"Place it on the bookshelf next to The Halo Effect, Switch, and The Fifth Discipline—in easy reach for rereading."

—Rolf E. Häsänen, Founder, Value at Work

THE SCIENCE OF SUCCESSFUL ORGANIZATIONAL CHANGE

How Leaders Set Strategy,
Change Behavior, and Create an Agile Culture



PAUL GIBBONS

Praise for The Science of Successful Organizational Change

"Organizational change is a huge industry filled with buzzwords and fads and suffering from an unacceptably high failure rate. Paul Gibbons applies scientifically founded, rigorous thought and practical wisdom to this charlatan-filled domain, and produces actionable, sensible, evidence-based insights that can make change efforts much more likely to succeed and organizations much more agile and effective."

—**Jeffrey Pfeffer**, Thomas D. Dee II Professor of Organizational Behavior, Stanford Business School

"The best book on change I have read. Paul Gibbons draws from his extensive experience in change management in big businesses and blends it beautifully with his knowledge of philosophy, psychology, neuroscience and even derivative trading to produce a highly readable science-based and groundbreaking study of what has gone right and wrong in managing change in the business arena."

-David Bennett, former CEO Alliance & Leicester PLC

"In my 25 years of working with teams and organizations, this is the first book that actually uses science as the foundation of how organizations learn and develop rather than platitudes and well-worn but erroneous beliefs. One of Gibbons' strengths is his willingness to tell it like it is, no matter how sacred the cow. This work will be used by businesses and consultants for many years to come."

-Curtis Watkins, Master Coach

"Paul Gibbons rethinks change management with a 21st-century approach that exchanges cargo cult management for an evidence-based approach built on neuroscience and complexity sciences. Time is overdue to replace Kotter's change model for something better suited for a complex world where change is continuous and not a one-time event, and where creative change continuously drives organizational improvement. Paul has succeeded with this, and in the process distills the best research into a book with a framework and ideas that will resonate with the modern leader and the Agile/Lean community. Buy it, read it, and place it on the bookshelf next to *The Halo Effect*, *Switch*, and *The Fifth Discipline*—in easy reach for rereading."

—**Rolf E. Häsänen**, Founder, Value at Work

"Paul Gibbons has made a valuable contribution to the store of knowledge on change strategy and strategic decision making. By applying the latest findings from the science of decision making to his 25 years of practical in-the-tranches experience counseling executive teams, Gibbons has enabled anyone engaged in strategic decision making to raise their game."

—Dan Sweeney, Director, IEE, Daniels College of Business, University of Denver

"Few people bring Gibbons' expertise, breadth of scholarship, depth of understanding, and range of experience to that most important of business practices: leading change."

—Robert Entenman, Global Head E-business for a major European bank

The Science of Successful Organizational Change

How Leaders Set Strategy, Change Behavior, and Create an Agile Culture

Paul Gibbons

Publisher: Paul Boger

Editor-in-Chief: Amy Neidlinger

Executive Editor: Jeanne Glasser Levine Development Editor: Natasha Wolmers

Operations Specialist: Jodi Kemper

Cover Designer: Alan Clements

Managing Editor: Kristy Hart

Project Editor: Elaine Wiley

Copy Editor: Karen Annett

Proofreader: Jess DeGabriele

Senior Indexer: Cheryl Lenser

Compositor: Nonie Ratcliff

Manufacturing Buyer: Dan Uhrig

© 2015 by Paul Gibbons

For information about buying this title in bulk quantities, or for special sales opportunities (which may include electronic versions; custom cover designs; and content particular to your business, training goals, marketing focus, or branding interests), please contact our corporate sales department at corpsales@pearsoned.com or (800) 382-3419.

For government sales inquiries, please contact governmentsales@pearsoned.com.

For questions about sales outside the U.S., please contact international@pearsoned.com.

Company and product names mentioned herein are the trademarks or registered trademarks of their respective owners.

All rights reserved. No part of this book may be reproduced, in any form or by any means, without permission in writing from the publisher.

Printed in the United States of America

First Printing May 2015

ISBN-10: 0-13-400033-1

ISBN-13: 978-0-13-400033-6

Pearson Education LTD.

Pearson Education Australia PTY, Limited.

Pearson Education Singapore, Pte. Ltd.

Pearson Education Asia, Ltd.

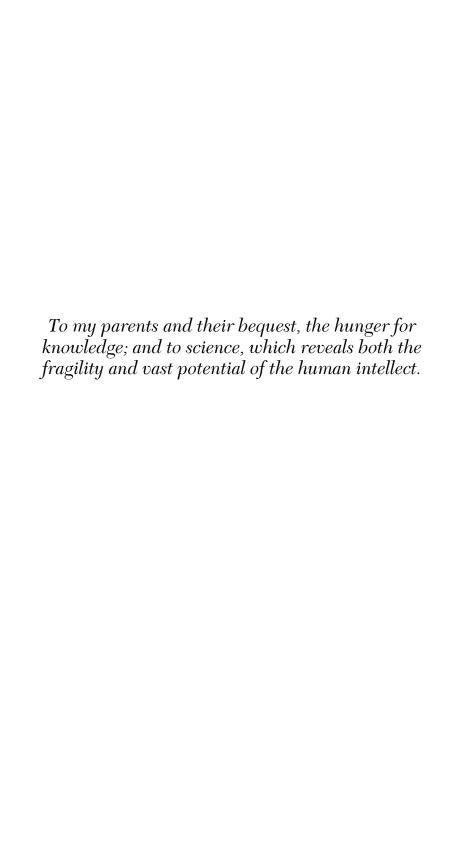
Pearson Education Canada, Ltd.

Pearson Educación de Mexico, S.A. de C.V.

Pearson Education—Japan

Pearson Education Malaysia, Pte. Ltd.

Library of Congress Control Number: 2015934399



Contents

	Introduction1
	How to Set 3 Million Dollars on Fire
	Reports in Drawers and Personal Change
	From the Laboratory to the Sweat Lodge
	Defenders of the Faith—How to Prove Something Works7
	Spoiler Alert—The Whole Book in One Diagram 9
	The War Between Validity and Usefulness
	The Path Ahead: Change-Agility, Strategy, and Tactics 12
	How to Read This Book and Make It Useful
Chapter 1	Failed Change: The Greatest Preventable Cost to
onapter 1	Business?
	The Change Problem—How Bad Is It?
	Evidence on Change Failure Rates
	Does All Change Fail the Same?
	Does Failure Always Mean the Same Thing?21
	Change Masters and Change-Agility
	Failed Metaphors—The Fantasy of the Static
	Organization23
	The Change Problem as a People Problem
	Change Myths
	Everybody Is an Expert on People Issues—Or Are They? 30
	Putting the Change Manager Out of Work
	From Change Management to Change Leadership31
	Change Leadership and the Human Sciences
	Conclusion
PART I	Change-Agility
	The VUCA World and Change Strategy37
Chapter 2	From Change Fragility to Change-Agility 41
-	The Systemic Change Model
	Agile People
	Agile Culture

	Agile Structures—Beyond Hierarchy	. 63
PART II	Change Strategy	
	Change Strategy	. 71
	Strategic Coherence	
	How Change Strategy and Change Tactics Interact	
	Consequences of the Strategy-Tactics Split	
	Favor Continuous, Rather Than Discrete, Involvement	
	Change Strategy—The Road Ahead	. 75
Chapter 3	Governance and the Psychology of Risk	.77
•	Psychology of Risk—Knowing the Mind of God?	
	Six Systematic Flaws in How Humans Think about Risk	
	Planning Fallacy and Consulting Fictions	
	Uncertainty—What to Do When Risks Are	
	Unmeasurable	. 91
	Managing Aggregate Change Risks	. 98
	Conclusion	100
Chapter 4	Decision Making in Complex and Ambiguous	
•	Environments	103
	Complexity	104
	Two Tools for Solving Complex Problems	106
	Ambiguity and the Human Side of Analytics	115
	The Human-Machine Interface—Where Data	
	Becomes Wisdom	
	The Human Side of Analytics	
	Conclusion	121
Chapter 5	Cognitive Biases and Failed Strategies	123
-	Cognitive Biases in Business	
	Perception Biases	126
	Problem-Solving Biases	
	Solution-Selection Biases	141
	The Wisdom (or Madness) of Crowds	154
	Conclusion and Implications for Change Experts	155

PART III	Change Tactics15	
	The Road Ahead	
Chapter 6	Misunderstanding Human Behavior16	
	How to Not Get Invited Back to Dinner Parties	
	Folk Psychology	
	Gurus and Pop Psychology16	
	Psychology: Science in Its Infancy	
	Psychological Myths17	
	Neuroscience	
	The Century Where Brain, Mind, and Behavior Come Together?	
	Conclusion	
Chapter 7	The Science of Changing Behaviors	
	From the "Science of Mind" to the "Science of Behavior"	
	The Cognitive Backlash Throws the Behavioral Baby Out with the Behaviorist Bathwater	
	Neobehaviorism	
	Behavioral Specificity—Checklists	
	Safety Behaviors HSE—Environmental Behaviorism 20	
	From Change Agent to Choice Architect	
	Nudging in Society and Business	
	The Mastery of Habit	
	Changing Behaviors through Training and Development 21	
	Getting More Behavioral Change and Greater Accountability from Soft-Skills Programs21	
	Conclusion	
Chapter 8	The Science of Changing Hearts and Minds22	
	The Craft of Changing Minds	
	Resistance to Change	
	From Change Management 101 to "Wicked Messes" 229	
	Influencing with Facts	
	The Mindful Leader24	
	Conclusion	

Chapter 9	Leading with Science
	Toward a Science-Based Craft
	Business versus Science: Two Examples
	What Is Science?
	Antiscience and Pseudoscience
	From Antiscience to a Scientific Mindset270
	From Prescience to Evidence-Based Management (EBM)
	Leadership, Reason, and Science
	Leadership and Farsight
	Conclusion—Science-based Leadership and Human Flourishing
	Bibliography
	Index

Acknowledgments

It takes a lot to build a career, and many people, mentors, clients, colleagues, and bosses were supportive beyond what was sometimes rational. Thanks to Ray Aldag, Julie Baddeley, Nichola Batley, Aidan Brennan, Richard Briance, Peter Burditt, Cari Caldwell, Simon Collins, Tom Dolan, Maureen Erasmus, Jerry Goldstein, Kelvin Hard, Sigi Hoenle, Dennis Keegan, Kate Larsen, Mike Lewis (consultant), Michael Lewis (author), Jamie Maxwell-Grant, Frank Milton, Steve Oristaglio, AJ Pape, Paul Reyniers, Anita Roddick, Tom Ryves, Makoto Sagi, Bassam Shakhashiri, James Shaw, Rob Shephard, Tim Stanyon, James Shaw, John Stewart, Paul Taffinder, Val Thompson, Mark Wade, Ian Wells, Ian Wilson, Chuck West, Roger Wyn-Jones, Mark Young, and Hyuk Yu.

Many people reviewed early drafts of chapters while they were still unreadable. They were kind enough to say directly when that was the case—a sign of true friendship. This includes Alan Arnett, Charlie Birch, Sarah Boulton, Francis Briers, Olivier Compagne, Pete Cuozzo, Trevor Davis, Geri Gibbons, John Gibbons, Pete Hamill, John Holt, Maz Iqbal, Rob Goathem, Stephen Guise, Akira Hirai, Claire Martin, Larry Pearlman, Tim Ragan, Brian Robertson, Surekha Subramaniyan, Aine Watkins, Curtis Watkins, and Andrew Williams.

A number of researchers were extraordinarily generous exchanging ideas electronically or providing guidance at various stages. These include Rob Briner, Dan Hausman, Helen Hughes, Phillippa Lally, Jan Lorenz, Scott Lilienthal, Mark Keil, James Kuklinski, Brendan Nyhan, Jeffrey Pfeffer, and Nassim Taleb. They bear no responsibility for any wayward ideas in the final product.

Both my agent and publisher were extremely forgiving of this first-time author and his attendant idiosyncrasies. Maryann Karinch and Jeanne Glasser Levine are due the warmest thanks for helping steer this project to completion. Thanks also to Elaine Wiley (Coyote), Karen Annett, and the whole team at Pearson for their extraordinary professionalism.

So many friends offered support in so many ways during the incubation of this book, but some stand above the crowd for their generosity of spirit and support. David Bennett, Robert Entenman, Adam Gold, Jake Simpson, Dan Sweeney, and Guy Warrington, you have my enduring gratitude.

My most heartfelt gratitude goes to my two young boys, Conor and Luca, who handled their dad's distraction and distance during writing with great maturity, and to my own parents, Moira and Willie, who sparked my initial love of scholarship, science, and philosophy.

About the Author

Paul Gibbons has a 35-year career straddling international business and academia. His research and writing explores how philosophy and science can be used to enlighten contemporary business thinking and solve practical business problems, including changing culture, developing leaders, and using analytics and evidence to make strategic decisions. During his 30 years in Europe, he was a derivatives trader, consultant, adjunct professor, and founder/CEO of an award-winning Organization Development consulting firm, Future Considerations. He now writes, teaches, and raises two boys in Colorado.

Introduction

"It is curious how often you humans manage to obtain that which you do not want."

—Spock, Star Trek: The Original Series, "Errand of Mercy"

How to Set 3 Million Dollars on Fire

In March 1993, the derivatives market was booming, and banks—although intoxicated by the profits—were worried about the risks of these strange, complex instruments and how to control the armies of traders making all that money. The normally reserved world of British commercial banks had been taken over by brash traders using swarthy epithets as often as the gammas and deltas of the trade. Senior management loved the income, but did not understand the math, hated the new trading-room culture of risk, vulgarity, and aggression, and were at sea with how to manage a business they did not understand.

So they called in the cavalry: consultants.

PwC had assembled a team from MIT, Harvard, and Oxford to help Barclays develop a comprehensive "Risk Management Framework." I was on the team as "a math guy" and because, as a former trader, I spoke the traders' language, the gammas, the deltas, and the epithets.

We worked for months interviewing senior leaders, traders, and other risk experts by day and writing our reports by night. The result was 12 ring-bound volumes of several hundred pages each. The one featuring the majority of my contributions was filled with pages of equations describing how financial instruments behaved under various stresses using advanced statistics. The other volumes were similarly

detailed and dense, suggesting what strategies, systems, accounting procedures, processes, and management practices Barclays should use to manage risk.

We charged 1.8 million pounds (\$2.7 million), which was a hefty consulting fee for 1993.

And then, nothing happened.

"What?" you say, "surely not nothing?" To be more precise, our findings were presented to the board of directors who nodded vigorously at all the right times. Then we presented to the executive committee, to the managing directors, to the business unit heads, and to their teams. They all nodded and applauded. No PowerPoint slide was left unturned. Almost *none* of our recommendations became real business change.

Although they found our logic compelling, and our recommendations sound, Barclays failed to "mind the gap," the one between agreeing with something and doing it. Barclays might as well have lit a bonfire on Lombard Street with the three million bucks (which, given London's spring weather, would have been better use of their capital).

I was crushed. From Master of Universe Consultant to snake-oil peddler on my first project. The project team remains the smartest and most professional I had ever known. What went wrong? There seemed to be three questions:

- 1. How could our recommendations not have been implemented when Barclays was so worshipful of them?
- 2. If our recommendations were as good as we and the bankers thought, what else should we have done to get them adopted?
- **3.** When were they going to blow the whistle on consultants for charging huge fees, producing no results, and hopping off to the next assignment?

Reports in Drawers and Personal Change

Little did I know that such epic fails were more the rule than the exception in strategy consulting; they have a name, "the report in a

drawer." Over the next 18 months, I worked on several strategy projects that soon decorated executive shelves and bottom drawers.

This professional epic fail paralleled one in my personal life.

As a teenager in 1980, I worked in cancer research before submitting myself to the sleepless nights of medical education. My research project involved studying the biochemistry of cancer to understand the effect of Vitamin A on skin cancers through its effect on DNA and RNA synthesis—by treating little white mice with a carcinogen from cigarette smoke. Despite this, and since the age of 14, I smoked a pack of Marlboro Red per day. At the lab, I would squirt the cigarette extract, watch the mice get cancer, and grab a quick smoke between experiments. While working at Barclays, I still frequented the parking lot for smoke breaks, so for almost 20 years I had ignored all the science, some of which I produced firsthand, which told me I was killing myself one cancer stick at a time.

The link between the failed project at Barclays and my death wish was not lost on me. There must be a link between how I systematically defied in-your-face rationality, and how Barclays effectively ignored our advice on risk management.

This birthed a tremendous hunger: How do people change, and how do businesses make real change happen? How do good ideas get acted upon in the real world, and how do reports find their way from bottom drawers into hearts and minds? This seemed to be a problem at the root of human happiness, business prosperity, and how we manage ourselves as a society.

The equation seemed to be:

 $E \times X = Change^1$

E seemed to be expertise, knowledge, research, statistics, advice, reasons, rationality, and clear thinking. My strategy colleagues and I were good at all that. X was the bit that stumped me completely, that I knew nothing about—the "special sauce" that combined with reasons produced change. X had eluded me in my personal life, and now in

¹ Later, in the change management practice, we used $O = E^2$ (output equals excellence times engagement), and others use $R = Q \times A$ (results equals quality times acceptance).

my professional life. I wanted to make a difference, not just espouse grand theories, and to be someone who did not just talk a good game but could play ball. I wanted *X*.

I changed gears. For almost two decades, I lived, ate, and breathed organizational change. My immersion was obsessive: in its academic disciplines (psychology, sociology, Organization Development, and Organizational Behavior), training in Daryl Conner's change toolkit, Californian "self-actualization" workshops, training as a counselor, working as a change manager in dozens of businesses, and teaching the advanced change management program to management consulting partners.

From the Laboratory to the Sweat Lodge

Then another problem reared its head. Little did I know that leaving the solid bedrock of science and reason for the world of change meant journeying to the opposite end of the spectrum—a world where ideas were much harder to test.

At first, I accepted perspectives in books such as Gladwell's *The Tipping Point*, or Goleman's *Emotional Intelligence* uncritically, never wondering how much meat there was on the sandwich, or whether eating marshmallows really predicted success (it does not).² My new change colleagues and I talked about emotions, socially constructed realities, presencing, living systems metaphors, ancient wisdom, consciousness, cultural memes, spiritual values, and stakeholder engagement. I loved the writings of 1990's change gurus—for example, John Kotter (Harvard) and Tom Peters (McKinsey)—and at that time, I accepted their ideas uncritically because of their reputations.

Then, as I traveled farther down the change rabbit hole, I encountered notions such as "quantum leadership," "right-brained

As with many psychological ideas that are presented as fact by popular media, Mischel's research on emotional intelligence is controversial. How the media popularizes and exaggerates research in psychology is the subject of Chapter 6, "Misunderstanding Human Behavior."

leadership,"³ and "leading from Source." I attended Organization Development (OD) workshops (also attended by household names in that field) that began with an "attunement" to let in Spirit, and workshops to reveal the collective unconscious (Jung) of a business. One workshop, hosted by consummate change professionals and attended by senior executives from a leading consumer goods company, used a labyrinth (a room-sized carpet that looks like a maze) to evoke insight and creativity. The premise was that if one walked around this ancient sacred structure with a question in mind, insight and creativity would emerge. I just got dizzy. Clients, normally discerning business people, suppressed whatever reservations they might have had.

I was now a stranger in a strange land. I knew there was more to producing organizational and personal change than reasons and "smarts," yet change theories had no science to back them up, and most of my fellow practitioners disdained science in favor of "other ways of knowing."

I had found that the change world (Organization Development and change management) had an overlap in values and methods with humanistic psychologists, pop psychologists, therapists, 1960's counterculture, and New Age spirituality. As great "people-people," they made for outstanding facilitators, but I always had nagging doubts about how reliable methodologies guided by those underlying belief systems might be. Of course, there is no standard belief system that represents the entire people side of business. I had explored the most extreme realms, hungering for meaning, for personal answers, and answers to the question, "How do people and businesses change?" On my search for meaning and insight, in those extreme realms, I had a lot of company; the demand for esoteric approaches from senior business people is enormous. In addition to labyrinths, I hosted Native American drumming workshops, encounter groups, Lego-play workshops, monastic retreats at monasteries, ropes courses, trust falls and trust walks, improvisational and standard theater sessions, yoga and tai-chi, psychodrama, and workshops with concert violinists and pianists. The

³ There is no such thing as a "right-brained" person or a "right-brained" leader, and psychological dispositions (such as being logical) are unrelated to hemispheric dominance. This, too, is explored in Chapter 6.

clients for these workshops were all in the top 100 corporations in the world and household names. I would wager that 100% of companies in the Global 500 have used and still use at least one of those techniques.

While experimenting with those methods, I also hungered for proof. Clients were happy and came back for more, so I left behind happier workplaces—but was the change sustainable, and did business results follow from the increased engagement? Naturally, in parallel with the esoteric work, I did much "change management" that looked more traditional: stakeholder engagement, team alignment, strategy facilitation, communications planning, organization design, and change-leader coaching. Some of my change experience was on projects with billion dollar price-tags.

Yet, how much better proven were the more conventional tools I favored, such as business cases, process-mapping, organization performance models, risk registers, stakeholder analyses, and criterion matrices, than my friends' labyrinths? Was it just a matter of taste? Although I became skeptical of some of the more esoteric approaches, I had equally little evidence to prove what I did.

The most shocking thing is that during more than 30 years in business, at the most senior levels, in the world's biggest companies, dispensing consulting advice, no client *ever* asked me whether there was evidence to support the models, frameworks, tools, methods, and ideas I proposed using. *Never*. I worry, silly me, about using methods on billion-dollar projects that are based on beliefs for which there is skimpy evidence. Do we just use what looks good, what is in fashion, and what gurus say works? Do we use what methods we know best rather than the best methods? How do we evaluate methods side by side in this science-free world?

I sought to square this circle, in 1999, with some research. I was a pioneer in an academic movement within Organization Development (OD) called Spirituality in Business, which had the very sensible idea that people had a spiritual dimension to their lives—either religion, a deep sense of values, or a commitment to some kind of humanism. By bringing their whole selves to work, they would be more engaged

and passionate. Value-centered leadership would become the norm. However, my research was aridly called *Spirituality at Work: Definitions, Assumptions, and Validity Claims.* I tried to bring some hard science to where my passions lay, and to the softest part of the soft end of OD. This book, in some ways, extends that project—can we bring some harder-edged concepts and some robust validity testing to the tools and ideas used by change leaders? Can we prove a certain kind of workshop "works"?

Defenders of the Faith—How to Prove Something Works

In this book, I want to shake up our collective certainty that what you do works. As you'll see in Chapter 1, "Failed Change: The Greatest Preventable Cost to Business?," change fails about half the time. Defenders of the status quo say "my methods are tested and proven." They mean, "When I use this change management tool (for example, model, framework, workshop, intervention, process), I *cause* the following result (for example, performance improvement, increased engagement, reduced cycle time)."

The problem is that we cannot easily prove cause and effect and that what we do works. Why? When a car mechanic replaces a gasket and the engine stops leaking, the mechanic has excellent evidence that his craft has worked. There are few, if any, other likely explanations for the engine leak stopping while the car was under repair in the garage.

This is never true in business. As you will see in Chapter 4, "Decision Making in Complex and Ambiguous Environments," businesses are complex systems and complexity theory tells us that cause and effect are never provable with any confidence in a complex system. When I intervene to improve employee engagement in order to improve financial performance, the causal chain between what I do, the engagement, and the financial performance is far too flimsy for me to make the same claim as a car mechanic can. People who make

strong causal claims about what they do and company performance are guilty of two logical fallacies: *post hoc ergo propter hoc* (it happened before it, so it caused it) and causal reductionism (reducing to a single cause something that could have been caused by many things). This kind of reasoning is why people buy homeopathic and herbal remedies and over-the-counter cold medications. None of these beat placebo,⁴ but people claim to feel better after taking them. They forget that they take them when they feel sick, are doing other things that do work (resting), and that all mild ailments improve on their own.

At the risk of being a bore, in the philosophy of science, if you say some intervention you make *caused* an improvement in performance, you have to prove it was a *necessary condition*, meaning the improvement would not have happened without your help. Many consultants make far stronger claims, that what they did was a *sufficient condition*, meaning what they did was enough *by itself* to cause the change. There is too much going on inside a business—too many other variables—that could have produced the result. This problem is solved by scientists using an untreated *control group*, which is then compared with the treatment group. In practice, this is hard to do in business. You will see, throughout this book, but particularly in the final chapter, how this even applies to research conducted by prestigious business schools. It especially applies to research done by consultants who always have something to sell.

Business is a people thing, and the human sciences lack precision and predictive power. We could go along pretending more precision than exists, or we could take a different approach and be far more skeptical (and humble) about what we do.

In this book, we visit some better-tested, more empirically valid theories from the human sciences, debunk a large number of change and psychological myths, and explore some recent discoveries that

⁴ Placebos can have a very powerful effect; the mind is a better healer than pseudoscience.

advance our understanding of people and consequently change topics such as influencing stakeholder communication, decision making, and behavioral change. Along the way, I also propose some ideas that have not yet been tested, but ought to be.

Spoiler Alert—The Whole Book in One Diagram

Figure 1 divides the change world into valid/not valid and useful/harmful.⁵ I believe that the future lies in moving as much to the upper-right quadrant as we can—that is, using practices that are both valid *and* useful. This requires a shift in business culture, toward more scientific validity, more measurement, and greater accountability for results. The shift will take decades, but there are indications that it is already under way with new analytics and data-driven approaches to decision making and a phenomenon called evidence-based management, which is discussed more in Chapter 9, "Leading with Science."

There is much research (upper-left quadrant of Figure 1) that is little known or used, and I hope to offer some of the research I find most interesting that has had little take-up in the change community. Businesses, I hope to show, must move practices (policies, models) from the lower-right quadrant into the upper-right quadrant by evaluating, proving, and testing them. Alternatively, policies, models, and practices that are proven harmful should be moved to the lower-left quadrant and discarded. In many sections of this book, I challenge some of what passes for accepted wisdom in the change world. I also take the liberty of introducing some ideas (on change-agility) that are interesting, useful-looking, but unproven.

⁵ Both *validity* and *usefulness* are nuanced and contested terms. There are hundreds of books on how we can prove that we know something (in the philosophy of science, epistemology, and books on research methods). In short, by *validity* and *evidence*, I mean (very roughly) that you can prove what you do with the scientific method, and if I did it also, I would get the same results. The final chapter has more details exploring evidence in the section on evidence-based management.

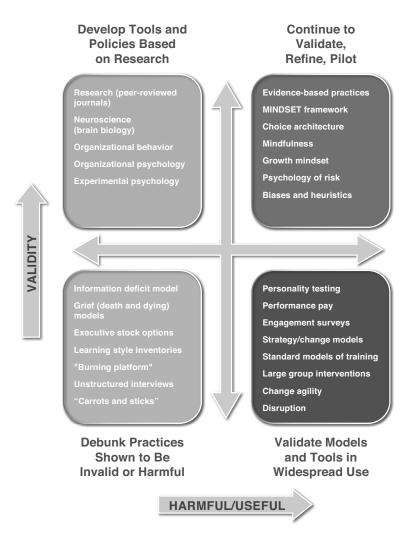


Figure 1 Change management culture needs to move toward increased validity and accountability even though it will take decades.

The War Between Validity and Usefulness

In the business world (especially in HR/change), we have a war, between the "validity people" and the "usefulness people." The validity people berate the usefulness people for lack of evidence and pseudoscience. The usefulness people, when they do not just ignore the researchers, respond, "Leave me alone, I have a job to do." The usefulness people, in their desire to get on with things, are guilty of

dropping rigorous evidential standards, hence we get fads, pseudoscience, antiscience, and lack of accountability. They then berate the validity people for not "being in the real world." This theory-practice war destroys value and not just in business. I once asked a criminology professor about the evidence basis for what happens in the criminal justice system. He replied, "Whatever the evidence proves, the system (prisons, parole, courts) does precisely the opposite."

Some topics I weigh in upon are hotly contested. Neuroimaging is an exciting area, but there is much debate around whether brain scans show what they claim to show. (One researcher put a dead fish in a brain scanner and found it lit up when shown images. This did not end the debate about imaging; it was more like putting out the fire with gasoline.) There are volumes—thousands of articles—written about performance-related pay (PRP). When I bluntly say "PRP does not work," this is to act as a counterweight to the "commonsense" idea that paying people for performance increases motivation and performance. The truth is more complex, but the weight of evidence goes against commonsense.

Most of what happens in the change world (and generally in business) has little scientific evidence at all, and we cannot simply switch off the juice until everything is proven. The need do something on Monday morning should not prohibit us from working in parallel on improving the validity of what we do.

Scientific evidence is not necessary for everything: Agriculture existed in preliterate societies as practices developed by trial and error were handed down over generations. However, they also made a lot of mistakes and some rituals they thought worked, such as those to influence the weather gods, were wasteful. Business is more like that than it is like medicine, but even medicine was based on folklore 200 years ago. Doctors had well-established rituals and practices, but they were based on utterly wrong ideas about the body (biochemistry, physiology, and so on) and lack of evidence on whether a treatment worked—because the scientific method had not permeated medicine.

⁶ This is explored further in Chapter 7, "The Science of Changing Behaviors," but the relationship between incentives, motivation, and performance is not straightforward. If you have to choose between "PRP works" and "PRP does not work," you are safer with the latter claim.

Doctors believed in things such as "humours" and used things like leeches. As with business change today, patients sometimes got better and sometimes died. When they improved, the doctors took the credit (and not the fact that they would have recovered without the leeches). When change fails, do we admit to ourselves that some of our "rain dances" may not work as well as we think, or that maybe our understanding of what make people tick still has "humours"? In change leadership, success has many fathers, and failure is an orphan.

On these contested topics, it matters a great deal less whether we are right or wrong on a particular topic than that we start to ask ourselves the hard questions within the practitioner community (for example, change, HR, or OD people). Business clients can hold the experts' feet to the fire and insist upon higher standards of accountability and evaluation.

The Path Ahead: Change-Agility, Strategy, and Tactics

Although most books on change focus on change tactics, I believe that sound *strategy* in a *change-agile* organization should reduce the need for extensive *tactical* change interventions. Accordingly, *The Science of Successful Organizational Change* is organized in three parts: Change-Agility, Change Strategy, and Change Tactics. The final chapter and conclusion deals with change leadership.

In Chapter 1, the first, context-setting chapter, we look at the scale of the change problem through two questions: How much change happens, and how much does it fail? Leadership is, uncontroversially, the single most important factor in making change happen. The chapter shows that leaders are poorly equipped to lead change because of the structure of business education and because even the expert world is rife with bad metaphors and change mythology.

Change-Agility

One essential capability in a VUCA world (Volatility, Uncertainty, Complexity, and Ambiguity) is the ability to adapt, learn, invent, and

build quickly. If every major change project entails bloodletting, overruns, damaged trust, and unintended consequences, eventually an external threat or internal change will arise that will be too much. In that scenario, each major change leaves the business no better, or perhaps worse, change fatigued, demoralized, and unready for the next change. Change-agility creates adaptive organizations, ones that appear to surf the waves of disruptive technologies, avoid the rapids in turbulent economic times, and set the pace for other businesses to follow.

Chapter 2, "From Change Fragility to Change-Agility," explains those ideas with examples from Google, 3M, IBM, and Shell and four perspectives: agile people and behaviors, agile cultures, agile structures, and agile processes.

Change Strategy

Starting with two premises, that no tactical interventions can fix a flawed strategy and that most of what is written about leading change is tactical, we look at strategy. Chapter 3, "Governance and the Psychology of Risk," examines some of the pitfalls from the realm of where math meets people. Chapter 4, "Decision Making in Complex and Ambiguous Environments," introduces two tools for decision making and discusses the human side of analytics. Chapter 5, "Cognitive Biases and Failed Strategies," covers strategic errors that result from cognitive biases.

Change Tactics

Change tactics are a much better-traveled territory than change strategy. Rather than provide a book of tools, this section looks at twenty-first-century human sciences for insights on leading people through change.

Chapter 6, "Misunderstanding Human Behavior," looks at how we learn what we know about leading people from psychology, the media, popular culture, and gurus. Those concepts from popular psychology lead unhelpfully to *pop leadership* and notions particularly unhelpful to change leaders.

Chapter 7, "The Science of Changing Behaviors," looks at neobehaviorism—how behaviors can be changed without always using persuasion and influencing, but also without resorting to coercion. Chapter 8, "The Science of Changing Hearts and Minds," examines multistakeholder dialogue, influencing with facts, mindfulness, and new ideas on resistance to change.

Chapter 9, "Leading with Science," summarizes the implications for leadership and leadership development, suggesting that the faculty of "farsight" (that seemingly uncanny knack for spotting future opportunities and niches) is an important, although neglected leadership asset, but one that can be developed (so we do not have to run around looking for geniuses). The chapter then discusses ideas on leading with science, or leadership as a science-based craft. First, antiscience and pseudoscience must be stamped out, but then I introduce an intriguing possibility. In the twenty-first century, medicine began to move toward evidence-based medicine. I believe if we can follow the lessons from medicine, evidence-based management could be an exciting paradigm shift.

How to Read This Book and Make It Useful

This is a short book with an enormous breadth of topics, many of which are extremely complex. My ambition is to provoke debate and ask the right questions, not to have the final word (for example, on whether neuroscience is useful). I ask your forbearance in advance should the treatment of a big subject be too abbreviated; many sections of the book, such as mindfulness, neuroscience, complexity, choice architecture, or cognitive biases, have entire libraries devoted to exploring them. I am usually trying to do one of four things on a topic:

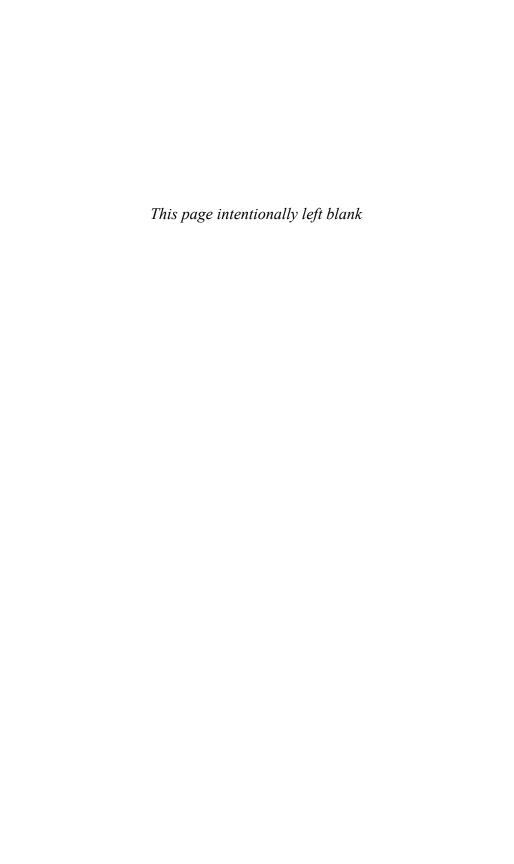
- 1. Challenge the received wisdom in a particular area, such as neuroscience.
- **2.** Bring a newer area to the attention of change practitioners, such as cognitive biases or the psychology of risk.

- **3.** Introduce a subject well understood by the change community to an executive audience, such as large-group interventions or systems thinking.
- **4.** Air some of my own models and ideas, such as the systematic change model, leadership as a science-based craft, or strategic coherence, so they can be challenged and strengthened.

One early reviewer of this book said, "What you suggest is correct, but easier said than done." Everything in the business world is easier said than done! Leadership is as challenging a practical discipline as philosophy and mathematics are as abstract disciplines because technical complexity and social/interpersonal complexity intersect, sometimes making straightforward technical challenges difficult to solve practically.

What I ask of you is that you read with the question, "How might I apply this?" in mind. You will find basic scientific findings on complexity, on analytics, on risk, on biases, on changing behaviors, on influencing hearts and minds, on changing culture, and on creating agile organizations interesting and thought provoking. In a practical discipline, such as business, interesting ideas are the booby prize.

The devil is not in the detail, but in the application. The heavy lifting of applying it to the organizations you lead must be up to you. Mindfulness research has shown that the practice reduces stress, improves emotion control, and betters focus. That does not mean saffron robes at the next executive committee meeting, but it might mean a few private, five-minute sessions per day to reequilibrate, or educating workers in how to practice mindfulness at work. Similarly, you will see how cognitive biases plague high-stakes decision making. You can shrug, and hope they do not affect your teams, or you can design safeguards and new practices that help auto-correct the decisions before they cost money. In short, making these insights *useful* will be your job. *The Science of Successful Organizational Change* will be useful only if it sparks intense conversation *and* alters the way you change.



1

Failed Change: The Greatest Preventable Cost to Business?

The Change Problem—How Bad Is It?

At a time when governments worldwide were desperate to cut deficits, and asking citizens—one way or another, whether by increased taxes or reduced benefits—to foot the bill, the 2011 headline in the British tabloid rag, the *Daily Mail* must have been unwelcome:

"£12bn [\$18bn] NHS Computer System Is Scrapped..."

The UK government had, after a decade, canceled the largest civilian IT project in the world at the National Health Service (NHS). Initial cost estimates had come in at a mere £2.3 billion (\$4 billion), which presumably seemed a steal at the time. On the other side of the pond, the U.S. Census Bureau canceled the planned automation of the decennial census project after approximately \$3 billion in cost overruns. A few years later, the U.S. Air Force canceled a logistics management program that had accrued costs of \$1.2 billion. The development cost overruns for Boeing's 787 "Dreamliner" approximated \$12 billion, Avon wrote off the entire \$100 million of the "Promise Project," Denver airport's baggage system snafus cost \$1.1 million per day until abandoned with an estimated cost of \$3 billion. Merger failures are even more astonishing—if that is possible. The AOL-Time Warner merger is reputed to have destroyed \$100 billion dollars in shareholder value—more than the GDP of a few countries!

Part of that was market timing, but most of the destroyed value arose from cultural and interpersonal conflict that made structural and strategic integration of the businesses impossible.

Visible megaproject failures such as those get plenty of media and political attention, but they are just the tip of the iceberg. Most change failures are below the waterline, either failures of standard change programs, or difficulties with everyday, nonprogrammatic change. Seventy percent of change programs fail is the "statistic" that many gurus and even some experts cite. This seems an extraordinary figure; it should raise eyebrows, yet few people challenge it. Is it true?

Because this is a book on science and change, this is the place to first blow the whistle on a statistic that is neither true nor useful. The statistic "70% fails" was based on survey data published in a non-peer-reviewed magazine and on out-of-context remarks by two well respected Harvard professors (Kotter and Nohria).¹ When I say here that the survey findings are "non-peer-reviewed," why does that limit their trustworthiness? The peer review process means that the methods, data, and conclusions have been scrutinized by a jury of one's peers, and it is the gold standard for quality because of this scrutiny. Despite this, even quality popular business magazines (for example, Harvard Business Review and McKinsey Quarterly) are not peer reviewed. This is astonishing, unique to business compared to other professions, and very worrying. In medicine or science, the most popular journals also have the highest peer-review standards (such as The New England Journal of Medicine and Nature).

This raises a theme that will recur in every chapter: business has the lowest standards for "knowledge" and the lowest standards for entry among the professions (such as medicine, architecture, science, or law).

Seventy percent is a horrific number. The critical questions are:

- Is it really that bad? What is the quality of the evidence?
- What do we mean by change? Do some kinds fail more?
- What do we mean by failure, complete write-offs, and slight delays?

¹ Hughes, M. (2011, Dec. 16). Do 70 per cent of all organizational change initiatives really fail? *Journal of Change Management*, 11(4), 451–464.

Evidence on Change Failure Rates

It seems that 70 percent is only a modest exaggeration: Dozens of surveys place the actual failure rate at around 50 percent, for example:2

- Fifty percent of mergers (totaling one trillion dollars in the United States alone) fail to deliver value.³
- Seventeen percent of large IT projects go so badly that they can threaten the very existence of the company, and large IT projects run an average of 45 percent over budget, while delivering 56 percent less value than predicted.⁴
- 41 percent of change projects were described as successful in an IBM report.⁵

Perhaps this success rate is something we have to live with. In baseball, a .500 batting average is stellar. Venture capitalists (roughly) expect big returns on only about 20 percent of projects, break even on another 30 percent, and write off the rest. Is change like this? On the other hand, it is hard to imagine driving a car or using a computer that works 30 percent of the time; we expect 100 percent or nearly so.

The challenge that change failure rates pose for C-level change governance is: Are we being honest with ourselves when assessing costs and benefits, return on capital, and risks of major change? Do the firm's accounting and capital budgeting processes reflect these failure rates? Do internal and external management consultants' proposals reflect these failure rates?

² Surveys of this kind are not robustly scientific, but they are the best that is available in this arena. There are those who downplay the source, saying that consulting firms use the 70 percent number as a scare tactic to persuade clients that they need their services. To me, this seems doubtful. In my mind, these abysmal success rates are a striking indictment of the consulting profession rather than a reason to use them more!

³ Bain US and European Acquisition Success Study (2007).

⁴ Bloch, M., Blumberg, S., & Laartz, J. (2012, October). Delivering large-scale IT projects on time, on budget, and on value. McKinsey Quarterly (online).

⁵ Jorgensen, H., Owen, L., & Neus, A. (2013). Making change work. IBM Future of Enterprise.

The next skeptical question is: What do we mean by change failure? Do failure rates vary by type of change?

Does All Change Fail the Same?

Change failure rates do seem to vary by the type of change attempted. UK researcher Dr. Martin Smith summarized 49 separate studies of change success from the academic and trade press and found the kind of variability we might expect. See Table 1.1.

ams

TYPE OF CHANGE	NUMBER OF STUDIES	MEDIAN SUCCESS RATE
Strategy deployment	3	58%
Restructuring/downsizing	9	46%
Technology change	5	40%
Mixed change	1	39%
TQM (Six Sigma)	5	37%
Mergers and acquisitions	9	33%
Reengineering/process design	7	30%
Software development/installation	6	26%
Business expansion	1	20%
Culture change	3	19%
Total	49	

Surveys of this small number of firms are underpowered statistically and limited as scientific evidence, yet the numbers suggest failure rates just below 50 percent, with culture change (as expected) the most fraught.

Leaders need estimates such as this before attempting something like culture change: Do we expect to do better than the average 19 percent success rate? Why? If I may add to that number anecdotally, I often say that if I had \$100 dollars for every time someone said "we have to change the culture" and I had to give back \$10,000 every time I saw culture change succeed, I would be well ahead.

⁶ Smith, M. E. (2002). Success rates for different types of organizational change. Performance Improvement, 41(1), 26.

Does Failure Always Mean the Same Thing?

Research including types of change takes us a bit further, but not far enough. What matters even more is the type of change failure. A complete business busting write-off is different than a 25 percent overrun. The lack of definitional rigor of most change surveys produces an average that includes tolerable delays (by the standards of organizational change) and those complete write-offs.

If some executives interviewed for the surveys use the word failure to signify "failed to deliver 100 percent of expected benefits," or "overran budget and timetable," and others use failure to signify "abandoned project halfway and wrote off entire project expenditure with no positive and many negative results," then even the average estimates from Smith's research conceal some important facts. To get to a more useful statistic, we need a better definition of failure and an analysis of outcomes by kind of failure, perhaps using a rough framework such as SOCKS (Shortfalls, Overruns, Consequences, Killed, Sustainable), shown in Table 1.2.

Table 1.2 SOCKS Taxonomy of Project Failures

SOCKS CATEGORY EXAMPLE¹ Benefit SHORTFALLS: The project Hershey's ERP supply chain system Little data is available on the average benefit shortfalls by type of change causes \$100 million revenue dip. completes, but there are important shortfalls in benefits delivery causing or type of business. disruption of business processes. Cost OVERRUNS:2 The project Boston's "Big Dig" overruns by Average cost overruns are 27% completes, but there are significant with one in six more than 200%.3 overruns (cost or time). Unintended CONSEQUENCES: The Fox Meyer Drug \$65 million ERP Little aggregate data is available on project completes, but there are costly. system bankrupts the company. adverse consequences, either the unintended consequences. number of projects affected or the type Scott Paper successfully cuts costs, and extent of consequences. earnings spike, but long-term competitiveness collapses. KILLED programs: The project is killed Denver Airport baggage system first delayed Little data is available on the number of after significant investment. airport opening by 18 months, but was projects killed and written off completely. then scrapped at a rough cost of \$3 billion. Lack of SUSTAINABLE results: Results are Following BP's Texas City refinery disaster Little data is available on how many projects delivered, but are not sustained over time. a new focus on health and safety behaviors have benefits that erode over time brought about short-term gains that eroded as memory of the event faded.4

¹ Why projects fail blog. Goatham, R. (Ed.). Retrieved from http://calleam.com/WTPF/.

² There is a strong relationship between overruns and benefits delivery. If a system will save \$1 million per month, delays extend costs and alter benefit timing.

³ Based on research we will revisit in Chapter 3, "Governance and the Psychology of Risk," from Professor Bent Flyvbjerg of Oxford.

⁴ Based on the findings of Baker, J.A., et al. (2007, January). The report of the BP U.S. refineries independent safety review panel. Retrieved from http://www.csb.gov/assets/1/19/Baker_panel_ report1.pdf.

This SOCKS categorization is not a scientific categorization because terms such as *consequences* and *sustainability* can mean a lot of things, but it is considerably better than just talking about "failure." It is a place to start, and every project should have a SOCKS review once completed (or not) using early budgeted costs and benefits as a baseline. This way, businesses can develop internal analytics on how projects fare and how they fail to meet expectations in ways that are useful for capital budgeting. They may be able to draw conclusions such as "When we attempt reorganizations, we exceed budget by an average of 30 percent, and there are often many negative, unintended consequences," or "When we have acquired a new company, the financial returns were, on average, 25 percent less than we had predicted."

As you will see throughout this book, when it comes to measuring change implementation performance, science is lacking, and practitioners are very slow to challenge orthodoxy or urban legends such as the 70 percent statistic. We need much better answers to questions such as: What types of change are riskiest? How much more risky is big budget change than small change? What factors increase/decrease risk? Does performance vary across business regions or functions?

Change Masters and Change-Agility

Even with better statistics on failure rates for types of change (culture change versus IT system implementation), and types of failure (write-offs versus delays), businesses need to go one step further. They need hard, empirical data on their own change performance. IBM, in *Making Change Work*, found enormous variation in change success between organizations that know what they are doing and those that stumble around.

The IBM survey identified a cohort of "Change Master" companies, who claimed an 80 percent success rate for change (almost double the average in the survey) and much better than "Change

Jorgensen, H., Owen, L., & Neus, A. (2013). Making change work. IBM Future of Enterprise.

Novices" who managed a miserable 8 percent success rate. The next chapters explore some of the facets of these change-agile businesses.

A leader in this is Cisco Systems who, late in the last century, was acquiring one company per quarter. Cisco started to study merger success factors both in the market, generally, and also specifically which factors affected their success and failure. They found that mergers of similar-sized firms fail more often, as do mergers where geographical distance is a factor, as do mergers where cultural dissimilarities are pronounced. Although this sort of analysis is observational (only producing correlation, not cause), it nevertheless is a step toward understanding specific factors related to a specific kind of change, in a specific business.8

Failed Metaphors—The Fantasy of the Static **Organization**

Heraclitus, the pre-Socratic Greek philosopher, intoned, "Everything changes and nothing remains still... and... you cannot step twice into the same stream." It is not just a metaphysical truth; it is a practical one for today's businesses. Today's organizations are less static than ever before; staff come and go faster due to shrinking job tenure and the end of "job for life" careers; much speedier information flows have demanded increased reaction times: local businesses have become less local, buffeted by events in faraway lands (for example, car dealers in Kansas affected by the Fukushima Daiichi nuclear disaster).

The kind of change covered by change surveys is called programmatic change, the big CRM system, or the rollout of the new HR policy. In the last section, we saw that about half of programmatic change fails in some respect; what we did not yet consider was how much change that might be! Consider this observation from 2012 while teaching at the University of Wisconsin.

⁸ From the superb book by Pfeffer and Sutton, Hard Facts, Dangerous Half-Truths, and Total Nonsense, Profiting from Evidence-based Management (Harvard Business Review Press, 2006).

If ever a group of businesspeople represented Middle American business, this was it—25 middle-aged managers, from ranks of middle management, of middle-American, medium-sized companies. The middle of the middle of the middle. What does change look like away from the headline-grabbing failures and \$100 million IT projects, smack in the middle of the business world? Our first task of the day was for the managers in attendance to list the change projects running in their companies. After 15 minutes, the whistle blew, and we counted: 585! Each company represented was running an average of more than twenty. The managers were then to "star" the projects in which they were involved: Those 25 managers were involved in 214 projects. These middle-American managers were under constant pressure from the day-to-day business of change—there was very little that was stable.

Another kind of change is even more prevalent than programmatic change, and that is continuous, nonprogrammatic change. These managers were affected by centrally driven, big programs as well as programs they initiated themselves (such as a departmental reorganization). They also were expected to continuously improve performance, help staff grow, make their processes more efficient, build new relationships, network, hire new people, and much more. Then, to add another layer of change, they were affected by change in other departments/divisions—what I call change backwash. A big change program in HR stretches HR's capacity to serve the business. These managers' experience at work was more or less constant change and its effects, constant pressure, and constant turmoil. The manager who "just keeps things running smoothly and doesn't have to worry about change" is a fantasy, perhaps from a bygone era, but certainly not today. This also casts doubt upon the standard notion that management is about efficient running of the status quo and leadership is about change.9

This distinction is from two of the most eminent of leadership theorists, Bennis and Drucker. They are so well regarded that their definitions of leadership and management have essentially never been questioned. In my view, we need to think critically about pat assertions such as this, however impressive their sources might be.

The underlying paradigm, upon which almost all change models rest, is that change is episodic, a disruption to an otherwise static business. I cautiously predict the next decade will hasten the demise (a demise that has been predicted for some time) of the notion of a business as a mechanistic, static entity, with rigid structures, and punctuated by episodic major change. This old paradigm can be seen in two additional canonical (and I think highly inaccurate) change metaphors, Business as Usual (BAU) and the oldest change model, unfreeze, change, refreeze. 10 The first of those metaphors suggests that there are things that are changing and things that are stable. The second of those implies that organizations are stable, and then you have to "unfreeze" them. There is no "frozen" in today's businesses.

The above metaphors and models are sacred territory—rarely are they challenged. From a scientific point of view, metaphors are neither true, nor false—they are either helpful, leading us to consider things in a better light, or unhelpful. BAU, unfreezing, and "management is about efficient running of the status quo" are, I think, not just unhelpful, but harmful in three ways:

- 1. Management education—In the way we train managers today, we do not equip them to manage change continuously. As we discuss more fully later, change management is thought of as a specific, discrete set of skills tucked away in a corner of a traditional MBA, or saved for later in management development programs.
- 2. The role of the manager and the change specialist-Managing change is not a small subset of management and leadership; it may be the majority of management and leadership—and even if only 20 percent of a manager's role, it may be 80 percent of her headaches. Change is every manager's job every day. Managing change is too important to be outsourced to specialists.
- 3. Manager mindset and cognitive dissonance—Teaching people that change is a disturbance to a stable status quo means that they compare their experience with that nonexistent

From Kurt Lewin, a brilliant, pioneer social psychologist and change theorist from the 1940s.

ideal. Change frustrations arise because the world ought to conform to that ideal: stable and predictable. This leads to the widespread (and false) conviction that change must always be difficult.

The amount of change managers deal with, the high failure rates of programmatic change, and the constant challenges of continuous change suggest that that failed (or failing) change is the single largest preventable cost to business. Now we should ask why.

The Change Problem as a People Problem

"If it weren't for the people, the god-damn people,' said Finnerty, 'always getting tangled up in the machinery. If it weren't for them, the world would be an engineer's paradise."

-Kurt Vonnegut, Player Piano

One unhelpful, yet commonplace, way of looking at change is as either a technical problem or a people problem: "hard stuff" or "soft stuff." People problems involve engagement, culture, resistance, communication, morale, involvement, skills, attitudes, behaviors, and so forth. Technical problems, on the other hand, involve budgets, planning, quality, risk, controls, change processes, system/ user requirements, or other challenges of a technical nature (such as how to integrate two CRM systems during a merger). The insight that belies the false hard stuff/soft stuff dualism is this: The technical dimensions of a change, strategy, tactics, planning, risk management, and design of new processes and structures become people problems because people have to solve them. For example, a massive systems project was four months behind schedule because of a technical programing issue. Our change team found that this was caused by a shortage of internal C++ programmers with the right skills. The issue then became a people issue that found its way to HR (recruitment). Then we found that HR could not simply hire more programmers because it didn't have the budget, or the clout. The problem was weak HR leadership. The program delay was eventually (after

months) escalated to executive leadership, who were irked that the \$120 million program was delayed because of inability to hire a few people at 60 bucks an hour. Yet the program governance structure did not permit the program director to easily push such issues up the chain of command. The problem of getting some C++ code written was, in fact, a leadership and governance problem at multiple levels.

The soft/hard (or technical/people) dichotomy has its roots in the canonical writings on organizations in the 1950s. Businesses, of course, are not really hard or soft, but most people see this metaphor as a natural, intuitive, and practical way of looking at the world. The metaphor lives on, like so much in management, unchallenged, as if it were Truth. I am not so sure. The split engenders entirely the wrong kind of thinking about the capabilities needed to implement change. The split leads to people issues (the soft stuff) often being thought of as separate or peripheral from the main objective (getting the "real" change implemented). Indeed, even the word soft seems to diminish its importance.

This split often causes the people side of big programs to be undervalued and the change experts to become necessary evils (which would be unnecessary if Finnerty's "god-damn people" did not cause so much trouble). For example, British Petroleum's (BP) Global Head of HR said of the change management plan of a \$100 million project, "I certainly do not want my people sitting in bean-bag chairs, next to lava lamps, talking about how they feel during this project." Accenture technical consultants had a nickname for change management experts: "chicks making slides," a stunning, one-two combination of ignorance and sexism. When I became a "change guy," more than one PwC colleague challenged my sexual orientation. The soft, in business, is associated with the feminine, and the feminine is still regularly discounted. Sexism is alive and kicking in the twenty-first century, and it affects how both women and people issues (HR) are seen and heard in the workplace, which is a much bigger issue than just change. One IBM partner, who runs billion-dollar projects, described it this way: "When budgets get tight, the first thing to get cut is change management, the second thing is user skills-training, and the third is the program management office." If it is true that the most difficult aspect of change is the people side, then it seems self-defeating that change is the most quickly slashed part of program budgets.

As alluded to earlier, this devaluing of the people side of change is also found in business school curricula. A two-year Harvard MBA has no leading or managing change in its required, core curriculum of about 15 subjects. Managing change is 1 of about 100 electives (although there are one or two that are change-related). The Europeans do no better. INSEAD's MBA also has zero change leadership/management electives, and ostensibly squeezes what leaders need to know about change into their core Organization Behavior (OB) module. It is not a stretch to say that graduates from top business schools emerge with little or no change management theory and (because the courses are theoretical) zero change management experience. If we accept that juggling multiple change programs is part of every manager's job, and that leading major change most severely tests executive mettle, then the content and structure of business education may be part of the change problem.

In summary, technical problems (such as technology, systems, and processes), project problems (such as governance and planning), and people issues (such as stakeholders, engagement, and culture) are all leadership issues. How we educate business leaders in change and how we think about change (technical versus people, soft versus hard) seem to be at fault.

Change Myths

Education in leading change is lacking in standard curricula, but in addition, much of what is taught (canonically) in change leadership programs is untrue—based on dated research, urban myth, or folklore. Study the following list closely. How many of these change myths were you taught, still believe, or ring true? These 20 change myths are merely a sample of misconceptions about change that twenty-first-century science has exposed. Upcoming chapters cover each of these in detail. The specific chapters that deal with these myths are listed in parentheses:

- You need a burning platform to drive change: Negative emotions motivate. (2, 7)
- Trusting your gut is a reliable decision-making strategy. (5)

- Rewards are at least necessary motivators and are sometimes sufficient. Behavioral change involves the right mixture of carrots and sticks. (7)
- Consultant-experts provide an objective analysis of business problems. (5)
- Benchmarking tells us what good performance looks like and fast followership is an effective strategy. (2)
- When stakeholders dissent about a complex problem, bringing experts in to talk to them is essential. (8)
- People know what they want, and will act rationally in pursuit of it. (5)
- There is a natural, inevitable division between people who decide and people who do. (8)
- A concrete budget and delivery plan, from which little deviation is permitted, are essential. (2)
- Changing habits is about having a big goal to get you motivated. (6)
- Giving people more information will alter their point of view. (7)
- In times of complexity and chaos, the best solution template comes from prior experience. (4)
- Change provokes an emotional response that follows the grief model—denial, anger, bargaining, depression, and acceptance.
- Worst-case estimates accurately assess the downside risk of particular strategies. (3)
- If you change hearts and minds, behavior follows along. (7)
- Brainstorming (going for quantity of ideas first) is the best way to generate high-quality new ideas. (5)
- Increasing worker engagement increases productivity and profitability. (9)
- Involving many people slows progress. (8)
- If a program goes badly, it is very important to quickly "get back on the change horse." (5)
- When things get difficult, people become more cautious. (3)

Everybody Is an Expert on People Issues— Or Are They?

The change expert has to get his expertise recognized by people who reckon they are "pretty good with people," except everybody reckons they are pretty good with people. As you will see in Chapter 6, "Misunderstanding Human Behavior," it is in this arena that people have the biggest gap between their confidence and their competence.

Change experts can be wet blankets. We make projects more socially complex, raise stakeholder risks, recommend involvement (usually), challenge cultural norms, and require resources and senior leadership time to address those risks. We advocate time-consuming engagement up front: "It is doubtful that engineering will accept that quality control process without extensive involvement in its design." We have to challenge leaders personally: "Your personal style is effective in many situations, but it will be a liability in this one." When we give reasons for things, those reasons are couched in psychological/sociological language that does not always play with project leaders and budget holders schooled in finance. (What executive under pressure wants to hear, "People may feel threatened and defensive," or "This may conflict with their cultural preferences and preferred communication style"?)

In today's businesses, with change expertise only in the hands of specialists, and top-down change the norm, it is an error to assume people will play nicely. The change expert throws cold water on that convenient error, introducing the near certainty of resistance to change. In Chapter 2, "From Change Fragility to Change-Agility," I speculate that certain business cultures (with the right mindsets, structures, and processes) could make this kind of change resistance a thing of the past.

Putting the Change Manager Out of Work

This makes the expert's job tough. More important, it suggests something hinted at earlier: Change expertise is too important to be left to specialists.

On major projects, change people are called in to sprinkle change pixie dust and make people problems go away. Their efforts are directed at persuading, involving, and communicating in order to align people with the change. However, this is a bizarre circumstance, for is it not the manager's job to persuade, involve, and communicate? Are not change managers, and their tools, a Band-Aid to cover up managerial insufficiency? (In the same way, consultants are sometimes called in to do jobs that more capable teams might well accomplish on their own.) This specialist discipline, practiced by experts (often internal or external consultants), is used to provide tools, models, and expertise that (mostly) ought to be part of every manager's day job.

Imagine an organization filled with leaders at every level who excelled at aligning staff with change strategy. Key change programs become priorities for them; they work hard at understanding the big picture, handle conflict assertively yet gracefully, motivate and align staff, communicate with affected stakeholders (for example, customers), skillfully facilitate cross-functional or cross-cultural teams, facilitate strategy development and planning, and challenge recalcitrant behavior. Would we, if such superstar skills existed throughout the business, need change management?11 Winning hearts and minds and changing behaviors is the job of leadership; therefore, to some extent, change management is used to shore up shortfalls in leadership and to bring skills that are far distant from business education.

From Change Management to Change Leadership

Following that line of reasoning, I believe that it is time to euthanize change management as we now think about it, and replace it with change-agile organizations and change-capable leaders at every

¹¹ Yes, these activities must be organized, but the change facilitator who parachutes into recalcitrant groups would be unemployed. Most of what I have been asked to do is put the pieces back together of a change program that has fallen apart because of poor leadership or insufficient attention to change issues at the outset. Of course, there will still be high-stakes, critical conflict resolution, strategy formulation and alignment, communication strategy development, and organization design efforts that require deep specialist expertise.

level. There will still be a need for change management skills and knowledge, but those will be widespread, and not concentrated in a few hands.

Table 1.3 proposes some principal differences between change management and change leadership (though there is more overlap than the split suggests).

 Table 1.3 Change Leadership Versus Change Management

CHANGE LEADERSHIP	CHANGE MANAGEMENT
There must be an internal leader; this cannot be outsourced to consultants.	Change management teams are often external consultant-experts, especially on big projects.
Engaging with change and leading change is what I do every day, constantly.	Engaging people with change is done through "set-pieces," workshops, "town halls," coaching, and communication.
The main foci are change strategy and building change-agility (removing the need for rearguard change fire-fighting).	The primary focus is change tactics and, more rarely developing change-agility.
"Being" is important (hard to reduce leadership to tasks): day-to-day engagement, inspiration, and challenge ("the happy warrior" metaphor) are key.	Change management is largely process, event, and tool based.
There is a proactive focus on building local change-agility and on business-wide issues.	Change management is often reactive and more narrowly focused.
Modeling leadership behaviors and personal change is critical.	Change manager behavior has less symbolic meaning, and is less important than the behavior of key sponsors
The critical role is before and during launch (and throughout, but uniquely before).	The critical role is from launch onward (and generally this is a mistake).

Change Leadership and the Human Sciences

"Of all the subjects which he might undertake to formally study, none is more important for the businessman-to-be than human behavior."

—Wallace Donham, 2nd Dean of Harvard Business School, 1919–1942

Some of the change leadership skills required by local leaders are attracting resources, resolving conflicts, streamlining decision making, negotiating, influencing, coaching, removing obstacles, handling risks, motivating people to solve problems, and establishing the right governance structure. Those skills depend on theories of what makes people tick and how they respond in various situations.

The Science of Successful Organizational Change looks at the assumptions and understanding of human behavior that lie behind those skills. Influencing skills, for example, depend upon assumptions about motivation, communication, social factors, power and resistance, how information is processed, what changes beliefs, and how beliefs change behavior. For example, if the underlying fabric of assumptions is flawed, the influencing skills (as recommended by hundreds of books) will be less effective.

Much contemporary understanding of human behavior in business comes to us through the discipline of psychology (and sister field, social psychology). However, human behavior is much more complex than any single field can explain, describe, or predict. Consider the raft of tools used by HR: personality types, psychometric assessments, engagement surveys, emotional intelligence, communications skills, motivational concepts, happiness/satisfaction, trait and behavioral models of leadership, coaching, self-esteem, learning style, and theories. All are based on psychology, and are somewhat useful when used correctly. As you'll see in Chapter 6, "Misunderstanding Human Behavior," the psychology on which they are based is a narrow, young field, whose status as a science is mixed.

Many interesting insights come from the intersection of psychology and other disciplines, such as economics. From just the nexus of psychology and economics, we get economic behavior, decisionscience, incentives, predictive rationality, heuristics, cognitive biases, and other insights not always found in traditional psychology texts (nor, may I suggest, in the toolkit of most organizational change consultants). The business leader and change consultant with only psychological insight at her disposal is playing golf with a single club in her bag.

This book promises a science-based treatment of change leadership that takes the newest ideas in psychology but also introduces concepts from other human sciences. The word cloud in Figure 1.1 illustrates just how rich this area is and the sorts of ideas soon to be discussed.

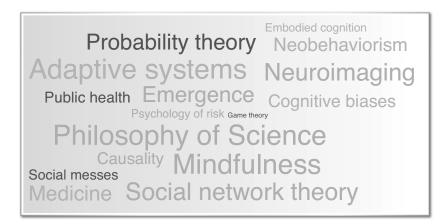


Figure 1.1 Human sciences with essential perspectives on change leadership.

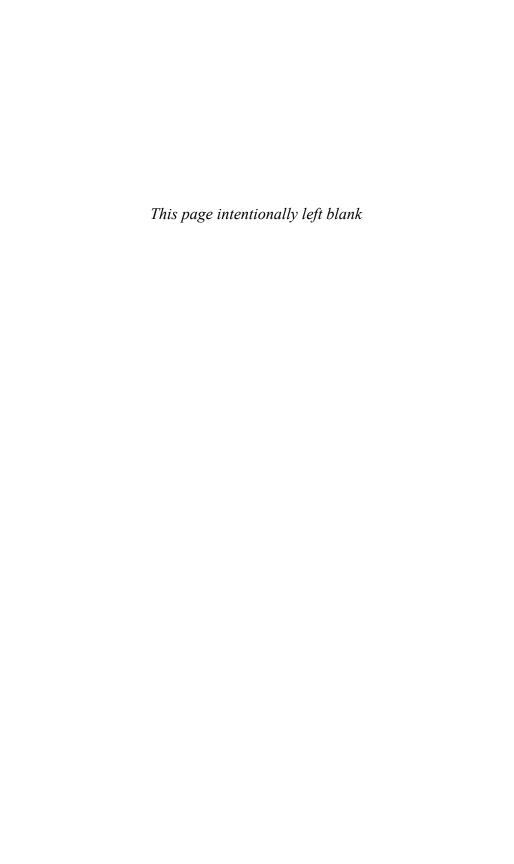
Some of these subjects, such as neuroscience, are already much discussed in the change leadership world. As I will show, neuroscience does not quite measure up in usefulness to the amount of media attention that it receives. Other terms, such as complexity and emergence, are thrown around but are very much misused, and I will clarify what they really mean and offer some tools for working with them. Other areas, such as evidence-based medicine, the psychology of risk, and neobehaviorism are relatively underrepresented relative to their usefulness.

Conclusion

The headline "change failures" grabs attention, but change is a substantial portion of what management does today. Businesses need robust data on their (SOCKS) performance to understand realistically where they fall on the Change Master—Change Novice scale. The idea that organizations are static, and change is episodic, is harmful, and it means that change skills are greatly undertaught in the business community. The soft-hard split between people issues and "real" issues is harmful, and even this language suggests the people stuff is less important.

We should euthanize change management: If we had great, inspiring, change leadership skills through the management pool, there would be much less need for tactical change management. The world is not ready for that because change management (and related subjects) is just a tiny portion of traditional management education, not reflecting the reality that most of a manager's role today is change-related.

The next chapter looks at how the world today might be different and how some leading businesses face up to the challenge of change-agility.



Index

A	noohohariorism Saa noohohariorism
A	neobehaviorism. <i>See</i> neobehaviorism
abstinence, 210	overview, 189
action bias, 124, 145-149	Behavioral Safety (BS), 200-202
diagnostic questions for, 154	behavioral specificity, 198-200
herd mentality, 147-149	behaviorism. See also neobehaviorism
reorganizations, 145-147	advantages of, 190
action triggers, 208-209	black box (stimulus-response) model,
Adenauer, Konrad, 290	189-190
agile change management, 64-65	ethical challenges, 191
agile culture, 49-50	limitations of, 190-191
	practical failures of, 191-194
innovation and. <i>See</i> innovation in agile	punishment, 192
culture	rewards, 192-194
leadership behavior changes, 50	Bell, Alexander, 221
agile execution, 64	benchmarking, 277-278
agile idea management, 63-64	benefit shortfalls (in SOCKS
agile learning processes, 66-68	framework), 21, 90
agile people, 44-49	Berlin, Isaiah, 127
agile structures	biases. See cognitive biases
hierarchy, 57-59	Big Data, 116-118, 121
holacracy, 61-63	Binet, Alfred, 173
project-based business (PBB), 59-60	black box (stimulus-response) model,
self-managed work teams (SMWT), 60	189-190
akrasia, 222	black swan events, 92-93
Amazon, 107	Boeing Dreamliner, 233
ambiguity	Bohr, Niels, 126
analytics, 103, 115-116	Bossidy, Larry, 241
Big Data, 116-118	brain biology, 179-184
human-machine interface, 118-119	Bridges, William, 227
people issues, 119-121	Briner, Rob, 147, 280
pitfalls of Big Data, 121	Business as Usual (BAU) change
American Express, 275	metaphor, 25-26
analysis in complicated systems, 106-107	business schools, change management
analytics	courses in, 27-28
ambiguity and. See ambiguity	business versus science, 257-259,
complexity and, 103	262-264
HR analytics, 176-177	202 201
antifragility, 41-42	
antiscience, 265-269	\mathbf{C}
Ariely, Dan, 123	Carleton, Paul, 55
Aristotle, 261	case studies, 276-277
attention training. See mindfulness	categorization in simple systems, 106
availability bias, 124, 135-136, 140	causal loop diagrams, 110-112
	cause and effect
D	in systems thinking, 109-115
В	as unprovable, 7-8
backfire effect, 238-239	Chabris, Christopher, 168
bad habits, breaking, 210-213	change
balancing loops, 110-111	
behavioral change	resistance to. <i>See</i> resistance to change speed of, 38-39
behaviorism. <i>See</i> behaviorism	change-agility, 37-40
humanism, 194	~, ~ .
···· ··· · · · · · · · · · · · · · · ·	agile change management, 64-65 agile culture, 49-57
	agne culture, 45-57

agile execution, 64	climate, innovation and, 55-57
agile idea management, 63-64	cognitive biases, 123-126, 275
agile learning processes, 66-68	list of, 124
agile people, 44-49	perception biases, 126-135
	problem-solving biases, 135-140
agile structures. See agile structures	solution-selection biases, 141-154
change management versus, 40	wisdom of crowds, 154-155
organizational characteristics, 39	cognitivism, 194-197
systemic change model, 42-44	
change backwash, 24	cohort studies, 278-279
change experts, 30-31	Collins, Jim, 127
change failures	commitment escalation, 149-154
examples of, 17-18	communication, nonverbal, 178
learning from, 132-135	complexity
statistics on. <i>See</i> statistics on change	analytics and, 103
failures	complicated versus, 104
types of failure, 21-22	features of complex systems, 104-105
change leadership	inadequate management methods,
change management versus, 31-32	105-106
human sciences and, 32-34	systems thinking, 109-115
change management	understanding complex systems,
agility of, 64-65	107-108
change-agility versus, 40	complicated systems
change leadership versus, 31-32	complexity versus, 104
leadership role in, 30-31	defined, 106-107
risk registers, 77	systems thinking, 109-115
technical issues versus people issues,	confirmation bias, 124, 135-136, 140,
26-28	150
validity and usefulness within, 9-10,	Conner, Daryl, 178
162-163	consequences. See unintended
Change Management 101, 229-230	consequences (in SOCKS framework)
Change Masters, 22-23	constraints on complexity, 105
change metaphors, failure of, 23-26	consulting fictions, 84-85
change myths, 28-29	continuous change, 24
Change Novices, 23	controlled experiment, 280-282
change risk, 77-78, 98-100	Cook, John, 239
change strategy, 71-72	Copernicus, 261
change strategy, 71-72 change tactics versus, 72-75	corporate mission statements,
• 5 . •	innovation and, 53-54
change tactics	cost overruns (in SOCKS framework),
change strategy versus, 72-75 model of, 230	21, 90
•	creating good habits, 208-210
changing	crisis situations, 108-109
behavior. <i>See</i> behavioral change	crowdsourcing, 154-155
minds	cultural resistance to change, 226
Change Management 101,	culture, 49-50
229-230	
influencing with facts, 237-241	innovation and, 51-57
mindfulness, 242-252	leadership behavior changes, 50
overview, 221-222	risk awareness in, 96-98
resistance to change, 222-228	curiosity, 271-272
social messes, 232-237	
chaotic systems, 108-109	D-E
character plane, 288	Davis, Trevor, 117
checklists, behavioral specificity,	
198-200	The Debunking Handbook (Cook and
childhood roots of psychological	Lewandowsky), 239
problems, 178	decision making
choice architecture, 202-205	ambiguity, 115-121
Cialdini, Robert, 240	cognitive biases, 123-155
Cisco Systems, as Change Master, 23	in complex system, 104-115
	systems thinking, 109-115

types of systems chaotic systems, 108-109 complex systems, 107-108 complicated systems, 106-107 simple systems, 106	experimentation, 107-108, 272, 280-282 expert opinion, 276 extreme events, normal distributions and, 92-94
Deepwater Horizon disaster, 128-131, 202	F-G-H
delays, 224 destruction, 223 deterministic fallacy, 87-89, 124, 135 developing mindfulness, 249-252 development, 213-219	facts, influencing with, 237-241 backfire effect, 238-239 effective use of facts, 239-240 MINDSPACE framework, 240-241 overview, 237-238
dissent, 224	FAE. See fundamental attribution error
distancing, 224	failed metaphors for change, 23-26
Donham, Wallace, 32 Drucker, Peter, 171	failures. See change failures
Dweck, Carol, 45-47	fallacies. See cognitive biases
Dyson, Freeman, 126	farsight, 288-291 Feynman, Richard, 270, 288 fictions of consulting, 84-85
EBM (evidence-based management),	Fifth Discipline Fieldbook (Senge), 230
272-287	fixed mindset, 45-47
case studies, 276-277	"Fixes that Fail" archetype, 112-113
cohort studies, 278-279	Fleming, Alexander, 271
controlled experiment, 280-282 expert opinion, 276	flourishing, 185
hierarchy of evidence, 274	Flyvbjerg, Bent, 83
implementing, 282-285	Fodor, Jerry, 183
observational studies, 279-280	folk psychology, 163-167 formal decision-making models,
overview, 272-274	intuition versus, 142-144
positivism, 285-287	foxes, hedgehogs versus, 127-128
professional experience, 275-276	fragility, 41
surveys and benchmarking, 277-278 economics, psychology and, 33	framing effect, diagnostic questions for,
education, 213-219	135
agile learning processes, 66-68	frozen businesses change metaphor,
in change management, 64-65	25-26 fundamental attribution error, 124
in risk probabilities, 81-82	defined, 166
EGAP (Everything Goes as Planned), 84-85	diagnostic questions for, 140
egocentric bias, 124, 140	Gall, Franz Joseph, 173
Einstein, Albert, 92, 135 Eisenhower, Dwight, 290	Galton, Francis, 154
Ekvall, Goran, 56	GameChangers, 63-64
emergence, 104-105	Gates, Bill, 221
emotional resistance to change, 226	Gell-Mann, Murray, 103 George, Bill, 49, 251
emotions, expressing versus "holding it	Gerstner, Lou, 49
in," 178	Gigerenzer, Gird, 81, 142
environmental behaviorism, 200-202	Gladwell, Malcolm, 168-169
episodic change, 24	good habits, creating, 208-210
errors. See cognitive biases escalation of commitment, 149-154	Google
estimates	70-20-10 rule, 57
overoptimism of. See planning fallacy	experimentation, 108 innovation in, 51-53
point estimates versus probabilities, 87-89	graphology, 173-174 Greek philosophers, 172-173
realistic estimates, 86-87	grief, stages of, 178
ethical challenges in behaviorism, 191	groupthink, 154-155
evidence. See EBM (evidence-based	Grove, Andy, 152
management)	growth mindset, 45-47
evidence-based management. See EBM	Guise, Stephen, 209
(evidence-based management)	gurus, 167-170

gut feelings. <i>See</i> intuition Gutfreund, John, 151	climate, 55-57 Google, 51-53 mission statements, 53-54
habit mastery	storytelling, 54-55
breaking bad habits, 210-213	The Innovators Dilemma (Christensen),
creating good habits, 208-210	262
explained, 205-207	institutional bias, 124, 154
habitual resistance to change, 226	Intel, 152-153
halo effect, 124, 131-132, 135	intelligence as unchangeable, 178
The Halo Effect (Rosenzweig), 277	intuition
Hamlet, 172	formal decision-making models versus,
happiness, 178	142-144
Hard Facts, Dangerous Half-truths &	Isaacson, Walter, 265
Total Nonsense (Pfeffer and Sutton),	"is-ought" fallacy, 124, 139, 140
259	Ionic Irving 154
hard/soft dichotomy, 26-28	Janis, Irving, 154 Jobs, Steve, 242, 265, 289
Harris, Jeanne, 116	Johnson, Samuel, 132
hedgehogs, foxes versus, 127-128	Johnson, Bantuci, 102
Heisenberg, Werner, 286	Kahneman, Daniel, 84, 86-87, 124, 149,
Heraclitus, 23, 228	169
herd mentality, 147-149	Keillor, Garrison, 126
hierarchy, 57-59	Kelly Criterion, 81
of evidence, 274	Kennedy, John F., 290
Hoenle, Sigi, 258 Hoffer, Eric, 44	Keynes, J. M., 147, 161
holacracy, 61-63	killed programs (in SOCKS framework),
holistic model of resistance, 225-226	21, 90
Holt, John, 200	Klein, Gary, 95, 142
HR analytics, 176-177	know-about knowledge, 213
HSBC bank, 251	know-how knowledge, 213
Hsieh, Tony, 62	Kohn, A., 193
hubris, 128-131	Kotter, John, 44, 60
human error. See cognitive biases	Kuklinski, James, 238
human flourishing, 185	~ ~ ~
human sciences, change leadership and,	L-M
32-34. See also science	Large Group Interventions (LGIs),
humanism, 194	234-237
human-machine interface, 118-119	leadership
Hume, David, 138	change leadership, 31-34
hyperbolic discounting, 124, 140	farsight, 288-291
	mindfulness, 242-252
I-J-K	organizational leadership
IBM, 22-23	change management role of,
idea management, 63-64	30-31 follow an agoment, 167
illusory superiority, 165	folk management, 167
implementation intentions, 208-209	pop psychology and, 170-171 rationality, 287-288
implementing EBM (evidence-based	as science-based craft, 255-257
management), 282-285	Leading Change (Kotter), 262
incentive behavior, 191	learning agility, characteristics of, 48-49
incentive pay packages, 267-268	learning processes. See education
Influence: The Psychology of Persuasion	learning styles, 178-179
(Cialdini), 240	left-brained versus right-brained, 178
influencing with facts, 237-241	Lehrer, Jonah, 180
backfire effect, 238-239	Lewandowsky, Stephan, 239
effective use of facts, 239-240	Lilienfeld, Scott, 181
MINDSPACE framework, 240-241 overview, 237-238	loss aversion, 191
information deficit model, 238	Loveman, Gary, 270
innovation in agile culture, 51-57	ludic fallacy, 91, 124, 135
O	

	_
Machiavelli, 221	Nokia, 153
managers. See organizational leadership	nonlinearity, 104
managing resistance to change, 223-224	nonverbal communication, 178
Maslow's hierarchy of needs, 178	normal distributions, extreme events
Massive Open Online Courses	and, 92-94
(MOOCs), 66	Nudge (Thaler and Sunstein), 202
Mayer, Marissa, 204	nudging, 202-205
McGregor, Douglas, 173	<i>8 8</i> ⁄
Meadows, Donella, 107	observational studies, 279-280
measurement in psychology, 174-176	Ollila, Jorma, 153
meditation, 243-244, 249-252	
mental agility, 48	optimism. See overconfidence bias
Mesmer, Franz, 173	organizational culture. See culture
mesmerism, 173-174	organizational leadership
	change management role of, 30-31
metaphors for change, failure of, 23-26	climate of innovation, 55-57
mindfulness, 242-252	in culture change, 50
benefits of, 244-247	folk management, 167
definition of, 243-244	organizational structure
developing, 249-252	as constraint on complexity, 105
learning agility, developing, 49	hierarchy, 57-59
science of, 247-248	holacracy, 61-63
minds, changing	project-based business (PBB), 59-60
Change Management 101, 229-230	reorganizations, 145-147
influencing with facts, 237-241	self-managed work teams (SMWT), 60
mindfulness, 242-252	ostrich effect, 124, 132-135
overview, 221-222	overconfidence bias, 124, 126-128
resistance to change, 222-228	diagnostic questions for, 135
social messes, 232-237	hubris, 128-131
MINDSPACE framework, 240-241	
Mini habits (Guise), 209	overoptimism of estimates. See planning
mission statements, innovation and,	fallacy
53-54	overruns. See cost overruns (in SOCKS
	framework); project overruns
MLD (Most Likely Development), 86	
Monnet, Jean, 290	P
Moore, Gordon, 152	-
multiple modalities in agile learning	passions, driving change via, 138-140
processes, 67	patterns in random events, 79
multiplicity, 104	PBB (project-based business), 59-60
Musk, Elon, 290	peer review, 18
myths about change, 28-29	people agility, 48
myths about human behavior, 161-164	people issues
folk psychology, 163-167	in analytics, 119-121
list of examples, 177-179	expertise on, 30
pop psychology, 167-171	human-machine interface, 118-119
	risk management as, 96-98
N-O	technical issues versus, 26-28
11-0	perception biases, 124, 126-135
narrative fallacy, 124, 136-138, 140	halo effect, 131-132
naturalistic decision making (NDM),	hubris, 128-131
142	ostrich effect, 132-135
neobehaviorism, 186	overconfidence bias, 126-128
behavioral specificity, 198-200	personality as unchangeable, 178
BS (Behavioral Safety), 200-202	
choice architecture, 202-205	Pfeffer, Jeffrey, 258
explained, 197-198	phrenology, 173-174 Pinault, Lewis, 83
habit mastery, 205-213	
training and development, 213-219	Diplog Ctoplop 160
	Pinker, Stephen, 169
	Pinker, Stephen, 169 planning fallacy, 124
neuroscience	Pinker, Stephen, 169 planning fallacy, 124 consulting fictions, 84-85
neuroscience commercialization of, 186	Pinker, Stephen, 169 planning fallacy, 124 consulting fictions, 84-85 defined, 83-84
neuroscience	Pinker, Stephen, 169 planning fallacy, 124 consulting fictions, 84-85

point estimates versus probabilities,	reductionism, 105-106
87-89	reinforcing loops, 111
psychology of, 84	relative probabilities, 80-81
realistic estimates, 86-87	reorganizations, 145-147
SOCKS framework of project failure,	resistance to change, 222-228
89-91 Plate 172	identifying, 223-224 managing, 224-226
Plato, 173 point estimates, probabilities versus,	transitions, 227-228
87-89	results agility, 48
political resistance to change, 226	rewards, 192-194
pop psychology, 167-171	right-brained versus left-brained, 178
Popper, Karl, 177	risk. See also uncertainty; volatility
portfolio management	change risk, 77-78
agile execution of, 64	probabilities and, 78-82
in risk management, 98-100	psychology of, 78-91
positivism, 285-287	uncertainty versus, 91-92
practical knowledge, 213	risk aggression, 79-80
practice, theory versus, 10-12	risk aversion, 79-80
pre-mortems, 95	risk management, 96-100
prescience, 261	risk of ruin, 81
probabilities	risk registers, 77
point estimates versus, 87-89	robustness, 41
risk and, 78-82	Rock, David, 183
SOCKS framework of project failure, 89-91	Rosenzweig, Phil, 277
problem-solving biases, 124, 135-140	Russell, Bertrand, 128
availability bias, 135-136	~
confirmation bias, 135-136	S
driving change via passions, 138-140	sabotage, 223
narrative fallacy, 136-138	safety, BS (Behavioral Safety), 200-202
professional experience, 275-276	Sagan, Carl, 255
programmatic change, 23	Salzberg, Sharon, 243
project management, agile execution	sample size, 79
of, 64	Satchidananda, Swami, 249
project overruns, examples of, 83.	Satel, Sally, 181
See also cost overruns (in SOCKS	SCARF (Status, Certainty, Autonomy,
framework)	Relatedness, and Fairness), 183
project-based business (PBB), 59-60	science, 255
Pronovost, Peter, 199	antiscience, 265-269
propositional knowledge, 213	business versus science, 257-259,
prototyping in complex system, 107-108	262-264
pseudoscience, 173-174, 265-269	change leadership and, 32-34
psychology	definition of, 260-261
economics and, 33	EBM (evidence-based management) 272-287
folk psychology, 163-167	farsight, 288-291
HR tools, 33 myths, examples of, 177-179	leadership as science-based craft,
of planning fallacy, 84	255-257
pop psychology, 167-171	of mindfulness, 247-248
of risk, 78-91	prescience, 261
science of, 172-177, 179-186	pseudoscience, 265-269
punishment, 192	of psychology, 172-177, 179-186
F	rationality, 287-288
O D	scientific mindset, 270-272
Q-R	theory versus practice, 10-12
Qantas Airlines, 231	S-curves in causal loop diagrams,
quick fixes. See action bias	111-112
random events, patterns in, 79	Seife, Charles, 78, 91
rational resistance to change, 226	self-awareness, 48
realistic estimates, 86-87	self-coaching for growth mindset, 47
reason, 287-288	self-esteem, 240

self-managed work teams (SMWT), 60	Tang, Y. Y., 249
Senge, Peter, 1, 109, 112, 191, 230	Taylor, F. W., 285
set pieces, 75	technical issues, people issues versus,
	26-28
7S tramework, 137-138	
70-20-10 model, 57, 214	Tetlock, Philip, 127
sexism towards change management, 27	theory, practice versus, 10-12
Shell, 63-64, 200-202	Tolstoy, Leo, 151
shortfalls (in SOCKS framework), 21, 90	training, 213-219
Silver, Nate, 89	transitions, 227-228
simple systems, 106	Transitions (Bridges), 227
skepticism, 271	trends in random events, 79
Smith, Martin, 20	Truman, Harry S., 88
Snowden, David, 106	Tversky, Amos, 149
social messes, 232-237	Twain, Mark, 128
SOCKS framework of project failure,	,,
21-22, 89-91	IIN Convention on Bights of the Child
	UN Convention on Rights of the Child,
soft/hard dichotomy, 26-28	192
soft-skills education, 215-219	uncertainty
solution-selection biases, 124, 141-154	normal distributions and extreme
action bias, 145-149	events, 92-94
intuition versus formal models,	pre-mortems, 95
142-144	
	risk versus, 91-92
sunk-cost bias, 149-154	unintended consequences (in SOCKS
Space X, 290	framework), 21, 90
speed of change, 38-39	usefulness
static organizations, nonexistence of,	in change management, 9-10, 162-163
23-26	validity versus, 10-12
statistics on change failures	utilization, 111
actual tailure rates, 19-20	Uttal, William, 182
standard assumptions, 18	
variations by type of change, 20	validity. See usefulness
status quo bias, 222	van Ahn, Luis, 38
stimulus-response model, 189-190	Varian, Hal, 108, 116
storytelling, innovation and, 54-55	
strategic coherence, 72	variance. See probabilities
~	Vermeulen, Freek, 278
strategy	virality, 111
change strategy, 71-72	visualize-specify-commit (VSC), 199-200
change tactics, 72-75	volatility. See also risk
strategic coherence, 72	
studies	defined, 77
cohort studies, 278-279	planning fallacy, 83-91
	von Clausewitz, Carl, 71, 115
observational studies, 279-280	Vonnegut, Kurt, 26
success rates for types of change, 20	VSC (visualize-specify-commit), 199-200
Sun Tzu, 157	VUCA (Volatility, Uncertainty,
sunk-cost bias, 124, 149-154	Complexity and Ambiguity 27 40
surveys, 277-278	Complexity, and Ambiguity), 37-40
sustainability (in SOCKS framework),	
21, 90	W-X-Y-Z
	VV -2X- 1 - Z
Switch (Heath and Heath), 208-209	Walmart, 278
System 1 thinking, 124	Watson, J. B., 189
System 2 thinking, 124	Watson, Lyall, 180
systemic change model, 42-44	
systems archetypes, 110-112	Welch, Jack, 37
systems thinking, 109-115	when-then statements, 209
systems timking, 100-110	wicked (social) messes, 232-237
	wisdom
T-U-V	of crowds, 154-155
	translating data into, 118-119
Tacitus, 123	o
tactics. See change tactics	Zappos, 62
Taleb, Nassim, 41-42, 92-94	
, , ,	zero-risk bias, 81, 124, 135

Zappos, 62 zero-risk bias, 81, 124, 135