hearing the conclusion or receiving the instruction. Meaning happens from interaction, not from blind passive reception. Can you imagine a dinner party where your host read a telephone directory to you?

**Send out scouting parties** to probe the environment. Send them out far and wide with the goal of finding stories to bring back. What Jobs found at Xerox PARC, what Lewis and Clark found on the Columbia, you can also find in your landscape. But you have to look, and with an open mind. A weekly trip to Radio Shack is unlikely to reveal what the latest fashions are from Paris or Milan. Notice that Sears finally figured this out and its clothing sales have improved

greatly. How can you ascribe background or foreground to what you cannot see or have never heard about? The biggest risk of personal newspapers on the Internet is that we may only read what we asked for. Wearing dark glasses indoors is only fashionable for those who have written off tomorrow or make Ray-Ban commercials.

**Post and attend to road signs.** It's hard to find your yard sale without them. Even the otherwise incorrigible London bookstore Foyles has them. Labels tag items to make them easier to find, but they come with a downside. Too much labeling or the wrong kind allows the label to become a fence. To individuals, tags are how they get known for doing things, i.e. credit is assigned. But to the organization that same tag may signal, "This is Fred's domain, back off." Good for Fred in the short run, bad for the organization in the not so short. Balance is essential. A highway of billboards isn't scenic no matter what the scenery is around it.

**Fuel coherence with aligned words.** Leadership is a journey and coherence your vehicle. Just as your auto won't work with the wrong kind of gas, mixed messages and "do what I say and not what I do" behavior will not a coherent organization make. Vehicles can be towed and people coerced, but these are not coherent actions, just temporary aberrations. Both come with a cost. Language and word choice form a manager's primary tool. Used wisely, sound guidance can grow from the seeds of aligned words. Used poorly and all you get are weeds.

We close this introductory chapter with a story (since it is best to tell stories and not state conclusions). Southwest Airlines embodies coherence by having each of its employees "think and act like an owner." Owners think differently from non-owners because ownership is a state of mind. It's about caring, about becoming fully engaged in the active pursuit of organizational objectives. For example, non-owners are more apt to worry about how their actions are perceived by their superiors. Owners focus on the business results of their actions, regardless of who's watching. Non-owners may be more inclined to protect functional areas, pursue self-interest and approach the business from a parochial point of view. Owners transcend functional boundaries. It doesn't matter where an idea comes from, own-

ers evaluate its merit based on whether it contributes to the ultimate objective of delivering customer value.

Non-owners have a greater tendency to live by the rules, even when the rules run contrary to common sense. Owners bend, stretch and even break rules that don't serve the organization's purpose. If breaking the rules is not an option, owners take the initiative to change them. Owners pay attention to details that others fail to notice. When people have a vested interest in the outcome of a business, they become more cost conscious, industrious, and imaginative. Owners are also different from non-owners in their willingness to take action without being asked; they are rarely spectators. An owner takes the time to follow up with a customer who expresses a concern during a casual meeting. An owner picks up the piece of trash that others have been ignoring for hours. An owner makes the extra phone call to pass on a small but important piece of information that could be helpful to another employee.

Southwest has eliminated inflexible work rules and rigid job descriptions so that its people can assume ownership for getting the job done and getting the planes out on time, regardless of whose "official" responsibility it is. This gives employees the flexibility to help each other when needed. As a result, the whole operation becomes more adaptive. Employees adopt a "whatever it takes" mentality. Southwest mechanics and pilots have the freedom and latitude to help ramp agents load bags. When a flight is running late because of bad weather, it's not uncommon to see pilots helping customers in wheelchairs board the plane, helping the operations agents take boarding passes, or helping the flight attendants clean up the cabin between flights. All of these actions are their way of adapting to the situation and taking ownership for getting customers on board more quickly. They are practicing the next common sense.

## Use Simple Guiding Principles

