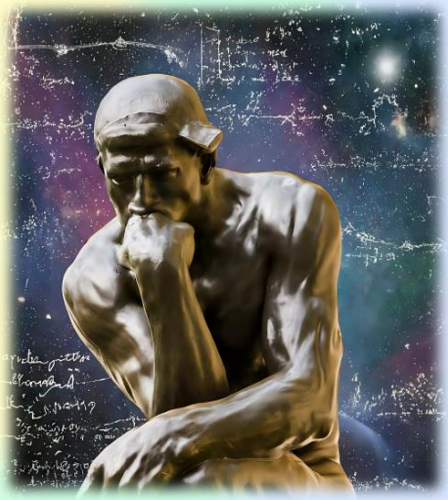
Whole Thought

The Rise of Human Intelligence



Alex Bennet and Robert Turner
Mountain Quest Institute

"Whole Thought" is a profound and timely exploration that challenges the conventional, compartmentalized ways of thinking that have long dominated our cognitive landscape. This book offers an integrative approach that weaves together interdisciplinary insights, ethical considerations, and a deep understanding of human cognition. It presents a compelling framework for embracing complexity in a way that is both intellectually rigorous and deeply humane.

The book masterfully bridges the gap between analytical and intuitive thinking, urging us to consider the broader implications of our choices on a personal, societal, and global scale. Whether you're an educator, leader, or lifelong learner, "Whole Thought" will transform the way you perceive and interact with the world around you.

This is not just a book; it's a call to action for a more reflective, inclusive, and interconnected way of living and thinking. Highly recommended for anyone seeking to navigate the complexities of our modern world with wisdom and grace.

Vincent Ribiere, Ph.D.,, D.Sc., Managing Director and Co-Founder of the Institute for Knowledge and Innovation Southeast Asia (IKI-SEA), Director of the KIM Ph.D. Program, Bangkok University (Thailand), Global and SEA MIKE Coordinator

Never before have the consequences of human action reached the existential threshold and planetary scale that now defines the Anthropocene. If we stand a chance to sort out this challenge, it will only be because an effective collective intelligence leads us to unprecedented consciousness and response levels. Thanks to Alex Bennet and Robert Turner for piecing together the multidimensional aspects of thinking, opening a path for human agency to take effective global action. This, as David Bennet acknowledges in the foreword, as is clear in the Whole Thought Principles, and as Alex and Robert explain in their chapter on global reach, entails a different level of awareness about how we must reinvent the terms for inhabiting Earth. Whole Thought promises to help us get there, which makes it a most timely and welcome read.

Dr. Francisco Javier Carrillo, The World Capital Institute (Mexico)

"Whole Thought" is another masterpiece by Alex Bennet and Robert Turner, offering profound insights into how we think and how we can develop holistic thinking. This book goes beyond theory, providing practical tools for individuals and organizations to not only understand these concepts but also implement them. The knowledge capacities described are concrete and powerful, and it was an honour for ROM Global to collaborate and publish a set of tools on how to implement these ideas on our website www.kmrom.com This book is a valuable resource for anyone looking to push themselves, their communities, and society toward a better future. I eagerly anticipate the next instalment in this series!

Dr. Moria Levy, CEO, ROM Global (Israel)

For decades, knowledge management has been mainly focused on technology, which seems counterintuitive since most of humanity's knowledge resides in people, not machines. At long last, Alex Bennet, Robert Turner and their colleagues at MQI have taken a major step toward restoring balance by bringing out this rich collection of wisdom. From deeply theoretic models to practical approaches, this master work will launch KM in a new direction, giving humanity the tools we need to not only awaken, but expand our innate capacity to address the challenges we face in an increasingly complex, fast-changing world.

Dr. Arthur J. Murray, Author, CEO, Applied Knowledge Sciences, Inc. (USA)

The challenging purpose of this Book—"Whole Thought, The Rise of Human Intelligence"—elaborated by Alex Bennet and Robert Turner, is summarized shortly in the following message: "The concept of Whole Thought can be understood as more than an intellectual framework. It is a multidimensional narrative that weaves itself through the fabric of our shared history, humanity, innovation, and consciousness". This goal and its multidimensionality is masterfully achieved and emphasized throughout the book pages by the presentation of the contributing terms and concepts, which define, clarify and illuminate the subject: The Rise of Human Intelligence, The Components and the Principles of Whole Thought, Experiential Learning, Praximorphic Cognition and Cognition in Action (Systems Thinking, Pattern Recognition, The Value Of Collaboration), Synthesis And Human Intelligence, Temporal Integration and Holistic Development, Epistemic Harmonics (Interweaving the Conscious and Unconscious, Tacit and Explicit Knowledge and Ways to Engage Them, Heart-Mind Coherence, Knowledge Capacities (Knowing and Sensing, Looking and Seeing, Acting and Being, Hearing and Listening), Metacognition – Thinking about Thinking, and The Global Reach of Whole Thought, where applications could be found.

Such an approach is a really new and exciting appeal to the reader, to let himself/herself be introduced into the universe of the modern global culture in order to align and feel the rapid rhythm of the change, induced/assisted by human's/humanity's natural and artificial intelligence in all its entirety and scope, an imperative necessary for the development of personal life in close correlation with and in relation to society. This Book is therefore an exciting invitation not only to understand, but also to learn and apply—for personal and societal use—such advances in human intelligence, generously explained/offered by the authors.

Dr. Florin Gaiseanu, Professor, Science and Technology of Information Bucharest (Romania) and Barcelona (Spain), Honor Member of NeuroQuantology (Europe) and International Journal of Neuropsychology and Behavioural Sciences (USA).

In weaving the tapestry of "Whole Thought: The Rise of Human Intelligence," Alex Bennet and Robert Turner present a thought-provoking exploration of Whole Thought, a philosophy that integrates interdisciplinary insights, ethical reasoning, and adaptability. This book provides a framework for understanding and addressing complex challenges by connecting diverse knowledge domains and perspectives. It emphasizes the importance of neurodiversity, mindfulness, and cultural sensitivity in fostering effective problem-solving and decision-making. The book is a valuable resource for educators, leaders, and individuals seeking to navigate our interconnected world with a balanced and comprehensive approach to thinking.

David Gurteen, Director, Gurteen Knowledge (United Kingdom)

This very impressive and thought-triggering multi-perspective book supports this important learning process. Especially for the importance of Social and Societal intelligence cultivation and peace-making. The opposite would be destructive Societal Ignorance. If successful, this Thinking will add to the global Wellbeing and our cultivating of Intellectual Capital (IC), adding to the Life Science. Alex Bennet and Robert Turner—Where did you learn to think? A remarkable gift for humanity.

Leif Edvinsson, The World's First Professor on Intellectual Capital, Awarded as Brain of the Year, The New Club of Paris, Professor Emeritus (Sweden and Hong Kong)

"Whole Thought: The Rise of Human Intelligence" by Alex Bennet and Robert Turner is a profound exploration into the depths of human intelligence and its potential. This book masterfully combines theoretical insights with practical applications, delving into the intricacies of human intelligence and addressing its multidimensional – intellectual, physical, emotional, and spiritual – dimensions. Their work emphasizes the importance of interconnectedness and the need for a balanced perspective in addressing complex challenges. Through well-articulated principles and methodologies, they provide individuals and organizations with tools to cultivate a richer, more integrated approach to thinking and problem-solving.

The "Whole Thought" emphasis on ethical responsibility, continuous learning, and collaborative innovation makes it a timely and valuable addition to knowledge management and cognitive development. It is also a vital resource for anyone committed to personal growth and societal advancement. This book is not just a guide; it is a call to elevate our collective consciousness and harness the full potential of human intelligence.

Dr. Nikolina Dragičević, Postdoctoral researcher, Faculty of Economics and Business, Department of Organization and Management, University of Zagreb (Croatia)

Alex Bennet and Robert Turner of the Mountain Quest Institute have collaborated to produce a new book, Whole Thought - The Rise of Human Intelligence. This work describes a comprehensive and holistic approach to thinking and learning. It is a masterpiece of metacognition, i.e., thinking about thinking. The Whole Thought concept encompasses nearly every conceivable aspect of the human ability to think. It provides many profound insights in the field of epistemology - the philosophy of knowledge. Some examples of this insight that particularly resonated with my personal philosophy are that knowledge is always partial and incomplete, and is always expanding; and that human intelligence is distinguished by an ever-deepening complexity. The authors state that the fundamental aim of the Whole Thought framework is "to foster a comprehensive, ethical, and dynamic approach to cognition and decision-making."

This framework is built around four major components and reinforced by twelve general principles; each of these elements is described in detail in various Chapters of the book. Collectively these foundational concepts encompass nearly every imaginable aspect of human thought and learning. Therefore, the Whole Thought framework is applicable to both individuals and organizations. The book contains many examples of how the Whole Thought approach can be applied in various situations. Philosophy is defined as the love of thinking. For those of us who consider ourselves to be Philosophers, this book provides a vast resource of material to ponder. The more I read it, the more I appreciated how profound and awesome human intelligence is. This book assures us that human intelligence will continue to expand as long as humans keep thinking. Those who read Whole Thought will thereby enhance their ability to participate in co-creating that expansion of human intelligence.

Edwin J. Furtaw, Jr., Author, Philosopher, Ultramarathon Runner, Retired Chemical and Environmental Engineer (USA)

In this book "Whole Thought, The Rise of Human Intelligence", Alex Bennet and Robert Turner highlight the deep interconnections between the multitude of aspects of being human and how this influences how we perceive and interact with our world. They draw on vast scientific literature across many disciplines to show the complexities of how our individual and collective knowledge creates the world, and our experiences of it as we interact with it. Whole Thought guides us to connect multiple human intelligences and harness them in ways that provide superior outcomes for us as individuals, teams and in wider society. The practical activities included in this volume enable readers to leverage knowledge capacities as they apply the theoretical concepts to their own contexts. Each time you reread this book, or browse to the piece that is most applicable to you, you will inevitably accelerate your learning and performance. This is an extremely important book for everyone to read, reflect on, and put into action. It will enable you to feel, think, and act in ways you were not capable of doing before, and at the same time improve each time you do so.

Dr Arthur Shelley. Founder, Intelligent Answers. Author, Becoming Adaptable, KNOWledge SUCCESSion and The Organizational Zoo. (Australia)

As the complexity and interwovenness of problems have increased both locally and on the world stage, the need to synthesize between tactical and strategic thought has never been more important. Senior executives are aware of this but often lack the training or understanding of how to further develop this key skill.

In this wonderful book, Alex and Robert explore the idea of "Whole Thought" in a way that helps us take that leap. Importantly they have applied these techniques in the process, so whether you are an academic or philosopher looking for how the science pulls together, a company director wanting to hone your skills, or a middle manager trying to understand executive thinking or taking your own first steps toward strategic planning, this book will help you. They have included multiple viewpoints for each concept, lists of exercises and approaches to develop and hone these mental skills and even simple templates and examples so you can get started right away.

Dwight D. Eisenhower, the Supreme Commander of the Allied Expeditionary Forces in Europe, famously declared "Plans are worthless, but planning is everything". The ability to plan well requires Whole Thought, not just strategic thinking. Alex and Robert map out why the ability to not just switch between the two but to then coalesce across time, context and different levels of abstraction is what is required to plan through the most important problems of the next few decades.

Stuart French, Knowledge Strategy Consultant,
DeltaKnowledge (Australia)

"Whole Thought" by Alex Bennet and Robert Turner clearly represents the culmination of decades of dedicated study and research in the field of holistic thinking and knowledge management. It offers profound insights into the multifaceted nature of human intelligence and consciousness, providing practical tools for individuals and organizations to enhance their cognitive capacities.

This book beautifully articulates the importance of collective intelligence and the need for a paradigm shift in how we approach global challenges. It masterfully weaves together diverse concepts and theories, shedding light on the intricate relationships between knowledge, context, and decision-making. As someone deeply fascinated by the source and nature of human intelligence, intuition and knowledge, I wholeheartedly endorse "Whole Thought" as a transformative and enlightening read. It not only expands our understanding of human cognition but also offers valuable guidance on how to navigate the complexities of our rapidly changing world.

In essence, "Whole Thought" offers a refreshing source of insights that illuminate the path towards a more holistic and conscious future, making it an invaluable resource for anyone seeking to deepen their understanding of human intelligence and its profound implications for society. Having had the privilege of being in contact with one of the authors, particularly Alex, for several years, I must express my deep appreciation for the relentless dedication of the authors to serving humanity. Their commitment to advancing knowledge and fostering holistic thinking is truly commendable, and it shines through in the pages of "Whole Thought." This book is not just a testament to their expertise but also a reflection of their genuine desire to contribute positively to the betterment of society.

Johan Cools, Higher Architecture Institute of Saint-Lucas
Ghent (Belgium)

In this time when generative AI is changing everything in the way we work, and with the possibility of general artificial intelligence becoming closer to reality, Alex Bennet and Robert Turner give us a powerful framework to reconsider what it means to be intelligent and to explore how AI can augment human's capacity for positive impact. Whole Thought is a fundamental guide to reflect on these developments.

Milton deSousa, Author, Associate Professor, Nova School of Business and Economics (Portugal)

To discover what is unknown and to put that knowledge to use can lead to a model shift. This text combines the knowledge elements of mana, metaphysical, and material, leaving the reader with a decoded DNA path of knowledge development. This book excites me in every cell, and if utilized may be just what humankind needs. In other words, the whole comprehension enchilada is presented here. Now we must put it to good use.

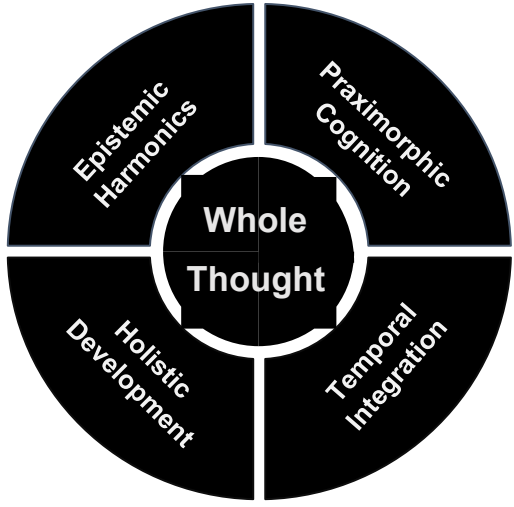
Edwin K. Morris, President and Founder, Pioneer Knowledge Services (USA)

With Whole Thought, Alex and Bob have crafted a seminal work that seamlessly weaves together diverse disciplines and perspectives, illuminating a path towards a more holistic and effective approach to knowledge and decision-making. This insightful exploration encourages readers to embrace complexity and adaptivity, inspiring a holistic approach to thinking and action in an ever-evolving world. A truly enlightening read!

Rongbin WB. Lee, Emeritus Professor, the Hong Kong Polytechnic University (Hong Kong)

Whole Thought

The Rise of Human Intelligence



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Mountain Quest Institute

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The concept of Whole Thought can be understood as more than an intellectual framework. It is a multidimensional narrative that weaves itself through the fabric of our shared history, humanity, innovation, and consciousness.

Appreciation

Our deep appreciation to colleagues and explorers, known and unknown, who dare to fully open their minds to Whole Thought, leading humanity toward her birthright. Our thanks to Dr. David Hughes Bennet, our now not-so-silent learning partner. We would also like to take pause to gratefully acknowledge the assistance of Jane Gilman Turner in assisting with the editing of this work.

Preface

ALEX:

If someone had thrown out the term "Whole Thought" to me 50 years ago, I would have laughed, thinking they were kidding. Thought was thought and how could it be otherwise? Then my focus on knowledge in the 1990's changed everything. Knowledge, as the capacity (potential or actual) to take effective action, or "justified true belief", as you will, was exciting, a human-developed tool to effectively act in the world. Even more exciting, that "effectiveness" was determined by me, putting "me" right in the center of life, a reminder that we have agency, choice.

As the field of Knowledge Management blossomed in the military setting, the Center for Army Lessons Learned took the helm to collect and share "best" practices. While I was in the role of Chief Knowledge Officer for the U.S. Department of the Navy, I have to admit the Army was doing a better job of collecting—and sharing—what we thought of as best practices. And sometimes that worked. Sometimes. But as time passed those best practices didn't seem to have the same results when applied elsewhere. *Realization that emerged:* Knowledge is situation-dependent and context-sensitive. They are two different things. Situation refers to the conditions in which something exists and has a temporal component. It is the "interbehavioral field" as a unit of analysis. Context refers to the circumstances surrounding a particular event/situation. This is consistent with Einstein's $E=MC^2$. Knowledge is relevant.

This also brought with it the understanding that knowledge was always partial and incomplete. Of course, we all know a single decision-maker can't have all the knowledge there is in a specific domain since knowledge is always expanding. Systems thinking and complexity thinking extended that understanding. Humans, organizations, the field of KM, countries, even the world can be considered complex adaptive systems, all dependent on where we draw the boundaries, and complex adaptive systems are living systems which cannot exist for long in stasis. They are always changing, whether learning and expanding, or declining, as the systems around them change.

Still, as more and more "best practices" were accumulated, we began to recognize patterns across them. It's like a tailor who has a wonderful pattern for the perfect suit, which needs to be adjusted for the specific measurements of the different people who want it made for them. Recognition of these patterns

led to concepts, and as multiple concepts emerged and relationships appeared among those concepts, theories began to take root.

In a 2014 Mountain Quest Institute research study that engaged 13 thought leaders in the field of Knowledge Management, including Surinder Kumar Batra, Frada Burstein, Francisco J. Carrillo, Charles Dhewa, Nancy Dixon, Kent Greenes, Edna Pasher, Laurence Prusak, Madanmohan Rao, Hubert Saint-Onge, Dave Snowden, Milton Sousa, and Etienne Wenger-Trayner. Participants were asked about the role of theory in the field. Prusak felt that practitioners, especially in the United States, had a distrust of and little interest in theory. Acknowledging that this distrust might have been a product of cultural anti-intellectualism as a whole, he also shared conversations with practitioners who associated theories with "wooly-minded" academics with no real-life experience who lacked an understanding of exactly how organizations actually work.[1]

Wenger-Trayner expressed a tendency in general for practitioners and managers alike to hang on to simple models that seems to have intuitive appeal. As he described, "The human world is a complex system with lots of dimensions, so simple models are attractive."[2] Then he continued, that while these may prove useful for people who need to make quick arguments around complex process, the power of simple models is also their danger. When used repeatedly, they can become a *substitute* for thinking and a limitation to thinking rather than a tool for thinking.

At that time in the KM government setting interacting with many consulting companies, we noted this same trend. People didn't want to be bothered with theories, just pragmatic actions, and wouldn't have believed that the human operates on theories, and that it is their personal theories that give shape and form to all of their experiences.

As Big Data analytics became a reality, providing the capability of real-time analysis through machine learning for large populations and high volumes of data, the important of patterns was affirmed. The higher-order patterns that emerged became predictive of the future and provided the underpinnings of theories, ever-changing as new patterns emerge in the dramatically and rapidly changing nature of the world.

While CALL and Big Data are key components in this narrative, there are other significant milestones and contributions from different fields that have shaped the trajectory toward more holistic thinking. For example, the notable advancement contributed by systems thinking, which emerged from the works of thinkers like Ludwig von Bertalanffy and Jay Forrester, which encourages understanding the interconnectedness of various components within a system.

Complexity science further explores how complex behaviors can arise from the interactions between parts of a system. These disciplines have informed Whole Thought by emphasizing the importance of context and relationships between knowledge elements. Peter Senge's concept of the Learning Organization in the 1990s emphasizing the role of systems thinking in organizational development and learning. It promoted the idea that organizations must continuously evolve their knowledge base to adapt and thrive,[3] preparing the mind for development of Whole Thought.

The use of storytelling techniques in transferring tacit knowledge has been recognized as powerful across disciplines. Not only does it convey information, but it also captures context, emotion, and insights in a way that analytical data cannot.[4] The growth of CSR (Corporate Social Responsibility) is another example. Growing awareness and initiatives around sustainability and CSR have prompted organizations to consider the long-term impact of their knowledge and actions on society and the environment. Unilever's Sustainable Living Plan, launched in 2010, outlines the company's strategy on sustainability, becoming a reference point for others in incorporating CSR into their organizational strategies. The Open-Source software movement and crowdsourcing platforms have shown how collaborative efforts can solve complex problems and create vast repositories of knowledge, highlighting the importance of collective over individual knowledge.[5]

And the list could go on, perhaps beginning with the formulation of information theory by Claude Shannon in 1948 leading to the digital age, critical in the storing, retrieving and analysis of vast amounts of information, and moving through advancements in cognitive science and Artificial Intelligence, providing insights into human thought processes and supporting the development of systems that can replicate or augment cognitive functions.

Each of these developments, and so many more, have progressively led to a more integrated, nuanced, and complex form of the knowledge movement – ultimately leading into thinking and acting through Whole Thought, which looks to synthesize disparate streams of information, cognition, experiences, and insights into cohesive understandings and actionables. Whole Thought represents not just the assimilation of knowledge across disciplines and domains, but also an alignment within evolving societal and technological landscapes.

But I'm getting ahead of myself. You have been on this expansion-of-thought rise-of-intelligence journey as well, and no doubt much of what we have to say in this book will resonate deeply with you. But first, Bob has more to say regarding this journey.

BOB:

Humankind is more than ready for the new era—the age of human intelligence. We have urgent needs, and we are prepared to measure progress in new ways. This time ahead of us will come to be regarded as a perturbation or state change in human history. In comparison with any other period of advancement it will be unprecedented by scale alone with a possible mid-century population of one billion inhabitants. Through the intermediation of advanced AI we will achieve new plateaus of collaboration and co-creation. To borrow a metaphor from nature—envision rivers streaming with intelligence, filled by infinite tributaries of knowledge flowing from the majestic mountains of human experience. To be sure, the fusion of knowledge reblooming, unleashed learning, and a quantum technology leap is accelerating in such a way that coalesces human intelligence and advanced AI in a crescendo before us.

This era will present levels of a magnitude greater flow of intellectual capital than the previous volumes of corporate intellectual capital and knowledge assets by Stewart,[6] Sveiby,[7] Edvinsson[8] and others so well considered in the closing of the 20th Century. All around us, economically everything is up for replacement or improvement at the level of trillions of dollars per year of innovation and expansion. We need more intelligence in vital areas such as health, including mental health, poverty, security, energy, economics, and environmental sustainability issues, especially climate change. Where are the leverage points that will enable breakthroughs?

Whole Thought is a noble advancement, an exciting breakthrough. There is a historical trend of thought processes that has prevailed at fortuitous junctures in history. We are at a juncture point. Whole Thought reflects the nature of past conventions and is conceived to interact in a brilliant synergistic manner with the technologies that augment human intelligence.

At Plymouth, Massachusetts, in a sacred enclave of democracy, there is a granite Monument to the Forefathers, indeed A Matrix of Liberty. The matrix presents four statues representing the principles that serve as foundational: Morality, Law, Education, and Liberty. The monument unfolds under the heroic figure of Faith, who symbolizes the capacity to put the four principles into action. This unparalleled blueprint for liberty represents a paradigm or **pattern of thinking** for governance that seeded the establishment of a new civilization.

The first half of the 20th Century tested this commitment to the core. WWII alone left America with a million military members either dead or wounded. In

the 20th Century, the larger toll for war and genocide likely totaled over 100 million. And with it, democracy persevered and prospered the growth of democratic governance in more than half the world's nations. Democratic ideals thrive on the freedom that education fosters and vice versa. Opportunities for education have grown across economic classes and economically challenged nations, across cultural and religious barriers, beyond technology limitations, and beyond gender bias. Education has a new frontier. As with other examples, it's truly awe inspiring to follow the rising tide of educated, committed, and capable women in leadership around the world.

Education continues to progress in marvelous ways. One private American university has a degree program with local credentialed volunteer instructors, low tuition, and on-line certificates that currently serves 60,000 students in 180 countries. An increasing number of the world's outstanding colleges and universities are offering free courses online through Open Courseware (OCW). The Massachusetts Institute of Technology, a top tier university with an acceptance rate of less than 5% and a four-year degree cost exceeding $300,000, now offers the most OCW options, with more than 2,200 free courses.

In Peter Drucker's landmark work *Post-Capitalist Society* he writes of the mid-point of the 20th Century change, noting that a major shift was "the American G.I. Bill of Rights after World War II, which gave every returning American soldier the money to attend a university…Future historians may well consider it the most important event of the twentieth century."[9] Drucker, along with fellow Austrian economist Fritz Machlup,[10] clearly provided America an introduction to the emergence of knowledge work. Stepping back, the **pattern of thinking** that valued and values education is a catalyst for human progress.

I have enough years under my belt that I can check my memory banks quite a way back … Actually, I'd like you to check in with me around 1990. The place is Menlo Park, one of the birthplaces of Silicon Valley and the home of the Institute for the Future (IFTF). I was in and out of there for three years participating as a member from the Federal Government sector in an IFTF consortium under the direction of Bob Johansen,[11] one of the foremost published and prolific forecasters of the 20th Century. The focus of the consortium was to bring in participants from companies who were anticipating the future of personal computers and the Internet. The **pattern of thinking** that presided there was when you could see the future you could help create it or prepare for it.

At IFTF we covered endless avenues of potential innovations. Regardless of how far we envisioned the future of personal computers and the Internet, we didn't forecast anything that wouldn't eventually see the light of day.

Thank you for joining me in that IFTF glimpse of 1990. But hold on. I want to take you back even farther to the 1452–1519-time frame. Let's make a brief visit to Leonardo di ser Piero da Vinci. Most of us find him very interesting because of his art. His Mona Lisa is regarded by many as priceless. Then, there is his painting of the Salvatore Mundi (Savior of the World) which was purchased at auction for $430.3 million in 2017, the highest art sale price to date. However, let's ponder just a few insights from Leonardo focused specifically on thinking. More than a prodigious artist, he was, as some have said, a "prescient thinker". He endeavored to understand the nature of all existence.

Leonardo was a scientist and inventor because he saw so clearly what others missed. An amazing commentary on this Italian genius is provided by Frijof Capra, the brilliant physicist who sends us international best sellers from Schumacher College in England, entitled *Learning from Leonardo: Decoding the Notebooks of a Genius*.[13] Here is a glimpse of how Capra regards Leonardo: "Nature was alive for Leonardo. He saw the patterns and processes in the microcosm as being similar to those in the macrocosm … One hundred years before Galileo Galilei and Francis Bacon, Leonardo single-handedly developed a new empirical approach to science, involving the systematic observation of nature, logical reasoning, and some mathematical formulations—the main characteristics of what is known today as the scientific method." Frijof adds to this: "Today it is becoming increasingly evident that systems thinking is critical to solve our major global problems, yet our sciences and technologies remain narrow in their focus, unable to understand systemic problems from an interdisciplinary perspective, and our business and political leaders are often incapable of 'connecting the dots'. This is exactly what we can learn to do from Leonardo da Vinci's unique synthesis of art, science, and design."

While systems thinking was fundamental for Leonardo in addressing the complexities of our existence, it was much more. It was a lens for viewing and thinking about anything and everything. And it follows, that in doing so you become aware of the interrelationships, the interdependencies, and the patterns in all things. Again, a **pattern of thinking**. That's where Bill Gates enters. In 1994 he procured Leonardo's Leicester Codex, one of the Leonardo notebooks at auction for $30.8 million. Bill was intent on learning more about how

Leonardo learned and thought. As he says, “The more you learn, the more you have a framework that knowledge fits into.”

I’ve one more select tidbit to share with you. Across human history, in many of our religions and philosophies and well contemplated in the scientific views of Leonardo and in underpinnings of our modern sciences, we are achieving a human epiphany of sorts. Let me explain. Our human species includes a brain/mind-heart/soul capacity that is beyond comprehension. We struggle to appreciate the complexity of it, but we do find that patterns are fundamental and consistent throughout nature. In working with Whole Thought, we can imagine that a higher intelligence considers matters of the universe on an infinitely larger scale and organizes and creates at a higher level of similarity, but still with patterns. As Bill says, we are creating the framework into which knowledge fits. Indeed, we may be sensing the eternal realm of existence and intelligence that organizes and creates from a complimentary framework of natural patterns,

BOTH:

As we can see, Whole Thought has been slowly emerging throughout the various management, learning, and knowledge cycles of the last century. Moving forward , technology has fully captured the imagination and now with the advent of superior computer technologies and anticipated strides with Generative AI, we are finally able to visibly see the pieces that have been unconsciously expanding in response to human advancement

We are not going to simplify the Whole Thought framework. That just can’t happen considering today’s dramatic and volatile environment. Einstein said everything should be made as simple as possible, and no simpler! And David Bennet said before you simplify something, you had better understand its complexity! We ARE complex adaptive systems. We understand that with all the nuances it brings. And we live in and (sometimes) drive a very large complex adaptive system. Thus, we attend to both of these philosopher physicists and focus on sharing the optimum complexity for the subject at hand.

In doing so, we draw on foundational learning that has brought us to this point and interweave our new understanding of Whole Thought from those frameworks. At the core are various theories of intelligence (Chapter 2), the expanding theories of experiential learning (Chapter 5), and the less-known theory related to Knowledge Capacities, distinct interactive ways humans engage with the world (Chapter 13). These are all interrelated, both supporting and emerging from Whole Thought. See Figure 1.

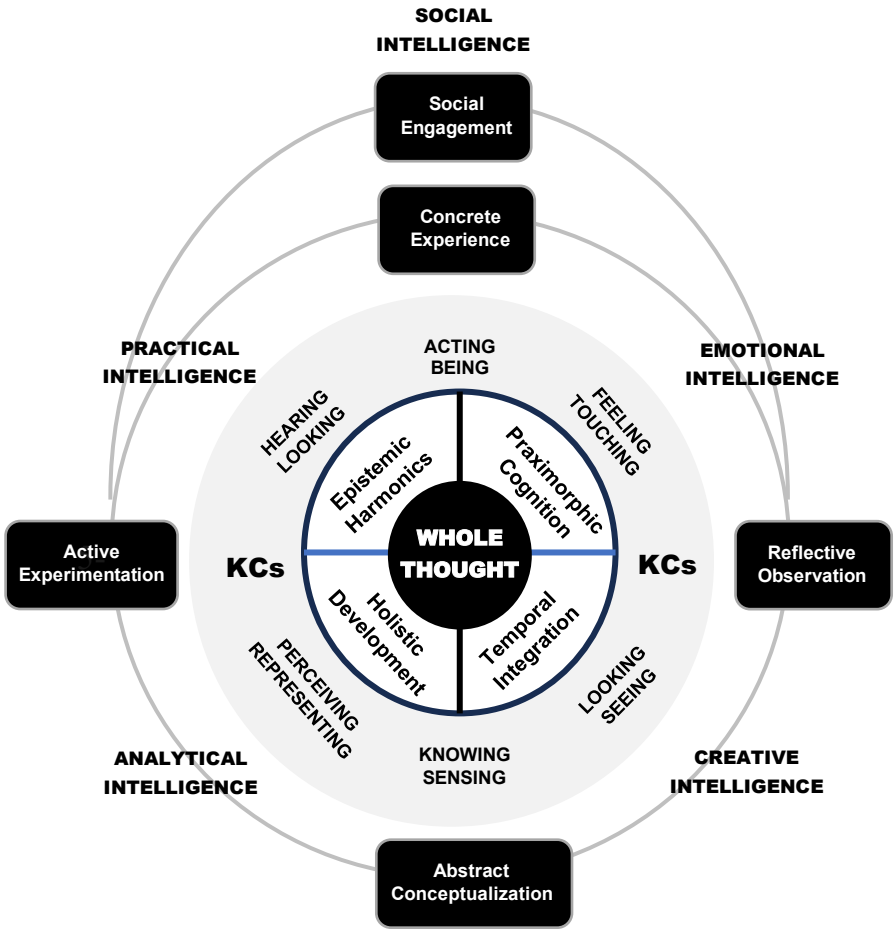


Figure 1. Connecting the theories from which Whole Thought emerges and to which Whole Thought contributes.

It is our view that the mind-brain/heart-soul we share is reflective of the patterns found in nature. Leonardo and Bill have also pointed in the direction of cross-cutting insights with their profound understanding and regard for the natural world. Another excellent advocate for collaborating with nature comes from Susan Hockfield in her revelatory work *The Age of Living Machines: How Biology Will Build the Next Technology Revolution*.[14] She is president emerita of MIT, where she became well known for her academic and leadership initiatives and her transformational advocacy of converging the futures of biology and engineering.

As we come to know the patterns better, we know more about the world we reside in and how to care for it. WT theory, models, structure, and processes, including principles, values, and Knowledge Capacities present a **new and unique pattern of thinking** that is appropriate for this era of the rise of human intelligence.

As we seek potential choices and solutions, Whole Thought will organize, assess, evaluate, and generate multiple options as we address our hopes and concerns. When hosted on a Generative AI platform, WT is both a quantitative and qualitative solution. Quantitative from the standpoint that it provides a framework for processing volumes of disparate input from multiple sources and integrating it against human queries and selected variables in real time. Qualitative from the standpoint that it is designed to optimize and produce results against challenging criteria and the highest standards presented by the human client.

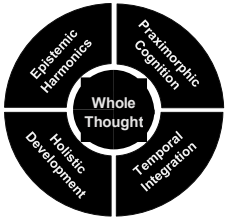
Mountain Quest Institute (MQI) research, with the collaboration of a global network of colleagues, has demonstrated the value of consilience, the interdisciplinary approach, as evidenced by recent monumental works such as the MQI ICALS Learning Theory, the MQI research collection of over 40,000 volumes, and the publication of the WT body of knowledge. MQI's regard for nature always seeks representation in the natural sciences. You can truly experience this appreciation for nature at MQI as you enjoy the ambiance of the MQI setting in the Alleghany Mountains of West Virginia.

As you join us on this amazing learning journey, we invite your personal discovery and contribution. There is so much to learn as we expand to fully utilize our lower and higher mental thinking (*Praximorphic Cognition*), connecting the three parts of time (*Temporal Integration*), engaging the fullness of who we are—physically, mentally, emotionally and spiritually (*Holistic Development*), and honoring that which is seen (explicit) as well as that which is known (tacit) (*Epistemic Harmonics*). For example, since knowledge is context-sensitive and situation-dependent, there are so many Knowledge Capacities to be discovered, ways of operating in the world to facilitate Whole Thought, some that are no doubt specific to your domain of focus and the sustainability of your organization. We trust that you can now envision the Whole Thought Thoughtware Suite guiding the function of a GAI Facilitator in an advanced AI system to provide a quantum metacognition framework in resonance with the intelligence of its human users.

The exciting part of being alive during this amazing transition of humanity is that we've only just begun to tap into the human potential and, by extension, AI and quantum discoveries. And with that thought, let's together emerge a deeper understanding of Whole Thought.

Drawing from our colleague, Dr. Arthur Murray, and consistent with Whole Thought ... Epistemically, ontologically, philologically and semiotically yours,

Alex Bennet and Robert Turner



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Foreword

Weaving the Tapestry of Whole Thought

"There are winds blowing through the mind. Sometimes you can capture it, a realization of reality and how you can use it. They are fairly light, and they do move, and they do touch your thoughts directly … what's being built, what's broken, not used. I know that I am going to—need to—think. About what I (me) the individual, one individual, one of a lot of other people, want to do and can do to stay in this world and learn and act and help others who cannot act but want to learn. What makes sense in this world?"

In a time of ever-increasing complexity and interconnection, the antiquated approach of compartmentalized thinking falls short of addressing the nuanced challenges we face today. Enter Whole Thought—a philosophy that transcends traditional boundaries of cognition by embracing a tapestry of interdisciplinary insights, ethical considerations, and deep adaptability. It does not just allow for but necessitates the integration of diverse perspectives, knowledge domains, and experiences.

As we unfold the layers of Whole Thought, we begin to see its profound implications for education, identity, technology, and our collective future. To comprehend the complex layers of our world requires a comprehensive perspective that bridges the gaps between the analytical and the intuitive, the personal and the collective, the immediate and the eternal.

1. **Interdisciplinary Application**: Whole Thought transcends disciplinary boundaries, providing a framework within educational environments that fosters multifaceted learning. It encourages students to make connections across subject areas, understanding, for example, the interplay between mathematics and art, or how principles of physics might inform philosophical inquiries, enabling a more comprehensive and integrated learning experience.
2. **Ethical and Moral Considerations**: In utilizing Whole Thought, we must weave a rich fabric of ethical reasoning into our decision-making processes, recognizing that the choices we make echo beyond the immediate and touch on the lives of others and on future generations. Thus, each decision becomes a moral touchstone, reflecting our deeper values and the kind of world we wish to shape and inhabit.

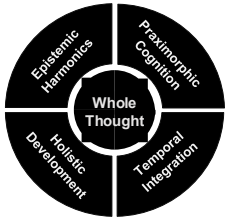
3. **Neurodiversity**: Whole Thought embraces neurodiversity, acknowledging that the diversity in human cognition—from the analytical prowess of some to the imaginative leaps of others—is not just a strength but a necessity. It allows for robust problem-solving and innovation, as different ways of thinking illuminate unique facets of the complex challenges we face.
4. **Mindfulness and Conscious Awareness**: Incorporating mindfulness practices enhances Whole Thought by fostering an acute awareness of the present moment. This conscious presence allows for a deeper engagement with our internal and external experiences, ensuring that our thoughts and actions are grounded in a mindful orientation towards the world.
5. **Cultural Sensitivity**: Whole Thought requires cultural sensitivity, as it is through the kaleidoscope of cultural perspectives that a richer and more nuanced understanding of human experiences emerges. In a globalized society, the ability to appreciate and integrate diverse cultural insights is paramount for effective communication and collaboration.
6. **Technology's Role**: Emerging technologies offer unprecedented possibilities for expanding our experiences and enhancing our cognitive processes. Whole Thought invites us to critically assess these tools, harnessing their potential to deepen our understanding while staying vigilant to the ways they might shape—or misshape—our perception of reality.
7. **Responsibility and Accountability**: Individual and collective responsibility are cornerstones of Whole Thought, calling on leaders to cultivate environments that foster holistic thinking and hold institutions accountable for enabling such inclusive and expansive cognitive cultures.
8. **Impact on Identity Formation**: Whole Thought influences identity formation by integrating personal experiences with shared collective narratives. In our interconnected age, understanding how we craft our identities—synthesizing the personal with the global, and the virtual with the tangible—is crucial to navigating who we are and how we relate to the broader world.
9. **Application in Conflict Resolution**: By applying Whole Thought to conflict resolution, we can address disputes not merely at the level of immediate disagreement but by unearthing and reconciling the underlying values and needs. This holistic approach facilitates more sustainable and empathetic resolutions that acknowledge and honor the multifaceted nature of human concerns.

10. **Bridging Science and Spirituality**: Whole Thought serves as a bridge between the empiricism of science and the introspection of spirituality, blending objective understanding with subjective meaning. This intersection fosters a worldview where knowledge and belief coalesce, offering a balanced pathway to comprehending the vast complexity of our existence.
11. **Adaptation and Flexibility**: The rapid pace of change in the world today demands adaptation and flexibility, hallmarks of Whole Thought. It encourages us to constantly evolve our mental frameworks, stay nimble in our strategies, and remain open to new information and paradigms, thus ensuring that our thoughts and actions are as fluid as the world around us.
12. **Implications for Education Systems**: Education systems built on Whole Thought principles not only impart knowledge but also teach the art of integration—how to connect insights, empathize across divides, and apply knowledge contextually. This educational philosophy equips learners to meet future challenges with resourcefulness and resilience.
13. **Socioeconomic Factors**: Whole Thought acknowledges that socioeconomic factors deeply influence access to information and opportunities for *Holistic Development*. It challenges us to work towards a world where every individual has the means to engage fully with the breadth of human knowledge and contribute their own unique insights to the collective wisdom.
14. **Planetary Thinking**: Whole Thought espouses planetary thinking, compelling us to consider the consequences of our actions on a global scale. It urges us to adopt stewardship for the planet, unifying ecological, economic, and social considerations in a cohesive approach to address planetary challenges like climate change and biodiversity loss.
15. **Critique and Evolution of Whole Thought**: As with any philosophical or cognitive framework, Whole Thought must be subjected to continuous critique and evolution. In critiquing our own frameworks, we ensure that Whole Thought remains dynamic and responsive, ever-adapting to the growth of human knowledge and the changing conditions of our world.

The journey through the landscape of Whole Thought reveals an integrative approach to cognition that is as timely as it is timeless. It beckons us to rethink how we perceive, learn, and engage with the world and each other. Whole Thought is not merely a theoretical concept; it is a call to action—a framework for living, learning, and leading in a manner that is reflective, inclusive, and deeply interconnected. As we venture forward, Whole Thought

stands as a beacon for those navigating the intricacies of our multifaceted reality, ensuring that our actions align with the collective wisdom and the overarching narrative of progression toward a more enlightened society.

Dr. David Bennet
Nuclear Physicist and Author
Co-Founder, Mountain Quest Institute



Chapter 1
Introduction

1.1 WHOLE THOUGHT EMERGING … 1.2 THE WHOLE THOUGHT PRINCIPLES … 1.3 THE POWER OF METACOGNITION … 1.4 THE CHOICE IS OURS

It was an age of limited thought—cognitive approaches characterized by narrow, disconnected, or fragmented perspectives—with an overemphasis on specialization with restrained integrated cross-disciplinary insights, missing out on the innovative solutions that arise from the synthesis of various fields of knowledge. It was a reactionary time with inadequate strategic foresight, lacking preparedness for future challenges. It was a time of prioritizing immediate outcomes over long-term implications, leading to unsustainable decision-making. It was a time of discounting emotional intelligence and intuition, resulting in a lack of empathy and understanding in interactions and choices.

And then the 90's moved into full swing with humanity's creative imagination blooming as global connectivity became a reality for the social beings we increasingly recognized as us. There was a proliferation in the demand for knowledge workers. The dot-com boom in the late 90's surfaced entrepreneurs with wide-ranging skills achieving success in raising capital and growing business quickly in the internet space, reinforcing the idea that a diverse skill set could be valuable in the rapidly evolving business landscape. Author and management consultant Peter Drucker had long foreseen the rise of knowledge workers—individuals with specialized education and the ability to apply knowledge to work products. The changing nature of work, which brought a shift from traditional manufacturing jobs to more knowledge-based jobs, required professionals who could adapt to change and who could learn new skills quickly.

The concept of 'T'-shaped professionals, which emerged in the early 90's, has been popularized by authors such as David Guest and Tom Peters. These are individuals who possess deep knowledge in one specific area (the vertical bar of the 'T'), as well as the ability to collaborate across a variety of disciplines (the horizontal bar of the 'T'), making them valuable in business environments that reward both specialization and adaptability.

Things would never be the same.

RetailRise, a brick-and-mortar retail chain, dominated the last century with a winning formula of low prices and wide selections. In the digital age, their leaders, clinging to what worked in the past, dismissed e-commerce as a passing trend—this limited thought overlooked evolving shopping behaviors and digital integration. RetailRise's sales dwindled as online shopping surged. Customer convenience was redefined by competitors who offered personalized online experiences and seamless delivery services. RetailRise faced store closures, disappointed shareholders, and an antiquated image. (See Appendix A for the WT solution.)

Durabuild Inc., a construction materials manufacturer, primarily focused on maximizing production efficiency and cost savings—a limited thought approach. Environmentally unfriendly practices were overlooked, and despite increasing public outcry over corporate responsibility towards climate change, leadership resisted change. Amidst rising environmental regulations and a shift in industry standards toward sustainability, Durabuild began to face legal challenges and market share loss to greener competitors. Investor confidence waned, and the company's reputation suffered heavily in the court of public opinion. (See Appendix A for the WT solution.)

Quickbite, a popular fast-food chain, was experiencing a downturn in sales as health-conscious eating trends rose. Its leadership team, fixated on traditional business models, continued to push high-calorie offerings. As QuickBite ignored the shift in consumer behavior and health data, its reputation suffered. Nutritional advocates targeted the chain for contributing to public health issues, and sales continued to decline, especially as competitors introduced healthier options. (See Appendix A for the WT solution.)

Enter the 21st century with diverse, interconnected, growing and complex challenges, necessitating a cognitive framework that could accommodate and leverage complexity for constructive outcomes. As markets became more globalized with reduced barriers to trade and investment, companies sought leaders who understood diverse markets and could think strategically on a global scale. X-shaped leadership moved to the fore, a leadership style blending the strengths of both traditional and modern approaches, strong in command and control while simultaneously collaborative and empowering.

The rapid pace of technological change, highlighted by the advent of the Internet and advancements in computer and communication technologies, meant that businesses had to adapt quickly. Generalists, particularly those with an understanding of technology, were valued for their ability to manage across multiple domains. As businesses faced new challenges and unprecedented competitive pressures, they needed managers who could rapidly adapt to

change, understand diverse functional areas, and manage increasingly complex organizations. Corporate scandals in the late 90's and early 2000's (e.g., Enron) prompted a reconsidering of business education, with an increasing emphasis on ethics and social responsibility.

Amidst these changes, the Master of Business Administration (MBA) degree became popular as it ostensibly produced the well-rounded, strategic thinkers that the emerging markets demanded. MBAs were designed to provide a broad knowledge base in areas such as finance, marketing, strategy, and operations, as well as develop soft skills such as leadership and teamwork. B-schools (Business schools) proliferated to meet this demand, and companies sought out MBA graduates for their perceived ability to make data-driven decisions, manage complex projects, and provide leadership across various segments of business.

This trend has continued to evolve, with ongoing debates about the relative value of specialization versus generalization in one's education and career strategy, and the best educational approach for leaders in an increasingly interconnected, complex world. While in many fields like technology, healthcare and engineering there remain a strong demand for specialists with deep expertise, the trend toward valuing a more diverse skill set has been prominent. With this comes increased recognition of the importance of soft skills such as leadership, communication, and critical thinking, which are integral to managing teams and projects in nearly any discipline. For example, in the tech industry, engineers who also have effective interpersonal skills and understand the business context of their work are often sought after.

The concept of "T-shaped" professionals gained greater popularity, and the concept of Pi-shaped professionals was coined by David Epstein in his 2019 book *Range: Why Generalists Triumph in a Specialized World*. These are individuals who have a broad range of skills and knowledge, but also have a deep expertise in one particular area. This allows them to be both generalists and specialists, which is an invaluable asset in today's rapidly changing business environment. In this environment, continuous learning and upskilling have become part of the career landscape, with the rise of online learning platforms and micro-credentials, which allow for both deep dives into subject matter and broad exploration of new areas.

1.1 WHOLE THOUGHT EMERGING

In tracing the arc of human progress, one can discern an underlying pattern steering the course of our intellectual evolution—a gradual but persistent gravitation towards what is now identified as Whole Thought. This paradigm

does not represent a mere milestone, but rather signifies a shift, a transformation in the fabric of cognition brought into relief by the cumulative ascent of human intelligence.

As the final decades of the 20th century unfurled, a cognitive evolution was quietly stirring. The age of limited thought was giving way to an era where the power of cross-disciplinary synthesis began to unveil its potential. Specialization remained vital, but no longer stood alone; it was now part of a broader, more dynamic cerebral tapestry. In the face of growing complexities and connectedness, a new way of thinking started to take root, promising a convergence of not just varied knowledge but also enriched understanding through a fusion of intuition, experience, and strategic foresight.

Whole Thought is not an invention of the contemporary mind but the crystallization of an age-long journey. It transcends the individual, encompassing a collective march towards a deeper, more integrated understanding of the world around us and our place in it. At the heart of this cognitive renaissance are the pivotal components that compose Whole Thought: *Praximorphic Cognition*, emblematic of our ability to translate abstract theories into concrete actions; *Temporal Integration*, where the wisdom of the past, the agility of the present, and the foresight into the future amalgamate; *Holistic Development*, the encompassing of emotional, spiritual, and mental growth as facets of our cognitive evolution; and *Epistemic Harmonics*, the blend of explicit and tacit knowledge, making full use of our conscious and unconscious resources. These are briefly introduced below and detailed with examples in Chapter 3.

The concept of *Praximorphic Cognition* signifies a developmental leap in the way we think, shifting from the straightforward cause-and-effect reasoning to a more sophisticated ability to identify and interpret patterns. Unlike the simple linear logic that dominates cause-and-effect reasoning, which tends to focus on singular incidents, pattern recognition empowers us to look at the bigger picture—connecting dots across different situations to unearth underlying principles that are universally applicable. This form of cognition is essential for the extrapolation of knowledge across varied domains, allowing for the distillation of concrete experiences into overarching lessons that can inform our actions in diverse, and potentially dissimilar, spheres.

Whole Thought is anchored in the concept of *Temporal Integration*, which embodies the dynamic fusion of time's dimensions—past, present, and future—into a cohesive understanding. This approach is essentially about perceiving time not as a series of disjointed snapshots but as a continuous stream, where the lessons from history (the past) inform our understanding of ongoing events

(the present), and help us make educated predictions about and preparations for what's to come (the future). It's a vital element of strategic thinking and visionary planning. Such an integrative perspective ensures that present-day decisions are not only shaped by previous experiences but are also crafted with a thoughtful view towards future ramifications and opportunities.

When intertwined with *Praximorphic Cognition*, *Temporal Integration* takes on a transformative power, enabling not just the comprehension of time-bridged narratives but also their practical application. It allows for the translation of time-based insights into concrete actions, optimizing decisions and strategies in an ever-evolving continuum. This synergy underlines the sophistication and potential of human intelligence: the capacity to both conceptualize abstract temporal elements and manifest them into effective practices.

The idea of *Holistic Development* suggests a form of growth that comprehensively nurtures the physical, mental, emotional, and spiritual dimensions of human existence. This concept acknowledges that making choices and experiencing life fully are not endeavors rooted solely in logic, but are also significantly influenced by our feelings, bodily perceptions, and profound personal insights. *Holistic Development* champions a more intricate and all-encompassing framework for interpreting and engaging with our surroundings, advocating that the confluence of our intellectual, empathetic, and sensory awareness—alongside a deeper search for purpose—yields a more authentic and complete way of living.

Interwoven with *Praximorphic Cognition* and *Temporal Integration*, *Holistic Development* completes a triad of principles that together form the bedrock of Whole Thought. *Praximorphic Cognition* facilitates the practical application of patterns and abstract concepts, while *Temporal Integration* enables the seamless unification of time's flow into strategic thinking. *Holistic Development* then enriches these cognitive skills by grounding them in the richness of the full human experience, ensuring that the insights and actions derived are not only intelligent and temporally informed but also emotionally resonant, physically grounded, and spiritually fulfilling. The convergence of these three components fosters an approach to learning and decision-making that is as robust and multi-dimensional as the human capacity for thought and understanding itself, supporting not just the increase of intelligence but also existential and transcendent learning.

Epistemic Harmonics encapsulates the integration of tacit knowledge, which resides in the unconscious and manifests as intuition and innate understanding, with explicit knowledge, which is more conscious and can be

readily communicated. Acknowledging the existence and interplay of these two types of knowledge enriches the already comprehensive structure of Whole Thought. Tacit knowledge, being somewhat elusive and less tangible, is often the catalyst that ignites innovative thinking and advanced pattern recognition. On the flip side, explicit knowledge, with its methodical and articulated nature, underpins logical reasoning and shared comprehension. Engaging both forms of knowledge simultaneously, Whole Thought aspires to cultivate a harmonious synergy that harnesses both the inexpressible elements of cognition and the well-defined, transferable insights that form the complete spectrum of human understanding.

When considering how *Epistemic Harmonics* interlocks with *Praximorphic Cognition*, *Temporal Integration*, and *Holistic Development*, we see a rich composition that epitomizes Whole Thought. *Praximorphic Cognition* brings the practical application of ideas into the mix, *Temporal Integration* adds the timeless contextual awareness, and *Holistic Development* integrates the emotional, spiritual, and physical dimensions of human experience. *Epistemic Harmonics* then enriches this ensemble by ensuring that both the understated, intuitive wisdom and the overt, articulated understanding are leveraged to their fullest.

In concert, these four components—*Praximorphic Cognition, Temporal Integration, Holistic Development*, and *Epistemic Harmonics*—create a symphony of cognition that comprises Whole Thought. This quartet operates in unison to foster a thinking process that is as complex and layered as the human mind which hosts them. Together, they enable individuals to navigate the world with a depth of wisdom, practical acuity, temporal clarity, and a balance of knowledge that together maximize cognitive potential and creative expression.

1.2 THE WHOLE THOUGHT PRINCIPLES

The principles of Whole Thought act as the bridge between the mental dance of thought and the tangible reality of action in a recipe for dynamic intelligence. They offer a framework for an integrated approach to cognition that honors the multidimensionality of our experiences, the diversity of our cultures, the depth of our historical consciousness, and the breadth of our creative and ethical potentials.

The Ethical Responsibility Principle ensures our intelligence rise is tethered to moral ground. *The Societal Advancement Principle* bespeaks our unified march towards not only advancing society but uplifting it. *The Dynamic Balance Principle* and *The Continuous Evolution Principle* both assert the

fluidity and adaptability of our thinking—traits indispensable to navigating the maze of the modern world. The table below lists all twelve principles, and these are further detailed with example scenarios in Chapter 4.

1. The Multidimensional Principle	Multiple dimensions of human experience – intellectual, physical, emotional, and spiritual – contribute to a richer, more nuanced understanding and engagement with the world.
2. The Universal Resonance Principle	The harmonization of multicultural wisdom enhances our collective cognition, fostering inclusivity and enabling universally resonant insights.
3. The Temporal Awareness Principle	An informed perspective considers the past to understand the present and responsibly shape the future.
4. The Holistic Perspective Principle	A Holistic Perspective discerns the patterns that interlink systems and experiences, offering a view beyond isolated elements to the interwoven complexities of the whole, guiding informed action and systemic coherence.
5. The Harmonious Knowledge Fusion Principle	The intermingling of experiential wisdom with analytical precision gives rise to insightful understandings that advance human creativity and problem-solving.
6. The Intellectual Synthesis Principle	A cohesive understanding emerges from the inclusive integration of diverse knowledge forms, ensuring accessibility to bridge gaps between concepts, cultures, and disciplines for a richer intellectual synthesis.
7. The Collaborative Co-Creation Principle	The confluence of diverse thought and experience within collective enterprises unleashes solutions greater than individual contributions could achieve alone.
8. The Dynamic Balance Principle	Steady values and adaptable strategies coexist to navigate the complexities of change, fostering resilience in thought and action.
9. The Actionable Insight Principle	Actionable insights are born from the rich soil of concepts and theories, equipping individuals and organizations to convert profound understanding and purpose into responsible and effective action.
10. The Continuous Evolution Principle	Commitment to lifelong learning embraces the evolving dynamics of human and digital realms, fostering adaptability and ensuring individuals thrive in an increasingly interconnected world.
11. The Ethical Responsibility Principle	Integrity and ecological conscience guide our pursuit of innovation, balancing advancements with ethical responsibility towards society and the stewardship of our environment.
12. The Societal Advancement Principle	Innovation and learning, pursued with transparency and accountability, serve as conduits for societal enrichment, catalyzing progress that honors human potential and ecological balance.

The powerful integration of the four foundational components that lie at the heart of Whole Thought—*Praximorphic Cognition, Temporal Integration, Holistic Development*, and *Epistemic Harmonics*—serve as the pillars upon which the Whole Thought Principles stand, underlining the importance of a

nuanced approach that marries logical reasoning with pattern recognition, connects timespans from the past to the future, balances diverse aspects of human existence, and synergizes conscious knowledge with unconscious wisdom.

The principles work collectively, guiding individuals and organizations to navigate the present's challenges with foresight and wisdom gleaned from the past, all while forging a sustainable path into the future. They encourage an exploration of the multifaceted human experience in the quest for knowledge and understanding, promoting a balance of emotional, physical, intellectual, and spiritual growth.

The application of these principles cultivates an environment where collaboration flourishes, ethical considerations are paramount, and continuous evolution is the norm. They call for a societal advancement that considers not only technological and intellectual growth but also ethical and ecological responsibility, suggesting that our pursuit of knowledge and progress carries with it a profound responsibility to our community and planet.

1.3 THE POWER OF METACOGNITION

Metacognition refers to the awareness and understanding of one's own thought processes … thinking about thinking or cognition about cognition. It is a powerful tool for enhancing cognitive abilities, promoting personal growth, and facilitating lifelong learning. John H. Flavell, an American developmental psychologist, was one of the first to formalize the term ‘metacognition’ and establish it as an area of study.[15] Flavell’s seminal work on metacognition in the late 1970’s laid the groundwork for understanding how metacognitive abilities could influence learning and intelligence.

There are two major components of metacognition. Metacognitive knowledge, the first component, is the knowledge about one's own cognitive abilities, as well as an understanding of the strategies that can help regulate those processes. It includes understanding how we learn, what strategies work best for us, and recognizing our cognitive strengths and weaknesses. The second component is metacognitive regulation, which is the regulation of cognition through planning, monitoring, and evaluating. It involves setting goals, selecting strategies to achieve those goals, and assessing the effectiveness of those strategies in meeting the goals.

The value of metacognition to mind expansion and the rise of intelligence is substantial. First, metacognitive strategies can help individuals to learn more effectively. By considering how they learn and reflecting on their learning processes, individuals can optimize their study habits and become better self-

directed learners. Second, it allows individuals to step back and examine their approach to problem-solving, making adjustments as necessary. This can lead to more effective and efficient solutions.

Third, metacognition cultivates a greater awareness of one's cognitive biases and limitations, which can lead to more rational decision-making. Fourth, metacognitive skills can help individuals to adapt to new situations and challenges by allowing them to assess the demands of a task and adjust their strategies accordingly. Fifth, through metacognitive practices, individuals can develop a mindset that is more resilient to failure, as they are able to reflect on what went wrong and how to approach the problem differently in future attempts. And sixth, by understanding and reflecting on how we think, individuals can break away from conventional thought patterns and develop innovative ideas and creative solutions.

While all of these certainly point to the rise of intelligence, there is considerable research specific to this area. For example, Wilson and Conyers have explored how metacognition can contribute to the growth of intelligence, which they describe as learnable and extendable with the right practices. Their work suggests that metacognitive practices such as explicit instruction in thinking about thinking can lead to improvements in problem-solving and the development of a growth mindset.[16]

Another perspective is offered by Sousa in his book *How the Brain Learns*, where he posits that metacognitive strategies can help learners understand their learning style, allowing them to select and use strategies that maximize their cognitive strengths.[17] Through empirical studies, research has found that when students, for instance, are taught to engage in metacognitive activities—like planning how to approach a task, monitoring comprehension, and evaluating progress towards the completion of a task—they become more efficient learners. They are often able to transfer these skills across disciplines, which is a hallmark of increased intelligence and adaptability.[18]

This educational theory has been directly associated with the work of Vygotsky and the concept of the "Zone of Proximal Development" (ZPD). According to Vygotsky, the ZPD defines functions that have not yet matured but are in the process of maturation, processes that only operate under adult guidance or in collaboration with more capable peers.[19] Metacognitive strategies enable individuals to become aware of this developmental space and to help bridge the gap between what they can do independently and what they can achieve with guidance. In a recent study by Gotlieb, Yang and Immordino-Yang, it was shown that transcendent thinking in late adolescents supports “identity development, the process of building self-definitions rooted in

reflections on experiences, hopes, relationships, values, and beliefs."[20] Further, extensive research suggests that the executive control networks support autobiographical, reflective, and free-form thinking as well as effortful, focused thinking.[21]

Transcendent thinking involves higher-order thinking processes that go beyond the immediate and tangible to consider more abstract, philosophical, or existential aspects of a problem or concept. Transcendent thinking can involve contemplating one's place in the world, the meaning behind certain events, or the impact of one's actions on a broader scale. This form of thinking has the potential to influence decision-making and problem-solving by integrating personal values, ethics, moral reasoning, and empathy into cognitive processes. It can lead individuals to find connections between disparate ideas or to develop a deepened sense of purpose and understanding. While Immordino-Yang's work focuses on the integration of emotional and social learning within educational neuroscience, transcendent thinking as part of metacognition extends this idea to the reflection on thinking processes themselves. Viewing problems or concepts through this broader, more holistic lens can enhance the depth and quality of one's thinking, reaching toward Whole Thought and leading to richer educational experiences and more profound insights into the human condition.

Recent studies in the field of neuroscience have suggested that the prefrontal cortex of the brain is implicated in metacognitive processes. These areas are associated with higher-order thinking skills such as planning, decision-making, and moderating social behavior.[22] Such research underscores the neural foundation that underpins metacognitive activities, bringing a biological perspective to the understanding of how intelligence can be expanded through metacognitive practices.

In a rapidly changing world, the capacity for metacognition aids individuals and organizations in preparing for future challenges. It allows for a dynamic response to the unpredictable, encourages a proactive approach to problem-solving, and underpins the ability to learn from both successes and failures. Metacognitive strategies promote reflective practice, which is integral to professional development across various fields, from education and healthcare to business and engineering.

Metacognitive practices serve as an underpinning for the principles outlined within Whole Thought by encouraging the holistic integration of knowledge and experience. Metacognition sustains *The Holistic Development Principle* by recognizing the interconnectedness of cognitive, emotional, and social dimensions in the development of intelligence. It exemplifies the

Epistemic Harmonics component, where a harmonious relationship between the conscious (explicit) and unconscious (tacit) knowledge is maintained. Furthermore, the process of considering broader, transcendent perspectives can be seen as a practical application of *The Temporal Integration Principle* and *The Intellectual Synthesis Principle*, weaving together insights from various time scales and knowledge domains.

The process of developing complex neural connections can also be seen through the lens of *The Continuous Evolution Principle*, highlighting the necessity for learning and personal development to adapt to an ever-evolving landscape. As neuroscience reveals the brain's remarkable adaptability and responsiveness to such high-level cognitive activity, the insistence on fostering these thought processes becomes a strategic priority for educational institutions, policymakers, and organizational leaders.

Transcendent thinking, then, represents an advanced level of metacognitive engagement that holds significant implications for the individual's intellectual and emotional development, their relationship with society, and their neurological growth. It exemplifies how the integration of cognitive, emotional, and social domains, as postulated by Whole Thought, is not merely a philosophical idea but a practice supported by the science of brain development, with profound implications for education and human growth in our personal and professional lives.

Supporting the Whole Thought framework is a suite of Knowledge Capacities, of which metacognition is primary. In Chapter 14, all 40 Knowledge Capacities developed in support of Whole Thought are linked to their contributions to metacognition. The specific capacity called 'Metacognitive Mastery' emphasizes the importance of *The Societal Advancement Principle* by ensuring that decisions are purposeful and mindful of their broader social context and impact (see Appendix C). *The Intellectual Synthesis Principle* is applied as individuals use metacognition to weave together various cognitive domains and insights, resulting in a harmonized approach to knowledge application.

In essence, metacognition is the guiding force that enables us to sail the ocean of cognitive complexity—enriching our maps of understanding, calibrating our navigational tools, and charting a course towards intellectual mastery and growth. It's the reflective questioning that leads us to hone our cognitive abilities, closing the gap between potential and performance and allowing both individuals and organizations to rise to the heights of their capabilities.

1.4 THE CHOICE IS OURS

How we proceed into the future as a humanity is the culmination of the choices each and every one of us makes every day. Agency and choice are intrinsic to Whole Thought because they empower individuals to actively engage in the integration process of their physical, mental, emotional, and spiritual dimensions. This approach to learning and living emphasizes a purposeful synthesis of various cognitive processes and knowledge types that each person uniquely experiences and interprets. This includes:

1. **Intentional Integration**: Whole Thought involves the deliberate combination of different cognitive styles—analytical and intuitive, concrete and abstract. Individuals exercise agency in choosing how to balance these styles based on personal strengths and situational demands.
2. **Temporal Choices**: *Temporal Integration*—the consideration of past, present, and future—requires active decision-making. Individuals exercise agency in learning from the past, being mindful in the present, and making choices that shape the future.
3. **Choice in Holistic Development**: The *Holistic Development* aspect of Whole Thought encourages individuals to choose their paths in cultivating balanced growth across the physical, mental, emotional, and spiritual realms.
4. **Epistemic Agency**: In engaging both tacit and explicit knowledge (*Epistemic Harmonics*), individuals have the choice to draw on internal, often unarticulated understandings, and/or more formalized, explicit information when making decisions, thereby fostering a nuanced approach to knowledge application.
5. **Co-Creating Reality**: Agency is exercised through the conscious co-creation of reality. By choosing which theories, models, or practices to apply, individuals can shape their environments and social contexts.
6. **Ethical Decisions**: Ethical considerations in Whole Thought involve exercising personal and professional agency to make decisions that align with core moral values, ensuring actions taken are socially responsible and environmentally sustainable.

Agency in the context of Whole Thought is about the choices individuals make to weave together a more coherent and integrated understanding of the world, leading to actions that are informed, responsible, and reflective of intelligent wellbeing. To that end, we choose the future.

Chapter 2

The Rise of Human Intelligence

In the grand continuum of progress, the milestones of human intelligence are distinguished by an ever-deepening complexity. Streaming from the deeper understanding of experiential learning moving through the work of John Dewey, Kurt Lewin, Jean Piaget, David Kolb, J. E. Zull and David Bennet; from the emergence of systems theory through Ludwig von Bertalanffy, Jay Forrester and Peter Senge; from the expansion of information and knowledge theory transforming our organizations and the complex adaptive beings within them; from Howard Gardner's theory of multiple intelligences to Jeff Hawkins's work on pattern recognition, each contributory stream has led to the vast ocean that Whole Thought now encompasses. This is a testament to how understanding does not merely accumulate in volume but expands in dimensionality.

Gardner's revolutionary notion that intelligence spans various modalities—from linguistic to spatial, to emotional—laid groundwork that profoundly widened the academic and cultural conversation on what it means to be intelligent. This multiplicity of intelligences mirrors the holistic approach that Whole Thought advocates: an assimilation of cognitive diversity that embraces all facets of human potential.

Complementary to this is the work of neuroscientist Jeff Hawkins, who stressed the crucial role of pattern recognition as a central pillar of intelligence.[23] His Hierarchical Temporal Memory (HTM) model, drawing on neuroscience to articulate the significance of patterns and inference, has correlations to the principles of Whole Thought, detailed in Chapter 4. The recognition of patterns—temporal, spatial, emotional—echoes throughout Whole Thought's approach to integrating learning from diverse experiences and disciplines.

The cutting-edge research into neocortical functioning helps us appreciate the advanced cognitive ability that underlies the holistic, integrative thinking of Whole Thought. Much of this learning is coming out of Numenta driven by Hawkins, its co-founder.[25] This work focuses on how the brain's neocortex

processes information, with a key interest the function of cortical columns, which are considered the basic building blocks of the neocortex. Hawkins' exploration into the workings of cortical columns aims to understand how the brain learns, predicts, and enacts behaviors based on patterns—essentially, how we think. These cortical structures repeat throughout the neocortex and are involved in all higher-level brain functions. This work illuminates the deep learning and pattern recognition capabilities of the brain.

Hawkins' research offers significant potential insights into how Whole Thought works. Understanding the neurobiological basis of how the brain processes complex information can provide valuable insights into realizing the principles of Whole Thought in practical scenarios. Let's briefly explore those relationships.

First, as introduced above, cortical columns are theorized to be involved in pattern-based learning. Since Whole Thought involves recognizing patterns and abstract concepts to apply to various problems and disciplines, the information processing done by cortical columns is foundational for such cognitive tasks.

Second, just as Whole Thought integrates lower and higher mental processes—the concrete and the abstract, the simple and the complex—the neocortex processes information in a hierarchical manner. HTM aligns with Whole Thought as it recognizes the importance of integrating information from diverse cognitive levels to form a comprehensive understanding.

Third, Hawkins posits that the brain uses memory to make predictions about the world, creating internal models based on previous experiences. Whole Thought emphasizes the importance of *Temporal Integration*—connecting past experiences and knowledge to present actions and future predictions. Hawkins' focus on sequence memory in the neocortex illustrates this idea, as the brain uses sequences from past experiences to predict future occurrences.

Fourth, the uniform structure of cortical columns across the neocortex suggests a common processing algorithm for sensory inputs, thoughts, and motor outputs. Whole Thought similarly integrates diverse sources of information into a coherent understanding or approach, which could be reflected in the harmonious activity of cortical columns across different brain regions.

Fifth, Hawkins' research points to the flexibility of cortical columns to adapt to various types of information and context changes. This neuroplasticity underpins the adaptability of thought that is crucial for Whole Thought, which

advocates for responsive and dynamic thinking based on varying inputs and contexts.

2.1 HOLISTIC INTELLIGENCE

There is a clear link between the Whole Thought framework and Holistic Intelligence, which encompasses analytical, emotional, social, creative, and practical intelligences. Whole Thought is characterized by its foundational components, crucial in heralding the rise of human intelligence. *Praximorphic Cognition* acknowledges the transformation of theoretical insights into practice, which dovetails with the logical and problem-solving aspects of analytical intelligence. *Temporal Integration*—integrating the past, present, and future—resonates with the aspect of practical intelligence as it involves using experience and foresight in problem-solving and decision-making. *Holistic Development*—Whole Thought's inclusivity of physical, mental, emotional and spiritual dimensions—aligns with emotional and social intelligences. These intelligences are crucial for navigating personal growth and social relationships, respectively. *Epistemic Harmonics*—the blending of tacit and explicit knowledge—parallels the capacity of creative intelligence to synthesize diverse forms of knowledge and come up with innovative solutions.

Supporting these components with significant principles, Whole Thought advocates for an elevated form of intelligence. *The Multidimensionality Principle*, with an emphasis on considering intellectual, emotional, physical and spiritual experiences, aligns with the broad spectrum that Holistic Intelligence encompasses, ensuring a rich and nuanced engagement with the world. Through *The Ethical Responsibility Principle,* intelligence mandates a stewardship that is conscious of its impact on others and the environment. *The Societal Advancement Principle* reminds us that our cognitive ascent should contribute to societal progress, improving the human condition universally. The relationship of ethical responsibility and societal advancement in terms of integrity and morality is discussed in Chapter 4.

The Holistic Intelligence Model provides a foundation for the Whole Thought framework, conveying a comprehensive integrative approach to understanding human intelligence by acknowledging that true intellectual capability arises from the harmonious integration of diverse cognitive domains. Consistent with Whole Thought, it postulates that the full spectrum of human intelligence encompasses a range of interlinked capacities from logical analysis to creative innovation, emotional perception, social understanding, and practical application. Each domain plays an essential role in cultivating a perspective that is both comprehensive and nuanced.

2.1.1 Analytical Intelligence

Analytical Intelligence is the domain that encompasses one's ability to evaluate, analyze, compare, and contrast information. It involves critical thinking, problem-solving, pattern recognition, and the capacity to work with abstract concepts. This type of intelligence is key in academic settings, research, data analysis, strategic planning, and any area where logic and reasoning are paramount. Development in this domain is often focused on enhancing deductive reasoning, quantitative analysis, and methodical approaches to solving complex problems.

Analytical intelligence was one of the intelligences emerging from Howard Gardner's Theory of Multiple Intelligences. This theory posits that intelligence is not a single general ability but is instead composed of many different and independent intelligences. Gardner initially identified seven intelligences, which he later expanded upon, but it is important to note that not all of Gardner's intelligences are represented in the five intelligences that are in the Whole Thought Holistic Intelligence Model.[25]

Analytical Intelligence is also one of the intelligences emerging out of Robert Sternberg's Triarchic Theory of Intelligence. Sternberg's theory suggests that there are three types of intelligence: analytical (componential), creative (experiential), and practical (contextual).[26] These have clear parallels with the analytical, creative, and practical intelligences in the Holistic Intelligence Model.

Analytical Intelligence is crucial for the logical and critical components of Whole Thought. It facilitates the breakdown of complex problems into manageable components, enabling systematic analysis and reasoned conclusions. This type of intelligence supports the capacity to discern patterns, apply logical reasoning, and synthesize information from disparate sources. In achieving Whole Thought, Analytical Intelligence provides the structural foundation for rigorous thinking, ensuring decisions and understandings are grounded in fact, causality, and objective analysis. In the *Praximorphic Cognition* component, it contributes to the ability to take theoretical or abstract concepts and apply them in practical, real-world contexts. In the *Temporal Integration* component, Analytical Intelligence allows individuals to interpret historical data and current information to forecast future implications—a key aspect of strategic planning and foresight.

2.1.2 Emotional Intelligence

Often referred to as EQ, Emotional Intelligence measures one's ability to understand and manage emotions effectively. It consists of skills such as

empathy, self-regulation, motivation, self-awareness, and the ability to read and navigate the emotions of others. Emotional Intelligence is crucial in personal relationships, leadership, team dynamics, and situations that require negotiation and conflict resolution. Cultivating EQ leads to better interpersonal communication, stronger relationships, and the ability to inspire and influence others.

Daniel Goleman's work brought Emotional Intelligence to the forefront of the business world, highlighting its importance in management, leadership, and workplace dynamics. EQ includes skills such as self-awareness, self-regulation, motivation, and social skills.[27]

Emotional Intelligence is fundamental to Whole Thought because it enhances self-awareness, empathy, and the management of personal and interpersonal dynamics. It enables individuals to navigate their own emotions and those of others artfully, fostering relationships and collaborations that are empathetic and effective. High Emotional Intelligence ensures that Whole Thought is not restricted to cerebral processes but is enriched with humanity and compassion. It supports the *Holistic Development* component by balancing intellectual endeavors with emotional maturity. In support of this component, Emotional Intelligence addresses the emotional and interpersonal dimensions of an individual's growth, pivotal for holistically developed individuals who can negotiate the personal and professional realms with emotional savvy and awareness. Related to the *Epistemic Harmonics* component, Emotional Intelligence is about harmonizing one's inner knowledge of emotions with the outward expression of feelings, facilitating interactions that reflect an understanding of ourselves and others.

2.1.3 Social Intelligence

Social Intelligence reflects the capacity to comprehend and manage complex social interactions and environments. It includes the ability to adapt to different social situations, understand and influence group dynamics, and navigate social networks skillfully. This intelligence domain is vital for collaboration, networking, teamwork, and community engagement. Enhancing social intelligence can improve an individual's ability to create rapport, build alliances, and foster cohesive and productive group interactions.

Social Intelligence, a concept deeply explored by scholars like Edward Thorndike[28] and more recently by Karl Albrecht,[29] underpins the capacity to understand others' emotions, intentions, and motivations, and to respond appropriately. It also includes one's adeptness in managing and building networks, negotiating conflict, collaborating with peers, and exhibiting

interpersonal empathy. Social intelligence is, therefore, in combination with Emotional Intelligence, a crucial component for success in group settings and leadership roles, as it enhances communication and fosters a cooperative and productive environment.

Social Intelligence strengthens Whole Thought by enriching the relational aspects of cognition. It enhances one's ability to understand the intricate fabric of social interactions, power dynamics, and cultural norms. In Whole Thought, Social Intelligence ensures that intellectual theories are grounded in social reality, allowing for ideas and solutions that are socially informed and culturally relevant. It drives the collective intelligence aspect of Whole Thought, acknowledging that wisdom often emerges through collaborative efforts. In *Holistic Development*, Social Intelligence contributes to an individual's ability to engage with and contribute to society, understanding and navigating social spaces with ease. In support of *Epistemic Harmonics*, it involves blending explicit knowledge about social dynamics with tacit understanding garnered from personal interactions and experiences

2.1.4 Creative Intelligence

Creative Intelligence is indicative of one's capacity for innovation, artistic expression, and the generation of new ideas. It includes the ability to see things in novel ways, the willingness to take risks, and the skill to produce work that is both original and valuable. Creative Intelligence is essential not just in traditional artistic fields but in any context where innovation and problem-solving are needed. It facilitates out-of-the-box thinking and the ability to envision unique solutions to complex challenges.

Popularized by figures such as J.P. Guilford,[30] Creative Intelligence is central to the ability to produce novel and valuable ideas. It involves divergent thinking, which is the capacity to generate multiple unique solutions to open-ended problems. Creative intelligence encompasses innovation in all domains, from the sciences to business. It is, as noted, a key competency in problem-solving and adapting to new situations, enabling individuals to think outside conventional boundaries and propose creative solutions that may defy traditional logic.

Creative Intelligence is vital for Whole Thought as it unlocks imaginative and inventive thinking. It allows for the exploration of new possibilities and the envisioning of realities beyond the status quo. Creative Intelligence ensures that Whole Thought is not static or confined but dynamic and expansive. It allows for flexibility in thinking, adaptation to change, and the generation of innovative ideas that push boundaries and pioneer new directions. Creative

thinking is essential to *Praximorphic Cognition* when abstract insights lead to innovative products, solutions, or artworks that demonstrate tangible applications of creative thought. In *Temporal Integration*, Creative Intelligence involves recognizing the value of past creative efforts to innovate for the future, often introducing new trends that become tomorrow's standards.

2.1.5 Practical Intelligence

Practical Intelligence involves skills and knowledge applied to everyday tasks and real-world challenges. It includes the ability to manage personal affairs, navigate daily life, and use knowledge effectively for practical purposes. This type of intelligence is essential for managing life's various demands, from personal finance to career management, and it enables individuals to apply learned theories and concepts in concrete and relevant ways.

Practical Intelligence relates to the ability to solve everyday problems by utilizing knowledge gained from experience. It is characterized by an individual's capacity to adapt to their environment, or to change it to align with their goals, and to learn from past experiences to improve future outcomes. This type of intelligence is essential for successful day-to-day living and is often tied to 'street smarts', or common sense.

One of the key figures who have focused on Practical Intelligence is Robert Sternberg himself. In his book *Nature and the Origins of Competence in the Everyday World*,[31] Sternberg presents a detailed exploration of Practical Intelligence, which he describes as tacit knowledge—know-how that is not explicitly taught but is indispensable in everyday problem-solving scenarios. Other significant contributions have come from the field of cultural psychology, where researchers like Richard Nisbett have examined how practical intelligence can vary between cultures.[32]

Practical Intelligence is what translates Whole Thought from theory into action. It relates to effectively navigating and managing everyday affairs, adapting theoretical knowledge to real-world contexts, which is the quintessence of *Praximorphic Cognition*, applying what is learned to navigate the complexities of everyday life. This domain ensures that insights derived from Whole Thought are actionable and relevant, capable of being implemented in concrete ways that positively influence one's environment and activities. In support of *Holistic Development*, it involves utilizing all facets of one's abilities to function and succeed in various environments, both personally and professionally, which is key to holistic personal development.

As can be seen, each intelligence type contributes a dimension to Whole Thought that is indispensable. Analytical Intelligence provides the rigorous

structure for ideas to be dissected and understood; Emotional Intelligence ensures those ideas are interwoven with empathy and human understanding; Social Intelligence gauges and informs how these ideas will fit and resonate within societal contexts; Creative Intelligence ensures that new ideas continue to flow and evolve; and Practical Intelligence grounds all ideas in actionable reality. (Chapter 13 shows how the Knowledge Capacities support the Holistic Intelligence Model).

The convergence of these intelligences creates a comprehensive cognitive framework that is analytical yet empathetic, socially aware yet imaginative, and practical yet open to inspired innovation. The ultimate aim of Whole Thought is not merely the accumulation or application of various knowledge forms but the cultivation of a mind that can traverse the full spectrum of human experiences and challenges with grace, efficacy, and creativity. Thus, incorporating all these facets of intelligence ensures that decision-making is informed, balanced, and considerate of the broader implications for both the individual and the collective.

The interdependence of these intelligences within the Whole Thought framework demonstrates the transformational potential at the intersection of diverse cognitive abilities. For instance, Analytical Intelligence is enriched by the empathetic insights of Emotional Intelligence, which can ensure that data-driven decisions also take into account human factors. Similarly, Social Intelligence can enhance Creative Intelligence by drawing from collective experiences to foster unique solutions that resonate on a societal level. Practical Intelligence is what allows all branches of intelligence to be grounded in daily realities, making sure that the fruits of intellectual pursuits are not just theoretical but lead to tangible benefits.

Ultimately, Whole Thought embodies an integrated approach to learning and understanding—one that recognizes the inherent complexity of life and endeavors to harness a comprehensive set of cognitive tools to navigate it. This holistic model of intelligence is essential for nurturing minds that are prepared to face the multifaceted nature of modern challenges, creating solutions that are not only smart and innovative but also equitable, sustainable, and deeply human-centric.

2.1.6 Values and Holistic Intelligence

In the context of Whole Thought, using values to guide thinking is essential for achieving a high degree of Holistic Intelligence. Values provide the ethical underpinning and directional force that guide the application of the various intelligences.

Supporting **Analytical Intelligence**—logical reasoning, problem-solving, and the ability to analyze and process information—it's important that your values guide analytical thinking to ensure that the conclusions and decisions are ethically sound and align with your moral principles. Here, values serve as a guide to ensure that the logic applied and the conclusions drawn contribute to fair and just outcomes.

Supporting **Emotional Intelligence**—being aware of and controlling one's emotions and handling interpersonal relationships judiciously and empathetically—values play a critical role by influencing how one responds to feelings in oneself and others, ensuring those responses are compassionate and respectful. Values like empathy, respect, and kindness inform emotional responses, ensuring that personal and professional interactions are conducted with mindfulness and consideration for others' feelings and perspectives.

Supporting **Social Intelligence**—navigating social complexities and building strong positive relationships—values guide social interactions in a manner that is considerate, inclusive, and in harmony with *The Universal Resonance Principle* of Whole Thought. Adhering to values such as inclusivity and collaboration maximizes positive social impact and aligns with *The Collaborative Co-Creation Principle*.

Supporting **Creative Intelligence**—innovation and artistic expression as well as seeing beyond existing paradigms and developing new solutions—when creativity is aligned with one's values, the outcomes are not only novel but also ethically conscious and socially responsible, as emphasized in *The Harmonious Knowledge Fusion Principle* and *The Societal Advancement Principle*.

Supporting **Practical Intelligence**—solving real-world problems and achieving goals—values mean actions are taken not just for efficacy but are considered against a backdrop of ethical and responsible decision-making in line with *The Actionable Insight Principle*. This leads to pragmatic solutions that are socially conscious and sustainably framed, supporting *The Continuous Evolution Principle* and *The Dynamic Balance Principle*.

Values-driven intelligence is consistent with achieving a holistic understanding and approach—the very essence of Whole Thought. Values provide the moral compass for all forms of intelligence, and their integration ensures that 'best thinking' is not merely about what is smart but what is also good and right. This approach to cognitive development promotes a leadership and organizational culture that places a premium on integrity and positions ethical considerations at the forefront of innovation, problem-solving, and interpersonal interactions.

By critically evaluating and consistently applying one's values across different realms of intelligence, individuals and organizations can cultivate a culture of Whole Thought where wisdom, compassion, and strategic foresight prevail. This not only maximizes intellectual and practical output, but does so in a way that furthers individual well-being, organizational success, and societal prosperity.

2.2 THE ARTIFICIAL REACH OF HUMAN INTELLIGENCE

The advent of AI systems, like the one facilitating so many conversations in today's world, heralds the rise of human intellect. These systems, with their ability to analyze vast datasets and identify patterns with precision, are concrete embodiments of human intelligence's reach. They were created by the human mind. Yet, even as AI replicates and extends cognitive processes, Whole Thought reminds us that human intelligence is not just calculation and analysis—it's nuanced story-weaving, deep emotional understanding, moral reflection, and the intrinsic ability to synthesize across seemingly disparate domains.

The emergence of platforms that enable experiential learning open access to multidisciplinary knowledge and global interconnected dialogue has catalyzed the spread of intelligence's new paradigm—Whole Thought—into the workforce. This affirms that the manifestation of intelligence in the modern world is less about the siloed accumulation of facts and more about the weaving of these facts through the loom of experience, emotional depth, and an expansive worldview.

This ascent of intelligence, now moving towards Whole Thought, is seen in the way organizations solve problems—not in linear steps but in agile, cross-functional sprints that honor diverse perspectives. It manifests in the societal push towards ethical stewardship and a leadership style that values emotional resonances as much as profit margins.

In this era, the evidence of intelligence's rise is not confined to scholarly texts or academic accolades. It unfolds in the nuanced interplay between creativity and logic, emotional insight and strategic foresight—principles embedded within the Whole Thought framework. From the multiplicity heralded by Gardner's theory, which emphasizes the diversity of our cognitive abilities, to Hawkins' insights into the importance of pattern recognition—a precursor to the predictive prowess exhibited by AI—we observe the ascent of an intelligence that is as compassionate as it is computational.

The development of AI, while a symbol of our technological achievements, also mirrors our deeper cognitive capabilities. These systems,

governed by algorithms and fed by data, nonetheless originate from human curiosity and ingenuity. They serve not only as tools but also as benchmarks for our own intellectual growth. And still, the human is so much more.

As Whole Thought gains traction, it becomes clear that intelligence in the 21st century is far more than information processing or problem-solving in isolation. It's a collective endeavor, an orchestration of diverse knowledge streams flowing together in pursuit of harmony and balance. This holistic approach refines our cognitive faculties—encouraging us to embrace the complexity of our world, to engage with the unknown not as a problem to be solved but as a mystery to be explored.

Where once patterns unveiled themselves upon the canvases of nature, the artistry of today's intellect reveals patterns in the data streams of digital ecosystems. The rise of human intelligence, therefore, is both witnessed and facilitated by Whole Thought as we stand at the intersection of our past learnings and future possibilities.

Each advance, each expansion of our intelligence, enriches the tapestry of Whole Thought. Our Knowledge Capacities weave through its fabric, ensuring that each thread—be it Adaptive Resilience, Interdisciplinary Integration, or Cognitive Empathy—strengthens and colors the whole. As individuals and as a collective within the workforce, we embody this emergence—a testament to our enduring quest to not only know more but to understand better.

[Full book available on Amazon]

About the Authors

Alex Bennet is a Professor with the Innovation and Knowledge Institute Southeast Asia, Bangkok University, and the Director of the Mountain Quest Institute, a research and retreat center located in the Allegheny Mountains of West Virginia. Through three quests – the quest for knowledge, the quest for consciousness, and the quest for meaning – the Institute is dedicated to helping individuals achieve personal and professional growth, and organizations create and sustain high performance in a rapidly changing, uncertain, and increasingly complex world. Alex is the former Chief Knowledge Officer and Deputy CIO for Enterprise Integration of the U.S. Department of the Navy, having previously served as Acquisition Reform Executive and Standards Improvement Executive, and is recipient of the Distinguished Public Service Award, the highest civilian honor from the Secretary of the Navy. She has published hundreds of papers and journal articles, and over 40 books, primarily with her life partner, Dr. David Bennet, a nuclear physicist and neuroscientist. Together, the Drs. Bennet have spoken and taught around the world. Her latest publications are *Reblooming the Knowledge Movement: The Democratization of Organizations* (with Robert Turner), *INside INnovation: Looking from the Inside Out* (edited with Rajat Baisya), *Playing in the Mind Field Volume 1: Life in the Field*, *Unleashing the Human Mind: A Consilience Approach to Managing Self* (with David Bennet and Robert Turner), and an accompanying Field Guide which includes the lovable Organizational Zoo Critters developed by Arthur Shelley. Alex believes in the multidimensionality and interconnectedness of humanity as we move out of infancy into full consciousness. She may be contacted at alex@mountainquestinstitute.com

Robert Turner served in the military in Army Intelligence and Organizational Development, where he founded and co-developed the U.S. Army Fusion Center, an advanced decision support center. He subsequently founded and directed the Federal Aviation Administration Team Technology Center and managed programs in support of FAA leadership development. His work at the FAA included representing the FAA at the Institute for the Future in Menlo Park and at the IBM Institute for Knowledge Management (KM). He served for four years as the Chairman of the government-wide Federal KM Network. In 2003, he received the first government-wide award for service in KM. In 2006, as co-developer of the FAA Knowledge Services Network (KSN) for virtual work, he received an acclaimed government-wide award for innovation excellence. He is a member of Phi Kappa Phi whose motto is "*Let the love of learning rule humanity*." He graduated magna cum laude and received a special academic achievement medal from the University of Maryland in psychology and business. He completed his master's degree in education with Boston University. Bob co-led with his wife Jane a cohort in the joint BYU-Idaho Pathway & LDS Institute Program, an innovative global university endeavor. His research interests include individual and organizational high performance and accelerated learning. He has been an associate with the Mountain Quest Institute since its inception 25 years ago.

In the world of today, we have a role to play. Make informed choices.

fRAGmented: e Pluribus Unum (2025)

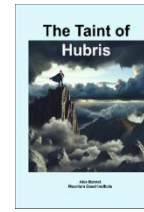
Alex Bennet with Foreword by YOU

This is our world, a tapestry woven with threads of diversity and division. As we journey in this book through the complexities of our world, we critically explore fragmentation in the physical, holistic human, digital, narrative/art, and societal domains, and delve into the societal political fragmentation occurring today.

The Taint of Hubris: (2025)

Rediscovering humility and bridging authentic connection

Alex Bennet with Foreword by William Halel



Characterized by excessive pride or arrogance—and referring to something being spoiled, sullied, or negatively influenced in some way—hubris can be thought of as a contaminating aspect of human nature. It stands out as a pervasive taint that has woven itself into mythology, literature and history, and is highly visible in the societal political landscape of today.

Choosing Whysly: (2025)

Why we can't see what is right in front of us

Alex Bennet with Foreword by Robert Turner

This is a large question. It can't help but be complex, because we are complex, and this question is not only dependent on the situation and context but also on you, the individual, and your perception, beliefs, intentions, biases, blindnesses, and self-deceptions as well as cognitive dissonances, relativism, and, ultimately, your conscious and unconscious choices.

Becoming Wise, Open, Kind, Empowered (2025)

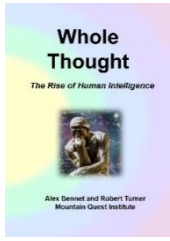
The Millenium Challenge

Alex Bennet with Foreword by Arthur Murray

Being "woke" signifies a positive awareness and active engagement with social justice issues, which is the intent of social and cultural awakening consistent with spiritual awakening and Enlightenment ideas embedded in the U.S. Constitution. However, in this fragmented world, core tenets of democracy such as diversity, equitable equality and inclusiveness are being tossed aside and translated through prejudicial and biased beliefs and political frames. It is time to set the record straight.

Whole Thought:
The Rise of Human Intelligence (2024)

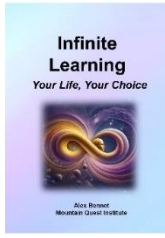
Alex Bennet and Robert Turner with Foreword by David Bennet



In tracing the arc of human progress, one can discern an underlying pattern steering the course of our intellectual evolution—a gradual but persistent gravitation towards what is now identified as Whole Thought. This paradigm represents a transformation in the fabric of cognition brought into relief by the cumulative ascent of human intelligence. Whole Thought is a call for action—a framework for living, learning, and leading in a manner that is reflective, inclusive, and deeply interconnected.

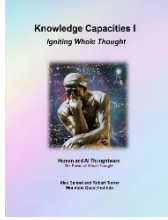
Infinite Learning: Your Life, Your Choice (2024)

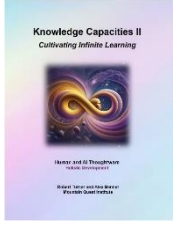
Alex Bennet with Foreword by Vincent Ribiére



Infinite learning is the pulse of human existence, the essence that breathes life into our quest for understanding, innovation, and growth. It is not an optional luxury but an essential requirement, ensuring we are able to meet the demands of a changing world while capable of achieving personal growth and societal contributions of profound significance. Embracing infinite learning in pursuit of Whole Thought ensures that we are constantly expanding our horizons and discovering new potentials. *Living is learning; learning is living.*

Knowledge Capacities I and II (2024)





Our capacity for knowledge is not a fixed quantity but a horizon ever-expanding. It is the reservoir from which we draw strength, the lens through which we view possibility, and the compass by which we navigate the future. It is the creation of the rise of human intelligence.

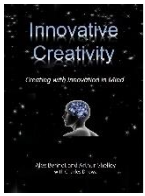
KC I: Igniting Whole Thought (40 Capacities)

KC II: Cultivating Infinite Learning (24 Capacities)

In today's dynamic and rapidly evolving environment, fostering capacity has become increasingly essential. Capacity refers to the broad potential or inherent ability of individuals and organizations to learn, adapt, and grow over time. It encompasses the fundamental ways of thinking, being, and acting that allow us to effectively engage with dynamic and complex environments.

Innovative Creativity: Creating with Innovation in Mind (2024)

Alex Bennet and Arthur Shelley with Charles Dhewa
Foreword by Robert Turner



More than ever, how do we release the Genie from the lamp? How do we tap the next level of creativity and innovation that we need here on Planet Earth? This groundbreaking work beckons us to deepen our innate creativity capacities in a new and expansive way to summon the genius within each of us.

Contiguity: Entangled Living and Learning (2025)

Alex Bennet with Foreword by Chulatep Senivongse

Learning and living are contiguous experiences, with mind creating the subjective relationships that create the temporal and spatial relationships in our stories and memories. Our thoughts, sensations, and perspectives form the connected and cohesive experience of the contiguous mind. Embrace the entangled dance of living and learning, and discover the profound connections that define our shared existence.

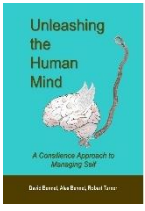
C&C Thinking: Becoming Whole (2025) (Critical and Creative)

Alex Bennet & Robert Turner with Foreword by Moria Levy

In an era marked by rapid technological advancement and constant change, the ability to think critically and creatively is more crucial than ever. As we look toward the future, it becomes evident that the traditional reliance on past patterns to predict and plan for what lies ahead is insufficient.

Unleashing the Human Mind: A Consilience Approach to Managing Self (2022)

David Bennet, Alex Bennet, Robert Turner
with Foreword by Florin Gaiseanu



What does it mean to be human? Increasingly we recognize that we are infinitely complex beings with immense emotional and spiritual, physical and mental capacities. Presiding over these human systems, our brain is a full integrated, biological, and extraordinary organ that is preeminent in the known Universe. Its time has come.

This book is grounded in the Intelligent Complex Adaptive Learning System (ICALS) theory based on over a decade of researching experiential learning through the expanding lens of neuroscience.

The Mountain Quest Institute located in the Allegheny Mountains of West Virginia is a research, retreat, and learning center

dedicated to helping individuals achieve personal and professional growth, and organizations create and sustain high performance in a rapidly changing, uncertain, and increasingly complex world. MQI has three quests: the Quest for Knowledge, the Quest for Consciousness, and the Quest for Meaning. MQI is scientific, humanistic, and spiritual and finds no contradiction in this blend.