Preface

Life is a puzzle, this book is the missing piece.

The purpose of this book is to evaluate the questions: Is wisdom investigated enough in scholarly research?, and if not, what is wisdom? Since wisdom is the ultimate human virtue, it seems that its application is very important for humans and civilization. This book provides a theory of wisdom and its applications in the broad context of civilization.

The book is written for all those who are interested in wisdom and particularly in its nature and applications. This means that the book should be interesting to all kinds of readers and could potentially be read by millions. However, this is a scholarly book, and for many readers it will be difficult to read. Perhaps a popular form of this text would satisfy the needs of such readers. In its current form, the book is written predominately for scholars involved in problem solving and decision making in their disciplines, ranging from humanities to engineering, medicine, and art.

Once, a special scientific discipline was devoted only to this virtue, namely philosophy, which means in Greek, “love of wisdom.” This science, or pseudo-science as some call it, was the first science, formulated about 2,750 years ago, and it provided the foundation for the development of all sciences over the next millennia. Even such a long time ago, people recognized wisdom as the most fundamental virtue of human beings. Ever since, literature has produced several books on wisdom proverbs but none on the universal theory of wisdom.

Despite wisdom’s high status, the first sages had problems in dealing with it and stated that only God(s) had the privilege of having wisdom and that people must follow their wise recommendations. Even philosophers in modern times continue to think the same way, perhaps due to their disappointment in humans’ unwise dealings.

In the last 100 years, the issue of wisdom has been treated by science as intelligence. The Intelligence Quotient (IQ) index was coined by the German psychologist William Stern in 1912. Its first application was in testing children’s intelligence. IQ scores are used in many contexts: as predictors of educational achievement or special needs, by social scientists who study the distribution of IQ scores in populations and the relationships between IQ score and other variables, and as predictors of job performance and income. However, IQ measures intelligence as the ability to solve problems, but not as wisdom per se.

By the end of the 20th century empirical research on wisdom was undertaken, mostly by some psychologists. One of the early pioneers was American Vivian Clayton, who identified the three general aspects of activity that are central to wisdom: the acquisition of knowledge (cognitive) and the analysis of that information (reflective) filtered through the emotions (affective). She developed a cluster of psychological tests to measure it. She also argued that wisdom resists erosion and might increase with
age; however, this is not true. According to Clayton, the young cannot be wise. When she quit academia for private practice, the wisdom research shifted to Berlin and to the famous Max Planck Institute for Human Development.

The Berlin Wisdom Study, a scientific study of wisdom, was initiated by Paul B. Baltes (1939-2006) in the early 1980s. Baltes was a German psychologist with educational roots at Pennsylvania State University. Baltes, with collaborators (Jacqui Smith, Ursula M. Staudinger, Ute Kunzman, and others) “took wisdom into the laboratory.” The Berlin paradigm defined wisdom as “an expert knowledge system concerning the fundamental pragmatics of life at its peak.” The Berlin researchers perceived wisdom as good judgment, shrewd advice, psychological insight, emotional regulation, and emphatic understanding. It could be found in family interactions, in formal writings, and in the relationship between a student and mentor or a doctor and patient. They also concurred with the early philosophers that wisdom is a utopian concept that was practically unattainable, owing to the fact that wisdom is rather a product of group thinking and individuals are “weak” messengers of wisdom from that group. They tested about 700 people and observed that there is not much wisdom around us; not one of those people could get high scores across the board. They also found that along the aging process, wisdom reaches a “plateau” and begins to decline at about age 75, due to the decline in cognitive abilities. According to the researchers, 60 is the optimal age for possessing wisdom.

In the U.S., German-born psychologist (at the University of Florida in Gainesville) Monika Ardelt continues Clayton’s research based on the cognitive, reflective, and emotional “three-dimensional” wisdom scale (“3D-WS”). She argues, based on her research, that a kind of wisdom can arise in ordinary people from unexpected backgrounds. This is progress in the concept of wisdom, which was mostly limited to the experts in the Berlin study. Perhaps great German philosophers such as Hegel, Kant, or Nietzsche impacted the Berlin study.

The Berlin Study did not trigger widespread research on wisdom in the U.S. Wisdom still is not seen as relevant to mainstream research in the social sciences. Yale psychologist Robert J. Sternberg is a rare exception. He published two comprehensive books on wisdom and argues that in testing human performance, one must go beyond intelligence and take wisdom into account. He defined wisdom as the application of successful intelligence and creativity as mediated by values toward the achievement of a common good through a balance among (a) intrapersonal, (b) interpersonal, and (c) extrapersonal interests; over (a) short and (b) long terms; in order to achieve a balance among (a) adaptation to existing environment, (b) shaping of existing environments, and (c) selection of new environments (2003, p. 152). His definition of wisdom is close to prudence.

Another current path of wisdom research investigates optimism and pessimism among young and old people which impact their wisdom. Stephen Hall reports in his comprehensive review (2007) that young people are more pessimistic and older people are more optimistic in expressing their judgment, which reflects their kind of wisdom. Compared with young people, older people experience negative emotions less frequently, exercise better control over their emotions, and bounce back quickly from adverse moments. He argues that “wisdom is, and how one learns to be wise, is still somewhat a mystery” (2007:66). It must really be a mystery if the Encyclopedia Britannica does not have an entry on the modern definition of wisdom!

Wisdom as the optimal decision has been the research subject of operation research (OR), management science (MS), and econometrics for the last 50 plus years. During World War II, the allocation of cargo in American convoys to the United Kingdom and Russia was spread among ships to minimize losses caused by German submarines. This was done by applying mathematical modeling, which later
provided the foundation for OR and MS. Several Nobel Prizes in economics were given to the pioneers of modeling optimal (wise) decision making. This area of the study was not noticed in philosophy. Why? Perhaps because, this approach takes into account only economic factors and is not universal enough for philosophers. However, decision science has done a lot of good things for society and has been showing the path to “calculated” wisdom. 

By the end of the 20th century, the torch of wisdom research had passed from philosophers (who escaped to the Ivory Tower in the last century) to psychologists, who have been trying to open the black box of wisdom. In the meantime, computer scientists have been building “thinking machines” using artificial intelligence. Furthermore, these machines make decisions and show some sort of preprogrammed decision making. In some instances, new decisions which can be categorized as “optimal” or “wise” are generated by artificial intelligence. In other words, the quest for wisdom absorbs the minds and skills of a third group of scientists: cognitive informaticians who not only argue what wisdom is but want to “insert” it into their “thinking machines.”

Cognitive informatics (CI) investigates the natural intelligence and internal information processing mechanisms of the brain, as well as the processes involved in perception and cognition. CI provides a coherent set of fundamental theories and contemporary mathematics, which form the foundation for most information- and knowledge-based science and engineering disciplines such as computer science, cognitive science, neuropsychology, systems science, cybernetics, software engineering, and knowledge engineering. The development of classical and contemporary informatics, the cross fertilization between computer science, systems science, cybernetics, computer/software engineering, cognitive science, neuropsychology, knowledge engineering, philosophy, and life science has led to an entire range of extremely interesting new research in this field (Wang, 2002, 2003; Targowski, 2009).

This book is based on the cognitive informatics approach and the following premises:

1. Every mentally healthy individual has some level of wisdom in thinking and making decisions.
2. Wisdom is not knowledge; it is a virtue. However, there is knowledge about wisdom which is just in status nascendi.
3. Wisdom, briefly defined, is prudent judgment and choice. Hence, one can perceive a person to be knowledgeable but not necessarily wise, and vice versa.
4. Wisdom is not a synonym or an extension of intelligence. Intelligence is the ability to solve problems while wisdom is the final touch in prudent judging and choosing a good solution among available options.
5. Wisdom can be practical, theoretical, global, and universal.
6. Wisdom can be taught. Left to practice only, it is usually applied too late to impact the right course of action. Wisdom is like a plant which must be nurtured to grow.
7. Wisdom should be monitored in civilization like strategic resources because it is the most important human resource on Earth.

This book investigates different approaches towards wisdom in a very broad context. It argues that wise civilization cannot function without wise people and vice versa, that wise people cannot function without positive conditions for the development of wise civilization. Figure 1 depicts the Composite Model of Human Wisdom, which is a federation of all kinds of wisdoms and factors influencing them.
The book will gradually define these types of wisdom. The cognitive informatics approach is reflected in graphic modeling and through the units of cognition such as data, information, concept, knowledge, and wisdom, and it encompasses factors from five dimensions (“5D-WS”):

1. Wisdom as solving problems (applying criteria of social, reflective, methodical and individual solutions)
2. Wisdom as developmental ability
3. Wisdom as interaction with context
4. Wisdom as cognitive process
5. Wisdom as solution (conclusion, position, suggestion, solution, decision, action, and other)

Further analysis of these dimensions will be provided in following chapters and are synthesized in Chapter 8.

**ORGANIZATION OF THE BOOK**

The book is organized into 11 chapters, beginning with a general review of the existing approaches to wisdom. It offers solutions on how to study and evaluate the state of wisdom in 21st century society and the requirements for wise civilization and its monitoring systems.
Chapter 1 reviews the different types and levels of wisdom in society, viewed as a dynamic complex of certain interrelated areas such as a) social wisdom coming from religion, law, and medicine; b) reflectional wisdom represented by philosophers, intellectuals, and great writers; c) methodical wisdom embedded in scientific methods, decision science, psychology, and semantics; and d) individual’s wisdom, practiced by folk people, great politicians, great generals, great businessmen, great engineers, great scientists, and great artists.

Chapter 2 reviews the philosophers’ contribution to knowledge about wisdom since the “beginning” of wisdom, particularly since the first records of wisdom. Because philosophy means “love of wisdom” in Greek, this science-theology’s contribution is traced through the last three millennia. A graphic model of the Aristotelian approach towards wisdom is constructed. The further development of the “love of wisdom” is evaluated. Since Aristotle put great emphasis upon the ends of life in pursuing wisdom, such new modern model is defined and synthesized through the comparison of their applications in different civilizations. Eventually a question is posed: Can philosophy deliver wisdom? And the answer is provided.

Chapter 3 investigates approaches to wisdom offered by information technology, computer science, cybernetics, robotics, artificial intelligence, and neural networks. The spread of the Internet creates collective intelligence which has potential for improving wisdom in society. However, is it true that it does what its potential indicates? Some examples from actual situations in society are brought into consideration in the attempt to answer this question. The study of business decision making is investigated from the wisdom delivery point of view, concluding that this is the most successful field in reaching for wisdom, even though it is limited to economic/business factors. Similarly, the area of data mining is also very promising in supporting wise decision making, although so far it is used only in business and government (tracing foreign activities). The cognitive approach to the mind and its science are evaluated from the wisdom delivery point of view, concluding that this science is not yet at the point of having clear solutions for the quest for wisdom via the known mechanism of mental processes. Hence, the quest for thinking machines is far from reaching that kind of solution, despite the fact that very soon chips that compute faster than the human brain will be available.

Chapter 4 examines the roots of mankind’s evolution, analyzing how certain components of the INFOCO system contributed to the development of brain and mind. Their main functions are defined from the point of view of wisdom. Hence, four kinds of minds are defined, and a universal model of the process of searching for wisdom is defined, applied as a graphic model. Eventually, four kinds of wisdom are recognized and the bifurcation process of minds/wisdom is presented.

Chapter 5 defines indexes of wisdom for civilizations active in the 21st century. First, the wisdom capacity potential index of civilization is defined. Then, the wisdom activity potential index of civilization is calculated. Based on these indexes, the wisdom potential index of civilization is defined as the aggregated index of civilization wisdom. The applications of such indexes are provided before conclusions are provided.

Chapter 6 defines indexes of wisdom for humans in the 21st century. First, the wisdom capacity potential index of human is defined. Then, the wisdom activity potential index of human is calculated. Based on these indexes, the wisdom potential index of human is defined as the aggregated index of human wisdom. The applications of such indexes are provided before conclusions are provided.

Chapter 7 analyzes whether wisdom can save the human project on Earth. It reviews myths of wisdom in Western and non-Western philosophies, asking about these philosophies’ potential for saving humans on Earth. In order to do so, Eco-philosophy should be widely applied, and the wisdom diamond is de-
fined to harmonize key kinds of philosophy supporting for the sake of humans’ awareness and wisdom in coping with civilizational issues.

Chapter 8 seeks the answer to the question: Can wisdom be taught? If it is not taught, why should people be wise? One must begin with understanding wisdom, which is summarized in the form of 5-dimensional graphic models and several definitions. The premise of the evolution of wiser humans to a wiser and better society is discussed. Learning wisdom from failure is analyzed in approaching the issue of teaching for wisdom. Hence, a wisdom-oriented curriculum is proposed. In order to successfully transform the academic knowledge inquiry to wisdom inquiry, the opening of wisdom institutes at universities is recommended. If all these conditions are satisfied, wisdom can be learned.

Chapter 9 addresses the question: Is business wise in the 21st century? History indicates all civilizations rise, grow, decline, and transform. This is analyzed in terms of the status of current civilizations, particularly Western civilization. Then, business as the world-system is analyzed closely as the main driving force of current civilization. The growth of business through the millennia is viewed as a very aggressive force, leading to the “growth trap.” As the result, the race for resources is discussed, and the Death Triangle of Civilization is defined. In terms of Western civilization’s transformation, the question is: Are we teaching the right stuff? The answer is that we are not. Also, millennial goals established by the United Nations are evaluated from the civilizational point of view and are questioned for their appropriateness. The hypothesis that the wisest civilizations may have a chance to survive in the current “rat race” is proved.

Chapter 10 offers a positive solution of how to enter the paths leading towards wise civilization. It is based on the synthesis of Western civilization’s simultaneous growth and decline, triggered by the nature of capitalism, socialism, and competition with communism. Wise solutions are based upon defined patterns of wisdom in civilizational development and on the contributions of science and technology, as well as their limits. The contribution of spirituality is discussed as a very important factor to civilizational wisdom. Based on these considerations, a new ideology of wise civilization is defined, including such ideas as complementary spirituality, integrated society, deep economy, eco-infrastructure, deep communication, and ecoism. Eventually, strategies for implementing a wise civilization are provided.

Chapter 11 answers the question of how to transform the information infrastructure of enterprise into a sustainable, global-oriented one. Ideas for monitoring and predicting the sustainability of civilization are also offered. The classic enterprise information infrastructure is synthesized. The global enterprise information infrastructure is then synthesized in order to define the sustainable and global information infrastructure. Models of systems for monitoring and predicting sustainable global civilization are defined at the end.

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REFERENCES


