

Richard Paul • Linda Elder



CRITICAL
THINKING

SECOND EDITION

Tools for Taking Charge of Your
Professional and Personal Life

What People Who Know Our Approach Say About the Book

“Most of us sense that the world is becoming more dynamic, more interconnected, and more complex. The pace of change is accelerating to the point that many traditional institutions and structures are not prepared to survive. It is clear that our ability to thrive is profoundly impacted by our ability to think well, to think in a different way. Paul and Elder have devoted their careers to developing fairminded critical thinkers. In this book, they share deep insights into their best thinking about thinking. This book challenges us to become better in every aspect, to use our best thinking as a tool for social justice. And, as Paul and Elder point out, we don’t generally challenge our own thinking; it’s too uncomfortable. But, we can all develop as better thinkers. This book serves as the roadmap for those who are willing and disciplined enough to start the journey to becoming fairminded critical thinkers.”

—**Dr. Daryl Watkins**, Leadership Department Chair,
Embry-Riddle Aeronautical University

“*Know Thyself*, the Oracle at Delphi that has influenced Western thought for more than 25 centuries, has yet to be achieved as a universal stratagem for the betterment of our planet. Richard Paul and Linda Elder’s latest collaboration advocates conscious thinking and choice for a nuclear-armed world mired in cultural assumptions, egocentric behaviors, and sociocentric actions. *Critical Thinking: Tools for Taking Charge of Your Professional and Personal Life*, second edition, demonstrates in clear prose how to live a rational and satisfying life in an ever-accelerating environment. The text, chockful of examples, offers effective ways to uncover flawed thinking processes, examine inherited values, and expand our capacities for a peaceful world.”

—**Richard LaManna**, PhD, Academic Assessment Manager,
Bronx Community College, CUNY

“...Dr. Paul and Dr. Elder have developed an approach that stands in stark contrast to the tendency to embrace critical thinking as an essential, yet vaguely understood goal. The authors clearly articulate the principle underpinnings and tools that individuals should harness to develop reasoning skills and intellectual traits. The book encourages readers to reflect continuously on elements of reasoning, intellectual standards, intellectual traits, as well as irrational thinking in the ‘Test the Idea’ sections, which offer metacognitive strategies. All of these accessible, pragmatic tools are embedded in a rich supply of real-world situations and problems. Altogether, the book inspires its readers to draw on methods grounded in wide-ranging examples that illustrate both the problems and promises of cognition in order to reason effectively about the challenges that beleague the human condition. This book offers educators, students, and the public at large a means to reason through any problem or issue, while adhering to intellectual standards that promote rational, effective thinking.”

—**Julie Stephens de Jonge**, Professor of Spanish, University of Central Missouri

“I would term this present book to be what I would have to call the ‘User’s Guide to the Human Mind.’ In the more than 400 pages, the authors have synthesized much of what they have written over the years, and for me personally/professionally, I will keep it on my nightstand and will have it dog-eared in short order. As with the authors’ other works, my brain (or mind) breathes a sigh of relief when I read them, as if my mind has been waiting for years to be so oriented. These are life’s lessons my parent, and others, should have taught me. I have worked in three research centers where research was the daily work, but no one made the explicit principles of critical and creative thinking available for us, likely because the lead research managers did not know them either. I have taught in five universities, and all of them claimed to practice critical thinking, but none of them had these principles.... Excellent fundamental and powerful concepts...”

—**Fred May**, Eastern Kentucky University, Homeland Security Program

“We currently live in a world in which we are increasingly being inundated with new information. To be beneficial in thinking and making decisions in our daily life, this plethora of data needs to be organized and evaluated for validity, merit, and relevancy. In this book, Richard Paul and Linda Elder offer a systematic, rational, and effective way of making the business and personal decisions necessitated in the adventure called life. The system delineates the elements of every thought, the standards used to evaluate these thoughts, and the character traits that foster critical thinking.... The theme of weak versus strong sense critical thinking is accentuated; Paul and Elder illuminate how people can become increasingly ethical as they develop as critical thinkers.”

—**Bob Schlim**, Jesuit Priest, Society of Jesus

“Authentic critical thinking can be a world changer! Richard Paul and Linda Elder provide a clear and practical approach to critical thinking that challenges us to not only improve our thinking, but embrace it as a lifelong journey that will deeply enrich the quality of our personal lives. Simply put, this book is masterfully crafted, thought provoking, and inspiring!”

—**Todd Dischinger**, Public Safety Administrator

“*Critical Thinking: Tools for Taking Charge of Your Professional and Personal Life*, by Dr. Richard Paul and Dr. Linda Elder, is an invaluable educational tool that encourages strategic thinking, self-understanding, and fairmindedness. The authors provide a variety of strategies for cultivating critical thinking, intellectual growth, and lifelong learning.

“The text offers a thorough examination of critical thinking and how individuals can improve their personal and professional lives by monitoring their own thinking. Readers are given concise, relevant strategies for incorporating Paul and Elder’s elements of reasoning and the universal intellectual standards into all aspects of their personal and professional lives. Included are relevant, insightful discussions

of self-understanding, the elements of thinking, and the intellectual standards for thinking, problem solving, sociocentric and egocentric thinking, the logic of decision making, ethical reasoning, and strategic thinking. At the end of each chapter, the authors have included ‘Test the Idea’ activities that provide highly effective opportunities for self-reflection and analysis and that cultivate the discipline of approaching the decision making process with clarity of mind. Readers are encouraged to improve the quality of their lives by engaging in thoughtful analysis of their own thinking and by implementing the strategies for correcting those habits of mind that could impede their personal and professional growth and happiness.”

—**Lauren McGuire**, English Professor

“The unique dimensions of this book provide an integrated approach to critical thinking in professional and personal life. The metacognitive approach so important to personal development is made explicit with practical examples, meaningful activities, and clearly identified steps that enhance meaningful reflection. Importantly, the authors provide the tools for improving the quality of thinking that take you through the essential steps in the process and continues beyond to capture a holistic perspective. It is life changing.”

—**Jeannette R. Dulan**, Ph.D., Professor of Education, Oakwood University

“In our daily lives as individuals, professionals, and members of a worldwide society, we are surrounded by a vast array of social media, opinions, and data. Now there is a guide to help us organize and assess all of this information. Dr. Richard Paul and Dr. Linda Elder have given us the tools for reflecting on our thinking in a new and highly valuable book based on the productive concept of critical thinking. Critical thinking challenges us to review our thinking, which often is simply a self-centered and culturally biased form of reasoning. Each chapter of their book presents us with many thought-provoking examples of current issues and includes many helpful graphic presentations of concepts and boxed inserts that contain information on the structure of and standards for critical thinking, as well as a format for asking questions that point us to intelligent decision making. We learn to be clear, honest, and ethical in our reasoning on our way to becoming what is called a fairminded person. The extensive and reflective glossary is a valuable reference source for the reader.”

—**Mel Manson**, Professor of Sociology and Psychology, Endicott College

“As always, the authors have left us with more to chew on until another edition comes along. As critical thinkers, it is their forte to bring new developments to our attention. Admirers of Paul and Elder will certainly make this book another one of their collector items. For newer readers, it is a treasure trove of ideas.”

—**Joe D’Silva**, Biology Department, Norfolk State University

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Critical Thinking

Tools for Taking Charge of Your
Professional and Personal Life

Richard Paul
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Upper Saddle River, New Jersey 07458

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Printed in the United States of America

First Printing September 2013

ISBN-10: 0-13-311528-3

ISBN-13: 978-0-13-311528-4

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: 2013940997

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Dedication

To all those innocent persons and creatures who suffer cruelty and injustice due to the weak-sense critical thinking that still dominates human life and the use of power in human societies.

Acknowledgment

We wish to acknowledge our appreciation to Gerald Nosich—a model of good sense, depth of vision, and unfailing friendship. His active commitment to the ideal of critical thinking extends beyond 30 years. He stands as living proof that humans can combine in one life reason, compassion, and justice.

Preface

The mind is its own place and in itself can make a hell of heaven or a heaven of hell.

—John Milton, *Paradise Lost*

You are what you think. Whatever you are doing, whatever you feel, whatever you want—all are determined by the quality of your thinking. If your thinking is unrealistic, your thinking will lead to many disappointments. If your thinking is overly pessimistic, it will squeeze what enjoyment can be found in life and keep you from recognizing what should be properly rejoiced.

Test this idea for yourself. Identify the strongest feelings or emotions you tend to experience frequently, and give examples in your life of when you experience these emotions. Then identify the thinking *correlated* with those examples. For example, if you feel excited about going to work, it is because you think that positive things will happen to you while you are at work or that you will be able to accomplish important tasks. If you dread going to work, it is because you think it will be a negative experience.

Similarly, if the quality of your life is not what you wish it to be, there are likely problems in the way you think about your life. If you think about it positively, you will feel positive about it. If you think about it negatively, you will feel negative about it.

For example, suppose you recently accepted a job in a new city. You accepted said job because you had the view that you were ready for a change, that you wanted to experience living in a different place, that you wanted to find a new set of friends—in short, in many ways you wanted to start a new life. And let's suppose that your expectations of what would happen when you took the new job did not come to fruition. If this were the thrust of your thinking, you would now feel disappointed and maybe even frustrated (depending on how negative you interpreted the situation to be).

Most people think at the unconscious level most of the time, never putting the details of their thinking into words. For example, most people who think negatively would not say of themselves, "I have chosen to think about myself and my experience in largely negative terms. I prefer to be as unhappy as I can be." When people allow themselves to routinely think at the automatic or unconscious level, they have little command of their thinking.

They are unable to adequately analyze and assess their thought. Lacking insight into problems in their thinking, they lack motivation to change it in any significant way.

Because few people realize the powerful role that thinking plays in their lives, few gain significant command of their thinking. Therefore, most people are in many ways “victims” of their own thinking—harmed rather than helped by it. Most people are their own worst enemy. Their thinking is a continual source of problems, preventing them from recognizing opportunities, keeping them from exerting energy where it will do the most good, poisoning relationships, and leading them down blind alleys.

If closely read and the ideas within it deeply understood, this book will improve the quality of your thinking. It will therefore help you achieve your goals and ambitions, make better decisions, and understand where others are trying to influence your thinking. It will help you take charge of what you do in your professional and personal life, how you relate to others, and even what emotions you feel.

Though it may not be easy, if you take the ideas in this book seriously, you can discover the power and role of thinking in your life. Like all of us, you are capable of achieving more significant professional goals. You can become a better problem solver. You can use power more wisely. You can become less subject to manipulation. You can live a fuller, happier, and more secure life. The choice is yours. We invite you to progressively take the steps that lead to greater and greater control in your personal and professional life.

How to read this book: There are two ways to read this book: sequentially and as the spirit moves you. Both are reasonable approaches to the material. You may be motivated to begin with some of the later chapters. That’s fine, since all the chapters have been written to be (roughly) intelligible on their own. Of course, the chapters also build on one another, so if you proceed sequentially you will be least puzzled by the logic of what is being said. In any case, if you are motivated to begin with a later chapter, we recommend that you familiarize yourself with the content in the first six chapters. We suggest that you skim those chapters so you have a frame of reference for any of the later chapters with which you might want to begin. And make sure you come back to the early chapters for a deeper reading before you conclude that you understand the power of the book. Each chapter helps illuminate the others. And they all converge on, and add depth to, a set of central themes. We highly recommend that you take the time to do the “Test the Idea” activities throughout the book. They provide an important vehicle for internalizing key ideas. People tend to want to skip these, to avoid the “extra work”; this is not advised. If you want to maximally develop as a critical thinker, reflecting in writing on ideas learned will be essential to the process.

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Thinking in a World of Accelerating Change and Intensifying Danger

The Nature of the Post-Industrial World Order

The world is swiftly changing. With each passing day, the pace of life and change quickens. The pressure to respond intensifies. New global realities are rapidly working their way into the deepest structures of our lives: economic, social, cultural, political, and environmental realities—realities with profound implications for thinking and learning, business and politics, human rights, and human conflicts. These realities are becoming increasingly complex; many represent significant dangers and threats. And they all turn on the powerful dynamic of accelerating change.

A Complex World of Accelerating Change

Can we deal with incessant and accelerating change and complexity without revolutionizing our thinking? Traditionally, our thinking has been designed for routine, for habit, for automation and fixed procedure. We learned how to do our job, and then we used what we learned over and over. But the problems we now face, and will increasingly face, require a radically different form of thinking—thinking that is more complex, more adaptable, and more sensitive to divergent points of view. The world in which we now live requires that we continually relearn, that we routinely rethink

our decisions, and that we regularly reevaluate the way we work and live. In short, there is a new world facing us, one in which the power of the mind to command itself, to regularly engage in self-analysis, will increasingly determine the quality of our work, the quality of our lives, and perhaps even, our very survival.

Consider a simple feature of daily life: drinking water from the tap. With the increase of pollution, the poisoning of ground water, the indirect and long-term negative consequences of even small amounts of any number of undesirable chemicals, how are we to judge whether or not our drinking water is safe? Increasingly, governments are making decisions about how many lives to risk based on the financial consequence of saving them, about whether, for example, to put less money into the improvement of water quality at increased risks to human health. How are we to know whether the risk the government is willing to take with our lives is in line with our willingness to be at risk? This is just one of hundreds of decisions that require us to think critically about the ever-more changing world we face.

Consider the revolution taking place in global communications. From e-mail to text-messaging, from complex electronic marketing systems to systems that track us and penetrate our private lives, we are providing not only positive opportunities for people to be more efficient with their time, but also systems that render us vulnerable and wield power over us. On the one hand, we have networks where goods, services, and ideas are freely exchanged with individuals the world over, and on the other hand, we face worldwide surveillance systems that render privacy an illusion. How are we to respond to these revolutionary changes? What are we to resist and what are we to support? When is a new system cost effective? Who should control it? For what ends should it be used? Who is to monitor its impact on human lives and well-being? How are we to preserve our traditional freedoms, at home and abroad? How are we to protect our families and ourselves? How are we to preserve our human rights and have lives of autonomy, security, and integrity? What are we willing to give up in the pursuit of greater convenience and ease of communication?

And while we ponder the many issues related to technological advancement, we must also juggle and judge work and child care, efficiency and clogged transportation systems, expensive cars and inconvenient office space, increased specialization and increasing obsolescence, increased state power and decreased civil freedoms.

A Threatening World

We are caught up not only in an increasing swirl of challenges and decisions, but in an increasingly threatening world as well:

- A world in which we can no longer anticipate the knowledge or data we will need on the job, because we can no longer predict the kinds of jobs we will be doing.
- A world in which powerful technologies are interfaced with simplistic thinking about complex issues: “Get tough on crime!” “Three strikes and you’re out!” “Zero tolerance!” “Adult crime, adult time!”
- A world in which national mass media gain more and more power over the minds of people.
- A world in which the incarceration of more and more people for longer and longer periods of time is becoming one of the largest industries, employing hundreds of thousands of professionals with vested interests in maintaining a large prison population: builders, architects, lawyers, police, federal investigators, prosecutors, social workers, counselors, psychologists, prison guards, and others.
- A world in which privacy is increasingly penetrated by multiple invasive technologies: face-recognition software, DNA testing, e-mail review systems, credit card tracking, and auto-tracking systems.
- A world in which global forces—subject to virtually no control—make far-reaching decisions that deeply impact our lives.
- A world in which self-serving ideologies are advanced in expensive media campaigns.
- A world in which increasing numbers of people advocate the use of violence as a response to real or perceived injustice.
- A world in which increasing numbers of people willingly accept significant diminution of individual rights and freedoms in exchange for increasing police and governmental powers of surveillance and detention.
- A world in which increasing numbers of civilians find themselves trapped in the crossfire of warring groups and ideologies.
- A world in which both freedom and safety are increasingly diminished for greater and greater numbers of people.

Test the Idea: Support the Points with Evidence

For the list above, see if you can support each point with your own evidence. Or are we wrong?

Change, Danger, and Complexity: Interwoven

Accelerating change, danger, and complexity do not function alone. They are deeply intermeshed, interactive, and transforming.

Consider the problem of solid waste management. This problem involves every level of government, every department: from energy to water quality, to planning, to revenues, to public health. Without a cooperative venture, without bridging territorial domains, without overcoming the implicit adversarial process within which we currently operate, the responsible parties at each tier of government cannot even begin to solve these problems. When they do communicate, they often speak from a position of vested interest, less concerned with public good than in furthering a self-serving agenda.

Consider the issues of depletion of the ozone layer, world hunger, overpopulation, and AIDS. Without the intellectual ability to reason through these complex problems, without being able to analyze the layers within them, without knowing how to identify and pursue the information we need to solve them, we are adrift in a sea of confusion. Without a grasp of the political realities, economic pressures, and scientific data (on the physical environment and its changes)—all of which are simultaneously changing as well—we cannot reverse the trend of deterioration of the quality of life for all who share the earth.

Consider, finally, the problem of terrorism and its link to the problem of ever-diminishing freedom. Predictable and unpredictable “enemies” threaten increasing numbers of innocent people. Though the root causes of terrorism almost always stem from complex issues, terrorism itself is often treated simplistically. We routinely, and uncritically, accept our national media’s portrayal of world affairs, though national media in every country typically distort why their nation’s “enemies” think and act as they do. Similarly, we readily accept our government’s portrayal of world issues. When our own country, or its allies, attack and kill civilians, such actions are defined by the national governments (and their symbiotic media) as “defensive” in nature.

Unethical practices by our own government are covered up, played down, or defended as a last recourse. Similar practices on the part of our enemy are highlighted and trumpeted, often fomenting national outrage. Mob action, national vendettas, and witch hunts commonly result. The words “good” and “evil” are freely used to justify violence and terror inflicted on enemies—whether “real” or imagined.

But the problem of terrorism is inseparable from the problem of preserving essential human rights and freedoms. In “solving” one problem, we can easily create another. Consider just a small part of the overwhelming evidence supporting this point. Statewatch (www.statewatch.org/news), a European public interest watchdog group, reports on a letter from President Bush proposing a “lengthy list of more than 40 demands to the European Union for cooperation on anti-terrorism measures,” many of which indiscriminately cover “criminal investigations, data surveillance, border controls, and immigration policies.” Yet Tony Bunyan, Statewatch editor, comments: “Many of the demands have nothing to do with combating terrorism....” At the same time, the UK parliamentary Joint Committee on Human Rights, composed of Ministers and Lords, has issued a report that is highly critical of the British government’s proposed Anti-Terrorism, Crime and Security Bill. The report claims that the bill violates the European Convention on Human Rights and questions both the definition of “terrorist activity” and the extension of police powers inherent in the bill.

The fact is that governments worldwide seem prepared to abandon traditional citizen rights and protections to accommodate sweeping extensions of police and government power—in the pursuit of those labeled “terrorists.” The *New York Times* reports (November 22, 2001): “As Americans debate how ruthless a war to wage against terrorism, India’s leaders have seized on the Sept. 11 attack to push a draconian new anti-terror law that has stirred furious opposition....” The new ordinance allows authorities “to tap telephones, monitor e-mail, detain people without charge for up to six months, conduct secret trials in jails, and keep the identity of witnesses secret.” According to the *Times*, under a similar previous Indian law, “...more than 75,000 people were arrested, but only 1% convicted...[while] many of the accused languished in jail for years” without hope of bail.

It is, of course, not uncommon for governments touting themselves as democratic to abuse freedom and deny basic liberties. Those concerned with human rights remind us that it is restraints on the government that separate a free society from a police state. We stand in need of the best legal thinking to provide for appropriate police and governmental power while yet preserving the restraints that are the bedrock of essential human freedoms.

This is a glimpse (and very partial analysis) of the world our children and we now face.

The Challenge of Becoming Critical Thinkers

The question of how to survive in the world is one that continually transforms itself. Accelerating change, increasing complexity, and intensifying danger sound the death knell for traditional methods of learning. How can we adapt to reality when reality won't give us the time to master it before it changes, again and again, in ways we can but partially anticipate? Unfortunately, most cultures and most schools ignore the crucial need for ever-new modes of thought to adapt to new problems and situations in new and humane ways. Short-term thinking, which leads to quick-fix "solutions," is still largely the rule of the day. Great power is wielded around the world by sophistic minds. Critical thinking is not a social value in any society, broadly speaking. If we are to take up the challenge of becoming critical thinkers, we face a battery of hitherto unanswered questions that define the detailed agenda of this book. This question-centered agenda provides the impetus for reformulating our worldview. Through it, we can appreciate the intellectual work required to change our thinking in foundational ways. Through it, we can grasp the need to regularly re-examine the extent of our ignorance. Through it, we can grasp the need for regular exercise of disciplined thinking. Through it, we can understand the long-term nature of intellectual development, social change, and personal growth and transformation.

Every chapter of this book highlights crucial questions we need to ask about thinking. All deal with essential dimensions of the problems we face in thinking. All challenge our perseverance and courage. In the end, we must face ourselves honestly and forthrightly.

Critical Thinking

The most fundamental concept of critical thinking is simple and intuitive: All humans think. It is our nature to do so. But much of our thinking, left to itself, is biased, distorted, partial, uninformed, or down-right prejudiced. Critical thinking begins, then, when we start thinking about our thinking with a view toward improving it.

Chapter 1 Summary

Summarize the key ideas you have learned from this chapter. Write your answers as follows:

1. The main ideas I have internalized from working through this chapter are...
2. These ideas are important because...
3. My life should be different in the future in the following ways, because I have internalized and am now using these ideas in my thinking.... Note the depth at which you will need to internalize a given idea to use it routinely in your thinking.

Recommended Reading

Heilbroner, Robert, *Twenty-First Century Capitalism* (House of Anansi Press, Limited: Concord, Ontario, 1992).

Reich, Robert, *The Work of Nations* (Vintage Books: New York, 1992).

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