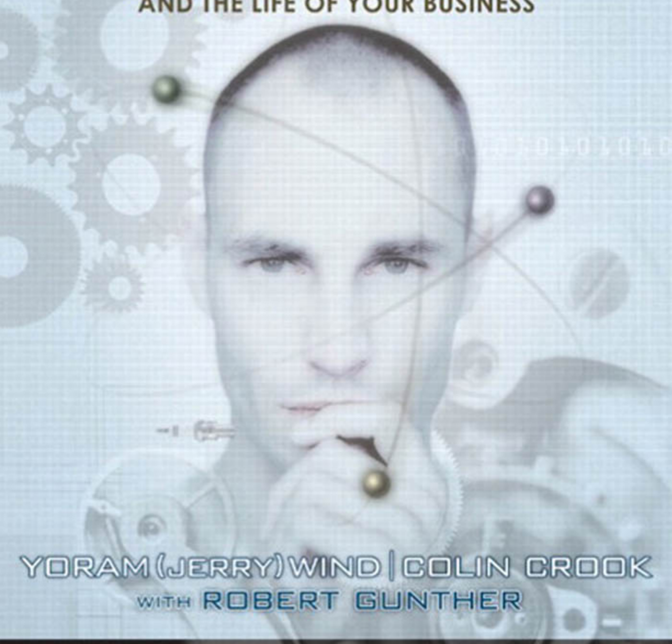
the POWER of IMPOSSIBLE THINKING

TRANSFORM THE BUSINESS OF YOUR LIFE AND THE LIFE OF YOUR BUSINESS



YORAM (JERRY) WIND | COLIN CROOK

WITH ROBERT GUNTHER

▶ If You Can Think Impossible Thoughts, You Can Do Impossible Things

Are you having trouble making a needed transformation?

Are you stuck in your career?

Is your organization stalled in its progress?

Are you lagging behind competitors in innovation?

Are you having trouble making your diet and exercise program work?

Are you overwhelmed by information?

It could be that you need to change your mental models.

Transforming your mental models can help you think impossible thoughts and overcome the barriers to change in your life, work and society. This book will show you how.

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It’s almost midnight.

You are walking down a dark city street toward your car parked several blocks away, when you hear footsteps behind you. You don’t turn around, but you quicken your pace. You remember a news story from a few weeks ago about a robbery at knifepoint in the neighborhood. Your pace quickens. But the footsteps behind you are also moving very quickly.

The person is catching up to you.

At the end of the block, under the street lamp, the steps are immediately behind you. You turn suddenly. You recognize the familiar face of one of your colleagues, heading to the same parking lot. With a sigh of relief, you say hello, and you and he continue on your way together.

What just happened?

The reality of the situation didn't change at all, but the instant you recognized the face of your colleague, the world in your mind was transformed. The image of the pursuing attacker was transformed into that of a friend. How could so little have changed in the situation, yet so much have changed in the way you viewed it?

First of all, you had created a complete picture of what was happening based on a tiny bit of information—the sound of footsteps behind you at night. From this mere suggestion, you drew upon memories of news stories of crimes, together with your personal fears and experiences, to conjure up an image of a potential attacker. You changed your actions based on this assessment of the situation, walking faster to escape an assailant. This could be a great survival instinct, but in this case, you were fleeing an assailant who did not exist.

Then, just as quickly, in the flash of the street lamp, you gained a little more information—and the entire picture shifted. In a split second, you recognized the face of a colleague—again based on the vaguest hints. You didn't take time to stare or think deeply about it. There might have been other possibilities in the situation. Could the person have been an assailant wearing a mask to look like your colleague? Could your colleague be an assailant? These possibilities were so remote that you didn't consider them, and by the time you thought through them, you might be dead. You saw the face, and the footsteps quickly switched categories from "foe" to "friend."

Only a small part of this drama happened on the sidewalk. Most of it was created within your own mind.

Working on transformation initiatives with leaders of major global corporations, we have recognized a simple lesson with profound implications: To change your world, you first have to change your own thinking. Neuroscience research shows that your mind discards the majority of the sensory stimuli you receive. What you see is what you think. The ability to see the world differently can create significant opportunities, as companies such as Southwest Airlines, FedEx, Charles Schwab and others have demonstrated. But even successful models can ultimately become a prison if they limit your ability to make sense of a changing world, in the way that major airlines failed to fully recognize the threat of upstarts such as Ryanair or that music companies, locked into a mindset of selling CDs, failed to see the opportunities and threats of music file sharing.

From driving organizational growth to improving personal health and fitness to fighting international terrorism, your mental models shape your responses in every area of your life. How do you become better at recognizing and using mental models more effectively? This book provides specific insights and strategies to help you understand the role of mental models, and know when to change them—so you can transform your organization and your world. ■

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Surely the human mind is not so malleable.
Are you saying we all have lost touch with reality?

We know what we see, right?

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Why don’t we ask the folks who saw Bugs Bunny in Disneyland?

The “wascally wabbit” from Warner Brothers would be turned into stew if he actually showed up to cavort with Mickey Mouse and Donald Duck in the theme park of rival entertainment company Disney. Yet when test subjects were shown mocked-up images of Bugs Bunny shaking hands with tourists in Disneyland, some 40 percent subsequently recalled a personal experience of meeting Bugs Bunny in Disneyland.[1] They “remembered” a meeting that was, in fact, impossible. It turns out that many of us are not much more astute at avoiding the rabbit’s tricks than his befuddled archrival Elmer Fudd.

How often in your daily life do you find yourself shaking hands with Bugs Bunny in Disneyland? ■

OK, so we might be fooled by some sleight of hand in a theme park, but we certainly won’t miss the signals that are truly important in our environment.

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How about overlooking a gorilla?

Researchers asked subjects to count the number of times ball players with white shirts pitched a ball back and forth in a video. Most subjects were so thoroughly engaged in watching white shirts that they failed to notice a black gorilla that wandered across the scene and paused in the middle to beat his chest. They had their noses so buried in their work that they didn't even see the gorilla.[2]

What gorillas are moving through your field of vision while you are so hard at work that you fail to see them? Will some of these 800-pound gorillas ultimately disrupt your game? ■

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What you see is what you think.

Just as we can believe we see the “impossible”—such as Bugs Bunny in Disneyland—or fail to see a gorilla striding across our field of vision, our mental models shape the opportunities and threats that we can see in our lives.

To change, you must first see the possibilities. By understanding the power of mental models and the process of changing them, you can think impossible thoughts. These thoughts can transform the way you approach the life of your business and the business of your life. On the following pages, we’ll explore a process for unlocking the power of impossible thinking. ■

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Rabbits and gorillas may be interesting, but why should I care about mental models?

Mental models shape every aspect of our lives. If you are stuck in your career, if your organization is stalled in its growth, an underlying mental model may be holding you back, or a new model might open opportunities for progress.

If you are lagging behind your competitors in innovation, it may be your models that are constraining your creativity. If you are overwhelmed by information, perhaps the models you are using are not up to the challenge of making sense in our information-rich world. If you are trying unsuccessfully to lose weight, increase exercise or improve your health, the mental models you use to understand these activities will have a dramatic impact on the outcomes you achieve and the quality of your life. If your personal relationships are strained, your mental models, and those of others, could be at the root. And if you want to change society or the broader world, you need to begin by looking at the mental models that shape your world and challenging them.

In any area of your life where you need to change and transform yourself, your organization or others, mental models play a central role. Yet we often have little awareness of what our models are and how they shape what we can see and do. Mental models can appear simple, and are often invisible, yet they are always there and have a significant impact on our lives. Changing the world begins with changing our own thinking. ■

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The world we live in is not out there on the street. It is in our own minds.

Until we recognize this, we will always be running away from ghosts and moving toward mirages. In our business and personal lives, we often fail to see the true threats and true opportunities because of the limits of the way we make sense of the world.

This book is designed to creep up on your view of the world and shake up the way you see the world. It will help you understand how your mind uses only a small part of the outside world it perceives, filling in the rest of the picture to make sense. Your mental models shape your vision and actions. Knowing how this process works will help you challenge the way you view the world and the way you act.

This idea may seem quite simple and self-evident, and it is. But if you truly consider the implications, as we will on the following pages, it is a powerful idea. This transformation of thinking is where all the transformations of our personal lives, our organizations and our society begin. That’s the power of impossible thinking.

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Do you hear footsteps behind you?

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(AN ASIDE)
IS THIS ANY WAY TO START A BOOK?

Some of the early reviewers of the manuscript liked the way this book opens, because they thought it drew the reader into the core issues. Others, operating from a different "mental model" (the way we make sense of the world), wanted instead a concise summary of where the book was headed and a diagram showing all the key points we'll be making. Others wanted more of an academic description, relating the discussion to what has been written in this area.

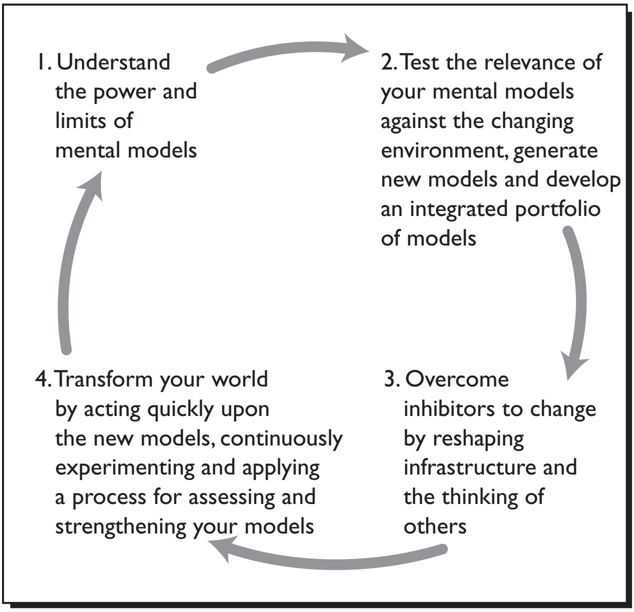
This is probably a good time to point out that your own reaction and experience is probably due as much to the mindset you bring to these pages as to what is written on them. The concept of a "book" is quite different when it refers to an extensively footnoted academic work versus a popular novel. Peter Drucker and Stephen King both write "books," but beyond the fact that they both use words, what they mean by "book" is completely different.

What did you expect when you picked up this book? Because it is coauthored by a university professor, were you expecting something more academic? Because it is coauthored by a former chief technology officer at a major corporation, were you expecting to see some opening tales from the trenches of business? Both these elements appear later on, but the opening is designed specifically to challenge your current thinking and perhaps make you more receptive to the ideas you will encounter here.

A fundamental message of this book is that what you see in any situation depends in very large part upon what you bring to the table. What you see in this book is no exception. You are involved as much as we are in the process of making sense of the ideas presented. More than what we have written here, your own experiences and mindsets will shape what you get out of this process.

If you think this *isn't* the way to start a book, we ask that you set aside your existing model and give us a little time to win you over. We also invite you to let us know your reactions so we can challenge ourselves and our own mental models (contact the authors at contact@impossiblethinking.com).

By the way, if you were looking for a roadmap of where we are headed, here is a diagram:


1. Understand the power and limits of mental models
2. Test the relevance of your mental models against the changing environment, generate new models and develop an integrated portfolio of models
3. Overcome inhibitors to change by reshaping infrastructure and the thinking of others
4. Transform your world by acting quickly upon the new models, continuously experimenting and applying a process for assessing and strengthening your models

ENDNOTES

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2. Taylor, John G. "From Matter to Mind." *Journal of Consciousness Studies*. 9:4 (2002). pp. 3–22. This experiment has also been mentioned in various other papers.

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PRAISE FOR
THE POWER OF IMPOSSIBLE THINKING

"This is an important book that 'makes sense of how we make sense.' The authors provide a thorough, fresh, and compelling exploration into the dimensions of mental models. All leaders who want to be more effective in their actions would be served well to leverage the principles in this book to learn about how they think and make sense of the world around them."

Nick Pudar
Director of Strategic Initiatives, General Motors

"This is a really great piece of work. It is 'immersion into the process of insight'. Truly a valuable addition to any forward-thinking person's library in light of the rapid change we face in today's world—business and personal."

J.Allen Kosowksy, CPA
Forensic Accountant and Director, 0N2 Technologies

"A masterfully written book that is sure to capture the attention of every thinking person who's willing to look at the world of business through new lenses. *The Power of Impossible Thinking* is both timely and intriguing."

Kathy Levinson, Ph.D.
Author of The 60-Second Commute

"Tough-minded managers like to think they see the world as it is. Wind and Crook, drawing on recent neuroscience research, demonstrate that none of us, tough-minded or not, do anything of the sort. What we perceive as 'the world' is as much inside our heads as outside. By realizing that and making choices about how we see things, we can become much more effective managers."

Rob Austin, Ph.D.
Harvard Business School and co-author of Artful Making

"While most of us may recognize that the world we respond to is more in our mind than in any physical reality, often we don't have a clue why this is so. This very important book clearly explains how our mental models work to construct these distinct inner worlds. And more importantly it offers empowering advice on how we can use this knowledge to work for us rather than against us in creating a better outer world for ourselves, our organizations, and our societies."

Charles C. Manz
Best-selling author of SuperLeadership, Fit to Lead, *and* Temporary Sanity

"Today, life moves at hyperspeed. Hence, the age-old human skill of pattern recognition is more essential to our health and happiness than ever before in history. *The Power of Impossible Thinking* is a wonderful guide to help you understand the patterns you recognize and—critically—when those patterns serve you well, when they don't, and what you can do about it."

Douglas K. Smith
Co-author of The Wisdom of Teams *and author of* On Value and Values

"I have been trying to explain why Japan has fallen into a pitfall and cannot come out of even the simplest problems. One can call it an innovators dilemma, but that does not solve the problem. This book suggests we have to go back to the basics of reviewing our underlying 'mental models' now and then, and only then, have to construct a new model, perhaps plural, and move onto exploring the new terrain."

Kenichi Ohmae
Author of the international bestseller, The Borderless World

"Jerry Wind and Colin Crook have one of the most powerful messages there is about dealing with the present changing world. Perspectives are prisons, they say. The only way to thrive in the coming environment is to cultivate the ability to sense the new patterns and relationships as (and before) they emerge—otherwise you'll be locked in the past. This book can get you out of that jail."

John L. Petersen
President and founder of The Arlington Institute and author of
Out of the Blue: How to Anticipate Wild Cards and Other Big Surprises

"*The Power of Impossible Thinking* is a health spa for the executive brain. Poor mental models can do more than ruin your reputation, your organization, or your team. How many times do we ignore market changes because of personal bias? Thanks to Wind and Crook we have a new vast insight into 'making sense' to help global leaders master the models needed for successful leadership behavior."

Cathy L. Greenberg, Ph.D
Executive Director, Institute for Strategic Leadership,
LeBow College of Business, Drexel University

"Everyone is familiar with exhortations for mindset change, attitudinal change and paradigm shift. But slogans are not solutions and words are not deeds. What is missing is a "how to" book. Wind and Cook have brilliantly filled this chasm of need with an extraordinary book that revolutionizes businesses, individual lives and society."

Dr. Y Y Wong
Chairman and Founder, The Wywy Group of Companies

"Wind and Crook have written a marvelous book that can teach you how to think more effectively in personal and business settings. Read it and learn!"

Drea Zigarmi
Author of The Leader Inside: Learning Enough About Yourself To Lead Others *and co-author of* Leadership and the One Minute Manager

"We like to say, 'See it with your mind's eye.' Wind and Crook show us that our mind is our eye. What we think is what we see, and what we see directs how we act. Not only do the authors make this paradigm clear, but they offer concrete and practical ways to change our mind's eye and as a consequence change our actions and the results we get. The value of that is hard to top."

J. Stewart Black, Ph.D.
co-author of Leading Strategic Change
and Professor, University of Michigan Business School

"This is a very important book. It deals with truly fundamental issues—both for practitioners as well as academicians—relating to making sense out of a variety of complex events in the real world, and how to keep an open mind regarding all of this. We often become 'prisoners' of set routines and behaviors, and thus gradually grow less and less effective. This book points the way out of this dilemma—in a most convincing sense. Models, properly focused around the best in human minds, are key here. These can help us understand paradigm shifts, maintain relevance, and keep momentum. To see things differently becomes central. The book makes seminal contributions here. It provides a strong, rigorous—and practical—conceptual base for this! I am equally impressed with the book's focus on implementation, both in terms of setting out an agenda for transforming one's world, as well as in terms of pointing out how action can be achieved—quickly and naturally—following the prescriptions of the book. All in all, I find the book to be a true seminal contribution, with a strong conceptual underpinning, convincing empirical verification, and realistic implementational focus. This book will become a must, for practitioners and academicians alike."

Dr. Dr. h.c. Peter Lorange
President IMD, The Nestlé Professor

“Evidence of the power of impossible thinking is all around us- from the moving assembly line of Henry Ford to the revolutionary political thinking of America's founding fathers to today's biotech entrepreneurs. By challenging the status quo, my father turned an upstart magazine into one of the most successful business publications in the world. Impossible thinking is one of the hallmarks of successful pioneers in almost every field of human endeavor. In this book, Jerry Wind and Colin Crook lay out some of the principles that these path-breakers grasped intuitively. If you are locked down by narrow thinking in your work or life, this is a book that will open your mind. It will help you be able to see- and do- much more than you thought was possible.”

Steve Forbes
President and CEO of Forbes Inc. and Editor-in-Chief of Forbes Magazine

“The Estée Lauder Compaines were built by challenging the status quo thinking in cosmetics -- in using samples, multi-branding, globalization and many other innovations. Time and again, when people said it couldn't be done, we did it. In The Power of Impossible Thinking, Wind and Crook show you how to challenge your own thinking to recognize and act upon the hidden opportunities that are all around us. As one of the inaugural titles of Prentice Hall, it demonstrates the creativity, power and impact of this new publishing initiative. If you want to transform your thinking, your business and your life, read this book.”

Leonard Lauder
Chairman, The Estée Companies, Inc.

“The authors have done a masterful job examining the power and limits of our mental models and how to better accomplish change in the complex world ahead.... This book offers a road map with a real set of attributes that can help us make the tough choices in a time of transition.... I would put this book at the top of my ‘keeper’ list for those on the front lines of change management and mission accomplishment.”

Ken Minihan
Lt. General, U.S. Air Force, Retired

“This book addresses some of the central challenges of management: How do you make sense of your situation? How do you probe alternative realities? What is your mental model? Understanding these issues is critical to each of us and central to key decisions that shape our professional and personal lives. Jerry Wind and Colin Crook offer a much-needed process for probing these issues in a structured way.”

John S. Reed
Chairman, New York Stock Exchange, and former Chairman and CEO, Citigroup

THE POWER
OF
IMPOSSIBLE THINKING

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Transform the Business of Your Life and the Life of Your Business

Yoram (Jerry) Wind • Colin Crook
with Robert Gunther

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ON THE AUDIO CD

The audio CD, a unique feature of Prentice Hall books, is included to give you a richer experience of the information in this book. On the audio CD you will find a short, 20-minute summary of the contents of the book, developed by Concentrated Knowledge Corporation, and an interview between the Editor-in-Chief of Concentrated Knowledge, the authors, and Al West, Chairman and CEO, SEI Investmests. Listen to the authors discuss the book, and further implications of the book, on this audio CD.

PREFACE

HIJACKING OUR MINDS

At first glance, mental models may seem abstract and inconsequential. But they cannot be dismissed as optical illusions, parlor games or academic curiosities—all in our head. Our models affect the quality and direction of our lives. They have profit-and-loss and even life-and-death implications.

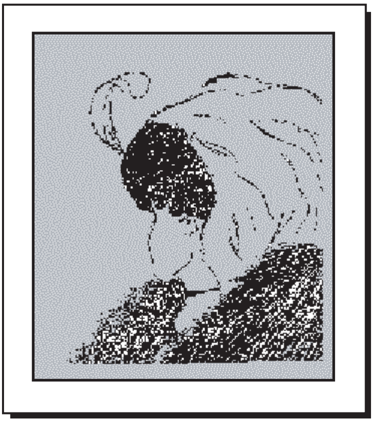
The debate about U.S. intelligence following the September 11 terrorist attacks illustrates the difficulty of making sense in today's complex environment. Congressional post-mortems focused on who knew what when—on the information—but not on the more critical mental models that shaped how that information was processed. As is almost always the case in our information age, what led to the tragedy was not primarily a shortage of data. Plenty of data points indicated that an attack using an aircraft as a missile was possible, and there was even information pointing to potential members of the conspiracy. While more specific information could have been gathered and shared among different agencies, the failure was only partially one of data gathering. This was not a failure of intelligence per se. It was, at least in part, much more a failure *to make sense*.

Information was filtered through existing mental models related to terrorism and hijackings. For example, middle-class, clean-cut young working men with everything to live for did not fit the profile of the stereotypical wild-eyed young fanatics who became suicide bombers. So when these apparently more stable men began studying in flight school or asking about crop dusters, the possibility of terrorism was filtered out. Hijackings also followed a certain well-established pattern. The plane and its crew typically were taken hostage and flown to some remote location, where the hijackers made demands. Pilots were instructed that the best course of action for passengers and crew was not to resist. During the September 11 attacks, the information was filtered through a set of mental models that made it hard to see what was really happening until it was too late.

The events of September 11 also dramatically illustrate the power of shifting mental models. When passengers on the fourth plane, United Flight 93, received reports by cell phone from friends and family about the attack on the World Trade Center, several quickly realized that this was not a typical hijacking. They could see that their own aircraft would be used as a missile against another target. In a matter of minutes, they were able to transform their mental models and take heroic actions to stop the hijackers. As a result, the last plane failed to reach its target, crashing in a field in western Pennsylvania, a tragedy that could have been much worse if some of its passengers hadn't been able to make sense of what was going on and move to stop it. The passengers and crew of Flight 93 were presented with a picture that was similar to the hijackings earlier that day. What they suddenly developed, however, was a different mental model. They were able to quickly make sense of what was happening and to act on this new understanding. And that made all the difference.

Mental Models

One of our most enduring—and perhaps limiting—illusions is our belief that the world we see is the real world. We rarely question



Romancing the Internet: The picture didn't change dramatically, but first we saw an attractive young woman, then an old crone. W. E. Hill, "My Wife and My Mother-in-Law."

our own models of the world until we are forced to. One day, the Internet was infinitely attractive. It could do no wrong. It was magnificent and beautiful. The next day, it was overhyped and ugly. It could do nothing right. Nothing had changed about the picture, yet in one instant we saw it as a seductive young woman and the next minute we rejected it. What happened?

This is called a "gestalt flip." The lines and data points are the same, but the picture is dramatically different. What has changed? Not the picture, but our making sense. What is in front of our eyes is the same. What is behind our eyes has changed. The same sight produces a very different *perception.*

We use the phrase "mental models" (or "mindsets") to describe the brain processes we use to make sense of our world. In recent decades, science and technology have progressed to the point where we can undertake direct observation of the brain. This is starting to transform philosophy and neuroscience. Instead of just thinking about thinking, we can now directly monitor brain processes as we think and observe. This research is generating a vast amount of experimental data. Confronting the incredible complexity of the brain, a range of neuroscience theories have emerged to explain what is going on inside our heads. In business and other organizations, these interactions become even more complex, as individuals with their own mental models interact through group decision making or negotiation, and they are susceptible to biases such as "group think" that can limit flexibility and constrict options.

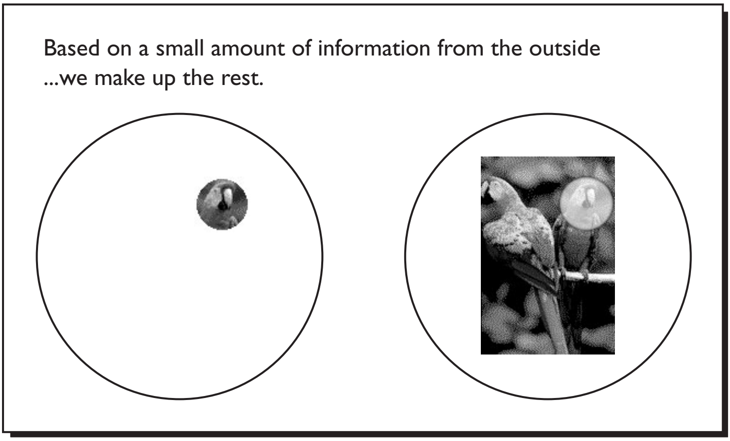
As we were leading transformation initiatives at the Wharton School and Citicorp, and helping other executives transform their organizations, we began to realize how important these mental models are to the process of change. We have written this book to explore the implications of mental models for transforming our businesses, personal lives and society. This book does not support a specific interpretation of the neuroscience evidence, but it does recognize that the brain has a complex internal structure that is determined genetically and shaped by experience.

The ways we make sense of our world are determined to a large extent by our internal mind and to a lesser extent by the external world. It is this internal world of neurons, synapses, neurochemicals and electrical activity, with its incredibly complex structure—functioning in ways we have only a vague sense of—that we call the "mental model." This model inside our individual brains is our representation of our world and ourselves. (The appendix provides a more detailed explanation of developments in neuroscience that have influenced the thinking behind this book.)

Mental models are broader than technological innovations or business models. Mental models represent the way we look at the world. These models, or mindsets, can sometimes be reflected in technology or business innovations, but not every minor innovation represents a truly new mental model. For example, the shift to diet soft drinks was a tremendous innovation in the marketplace, but it represents only a minor change in mental models. Our mental models are much deeper, often so deep that they are invisible.

As a core component of our perception and thinking, mental models come up often in discussions of decision making, organizational learning and creative thinking. In particular, Ian Mitroff has explored their impact in creative business thinking in several books, including *The Unbounded Mind* with Harold Linstone.[1] These authors examine the need to challenge key assumptions, particularly in moving from "old thinking" to new "unbounded systems thinking." Peter Senge discusses how mental models limit or contribute to organizational learning in *The Fifth Discipline* and other works, and John Seely Brown examines the need to "unlearn" as the world changes.[2] J. Edward Russo and Paul J.H. Schoemaker emphasize the role of framing and overconfidence in decision making in *Decision Traps* and, more recently, in *Winning Decisions.*[3] Russell Ackoff, in *Creating the Corporate Future*[4] and other works, stresses the importance of approaching planning by challenging fundamental models through a process of "idealized design," starting with the desired end and working backward to the goals and objectives in reaching it. There have also been more rigorous academic considerations of these topics, such as *Decision Sciences* by Paul Kleindorfer, Howard Kunreuther and Paul Schoemaker,[5] and research on organizational learning by Chris Argyris.[6] Many other books and articles have touched in some way on mental models.

With so much having already been written on the topic, why another book? First, research in neuroscience is now supporting what we may have recognized intuitively in the past. This research makes mental models more substantial and, for us, more convincing, especially considering their inherent invisibility. Second, this book examines the impact of mental models more broadly, not just how they affect organizational decision making or learning, but the way they work and their implications for transformation—personal, organizational and societal. Finally, despite all that has been written about our mental models, the failure to see how they shape how we think and act is still leading to serious errors and missed opportunities. This is a lesson we can keep learning. This book represents an original take on the subject and an exploration of how these insights apply to personal and business life.



Based on a small amount of information from the outside
...we make up the rest.

What We See Is What We Think

Whether considering a business move or a personal decision, what we "see" is not what we *see* (see sidebar, "The Difference Between Sight and Sense"). What we "see" is what we *think*. We usually trust what we see with our own eyes or perceive with our other senses. But research shows that we often use very little of the sensory information we take in from the outside world; most of it is discarded. Though we experience the process as seeing the external world, what the incoming stream of images actually does is to evoke other experiences from our internal world. This does not mean that the external world does not exist (although philosophers have argued this point), but only that we ignore much of it.

Most of what we see is in our minds.

The power of the mind in creating reality is demonstrated in the experiencing of a "phantom limb" by people who have lost a real limb through accident or surgery. The physical limb is no longer there, but the person continues to feel it. In a famous experiment, neurologist Dr. Ramachandran of the Salk Institute used Q-Tips® to touch a patient's face, evoking the reaction that he had just touched the patient's nonexistent hand. It turns out that the body map inside our brain has the hand and the face located in adjacent areas. When the hand was lost in an accident, the associated hand-mapping neurons moved into the adjacent face area for sensory input. The brain could now experience having its nonexistent hand touched. The person's experience of this touch was completely real. As Dr. Ramachandran observed in a series of lectures on the BBC, our brains are "model-making machines," and we construct "virtual reality simulations" of the world and then act upon them.[7]

While most of us have never experienced a "phantom limb," we have all had the experience of believing something and finding out suddenly that we were mistaken. This is the pivot upon which a magician's tricks often turn, as we are led to see a particular thing when, in fact, something quite different is actually taking place. Many of the great dramas and mysteries of fiction and of our own experience involve such twists. We are surprised and amazed by the shifts in how we make sense of the world.

THE DIFFERENCE BETWEEN SIGHT AND SENSE

The ability to make sense is different from the ability to see. Mike May, an accomplished downhill skier who had been blind since the age of three recovered some sight through an operation at the age of 46. In his diary, he describes the experience of seeing the world for the first time.[8]

On his first airplane flight with his newfound vision, he looked out the window but couldn't figure out what he was seeing. He thought the white lines he saw against the brown and green of the ground were mountains. He turned to the passenger in the seat beside him and explained his situation and asked: "Could you help me figure out what I am seeing?"

The woman sitting next to him explained that the white lines were haze, and then proceeded to point out the valleys, fields and roads in the scene below. When he later looked at the night sky with his new sight, he experienced the stars as "all these white dots, so many white dots" before truly recognizing them as stars.

The process of recovering his physical sight was just the beginning of the process of learning how to make sense of this new visual information.

The Importance of Mental Models

Mental models affect every aspect of our personal and professional lives and our broader society. Consider a few examples:

- **Personal—Wellness.** Every day, we are bombarded with new medical studies and other information. Some studies find that certain foods or activities have harmful or beneficial consequences. Some of these reports are contradictory. Even studies in respected medical journals are sometimes later overturned or found to be less conclusive than first touted to be in the media. We also receive other information about potential threats from diseases such as AIDS, mad cow disease, West Nile virus and SARS. How do we assess the danger and take appropriate action? We also face some more fundamental questions about our approach to health. For example, we can adopt the traditional Western focus on treatment of disease after it occurs, or we can focus on prevention of disease through diet, supplements and exercise. Or we can combine the two approaches. We can put our faith in allopaths, homeopaths, osteopaths or naturopaths. Our decisions in this area have a lot to do with how we make sense of the world. If we choose to adopt a diet to lose weight, we confront a cacophony of conflicting diets to choose from. The way we make sense of this picture has significant implications for our length and quality of life. How can we make sense of all these options? How can we become better at assessing the options and making decisions about our personal wellness?

- **Corporate—Growth.** Many companies have built their strategies around a traditional model of growth. Companies such as McDonald's, Coca-Cola and Starbucks have achieved growth in domestic markets and then sustained it by looking at overseas opportunities or new distribution channels. Other companies have grown through rollups and acquisitions. But the drive for growth has the potential to dilute the value of the brand—Starbucks coffee has a completely different meaning when served in gas stations and supermarkets. Yet the commitment to investors often keeps these companies addicted to growth. How can companies create healthy growth strategies, which either enhance the brand (reduce churn, maximize lifetime value of customers, capture market share, enter new markets, add new distribution options, etc.), extend the brand to new product/markets, or create new brands (new growth engines)? What other models have companies used to build and sustain successful businesses? Could you apply them to your business?

- **Society—Diversity and Affirmative Action.** Mental models also play a key role in debates on challenges for our society. For example, what is the best way to address historical inequities in the treatment of ethnic minorities or other populations (such as women) that have faced discrimination? One model, embodied in U.S. Affirmative Action programs, creates a formal structure designed to compensate for historical discrimination. As President Lyndon Johnson explained in a speech at Howard University: "You do not take a person who for years has been hobbled by chains and liberate him…and then say 'You're free to compete with all the others' and still justly believe that you have been completely fair." But opponents of these strategies hold a different model—that programs such as Affirmative Action are in themselves discriminatory and tend to emphasize and thus perpetuate the very racism they are designed to counter. President George W. Bush called an Affirmative Action program at the University of Michigan, "divisive, unfair, and impossible to square with the U.S. Constitution."[9] The choice of these models has serious implications for legislation and society—and individuals. The competing views have played out in a series of high-profile court cases.

In each of these examples, mental models play a crucial role in our thinking and actions. Our models shape what we see, and this opens or limits our possibilities for action. We will explore some specific dilemmas of personal life, business and society in Chapter 11.

Thinking the Impossible

How do we engage in impossible thinking? The parts of the book that follow provide an overview of a process (see the sidebar, "Choices for Change").

First, we need to recognize the importance of models and the way they create limits and opportunities, as discussed in Part I. Then we have to find ways to keep our mental models relevant, deciding when to change to a new model (while adding the old to our portfolio of models), where to find ways of seeing, how to zoom in and out to make sense of a complex environment, and how to conduct continuous experimentation, as considered in Part II. Even if we are willing to change our thinking, we also need to recognize the walls that keep us in the old models, the confining influence both of the infrastructure and processes of our lives and of the slowly adapting models of those around us. In Part III we consider these obstacles to change and strategies for addressing them. Finally, we recognize that models are used in order to act quickly, and in the last part of the book we explore ways to access models quickly through intuition to transform our world.

CHOICES FOR CHANGE

RECOGNIZE THE POWER AND LIMITS OF MENTAL MODELS

- Understand how models shape your world
- Recognize how models limit or expand your scope of actions

KEEP YOUR MENTAL MODELS RELEVANT

- Know when to shift horses
- Recognize that paradigm shifts are a two-way street
- See a new way of seeing
- Zoom in and out to make sense from complexity
- Engage in experiments

OVERCOME INHIBITORS TO CHANGE

- Dismantle the old order
- Find common ground to bridge adaptive disconnects

TRANSFORM YOUR WORLD

- Develop and refine your intuition
- Transform your actions

ENDNOTES

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CHAPTER

3

SHOULD YOU CHANGE HORSES?

All growth is a leap in the dark, a spontaneous, unpremeditated act without benefit of experience.

—**Henry Miller**[1]

You have been carjacked.

You are now sitting in the passenger seat and a man in a ski mask is pointing a gun at you while he drives your car. You have only a split second to size up the situation. Does he intend to kill you, or will he drop you off somewhere up ahead on the road? Your door is unlocked, so the thought passes through your mind that you could jump out of the moving car onto the street and run away. But would you survive the jump? Are you better off staying in the car with the danger that you know, rather than making a leap into the unknown?

How do you know it is the right time to give up the world that you know, even when it has become dangerous, for something new?

In your personal and business life, you will often face such forks in the road. They will not always be this dramatic, but the choices can be just as sharp and the implications just as ambiguous. You will be faced with the choice of holding onto an old model that may not be working or adopting a new one with uncertain repercussions. If you are facing trouble in your marriage or at work, do you abandon your model of family life or your model for a career, or do you stick with the old model despite the problems? When do you need to make the leap, and how do you do it? This chapter examines these issues, beginning with the unfortunate story of Lord George Simpson, who perhaps should have looked a bit harder before he leaped.

Imagine you are Lord George Simpson, who took the reins of General Electric Company (GEC) in the United Kingdom (no relation to U.S.-based General Electric) in September 1996. Under the leadership of your predecessor, Lord Arnold Weinstock, GEC had risen to become one of the most powerful companies in Britain. It was an extremely successful money-making machine that dominated British defense, power and electronics.

Weinstock, who ran the company with an iron fist for 33 years, introduced an approach to operating the conglomerate in the 1960s that was radical for its time in the UK. He sat in his office and ran the corporation's 180-some companies based on a set of key financial ratios, firing managers when their ratios dipped below acceptable levels. He rarely walked into his own factories, but he watched the numbers like a hawk. And his managers trembled when they heard him on the other end of the phone line. He stripped away wasteful overhead and instituted strong controls. He added new businesses through major acquisitions.

While Weinstock indulged a personal passion for gambling on horses at the racetrack, he didn't leave anything at the company to chance. He created a model for running the business that was so successful, it became the standard for other large British firms.

While Weinstock's mechanical model and conservative strategy for the business were rewarded by strong financial performance, at least according to his measures, the low-growth approach was punished by the market in boom times. As Weinstock neared the end of his term in the mid-1990s, GEC's share price was languishing. Investors, who wanted growth, were rewarding GEC's rivals who entered microchips or consumer electronics. Weinstock and his managers were flogging performance out of existing businesses, but they were not aggressively pursuing the technology-driven growth that other competitors were achieving in computing and telecommunications.

As George Simpson, when you enter the building on your first day, you have inherited a very successful company, but one that is no longer the darling of investors. You are sitting on a pile of more than £2 billion in cash. As you walk into the stodgy offices in Hyde Park Corner and settle down into Weinstock's large chair under an oil painting of one of the racing horses he so much admired, you begin to consider your strategy. GEC is a solid warhorse, but it certainly can't keep pace with the nimble thoroughbreds running past it to the high-tech winner's circle. Is Weinstock's powerful organization finally losing its footing? The cozy political relationships that allowed for lucrative cost-plus defense contracts are fading fast. New technologies are transforming the competitive landscape and creating red-hot opportunities. Clearly, it seems, a different model is needed. Isn't it time to switch horses? Do you stay the course or put your own mark on the organization? What would you do?

Your choices at such forks in the road are often the most important decisions you can make. How do you know whether the old business model, and the mental model on which it is based, are worn out or just need to be reshod? How do you know that the new model will live up to its hype?

All the time that people are making such decisions about which models to bet on, the horses keep on running; there isn't a pause in the action. Not having much time to assess the situation, people tend to keep rolling over the same old bets, or to jump impulsively from horse to horse.

Place Your Bets

There are no easy answers to the underlying questions. In making decisions about changing mental models—whether they involve a corporate growth strategy through acquisitions or a personal "antigrowth" strategy of diet and weight control—you face the danger of two kinds of serious mistakes:

- ***Being left behind.*** The first mistake is to stick with the wrong model and be left behind. You are backing an old nag that should have been put out to pasture long ago. You are running your business on an industrial model in an information age. You are eating a processed-food diet of the 1950s while knowledge of nutrition and exercise have moved forward. The rest of the pack, with better mental models, thunder by, and you are left in the dust. You fail to seek out something new until your losses accumulate or the horse you are backing keels over. Sometimes then it is too late. As Simpson took over GEC, he must have worried that the model that Weinstock had used to build the company was losing steam. It seemed that the time was ripe for a revolution, while the company still had the resources to pull it off. When you leave the safety of tried-and-true bets, however, you risk a second possible mistake.

- ***Backing the wrong horse.*** In jumping to a new mental model, you might abandon a perfectly adequate one before it has been exhausted. An even more serious danger is that you might change to a model that turns out to be much worse. When Internet start-ups and venture capitalists convinced the world to look at eyeballs rather than ROI, they attracted big bets on a model that focused on how many users were looking at their Web pages rather than how many dollars were flowing into their coffers. A short time and billions of dollars later, many investors gave their heads a vigorous shake and were a bit shocked to see this same picture through very different eyes. They concluded that their bets, in many cases, had been unwisely made, based upon a vague and poorly understood model. As a consequence, there were big losses. This is the trouble Lord Simpson ultimately found himself in.

A Wild Ride

Lord Simpson apparently decided it was time for a revolution. Weinstock had described his successor as “a man of vision,” and he was right. Simpson moved the company out of its conservative Hyde Park headquarters to trendy offices on Bond Street and changed its generic name to the more nuanced Marconi, signaling his intent to concentrate on the hot-growth sector of telecommunications. The company sloughed off the old defense business to British Aerospace and drove full bore into telecom.

Marconi now had the kind of focus on growth that shareholders dream about. Lord Simpson had transformed the boring, old-fashioned conglomerate into a dynamic, sharply focused high-tech firm. As the bright red 1999 annual report gushed: "Our future… will be digital. We will lead the race to capture, manage and communicate information. We will ride the rising tide of demand for data transmission. We will be a leading global player in communications and IT."[2]

The dream was seductive. Despite signs that the telecom market was weakening, Simpson held to his view of the world. He had burned his boats to make a stand on this foreign shore and there was no way back. As competitors such as Nortel, Nokia and Ericsson warned of declining sales and profits in the first quarter of 2001, Simpson stubbornly clung to his view of telecom as a hot market. On May 16, 2001, he told shareholders: "We anticipate the market will recover around the end of this calendar year, initially led by European established operators … we believe we can achieve growth for the full year, as a result of our relative strength supplying these operators."[3]

As commentator Frank Kane wrote in the *Observer* in August, while the rest of the world saw that Marconi's vision was collapsing, Simpson refused to give up on his view. He was, perhaps, too deeply committed. Kane wrote that "What might have been called brave determination a month ago has turned into willful stubbornness coupled with a blind refusal to see reality."[4]

The dream of Marconi turned to a nightmare as the company was swallowed up in the telecom bust, which left the global industry with a hangover of $750 billion in excess capital expenditure and debt. By September, Simpson and his top managers had stepped down from a business that was reeling. Marconi shed 10,000 employees. The more than £2 billion in reserves existing when Simpson took charge were gone, replaced by a crater of more than £4 billion in debt. The company's share price plummeted from a vigorous peak of £12.50 to the comatose level of four pence at the time of Lord Weinstock's death in July 2002.[5] He lived to see the once-great company he had built brought to the brink of bankruptcy. It was, in the words of the BBC, "one of the most catastrophic declines in UK corporate history."

How did this "man of vision" go so wrong? Marconi's business was built on a chain of assumptions. In 2000, when telecom operators were spending more than 25 percent of their revenue on expanding their networks, they had a voracious appetite for Marconi's telecom equipment and software. This spending was, in turn, based on projections of a rapid increase in customers and an insatiable demand for bandwidth. These projections were wildly optimistic and, as they collapsed in 2001, the industry suffered from overcapacity and quickly cut back on spending. During its acquisition spree, Marconi had paid top dollar to create end-to-end solutions for customers, based on a perception of continued growth in the sector. When these projections of growth collapsed, so did Marconi's business. All these changes occurred in the broader context of several decades of deregulation that had transformed the telecom industry.

The business models Lord Weinstock and Lord Simpson created were based upon totally different mental models. Lord Weinstock ran a business that was risk averse and very conservative, a vision that may have been shaped by his childhood as a poor Jewish immigrant from eastern Europe. He ran the business by the numbers. The affable Lord Simpson, a member of seven golf clubs, worked from personal relationships. He had built his career upon making deals. He had sold Rover to BMW and closed other major deals earlier in his career that helped in selling GEC's defense business and making a series of acquisitions to build Marconi's capabilities.

Both men had become successful based on their world views, and both in different ways were blinded by them. Lord Weinstock's reliance on financial controls over personal management may have led to his poor judgment in appointing Simpson as his successor. Lord Simpson's reliance on personal relationships and deal making may have blinded him to the importance of rigorous controls that are needed to run the business. As both men entered a process of establishing a new model for GEC's business, they made the dangerous move from their areas of deepest experience into new industries and ways of operating that were not familiar.

To institute a new order of things, leaders need to be able to persevere against the naysayers and rise above obstacles. They need to be able to overlook the limits of today to build the business for tomorrow. When does the "brave determination" that is needed to champion a new vision become "a blind refusal to see reality"?

There are several psychological forces that tend to keep people committed to a course of action long beyond the point when they should rationally quit. The first is the "sunk cost fallacy." This can be seen in the actions of the stock market investor who has watched share prices of a company plummet from $60 to $20. At this point, instead of objectively assessing the potential of the stock, the investor may hold onto this stock—or buy more shares—in hopes of regaining these "sunk costs."[6] But if the company is collapsing, there will just be more losses. Managers with deep investments in a given project, financial or reputational, will likely sustain it beyond when they should objectively pull the plug. This tendency to deepen commitment can also be seen in political commitments such as the U.S. involvement in Vietnam, where past investments made it very difficult to pull out.[7]

A related factor that clouds our judgment about when to quit is the escalation of conflict. In a competitive situation, investments in a given course of action can reach ludicrous levels. For example, in an auction game in which two competitors bid to win a dollar bill (with the winner paying the sum of the two final bids), bidding quite often ends with the winner paying three to five dollars to obtain a single dollar.[8] There are a variety of factors that drive this escalation. Initially, it might be a desire to make money or prevent a future loss, but as the bids mount, regaining losses or simply outdoing an opponent become more important.[9] In the dollar auction, the ridiculousness of such bidding is very clear, but the same effect can lead to overbidding for much higher stakes (such as the G3 wireless auctions in Europe) and a heavier "winner's curse." Once Simpson was committed to his course of action in transforming GEC, it became very difficult to pull back, despite the mounting losses.

This is not to say that GEC should have continued on the course set by Lord Weinstock. His model of centralized financial control of a conglomerate may have been too slow for the late 1990s. It was due for a change, perhaps, especially since the market did not value such companies highly. There are other cautionary tales from companies that changed too slowly—Xerox seeing its business undermined by Japanese competitors in the 1980s or, a decade later, IBM watching its business drained away by the PC and Sears seeing its department store whittled away by the rise of new retail formats. IBM was so focused on tracking measures for mainframes that it missed the fact that its total share of computing was declining. Sears was watching department store rivals so intently that it missed the rise of different niche retail formats that were taking business away in clothing or hardware. When the racing bell goes off, it is dangerous to stand still.

Simpson's tale of woe emphasizes the inherent difficulty of shifting mental models. If telecoms had fulfilled their outrageously rosy predictions, Lord Simpson would have been a visionary and a hero who had taken his company in a bold new direction. Instead, he walked away from the track in disgrace, having squandered virtually his entire inheritance. Other choices, however, had been open to him, other than betting the entire company on a new direction.

KNOWING WHEN TO SWITCH HORSES

To their credit, Lord Simpson and Lord Weinstock did recognize that the world was changing and that GEC needed to change. This recognition is the first challenge, because it is often difficult to see there even is a problem with the old model until it is too late. While businesses can be destroyed by the race to new models, others are also destroyed by standing still. How do you recognize when you need to change your mental models?

- ***When the old model dies, you have no choice.*** The clearest sign that you need to shoot your old model is when the old nag stumbles and breaks a leg. When you face a serious crisis or failure of the old model, there is no question that you need to find a new one. If you have to shoot the current horse, you may find yourself on the side of the road with no transportation. When your old models in various areas fail, you risk losing your health, eroding the profits in a business or undermining the prosperity of society. You face dangers in waiting this long to act. How do you see the trouble coming before you encounter a full-blown crisis?
- ***Pay attention to outliers and "just-noticeable differences."*** In psychology there is a concept of a "just-noticeable difference." It is a change that could be noticed but is absorbed by the process of normalizing variance. When you see something that doesn't fit the current model, you make it fit. In the movie *The Matrix,* in which the characters are living in a simulated world that they believe is real, it is only through small glitches in the program that they are able to see beyond this illusion. Most of the time, people normalize the variations that they see, and this can get them into trouble. The temperature rises slowly in a room, and you don't realize the change until you break into a sweat. You dismiss chest pains or lack of energy until these symptoms turn out to be a serious medical problem. A company like Motorola is building analog wireless phones at a time when the industry is turning to a global digital standard, but because its current business is successful, it fails to recognize quickly enough that the world is changing. As a result, it is forced to concede significant market share to Nokia, Ericsson and others.

Often these small variations are truly insignificant, but they can sometimes turn out to be the tail that wags the dog. If you systematically pay attention to them, you can recognize when they should make you reconsider your mental models. The more hubris you have built up as an individual, an organization or a society, the more you need to be alert for these outliers and to look at them from different angles to see what they mean. As an adult with many years of experience, you may need to deliberately take time to sit down with young people, read widely or otherwise seek out views that contrast sharply with your own. As a mature organization, you may need to create processes for reporting the information around the fringes rather than just looking at the big averages or the statistics that you have always tracked. These past statistics will tell you where you have been but not where you are headed. You need to look for differences that indicate your old model is not working or that the potential for a new model has emerged.

- ***Avoid cognitive lock.*** Part of the challenge of seeing these small variations is "cognitive lock." People become so fixed in a single view of the world that they filter out all information that conflicts with this model and are unable to see another possible explanation. The problems with the O-rings on the *Challenger* space shuttle were apparent before the disastrous explosion, but they were attributed to quality control in the manufacturing process rather than to the effect of low temperatures. Viewing the challenge through the lens of disciplinary training in manufacturing or engineering let the real problem remain unseen. If your education is in marketing, you'll tend to see problems as marketing problems. If your education is in finance, you'll see everything in terms of ROI and cash flow.
- ***Create an early warning system.*** One way to recognize small differences and avoid cognitive lock is to create systems for identifying specific changes in your environment. During the Cold War, when the United States and the Soviet Union had their fingers on the buttons of nuclear weapons aimed at one another, they developed sophisticated early warning systems to let them know when trouble was headed their way. These systems essentially were designed to signal that the deterrent model of "mutually assured destruction" (MAD)—a standoff where neither side moves because of the threat of annihilation from the other—had broken down. In this case a new model, of open nuclear war, would have been signaled, requiring a different set of actions.

You need to develop early warning systems so you know when to look more closely at your models. Robert Mittelstaedt, Jr., has pointed out that many serious disasters from airline crashes or nuclear accidents occur through a chain of multiple mistakes.[10] There is often time to recognize and address the initial mistakes, but they are overlooked until they become compounded. Chemical companies and other firms have found it very effective to conduct analyses of "near misses," instead of waiting for major catastrophes. The major accidents usually do lead to a thorough analysis, but the near misses often are overlooked. Managers wipe their brows and go back to work. By systematically identifying and making sense of these near misses, companies can achieve higher levels of learning and correct potential problems without the pain of very serious mistakes.

Early warning systems should be based on real-time feedback and have trip wires for action or more intense investigation. Any latencies or lags in basic control systems cause instability. The trip wires should be based on your understanding of your current models. If you know your models' limits, and the assumptions upon which your models are based, you can monitor when the limits have been crossed and the assumptions contradicted. A missile crossing into U.S. territory would have been a clear sign that the assumptions of the Cold War standoff were no longer valid.

These trip wires are not the kind of absolute cutoffs for ratios that Lord Weinstock monitored, but rather events that call for increased scrutiny in a certain area. For example, a credit card company set trip wires for a certain level of customer complaints, employee or customer attrition, reductions in average purchases or declining frequency of use of the card. Companies also set up trip wires for detecting fraud. If a customer uses a card outside his or her normal pattern or geography, the company will turn down the charge until the customer verifies it.

The problem with trip wires and warning systems is that they can sometimes blind you to larger changes in the environment. Trip wires are based on preconceived scenarios of possible events on the current model. Other events, which you may not anticipate at all, could sneak up on you from a different direction. The "digital dashboards" that are being developed to keep critical performance measures in front of managers in organizations tend to focus attention on a few key metrics. The U.S. and Soviet systems were designed to recognize a nuclear missile attack but would have been ineffective against a suitcase bomb or other terrorist act. Lord Weinstock's ratios were not what allowed him to recognize the changing terrain of investment and the telecom industry.

The more you rely on systems to guide your actions, the more you may erode the intuition to see something new. In addition to these more rigid systems for running the business, you also need to cultivate flexible metrics and monitoring. You need the tactile experience of your "hands on the wheel." The best race car drivers are not necessarily those with the best dashboards but rather those with the best feel for the road. You need to look up from the dashboard occasionally and peer out the front and side windows to ensure you are truly headed in the right direction.

- ***Look at the world through the eyes of customers.*** One way to get a fresh view of your products or services is to look through the eyes of your customers. Too many companies are internally focused, so customers can offer a fresh perspective on the business.

- ***Recognize fads.*** When people decide to abandon their old mental models, they become much more susceptible to the crosswinds of fads, pursuing mirages that appear just beyond the horizon. The assumptions can be wildly off, as was Simpson's view of the growth of telecom. Similarly, in personal life, when you set out to change your traditional diet, you can be swept into an endless series of fad diets, some with radically different mental models. Some are based on taking pills or fortified drinks to replace meals; some strip away almost all red meat and encourage high-fiber, low-calorie eating; while others, such as the Atkins diet, allow unlimited meats and cheeses while scorning carbohydrates. Barry Sears' 40/30/30 ZONE diet calls for a balance of 40 percent carbohydrate, 30 percent protein and 30 percent fat. Some diets are based on eating all you can of certain foods on certain days—or an unlimited quantity of a certain food such as cabbage soup—while others are designed around periods of fasting where you eat no foods. Some are based on one-size-fits-all approaches, while others, such as the plan proposed by Peter D'Adamo in *Eat Right for Your Type,* tailors the diet to your specific blood type—recommending a hunter-caveman diet for Type Os while Type As are to eat a more vegetarian diet. Can all these diets be right?

In assessing potential new models, you need to be rigorous in your analysis. What is the basis for the claims? Can the model really deliver on its promise? In what ways does this new mental model create a different set of blind spots and how can you protect yourself against these?

- ***Know yourself.*** Depending on your own experience, you can face different kinds of pitfalls in shifting models. Very inexperienced people, in general, will tend to jump too quickly to embrace a new model. Most experienced people, in general, have a tendency to stick too long with the old model. By understanding ourselves, we can better avoid being blinded by either maturity or inexperience.

As illustrated in Figure 3.1, young people or start-up organizations have high differentiation (are able to see the world through fresh eyes) but have fewer capabilities for action.[11] As they age, they reach a prime state where they are both able to recognize new things and have the capabilities needed to act on these insights. Maturation follows, when they are still good at getting things done but increasingly are locked into their well-worn models and cannot recognize new things. They have accumulated considerable experience, which they tend to use to explain everything, whether the explanation actually fits or not. As differentiation and capabilities sink low, the individual or organization enters demise.

Flexibility and openness to new ideas, which are more common in young individuals and in start-ups that are still formulating their processes and mindsets, can lead to a tendency to run from fad to fad, chasing new models merely because they are new. On

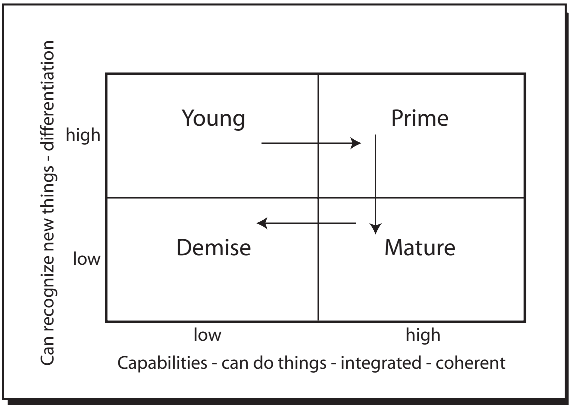
Can recognize new things - differentiation
high
low
Young
Prime
Demise
Mature
low
high
Capabilities - can do things - integrated - coherent

FIGURE 3.1 Knowing yourself

the other hand, the status quo approach, which is more common in mature individuals and organizations, leads to a tendency to dismiss new opportunities and mindsets. This is the approach seen in Lord Weinstock, who stuck doggedly to his old models even as the world was changing around him. The danger if yours is a mature organization is that you will back the wrong horse, missing changes in your environment because all new information will be force-fitted into the old model. With maturity, you have considerable experience and a vast mental model repertoire, which have served you well but are both a blessing and a curse. Demise follows when the ability to get things done diminishes and new things are increasingly difficult to handle.

Individuals have little choice but to follow this path from youth to demise in their physical development, although many consistently reinvent themselves to stay young in their thinking. Organizations generally react to a perception that they are headed into decline by attempting to reinvent themselves and bring in new leadership, as GEC did with the arrival of Lord Simpson. This is a turning point for the organization, and a potentially dangerous one. It is like a heart transplant. In attempting the transition from the old to the new the patient may gain many more productive years of life—or may be lost on the operating table.

Some visitors to the racetrack will have a tendency to stick to the same horses and riders they have always known. Others will tend to jump from horse to horse, backing whatever hot new jockey or horse enters the starting gate. Both tendencies will lead to certain kinds of mistakes. Knowing how you approach the process of shifting new mental models can help you be more vigilant about errors.

- ***Beware of the midlife crisis from postponing change.*** Because of this cycle, mature individuals and organizations sometimes hit a “midlife crisis.” They avoid changes for a long while and then make a dramatic leap, often with very negative consequences. The impact of the corporate version of this process can be seen in Lord Simpson’s decisions. This pattern can also be seen in the wholehearted embrace of the Internet in the late 1990s by companies that had long dismissed it. In the more personal version of this crisis, the protagonist may give up the minivan for a sports car, abandon a marriage of many years to revisit the bars and dating of his youth or give up a stable career to launch a new business venture. Some people use this route to successfully reinvent their lives, but many destroy their family relationships and their careers in the process, with little to show for it at the end. They become frustrated with their old mental model and essentially throw it out to adopt a new one.

- ***Use experimentation to avoid a leap in the dark.*** One way to avoid the “midlife crisis” and minimize the need for dramatic leaps is to engage in continuous adaptive experimentation. (We’ll discuss approaches in Chapter 7.) Though Henry Miller contends that leaps in the dark are necessary for growth, they are not always necessary and they don’t have to be *in the dark.* People often present options in the form of stark, binary positions (staying or leaping, resting on GEC’s laurels or reinventing its future), but usually there are many more options. The fork in the road presented by a new mental model is more complex, as illustrated by Figure 3.2. At these decision points, you could decide to keep your existing model without changing it; throw out the old model and adopt a new one, as Lord Simpson appeared to do; or conduct experiments, monitor and modify or adapt your model as needed. Unless an extreme shift is needed, this third approach is very attractive. With more experimentation, Lord Simpson might have discovered the weaknesses of his model at a lower cost. You do need to beware of using "experimentation" as an excuse to avoid courageous changes that are needed. In many cases, however, as Shakespeare put it, "discretion is the better part of valor." Why take a big and dangerous leap when you can design experiments that offer you insights with a lot less danger?

In reality, there are even more degrees of freedom than are suggested by Figure 3.2. You may not need to choose rigidly between the old model and the new. Instead you can develop a portfolio of models and apply the one that works best for the specific situation. Simpson didn't have to abandon Weinstock's old ratios and controls. They embodied quite a bit of wisdom that might have served the new organization well, even as it created new models and moved into new directions. In this way, paradigm shifts are not absolute and irrevocable, but rather "a two-way street," as discussed in Chapter 4.

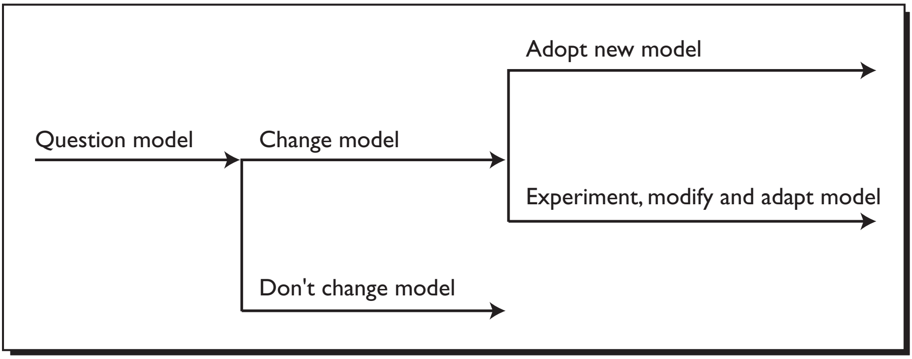

FIGURE 3.2 Choices for change

OFF TO THE RACES

The horses are already out of the starting gate. Your life and your business continue to race forward. You have placed your bet on a given model, and it has probably served you well up until now. Is it time to change horses? How do you avoid making the mistakes that GEC made in shifting its business and mental models? How do you know when to switch horses? How do you avoid backing the wrong horse or making a series of bad leaps?

Even under the best of circumstances, not all your bets will pay off. The story of Lord Simpson's decisions in this chapter, with the benefit of 20/20 hindsight, is not intended as a personal critique. Everyone has made similar—although perhaps less dramatic—mistakes. The important question is: What can you learn going forward?

Given that mental models determine your reality, it is your understanding of your mental models—and knowing when to change them—that determines your opportunities for success and your risks of failure. The chapters that follow discuss this process of building bridges between old and new mindsets, engaging in adaptive experimentation and managing the challenge of complexity. Through these and other approaches, we can recognize the need to change and move in directions that are neither a leap nor in the dark.

IMPOSSIBLE THINKING

- In what ways are your current mental models working? In what ways are they failing? Do you need to switch horses?
- What are some new models you might adopt to rethink your business or personal life?
- What are some low-cost, low-risk ways to test these models through experimentation before adopting them wholeheartedly?

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