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FREDMUND

MALIK

CORPORATE POLICY AND GOVERNANCE

HOW ORGANIZATIONS SELF-ORGANIZE

Management: Mastering Complexity
Volume 2

Fredmund Malik

Corporate Policy and Governance

How Organizations Self-Organize

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For Hans Ulrich,
who gave me the freedom and the courage
to think beyond limits

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What This Is All About

There are many ways to systematically solve problems – but only one way to systematically avoid them: the cybernetic way. The design of a system to avoid problems must begin with the permanent realities at the core of all beings and things – their *function*. At the same time, it needs to integrate today's perception of the problem if it is to be understood at all. This is why I gave this book a title relevant to most top managers' world view: *Corporate Policy and Governance*. Only a few such managers, however, will be familiar with its content: the constants of how complex systems work – how *general systems policy* and its *Master Controls* can be used to organize organizations in such a way that whatever needs to be organized in them will organize itself.

Every organization, and indeed every human being, senses the effects of the profound change we have been undergoing ever since the age of complexity dawned. Almost everybody senses that rapid change is increasingly part of everyday life. Many people today – in particular those carrying great responsibility – find they can only fulfill their tasks at the expense of their personal lives. Hardly anybody would doubt that we need new foundations for management that are better suited to meet the new challenges than those still in use.

With this volume of my series *Management: Mastering Complexity,* I am presenting the key element of what general management needs in this age of complexity: the chief prerequisite for the organizations of the future, organizations that will work autodynamically. However, the concept will only unfold its elementary power, as it were, in conjunction with both the entire book series and the *Malik Management System*. Only when all other parts of the system work together can it achieve its maximum impact. This is why I start by explaining the concept and the logic of the series on the following pages.

Everything to be said about the subject of this book is much easier to express (and even easier to implement) in models than to put in succinct words without exceeding the scope of a book. Some of the paragraphs may therefore seem superfluous to one reader while another will find them to be precisely what he needs to understand the subject matter well. That is the price of rigorous management writing: it needs to use a language suited for everybody yet sometimes requires newly invented terms.

The questions as to what exactly needs to be done in corporate policy and governance can only be answered individually for each organization. With this book, I am making available a fully equipped *toolbox*, so to speak, along with the *operating instructions for each of the tools*, so that top managers will be able to perform the necessary *craftsmanship* in their organizations.

Directions regarding this volume and the entire series are given before Part I. That part then describes the key premises to be observed in order to master complexity. It also contains a *roadmap* for developing a corporate policy as I understand it. The roadmap explains how the remaining three parts of the book are structured. Part II explains the concept of a *Master Control* in complex systems: what it is, how it works and what it is needed for. The modules of *Master Control* will be presented in Part III. In Part IV, I will address top executives in charge of developing a corporate policy, explaining what needs to be done in order to achieve the system behavior required and what *Master Controls* managers need to apply to themselves. The appendix provides some concise information on the *Malik Management System*.

At this point I want to thank Maria Pruckner for her invaluable help in structuring and formulating this manuscript. As a student of Heinz von Foerster and an experienced management practitioner, and with her profound knowledge about the cybernetics of complex systems, she has helped me to better sort out my own thoughts and their cybernetics. The interaction of speech and thinking is one of her specialties. There is hardly anything that could be more important for an author and his readers.

Further, my thanks go to the members of the Board of Directors and the Group Management Board at Malik Management, in particular to Elisabeth Roth, Walter Krieg, and Peter Stadelmann for relieving me of some of my management tasks while I was writing this book.

It is a principle of mine not to publish any of my books until their content has proven valid in years of cooperation with hundreds of managers

– including clients as well as colleagues in various top management bodies – and after both critical discussions and field tests have been passed. I owe my sincerest thanks to all of them.

Concept and Logic of the Series *Management: Mastering Complexity*

This series of six books has a modular structure. The first book, *Management. The Essence of the Craft,* provides the basis and gives an overview of the series's overall concept, as well as of my approach to *right and good management.* The remaining volumes elaborate on the topics of each individual chapter.

In other words, each of the volumes deals with a subject matter en bloc. Each can be read independently of the others, and in any order. Readers of one individual volume may, however, find it helpful to have a look at the introductory volume *The Essence of the Craft* in order to be able to position an individual topic within the overall context, according to the graph shown in figure 1.

A key concept for this series of books is my "Basic Model of Right and Good Management", frequently referred to as the "Management Wheel" due to its shape. In my book *Managing Performing Living* it is described in detail[1]. The statements I made in that book are a prerequisite for fully understanding the contents of the series *Management: Mastering Complexity*.

Foundations

The basis for all my books and papers is *Strategie des Managements komplexer Systeme* ["Strategy of the Management of Complex Systems"][2], a

1 *Führen Leisten Leben* was first published in 2000; the English translation *Managing Performing Living* followed in 2003. A revised and expanded edition of the German version was published in late 2006. All at Campus, Frankfurt/New York.

2 *Strategy of the Management of Complex Systems*, 10th edition, Berne/Stuttgart/Vienna, 2008.

considerably expanded version of my habilitation treatise. This, in turn, is based on the books *Systemmethodik Teil 1 und Teil 2* ["Systems Methodology – Basic Principles of a Method for Researching and Designing Complex Socio-Technological Systems"][3], the joint PhD thesis by Peter Gomez, Karl-Heinz Oeller, and myself. These books cover the theoretical principles of cybernetics and systems science, which represent the cornerstones of all my thinking with regard to management topics.

Figure 1: Concept of the book series Management: Mastering Complexity

3 Gomez, Peter; Malik, Fredmund; Oeller, Karl-Heinz: *Systemmethodik – Grundlagen einer Methodik zur Erforschung und Gestaltung komplexer soziotechnischer Systeme*, Band 1 u. 2, Bern 1975.

Connections

For the present volume on *Corporate Policy and Governance,* I have expanded figure 1 to make the connections between the six books more transparent. Figure 2 shows how the subject matters of all six books overlap, which corresponds with the systemic relations between the individual topics. Together they form a whole: an inseparable system for the integrated management of a complex societal institution – the General Management System I have developed, and tested in practice, over the past 30 years.

In the inner circle, we have the summary volume *Management. The Essence of the Craft.* It is embedded in the second volume, *Corporate Policy and Governance.* The latter, in turn, is embedded in four outer circles: the volumes on strategy, structure, culture, and executives. All are connected to each other in the manner illustrated in figure 2.

Possibilities and Limits

The systemic relations between the individual volumes come up against the limits of descripteveness of complex systems – with consequences for both the content and design of the individual volumes. The subject matters of the books stretch to the limits not only of language but also of conceptual comprehension.

While complex systems are relatively quick and easy to demonstrate and even easier to experience in certain ways, they are almost impossible to describe. The medium of language, and thus this book, is not really suitable for describing, capturing, and communicating the complexity of interconnected systems. This is one reason why maps and nautical charts were invented. With complex systems, the everyday maxim "easier said than done" is quickly reversed to "easier shown and done than said…"

What possibilities do we have, then, despite the limitations of language and books, to make complex systems halfway comprehensible and transparent?

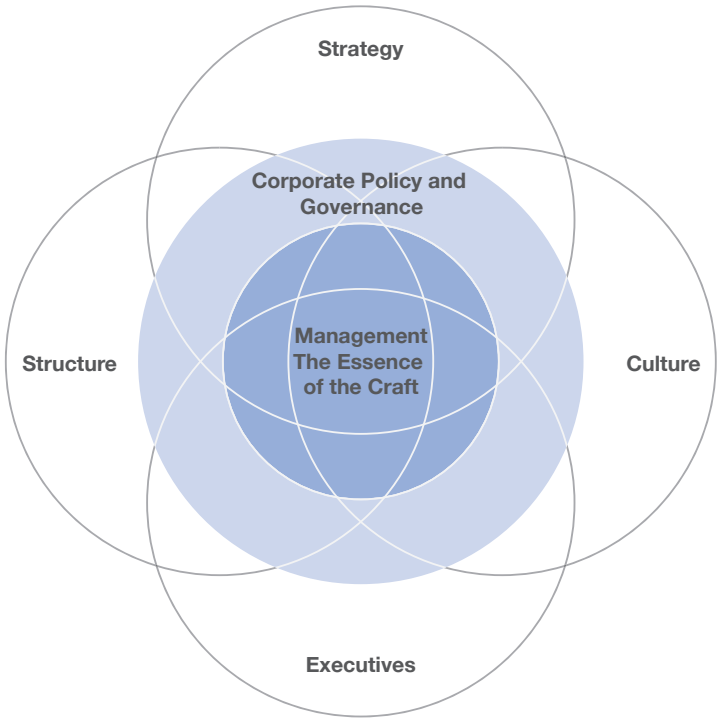

Figure 2: Systemic relations between the volumes of the series Management: Mastering Complexity

Redundancy

As the six volumes describe one system with its subsystems, repetitions are inevitable, and indeed intended.

The first reason why redundancies are inevitable is that the subject matters, while clearly distinguishable, are also inseparable, which is an important but rarely mentioned aspect of systemic thinking. They form one whole and must therefore be understood with regard to their interrelations.

Secondly, redundancy is intended because it is an indispensable tool to ensure certainty of communication and understanding. Thus, according to

communication theory, redundancy is by no means superfluous. Not always are these two kinds of redundancy clearly distinguished. Functional redundancy facilitates orientation and comprehension by the reader.

Here, redundancy is not simply repetition but dealing with the same subject matters from different perspectives. One of the reasons why this is necessary is that the interrelations between subsystems are mutual but not symmetrical. For instance, the relation from strategy to structure is not of the same kind as the one from structure to strategy.

Graphs

As has been pointed out before, descriptions and explanations of complex systems are pushing against the limits of what language is capable to communicate. Language is linear and thus, for all intents and purposes, unsuitable for describing branches, feedback loops, recursions, and other nonlinear concepts. It is also not complex enough to reflect the real complexity of systems.

In order to describe the non-linearity and complexity of systems without resorting to mathematics, the only means that a book has to offer besides textual redundancy is illustrations. But even illustrations can be highly inappropriate for complex systems. Firstly, there is only a two-dimensional surface – the book page – to depict multi-dimensional systems. Secondly, the depictions in a book are static while systems are dynamic by nature.

For representing the systemically constitutive phenomena of complex systems, such as their being embedded, interconnected, and dynamic, the book is basically an outdated medium. More adequate means of depiction include hypertext, hyperlinks, and the whole browser technology which is making ever more rapid advances.

The subject matter of this second volume, *Corporate Policy and Governance,* more than any other book of the series, requires the use of system models and corresponding illustrations to explain complex systems, and the modern techniques mentioned above would be much better suited for that.

Exploring Things on the Web

The dynamics of a cybernetic system are best explored in dialog-type interaction. To overcome the limitations of the book medium, interested readers may want to visit the website www.malik.ch to explore the *Malik Management System*, better understand its workings, and use it in practice. This website offers the easiest possible access to the management of complex systems.

What Readers Need to Understand in Order to Understand this Book

With the book series *Management: Mastering Complexity* I am publicizing my management theory and my management system for the age of complexity. In retrospect, historians will probably date its beginning, as well as the associated emergence of a new society, to the early 21st century, knowing that epochal transformations can hardly be pinned to a fixed date.

It is a fact, though, that as far back as in the late 1940s, at the legendary Josiah Macy Conference, a new science emerged in response to the issue of complexity: the science of cybernetics. The focus of interest for related research is complexity. With his book *Cybernetics and Management*, published in 1959, the British top manager Stafford Beer laid the groundwork for management cybernetics because the core problem in management is complexity. We later cooperated closely. In 1968, my academic teacher and mentor at St. Gallen University, Prof. Hans Ulrich, took the next decisive step when writing his *Systems-Oriented Management Theory*. Together with my friend and colleague Walter Krieg, he presented the *St. Gallen Management Model* in 1972. Hence, ever since my time as a university student, my thinking has been challenged and influenced by thought leaders far ahead of their time. I was privileged enough to work with several of them, research and develop things with them, experiment and discuss with them. My doctoral thesis deals with the *methodology* used to research and design complex systems, and the title of my habilitation treatise of 1978 translates as *Strategy for the Management of Complex Systems*.

Against this historical and scientific background, the purpose of *Management: Mastering Complexity* is to enable the men and women of our New Society to survey and take advantage of the output of the relatively quiet yet enormously fruitful development work that has been going on over the past approximately 60 years. In this book series, the most essen-

tial things about complexity, management, and cybernetics will be pointed out in clear and comprehensible language. It is intended as a contribution to support the viability of the New Society, the functioning of its institutions, and the safe orientation of people in a world driven by complexity.

The change that the 21st century brings will be more dramatic than most people can imagine. The conditions for fundamental restructuring are in place. Although this may appear to be a paradox, its main cause is the enormous worldwide success of the kind of Western management practiced to date. This conventional kind of management has been so successful that it is no longer able to understand and control the systems it has generated, as they have become too complex. It is analogous to the protagonist of the famous ballad by Goethe, the *Sorcerer's Apprentice*, who was unable to control the spirits he had called. The complex systems of the 21st century cannot be managed with 20th century thinking – because this is what has called them forth.

Success Programming Its Own Failure

Never in history has a period of success been permanent. It is inherent in every success that it will systematically overtake itself because it generates the conditions of its own failure. This is one of the many paradoxes of complex systems.

Few people are capable of recognizing previous success as a cause of current problems. Few are capable of understanding that new solutions are required because the previously successful methods, owing to their very success, tend to lose impact or even become counterproductive, further exacerbating the difficulties they bring with them.

Whenever difficulties arise in a period of success, most people try addressing them by doing "more of the same". This well-known, well-researched human behavior in complex situations is typical. It is also very wrong.

When Thinking Fails to Grow With Practice…

History has shown that periods like this keep demanding new ways of thinking, new methods and systems. Drawing on previous practices has seldom been successful; in most cases, radically new concepts were called for.

Today, we are facing the conditions for radical change *on a global scale*. The Western world's practices have been such breakthrough successes that they have spread all over the world. Hence, all over the world there is a challenge to create a new order of systems of organizations, the nature of which cannot be predicted in advance.

The two successful concepts of the West are *market* and *management*. Wherever they have been applied so far they have caused the forces of free markets to be unleashed, and all available resources to be used ever more efficiently by management.

The impact of free markets is still being maximized by the elimination of boundaries and of national regulation. The impact of management is being maximized by computers and MBA programs. Unless they are fundamentally changed, both of these success methods will be hard pressed to survive the conditions they have created. A synthesis of both methods can lead to a sweeping success. However, this success will set clear limits for managing it, for simultaneously with the synthesis of market and management a process of gigantic complexification has set in, characterized by a progressive intertwining of an ever greater number of systems. As a result of this side effect, the functionality of societies and their institutions is being pushed to its limits. They become inefficient, which threatens to overstrain society as a whole.

When entire systems keep getting more and more inefficient, clear signals are exhibited. These include:

- more and more input being required to obtain less and less output,
- former liberties leading to excesses, and
- previously decreased regulation returning as exponential degrees of bureaucracy.

In other words, the system gets under pressure from its own coercions. What used to be success turns into its opposite and becomes a liability. All the systems of our society are becoming increasingly unstable because the market and management-focused success methods that have been prac-

ticed are now generating systemic risks and potential collapses. What used to be healthy growth turns into cancerous tumors.

Problems and Systems

It is in the nature of problems resulting from success that they cannot be solved with the same methods which led to that success. It is also in their nature that the success methods in practice turn into a problem and, over time, into the underlying problem. A main reason for that is that these methods are based on the knowledge of the 20th, in part even the 19th century. This knowledge stems from a world where the main issues to be dealt with were substance and force or, to put it differently, matter and energy. It was a world consisting of simple systems. They may have been *complicated* but – another presumed paradox – they were not particularly *complex*.

The texture of the age of complexity is different: as the name implies it is an unprecedented complexity which was brought about by the success of the approaches so far used. That is the common denominator of today's societies and their institutions.

Different as commercial enterprises, hospitals, universities, and administrative agencies are, what they all have in common is that they are complex, dynamic, non-linear, probabilistic, networked systems. Their respective environments – complex systems themselves – form an interlaced and interwoven, dynamic, non-linear system ecology. Healthcare, educational, and social systems, utility, energy, transportation, and logistic systems, the field of media and information, the field of information and communication systems, the global financial system, legal and tax systems – to mention just a few – form a network of complex systems which are essentially fuzzy, opaque, and absolutely inscrutable to conventional reason.

Complex systems have their own laws, qualities, and behavioral patterns which are fundamentally different from those of simple systems. Consequently, the focus of management in and of a complex system must be very different from that of the management of a simple system: it must work with the inherent laws of the particular complex system in itself. These laws are what enable us to correctly predict the mode and behavior

of a system, at least in its fundamental orientation, and control it accordingly.

For most organizations, operating in the highly complex system ecology of the age of complexity requires a radical redesign of the way they are managed, as well as of their strategies, processes, and structures. However, society and its institutions are presently not equipped to comprehend the natural conditions created by complexity.

Old and New Sources

Managers intuitively feel that they need to adopt new ways and approaches, although few are able to explain why. Their search for suitable solutions is tedious experimentation and groping around, because they still lack the necessary theories, models, and concepts for dealing with today's dimensions of complexity.

Successfully mastering this much complexity requires a fundamental reorientation, starting with the basic model of management. This fundamental change of perspective is comparable to the Copernican transition from the geocentric to the heliocentric view of the universe. On the one hand, it requires radically new concepts of management; on the other, taking into account fundamentally new insights about information, systems, and their complexity.

The knowledge required for this reorientation cannot be found where people have been looking for it. It is derived neither from economic science nor from the classical natural sciences. They were the sources of the old solutions – those that are now outdated. The insights about complex system, which will be indispensable in the future, can be derived from systems, bio-, and neurosciences, as well as from evolution theory. Why is that so? Just imagine what it would be like if living organisms were organized in the same manner as our present social organizations. They would not function, they would not be viable. However, as biological systems are amazingly viable and versatile, we need to use them as a reference in designing man-made organizations and complex systems. We can and must learn from them.

Cybernetics as a Source of Relevant Insight

It is not enough, however, to simply draw upon the analogies between organisms and organizations, because while organisms are organizations, organizations are not organisms. Insights from the bio- and neurosciences cannot (or can only very rarely) be transferred directly to societal organizations.

Reliable help can only be found where there are regularities that biological and man-made systems have in common. These regularities have been researched and revealed in the context of cybernetic studies. This is how, among other things, computers and modern medical technology, regulation and control systems in cars and airplanes, modern security systems, and satellite navigation were developed. In the entire field of technology and in several other disciplines cybernetics has been used for many years. Wherever that is the case, there have been demonstrable and obviously break-through achievements.

Cybernetics is the science of structuring, controlling, and regulating complex systems by means of information and communication. Related skills are crucial for society and its institutions' ability to function in today's complex world, and generally necessary for the management task as such.

Few things are more important for man in the age of complexity. It is not so much different attributes or qualities that distinguish him from the man of previous centuries, but his fundamentally different knowledge and, even more, what he does not know, as well as the conditions in which he needs to act and decide. This is precisely where the insights from cybernetics can be of invaluable use.

Two Leaps of Evolution

There is no doubt that cybernetics works well in technological systems. The management of complex organizations, however, includes much more than technical applications. To achieve the same kind of breakthroughs in management as have been achieved in technology, based on the insights from cybernetics, two evolutionary leaps must be taken simultaneously:

- The first is applying cybernetics to much more complex systems than there are in technology, namely to living and social systems which, in relation to the former, can be referred to as *hypercomplex*.
- The second is applying cybernetics to the *results* achieved with the first step, or in other words, to systematize cybernetics *itself*.

In principle, complex systems are inscrutable and incalculable. Due to their complexity they cannot be analyzed or understood, which is why they cannot be organized and controlled in detail. For particularly complex systems, as those entailed by an organized society, this is all the more valid. Cybernetics with its questions and search routines shows us how to successfully deal with such systems, master their complexity, and even take advantage of them. This is difficult to imagine as long as you assume that man, and in particular a manager, is in complete control of the functioning of systems. It only becomes plausible when you apply one of the most fundamental insights of cybernetics: that complex systems organize themselves, and they do so in accordance with the natural laws defined by cybernetics. Man can either come to terms with them, or otherwise be dominated by them just like he is dominated by any other force of nature.

The second evolutionary leap is a logical consequence of the first: since in principle we cannot know enough to control, regulate, organize and develop a system, we need to make sure it will do all these things by itself – as intelligently as nature is able to. Hence, cybernetic management is the application of cybernetics to management, and the decisive step towards a systematic use of all the "self-concepts" and "self-skills" (as I call them) provided by nature. It is the step from regulating to self-regulating, from organizing to self-organizing, from structuring to self-structuring, from coordinating to self-coordinating, from developing to self-developing – or, in other words, to evolution. In this context, and particular when talking about corporate policy, I also use the term *Master Control*.

Taking Advantage of Complexity

Today's societies and their institutions are systems which restructure themselves, permanently and unpredictably. They are systems of a particular type. They are characterized by the fact that they are a result of human

action but not a result of human intent and purpose, in that these systems are more complex than man could ever plan and design them to be. They generate themselves, and that is the main reason why man will not readily accomplish what he wants and expects. Heinz von Foerster has referred to this circumstance in a manner now legendary when he used the metaphor of "trivial" and "non-trivial machines".

The two evolutionary leaps mentioned above, which are responses to the hypercomplexity of our self-originating systems and to the self-capabilities of systems, are comparable to the historic transition from the flat-earth to the spherical-earth theory in terms of their dimensions and consequences. They have very far-reaching effects.

Cybernetic management does not simply take away the fear of complexity and its consequence, the urge to reduce it. On the contrary, by applying cybernetics to management it becomes possible to take advantage of the properties of complexity and its perpetual self-generation. This is done by creating simple and often ingenuous solutions which enable organizations and society as a whole, to function better and more independently.

All major achievements and advancements result from the increase and better use of complexity, not its reduction. For instance, Ancient Rome drew its superiority from the greater complexity of its traffic routes and from the expertise in orchestrating complex armies. Gothic builders knew better than Romanic ones how to deal with complexity. Global business is facilitated by the complexity of modern communication technology, which is exponentially higher than the technology of the 20th century.

Cybernetic management and the deliberate, systematic use of complexity also help dissolve most of the contradictions and paradoxes that exist in traditional management thinking. Seemingly irreconcilable opposites can effortlessly be integrated by using this way of thinking. Systems managed and regulated by cybernetic principles are able to overcome the paradoxes of simplicity versus complexity, of freedom versus order, of variety versus unity, of autonomy versus centrality, of community versus the individual, of free economy versus control of excesses, of reason versus intuition. Reductionist either-or thinking is replaced or supplemented by systemic as-well-as thinking.