Much has been written about the escalating intolerance of worldviews other than one’s own. Reasoned arguments based on facts and data seem to have little impact in our increasingly post-truth culture dominated by social media, fake news, tribalism, and identity politics. Recent advances in the study of human cognition, however, offer insights on how to counter these troubling social trends.

In this book, psychologist Jon F. Wergin calls upon recent research in learning theory, social psychology, politics, and the arts to show how a deep learning mindset can be developed in both oneself and others. Deep learning is an acceptance that our understanding of the world around us is only temporary and is subject to constant scrutiny. Someone who is committed to learning deeply does not simply react to experience, but engages fully with experience, knowing that the inevitable disquietude is what leads to efficacy in the world.

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DEEP LEARNING IN A DISORIENTING WORLD

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Contents

List of Figures     vi
Preface     vii
Acknowledgments     xiii

1 Why Deep Learning Is So Important … and So Hard     1
2 How We Learn: A Short Primer     19
3 Mindful Learning     38
4 Constructive Disorientation     57
5 Critical Reflection     73
6 The Importance of Others     88
7 The Influence of Politics on Deep Learning     108
8 Constructive Disorientation Through the Arts     122
9 The Art of Maintaining Essential Tensions     140
10 Cultivating a Deep Learning Mindset     158

References     177
Index     193
Figures

1.1 Sources and outcome of confirmation (myside) bias  page 9
2.1 The human brain  20
2.2 The limbic system  21
2.3 Experiential learning cycle  27
3.1 Maslow's hierarchy of needs  39
5.1 The development of expertise  82
5.2 The deep learning mindset  85
6.1 The deep learning mindset, including the social learning field  106
8.1 World War II poster  136
8.2 The deep learning mindset with aesthetic experience added  138
9.1 The deep learning mindset, complete  151
Preface

I have approached this book with a sense of urgency, even alarm. I am normally an optimistic person, believing that yes, the world is always in crisis, somewhere; but I have also believed that “crises” are often overblown, sensationalized by media looking for ways to increase their viewership. In recent years, however, I have found my normal optimism shaken by the disharmony and polarization I witness in our social discourse, nearly every day. There is too much talking and not enough listening. There is too much dismissal of diverse points of view, and not enough effort to find common ground. There is too much moral judgment and not enough nuance. There is too much knee-jerk stereotyping and not enough appreciation of difference. And all of this, I fear, is getting worse, for reasons I explore in the coming chapters. What is needed, I submit, is a commitment to deep learning, a way of being that treats incoming information thoughtfully and critically. Those who learn deeply refuse to be seduced by messages that feed existing biases, and they embrace challenges to their worldviews. Deep learners assume that there is always more to learn.

The term “deep learning” has been used in other contexts, most recently artificial intelligence (cf. Goodfellow, Bengio, & Courville, 2016), not what this book is about, so let me define at the outset what deep learning is and what it is not:

(a) Deep learning is not stuff that is locked away in the brain and stays there. Deep learning is learning that lasts, but not vice versa. We all remember a lot of random things. I have no earthly idea why I remember a particular morning after a childhood sleepover, when my host told me at breakfast that his family used a spoon rather than a knife to get the jelly out of the jar.

(b) Deep learning is not the result of doing a lot of research on a topic. Knowing a lot about something does not necessarily mean that you have learned deeply to get there. Ask me which garage band recorded
viii

Preface

“Wild Thing” and when, and I’ll tell you. The fact that I remember a lot of rock and roll trivia doesn’t mean that I engaged in a lot of deep learning during my undergraduate days in the 1960s. (Far from it, sadly.)

(c) Deep learning is not what is taught in school. I don’t mean to suggest that what we learned in school is not important. Children need to learn their multiplication tables; teenagers need to learn the foundations of their local and national governments; medical students need to learn the biochemistry of the Krebs cycle. Each of these is essential learning, needed to function in society or, in the case of medical school, the profession. None are useful, however, unless and until they are linked with lived experience, the challenges of life and work.

(d) And finally, deep learning is more than getting knocked off stride by an experience that encourages us to see things differently. Transformative learning, as this is known (Mezirow, 2000) is a necessary part of deep learning but not the whole of it.

So what, then, am I writing about in this book? Deep learning is learning that lasts, yes. And deep learning is the result of cognitive and emotional disorientation that makes us want to examine other ways of viewing the world, yes. But deep learning is also a way of being, a mindset, an orientation. It is a worldview that our understandings of the world around us are only temporary understandings, subject to constant inspection and scrutiny. Someone who is committed to learning deeply does not simply react to experience, but engages fully with experience, knowing that the inevitable disquietude is what leads to efficacy in the world.

Frankly, most of us don’t do this very well. More than a quarter-century ago, in a widely reprinted article for the *Harvard Business Review* titled “Teaching Smart People How to Learn,” psychologist Chris Argyris (1991) argued that “success in the marketplace increasingly depends on learning, yet most people don’t know how to learn” (p. 99). This is a startling assertion from one of the eminent organizational theorists of his day. He argued that the reason for this dilemma stems from two misconceptions about the nature of learning itself: first that learning is all about “solving problems,” and second that getting people to learn is all about creating external incentives, such as compensation programs and performance reviews. Argyris drew upon his research and professional experience as a consultant to argue that knowing how to learn requires the ability to reflect critically on one’s own behavior, something people are rarely taught to do, whether in school or on the job.
An astonishing amount of research on human learning in the intervening years has largely supported and augmented Argyris’ analysis from decades ago. And yet, his article remains provocative to this day. Why is this so? Why haven’t schools, colleges, and professional development practices taken Argyris’ and others’ wisdom to heart? Or, when they have, why are the effects, if any, often so ephemeral? In this book I address this conundrum and offer some suggestions, based upon my own research and others’, about how to deal with it.

Along the way I make several claims. First is the mounting evidence exploding the prevailing myth that people behave rationally, and when they do not it is because they have become unmoored by their emotions. Instead, available evidence suggests that belief comes quickly and naturally, and because humans have a low tolerance for ambiguity, skepticism about one’s beliefs is slow and unnatural (Shermer, 2011). Second, developing skepticism in ways that lead to deep learning depends on an interaction between thoughts and feelings, cognition and emotion. Neither can lead to deep learning by itself. Third, critical reflection, both with oneself and with others, is the key to long-term behavioral change. Fourth, deep learning will often have political ramifications, requiring sensitivity to political dynamics. And fifth, aesthetic experience can be a powerful if often unrecognized source of deep learning.

I end with some specific suggestions on steps we can take to facilitate deep learning, both for ourselves and for those with whom we live and work.

Here is a roadmap to the book.

The first two chapters discuss the challenges to deep learning in a world that is often hostile to it.

Chapter 1 describes why critical reflection is more important today than ever before, and yet harder and harder to do. I delve into this apparent paradox, why “facts” and “evidence” seem to have so little effect on rational behavior, and why this so often leads to bad decisions.

In Chapter 2 I review the basics of cognition, showing how old ideas about learning as storehouses of information, standing at the ready to address problems, have given way to much more complex notions about how our brains do not just take in information and store it, but make meaning of that information by attaching it – or not – to existing mental models. I discuss how this is not only vital to our survival as a species but also presents a challenge to our cognitive development. I also introduce the notion of transformative learning, arguably the most important theory on adult learning in the last half-century.
The next seven chapters describe and explain the keys for facilitating deep learning in the midst of turbulent social change.

Chapter 3 discusses “mindful learning.” The central message here is Socrates’ dictum, “know thyself first.” We must know ourselves before presuming to think that we are in any position to influence others. I explore the now-bulging literature on personal and organization development and offer some integrating principles for understanding how deep learning can be developed in ourselves and others.

In Chapter 4 I discuss the power of what I call “constructive disorientation,” and how it can lead to transformative learning as a tool for constructive change. Constructive disorientation is a sweet tension between curiosity, an innate human quality, and disquietude, a disturbance in our perceptual field that demands our attention. Neither alone is sufficient for deep learning, but powerful given the right balance.

In Chapter 5 I explore in detail the importance of critical reflection on human experience. Critical reflection is not an innate human quality and so must be cultivated. I discuss how critical reflection is important throughout all aspects of human learning, including the development of expertise and the incidental learning that happens every day, usually below our conscious awareness.

Chapter 6 takes on the importance of relational experience in learning. Despite our typical school experience, where the expectation is to learn alone and to demonstrate that learning alone, the research evidence is unmistakable: deep learning is most powerful, and often necessary, in social discourse. Learning in the presence of others allows us to understand the world as others see it, and to try on perspectives that we would not have known about otherwise. Learning with others is perilous, often leading to the hardening of beliefs and attitudes, and so I also discuss how social discourse can be most productive.

In Chapter 7 I acknowledge the power of politics (small “p”) in making real change. If the core definition of politics is group conflict over scarce resources, leading to the use and manipulation of power, then how can politics and learning come together as a developmental force? Here I revisit philosopher John Dewey’s ideas about a “learning democracy,” presented more than a century ago, and recast them for the challenges we face today.

In Chapter 8 I look at the role of the arts as a compelling tool for social change: how the arts can serve to create just the sort of “constructive disorientation” that I write about in Chapter 4, in ways that probe our innermost values and bring them to the surface. The arts offer paths that are
Preface

closed to logic and argument, and as such have enormous potential for promoting deep learning.

Chapter 9 explores “essential tensions” – paradoxes that are not resolvable but require constant attention if they are to remain in a useful balance. I argue that holding these tensions is vital for mindful – and hence deep – learning, and that they require a dialectical way of thinking and being.

Along the way in these chapters I present a model of the “deep learning mindset,” piece by piece, displaying the complete version at the end of Chapter 9.

In Chapter 10 I offer an integration of the book’s previous chapters, shifting from a review of prevailing theories and empirical evidence to a more practical set of recommendations. I address these two questions: How might I become a better deep learner? And, how might I encourage deep learning in others?

On a personal note: I have approached the writing of this book from the perspective of neither a neuroscientist nor a cognitive psychologist. My doctorate in educational psychology in the early 1970s is nearly useless today, except perhaps as a marker of just how far research on human learning has come. Most of my own learning has come through my work, much of which is represented here. Still, I am a nonexpert writing both for fellow academics and for those outside the academy, and thus risk appealing to neither group. I am however an expert pedagogue: I have spent most of my professional career working to make difficult and complex ideas accessible to others, both students and practitioners. I have tried to put these skills and decades of professional experience to use in this book, taking the now mountain of research on what helps and hinders deep learning and creating with it a guide to putting this research to practical use.

Note

1 The Troggs, 1966.
Acknowledgments

An essential part of deep learning is accessing the wisdom of others. I am indebted to, and have learned deeply from, the work of the more than 200 scholars cited here, some of them numerous times. These include Daniel Kahneman, most notable for his Nobel Prize-winning work on the frailties of human cognition, pulled together beautifully in his book *Thinking, Fast and Slow* (2011); Mihalyi Csikszentmihalyi for his groundbreaking work on flow theory (1990); Robert Kegan for his contributions to adult development theory (1982, 1994), and his and Lisa Lahey’s ideas on “immunity to change” (2009) (a book that more than any other in recent memory changed the way I think about learning and change); Jack Mezirow, who revolutionized the world of adult learning with his transformative learning theory (2000); Peter Vaill, who coined the term “learning in permanent white water” (1996) nearly a quarter-century ago, and whose advice is even more pertinent today; and Ron Heifetz and his colleagues for their work on adaptive learning in organizations (Heifetz, Linsky, & Grashow, 2009).

Most of all, I am indebted to the legacy of John Dewey. His deep and timeless thinking on learning, education, democracy, and the arts, is cited in nearly every chapter. One of my friends, having read a draft version of this book, teased me about having a “love affair” with John Dewey. Well, so be it.

For all of that, this book would not be what it is without the generous assistance of friends, colleagues, and former students. I trusted them to give me honest feedback on early drafts, and they delivered the goods. This group included colleagues Laurien Alexandre, Richard McGuigan, and Ron Cacciope, and dear friend and mentor of more than 50 years, Larry Braskamp. The group also includes a band of former doctoral students and Antioch alumni I called “critical friends” who read and commented on early drafts of chapters: Jane Alexandre, Shelley Chapman, Karen Geiger, Lisa Graham, Pat Greer, Sue McKevitt, John Porter, and Tayo Switzer.
Even if they may have taken the “critical” part a bit too literally once in a while, I benefitted from every comment and the book is immeasurably better for it.

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