

Boundless Reason (Second Edition)

Changes by Ranges of Versions

Changes from 20210515 to 20210619

Introduction, fifth paragraph

Added: “(multiple-frame)” to the second sentence.

Introduction, sixth paragraph

Changed “problems ring true” to “problems **that** ring true” in the last sentence.

Chapter 1, introduction, fourth paragraph

Changed “an” to “**can**” in the second sentence.

Chapter 1, *The Wisdom of Effectiveness*, sixth paragraph

Changed “learn, and learn to learn” to “learn **to set up better**, and learn to learn **better**” in the second to last sentence.

Chapter 1, *The Wisdom of Effectiveness*, seventh paragraph

Changed “invent this knowledge” to “invent this knowledge **directly**” in the second to last sentence.

Changed “**developed** a strategy for learning **how to create**” to “**invented** a strategy for **inventing**” in the last sentence.

Chapter 1, *Seeing Through Apparent Miracles*, second paragraph

Changed “**Abbot**” to “**Abbott**” in the second sentence.

Chapter 1, *An Infinitely Large Crane*, third paragraph

Changed “self-refining **processes**” to “a self-refining **process**” in the third sentence.

Chapter 1, *An Infinitely Large Crane*, fifth paragraph

Changed “an infinitely large crane, **not a skyhook**” to “**a grand strategy for building** an infinitely large crane” in the second sentence.

Changed “**approach**” to “**a grand strategy for learning**” in the fourth sentence.

Chapter 1, *The Truth of Wisdom*, second paragraph

Changed “**general** belief **about the marbles in the urn**” to “belief” in the last sentence.

Chapter 1, sixth footnote

Deleted the sentence:

“Philosophers will recognize this as the analytic versus synthetic truth distinction, which is the first of W. V. O. Quine’s two dogmas of empiricism.”

Chapter 1, eighth footnote

Changed “faceted” to “faceted **to describe the complex (multiple-frame) model of deciding well**” in the first sentence.

Chapter 1, *Ever More Complete Boundless Models*, second paragraph, second to last sentence

Inserted the sentence:

“**They also include the debts we owe the whole of life for the natural resources we need to live well.**”

Chapter 1, *Ever More Complete Boundless Models*, fourth paragraph

Changed “understand” to “**potentially** understand” in the first sentence.

Changed “**this greater**” to “**better**” in the second sentence.

Chapter 1, *The Learning Age*, first paragraph

Changed “**learning** strategy” to “**strategy for learning ever more about deciding well**” in the last sentence.

Chapter 1, *The Learning Age*, last paragraph

Changed “**ever more about deciding ever better**” to “**well**” in the last sentence.

Chapter 2, first footnote

Changed “regretted” to “regretted **as much**” in the fourth sentence.

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Chapter 3, *Overcoming Constraints in Deciding Well*, last paragraph, third and fourth sentences

“They **have more need to process information efficiently**. Statistically, they are more energetic, creative, adaptable, and **longer lived**.”

were changed to:

“They **tend to be** more energetic, creative, adaptable, and **more long-lived**. **Further, they live in cultures that have greater need for computing well**.”

Chapter 3, *Three Approaches to Policy*, last paragraph, last sentence

Inserted “, **as the best means of refining our knowledge of how best to decide well**”

Chapter 3, *The Beauty of Self-Referential Science*, first paragraph

Deleted “**(certain)**” from the last sentence.

Chapter 3, *Boundless Explanations of Quantum Mechanics*, second to last paragraph, first sentence

“As a concept for helping us explain well, it does not compete with concepts of time that help us predict well.”

was changed to:

“As a “**holistic**” concept for helping us explain well, it does not compete with “**reductionist**” concepts of time that help us predict well.”

Chapter 3, *Boundless Explanations of Quantum Mechanics*, second to last paragraph, first sentence

“As a concept for helping us explain well, it does not compete with concepts of time that help us predict well.”

was changed to:

“As a “**holistic**” concept for helping us explain well, it does not compete with “**reductionist**” concepts of time that help us predict well.”

Chapter 3, *Boundless Explanations of Quantum Mechanics*, last paragraph, first sentence

Changed “**this view**” to “**the decision class view**” in the first sentence.

Chapter 3, *Boundless Explanations of Quantum Mechanics*, last paragraph, last two sentences

“Deciding well provides us with the resources we need to change frames well. **It also provides us with the resources we need to** adapt to the resulting changes in the world.”

were changed to:

“Deciding well provides us with the resources we need to change frames well **and** adapt to the resulting changes in the world.”

Chapter 3, eighth footnote

“From **views that do not include learning**, the question is the percentage of boundlessly reasonable people needed to trigger the public analogue of phase transitions to superfluidity. We might begin to answer this question by **replicating Per Bak’s sandpile experiments using varying mixtures** of sand grains and spheres of similar size and weight. From the boundless view, we might **use computer simulations that include learning and forgetting functions**. Given our current ignorance of how best to model such processes, the results ought to take the form of sensitivity analysis. Such analysis helps us choose how best to learn to decide ever more wisely.”

was changed to:

“From **a modern view**, we might begin to **understand these phase transitions** by **replacing some of the sand grains in Per Bak’s sandpile experiments with spheres of similar size and weight**. However, this ignores **learning from the example of others**. From the boundless view, we might begin by doing sensitivity analysis of **learning, forgetting, and revealed deceit functions in agent-based computer simulations**. Such analysis can help us choose where best to invest in learning. A potentially fruitful research area concerns how **abusing reductionism hinders deciding well**. In general, engineering approaches to policymaking promote preferred behaviors; modern evolutionary approaches protect established ones. The most pernicious abuses are those in which people pursuing personal ends use reductionism to deceive others. Knowledge of boundless reason can help people see through such deceit. In game theory terms, boundless reason can help people identify **defectors in the game of deciding well (in the natural pursuit of living well)**.”

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Chapter 4, *Refining Finding Problems to Solve*, second paragraph, last three sentences

“The more beautiful problem is the latter, which calls for us to act as if free will exists. It rings truer with all that we currently know about deciding well. Acting as if free will does not exist conflicts with deciding well.” were changed to:

“The more beautiful problem is the latter, which calls for us to act as if free will exists (in seeking to disprove that free will exists). This rings truer with all that we currently know about deciding well—acting as if free will does not exist conflicts with deciding well.”

Chapter 4, *Modern Policy Mistakes*, fourth paragraph

Changed “From” to “In contrast, from” in the second sentence.

Chapter 4, *Testing the Boundless Approach*, first paragraph

Changed “set of beliefs” to “set of beliefs (as a whole)” in the last sentence.

Chapter 7, *A Normal Anomaly*, second paragraph

Changed “Brunner” to “Bruner” in the second sentence.

Chapter 7, *An Extraordinary Anomaly*, fourth paragraph, last sentence

“Implicit in this description is the idea of the game of deciding well.”

was changed to:

“Implicit in Bronowski’s description of what von Neumann sought is the idea of the game of deciding well in living well.”

Chapter 7, *An Extraordinary Anomaly*, fifth paragraph

Changed “In cybernetic terms” to “From the boundless view” in the second to last sentence.

Changed “this work” to “boundless view” in the last sentence.

Chapter 7, eighth footnote

Deleted the footnote: “⁸ Israel, G. and Gasca, A. M., *The World as a Mathematical Game*, John von Neumann and Twentieth Century Science (Basel: Birkhäuser, 2009), pp. 162–165.”

Chapter 7, May 15th ninth footnote (June 19th eighth footnote)

Changed “Ibid.” to “Giorgio Israel and Ana Millán Gasca, *The World as a Mathematical Game*, John von Neumann and Twentieth Century Science (Basel: Birkhäuser, 2009)” in the first sentence.

Chapter 7, May 15th tenth footnote

Deleted the footnote: “¹⁰ Students of Immanuel Kant may question the use of ‘transcendent’ rather than ‘transcendental’ here. Kant’s distinction is temporal. Deciding well is both timeless and self-referential. It includes an endless cycle of perceptions refining conceptions and conceptions refining perceptions. What Kant called synthetic a priori judgments are beliefs we have not yet disproven empirically.”

Chapter 7, *An Extraordinary Anomaly*, last paragraph

Changed “evolve” to “learn” in the first sentence.

Chapter 7, May 15th fourteenth footnote (June 19th twelfth footnote)

Changed “*Patterns of Conflict*” to “Ibid.” in the first sentence.

Chapter 7, May 15th seventeenth footnote (June 19th fifteenth footnote)

Changed “*Patterns of Conflict*” to “Boyd, *Patterns of Conflict*” in the first sentence.

Chapter 8, introduction, second to last paragraph

Changed “include” to “encompass” in the second sentence.

Chapter 8, introduction, last paragraph, last two sentences

“As vehicles learn, traffic becomes more fluid. As traffic becomes more fluid, the rate at which flow becomes turbulent rises.”

were changed to:

“As vehicles learn, the rate at which traffic flow becomes turbulent rises.”

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Chapter 8, first footnote

Deleted the last sentence: “Here Bronowski describes what John von Neumann sought in his unfinished study of the mathematics of reason.”

Chapter 8, Governing Our Minds Well, last paragraph

“Neurons that wire together fire together. Conscious control of our daemons may result in opening consciousness to more of our daemons. Genius may lead to madness. A grand strategy for deciding well that does not include governing our minds well is dangerously incomplete.”

was changed to:

“Conflicts between parts of our minds call for us to govern our minds well. Following in the holistic tradition of Plato, we may call the boundless end of governing our minds well Eudaemonia.² So conceived, Eudaemonia is a boundless factor of deciding well.

“Given our ignorance of deciding well, the pursuits of Happiness and Eudaemonia are not the same. We can see this in the sad ends of Georg Cantor and Kurt Gödel. The part of their minds they believed to be perfectly good would not let them give up trying to find logical solutions to open-ended problems. Cantor died in an asylum. Gödel starved himself to death. Neurons that fire together wire together. Conscious control of our daemons may result in opening consciousness to more of our daemons. Genius may lead to madness. A grand strategy for deciding well that does not include governing our minds well is dangerously incomplete.”

“² In the reductionist tradition of Aristotle, modern translations of the classical Greek term ‘eudaemonia’ include happiness, well-being, and flourishing. In the holistic tradition of Plato, ‘eudaemonia’ means having a good attending or indwelling spirit. This daemon helps us address the holistic problem of finding better problems to solve in deciding well.”

Chapter 8, first footnote

Deleted the last sentence: “Here Bronowski describes what John von Neumann sought in his unfinished study of the mathematics of reason.”

Chapter 8, Reunifying Platonic and Aristotelian Science, title

Changed to “Reunifying the Reason of Plato and Aristotle.”

Chapter 8, Reunifying the Reason of Plato and Aristotle, second to last paragraph, end

Added the sentence:

“To address this problem, the science of deciding well put forth in this work uses self-refining concepts of boundless factors of Wisdom to find problems to solve.”

Chapter 8, Reunifying the Reason of Plato and Aristotle, last paragraph

“Given the inexhaustibility of knowledge and the need for living beings to live well, the whole of science is nothing more than the process of refining everyday thinking. Conflicts between parts of our minds call for us to govern our minds well. Following Plato, we may call the boundless end of governing our minds well Eudaemonia.⁵ So conceived, Eudaemonia is a boundless factor of deciding well.⁶”

“⁵ In the reductionist tradition of Aristotle, modern translations of the classical Greek term ‘eudaemonia’ include happiness, well-being, and flourishing. In the holistic tradition of Plato, ‘eudaemonia’ means having a good attending or indwelling spirit. This daemon helps us address the holistic problem of finding better problems to solve in deciding well.”

“⁶ In the reductionist tradition of Aristotle, modern translations of the classical Greek term ‘eudaemonia’ include happiness, well-being, and flourishing. In the holistic tradition of Plato, ‘eudaemonia’ means having a good attending or indwelling spirit. This daemon helps us address the holistic problem of finding better problems to solve in deciding well.”

Chapter 8, Conclusion, first paragraph, end

Added:

“In the words of Jacob Bronowski: “If we are anything, we must be a democracy of the intellect. We must not perish by the distance between people and government, between people and power, by which Babylon and Egypt and Rome failed. And that distance can only be conflated, can only be closed, if knowledge sits in the homes and heads of people with no ambition to control others, and not up in the isolated seats of power.”⁶

“⁶ Bronowski, *The Ascent of Man*, p. 435.”

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Appendix C, The Problem of Heraclitus, second paragraph

Added: “(multiple-frame)” to the last sentence.

Appendix C, The Problem of Heraclitus, second paragraph

Added: “(multiple-frame)” to the last sentence.

References, entire document

Changed author format to less formal format.

Changed HTML reference dates from May 8 to May 15.

Corrected miscellaneous punctuation mistakes.

Changes from 20210619 to 20210901

Preface, last paragraph

Deleted last two sentences: “In refining this strategy, I found better problems to solve across a wide variety of fields: a dynamic analogue of, and alternative to, Pareto optimality, the state of the world in which it is impossible to make any person better off without making at least one other person worse off; a grand strategy superior to that used by the coalition forces in the First Gulf War; and an entropy-based concept of biological evolution that includes human culture. Such is a universal strategy for learning to decide ever better.”

Acknowledgments, fifth paragraph

Changed “throwing off” to “generating” in the second sentence.

Acknowledgments, sixth paragraph

Changed “efficiency” to “excellence” in the fourth sentence.

Introduction, fourth paragraph

Changed “, we end with” to “yields” in the third sentence.

Introduction, second to last paragraph

Changed “biological evolution” to “evolution” in the last sentence.

Chapter 1, *The Wisdom of Effectiveness*, fifth paragraph

Changed “knowledge, we cannot measure the value of knowledge” to “new knowledge, we cannot estimate its value” in the sixth sentence.

Chapter 1, *The Wisdom of Wisdom*, last paragraph

Changed “these” to “ideal” in the second to last sentence.

Chapter 1, *An Infinitely Large Crane*, fifth paragraph

Changed “approach to deciding well taken in this book” to “boundless approach to deciding well taken in this book” in the second sentence.

Chapter 1, *The Truth of Wisdom*, fourth paragraph

Removed quotation marks around “swan” in the sixth sentence.

Chapter 1, sixth footnote

Promoted the last sentence (Philosophers will recognize this as the analytic versus synthetic truth distinction, which is the first of W. V. O. Quine’s two dogmas of empiricism.) to the end of the fourth paragraph.

Chapter 1, ninth footnote

Moved footnote to the end of the paragraph.

Chapter 1, *Ever More Complete Boundless Models*, fourth paragraph

Changed “this” to “the” in the second to last sentence.

Chapter 1, *Ever More Complete Boundless Models*, last paragraph, last sentence

“For a 500-year-old depiction of this faceted approach to pursuing Wisdom, see Appendix C (Renascent Art).”

was promoted to a new paragraph and changed to:

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“From the boundless view, the further we choose to “see” into the future, the less we believe we know relative to what we do not know. In the end, all that we presume is True is the reason underlying the boundless approach. For a 500-year-old depiction of this universal form of reason, see Appendix C (Renascent Art).”

Chapter 1, The Learning Age, first paragraph

Changed “Alexander Luria” to “psychologist Alexander Luria” in the third sentence.

Chapter 2, introduction, first paragraph

“From the boundless view, living well calls for us not only to survive and thrive based on what we currently know but also to learn to survive and thrive ever better. The faster the pace of change becomes, the more important what we may learn becomes relative to what we currently know.”

was changed to:

“From the boundless view, living well calls for us to learn to live ever more wisely. The less well we can predict, the more important what we may learn becomes relative to what we currently know.”

Chapter 2, introduction, second paragraph, first two sentences

“One of the greatest current constraints in learning to survive and thrive better is using concepts derived from the modern scientific approach to economics to find problems to solve. We can see this in the EOQ/RTS example of the last chapter.”

were changed to:

“One of the most significant constraints in learning to live ever more wisely is using concepts derived from the modern scientific approach to economics to find problems to solve. We can see this in the EOQ/RTS example.”

Chapter 2, introduction, last two paragraphs

“From the boundless view, deciding well calls for timeless normative models as well as positive models.

Recursionist models help us find better problems to solve in deciding well. Marginalist models help us solve given problems by predicting well.¹

“This chapter puts forth recursionist complements to six marginalist concepts. Its primary purpose is to provide better means of “seeing” (imagining) ever better means of overcoming constraints.”

were changed to:

“The boundless approach to deciding well calls for both recursionist and marginalist models. Recursionist models help us find better problems to solve in deciding well. Marginalist models help us solve given problems by predicting well.¹ This chapter puts forth recursionist complements to the marginalist concepts of wealth, consumption, trade, production, taxation, and profit.”

Chapter 2, first footnote

Inserted “(of evolutionary economics)” into the third sentence.

Changed “regretted as much” to “regretted” in the fourth sentence.

Changed “regretted” to “regretted as much” in the fifth sentence.

Chapter 2, Tools for Pursuing Pleasure and Joy, fourth paragraph

Changed “timeless” to “timeless tools for pursuing Wisdom” in the second sentence.

Chapter 2, Tools for Pursuing Pleasure and Joy, last paragraph

Removed italics from “needs” in the third sentence.

Chapter 2, Trade, first paragraph

Changed “fairly” to “justly” in the last sentence.

Chapter 2, Three Common Mistakes, first paragraph

Changed “avoid” to “ignore” in the third sentence.

Chapter 3, introduction, last paragraph

Changed “Contemplating truly” to “From the boundless view, contemplating” in the first sentence.

Changed “Truly beautiful” to “Beautiful” in the last sentence.

Chapter 3, Overcoming Constraints in Deciding Well, second to last paragraph

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Changed “No” to “For example, no” in the third sentence.

Changed “approach” to “approach to overcoming constraints” in the last sentence.

Chapter 3, *Overcoming Constraints in Deciding Well*, last paragraph, third sentence

Inserted the sentences:

“They tend to be more energetic, creative, adaptable, healthy, and long-lived. Further, they create cultures that have greater need for computing well.”

Chapter 3, *Overcoming Constraints in Deciding Well*, second to last paragraph

Changed “promotes” to “is that of” in the last sentence.

Deleted “, as the best means of refining our knowledge of how best to decide well” from the last sentence.

Chapter 3, *Three Approaches to Public Order*, first paragraph

Changed “solve public” to “solve what they believe are public” in the second sentence.

Chapter 3, *Public Entropy*, first paragraph

Inserted the paragraph: “Our ignorance of how best to decide well is part of the world. Overcoming this ignorance calls for changing the frames we use to predict and explain the world. Doing so provides us with the resources we need to decide well, which includes not only refining frames well but also adapting to the resulting changes well.”

Chapter 3, *Public Entropy*, new second paragraph

Changed “dynamic analogue of and boundless alternative to” to “boundless analogue of and alternative to” in the last sentence.

Chapter 3, *Public Entropy*, second to last paragraph

Changed “In considering waste in deciding well” to “In refining these descriptions” in the first sentence.

Chapter 3, *Public Entropy*, last paragraph

“We can use the concept of public entropy to help us learn ever more about how best to remove waste from our belief systems. Removing waste from our belief systems is like removing excess work-in-process inventory from a Toyota production line. In both cases, we remove waste from the process of deciding well.”

was deleted.

Chapter 3, *The Beauty of Self-Referential Science*, last paragraph, third through last sentences

“Hence, investing in a research program to discover a way of communicating at greater than light speed would be foolish. From the boundless view, given the discounted certainty equivalent of the research program is negative, investing in it at this time would be foolish. The better formal problem to solve is the decision science problem. It rings truer with all that we currently know about deciding well.”

were changed to:

“Hence, investing in a research program to create a way of communicating at greater than light speed would be foolish. From the boundless view, given the discounted certainty equivalents of all faster-than-light-communication research programs are currently negative, investing in any such program would be foolish at this time. Because the decision science problem rings truer with all that we currently know about deciding well, it is the better problem to solve.”

Chapter 3, *Boundless Explanations of Quantum Mechanics*, second paragraph

Changed “when they interact but like waves when they do not interact.” to “at times and waves at other times” in the third sentence.

Chapter 3, *Boundless Explanations of Quantum Mechanics*, second to last paragraph, last sentence

“As a “holistic” concept for helping us explain well, it does not compete with “reductionist” concepts of time that help us predict well.”

was changed to:

“As a tool for explaining well, this concept of time does not compete with concepts of time for predicting well.”

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Chapter 3, *Boundless Explanations of Quantum Mechanics*, last paragraph

“We can use the concept of public entropy to help us learn ever more about how best to remove waste from our belief systems. Removing waste from our belief systems is like removing excess work-in-process inventory from a Toyota production line. In both cases, we remove waste from the process of deciding well.”
was deleted.

Chapter 3, *Expect Sudden Transitions to More Fluid Cultures*, first paragraph

Changed “Further” to “Now” in the fourth sentence.

Chapter 3, *Expect Sudden Transitions to More Fluid Cultures*, first paragraph, last sentence

“The cause of these transitions concerns not only wisdom but also the “beautiful” examples wisdom provides.”

were changed to:

“The cause of this “phase change” concerns not only the wisdom of seasoned soldiers but also the “beautiful” examples they provide.”

Chapter 3, *Expect Sudden Transitions to More Fluid Cultures*, footnote

Changed “revealed” to “revealing” in the second sentence.

Chapter 4, *Academic Fields*, second paragraph

Changed “the tendency of modern views to blind us to our need to pursue the boundless factors of deciding well” to “this blindness” in the first sentence.

Chapter 4, *Academic Fields*, fourth paragraph

Changed “our cultural evolution from biological evolution” to “refining everyday thinking from evolution” in the last sentence.

Chapter 4, *Academic Fields*, last paragraph

Changed “complex” to “complex (multiple-frame)” in the first sentence.

Chapter 4, *Refining Finding Problems to Solve*, second paragraph, last two sentences

“The more beautiful problem is the latter, which calls for us to act as if free will exists (in seeking to disprove that free will exists). This rings truer with all that we currently know about deciding well—acting as if free will does not exist conflicts with deciding well.”

were changed to:

“The more beautiful problem is the latter, which calls for us to act as if free will exists. Acting as if free will does not exist conflicts with deciding well.”

Chapter 4, *Modern Policy Mistakes*, fourth paragraph

Changed “In contrast, from” to “From” in the second sentence.

Chapter 4, *Modern Policy Mistakes*, sixth paragraph

Changed “less” to “less resources” in the third sentence.

Changed “more resources” to “more” in the fourth sentence.

Chapter 4, *Testing the Boundless Approach*, first paragraph

Changed “beliefs (as a whole)” to “beliefs” in the last sentence.

Chapter 5, *The Explicit Experiment*, third paragraph

Changed “experiment” to “freedom-based experiment” in the second sentence.

Chapter 5, *The Explicit Experiment*, fourth paragraph, first two sentences

“The story put forth in the Declaration of Independence’s preamble is not the only United States sovereign-rights story. The United States Constitution offers an agnostic story in the form of a social contract.”

were changed to:

“The Declaration story is not the only United States’ sovereign-rights story. The Constitution offers an agnostic story in the form of a social contract.”

Chapter 5, *A Sovereign Story for Deciding Well*, fourth paragraph

Changed “him” to “his philosophy” in the fourth sentence.

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Chapter 5, *Judge Interventions*, second paragraph

Changed “owners” to “landlords” in the last sentence.

Chapter 5, *Promote Savings for Welfare*, last paragraph

Changed “running a state religion based on either pseudoscience or revealed truth” to “establishing a state religion” in the last sentence.

Chapter 6, introduction, second paragraph

Changed “many” to “most” in the second sentence.

Chapter 6, Schweitzer’s Mystical Oneness, last paragraph

Changed “, which” to “that” in all (2 occurrences).

Chapter 6, Worldly Benefits of Detachment, second paragraph

Changed “overwhelming task” to “potentially overwhelming task” in the fourth sentence.

Chapter 6, Worldly Benefits of Detachment, last paragraph

Changed “system of beliefs” to “belief systems” in the second sentence.

Chapter 6, Experiencing Mystical Oneness, first paragraph, first two sentences

“Deciding well calls for us to use our current mental models of the world. Deciding well also calls for us to create ever better models of the world.”

were changed to:

“From the boundless view, deciding well calls for us to create ever better models of the world.”

Chapter 6, Einstein’s Twin Warnings, second paragraph

Changed “Theistic” to “Most theistic” in the first sentence.

Chapter 6, Einstein’s Twin Warnings, last paragraph

Changed “decide well, believe well, and live well” to “follow the path of deciding well, believing well, and living well” in the first sentence.

Chapter 7, *A Normal Anomaly*, second paragraph

Changed “Jerome Bruner and” to “psychologists Jerome Bruner and” in the second sentence.

Chapter 7, *An Extraordinary Anomaly*, first paragraph

Changed “common ground” to “common ground for cooperating well” in the first sentence.

Changed “compete well by finding common ground” to “seek to find such ground” in the second sentence.

Chapter 7, *An Extraordinary Anomaly*, third paragraph

Changed “completely explain” to “prove all true statements in” in the first sentence.

Chapter 7, *An Extraordinary Anomaly*, first paragraph

Changed “cybernetics, the science of goal-seeking” to “the science of goal-seeking (*cybernetics*)” in the first sentence.

Chapter 7, The Scope of Strategy, first paragraph, second through second to last sentences

“In the game of Reversi (Othello), the boundaries protect the corner positions from attack. At the Battle of Thermopylae, boundaries defined by the Athenian-controlled Gulf of Malia and the shoreline cliffs protected the Spartans and their allies from attack from the north and south. To compete well, we also need to consider the temporal boundaries that define the field. The most important development in strategic thinking in the second half of the twentieth century was the idea of competing well by deciding well more quickly than competitors decide.”

were changed to:

“For example, at the Battle of Thermopylae, boundaries defined by the Athenian-controlled Gulf of Malia and the shoreline cliffs protected the Spartans and their allies from attacks from the north and south. To compete well, we also need to consider the temporal boundaries that define the field. In the second half of the twentieth century, the most important development in strategic thinking was the idea of deciding well more quickly than competitors do. In terms of boundaries, this concerns getting closer than competitors to the boundary formed by the flow of time.”

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Chapter 7, The Grandest Possible Strategy, last two paragraphs

“To compete well, we need to consider the moral boundaries **that define the field. People who adopt a grander strategy take higher moral ground.** In taking **this** ground, **they** tend to be more successful in “attracting the uncommitted, in magnifying their own spirit and strength, and in undermining the dedication and determination of their adversaries.”

“From the boundless view, the **grandest possible strategy is deciding well, which calls for making our national goal deciding well. It** also calls for keeping Abraham Lincoln’s faith that right makes might.”

were changed to:

“To compete well, we need to consider moral **as well as spatial and temporal** boundaries. In taking **higher moral** ground, **people** tend to be more successful in “attracting the uncommitted, in magnifying their own spirit and strength, and in undermining the dedication and determination of their adversaries.”

“From the boundless view, the **highest moral ground is the grand strategy for deciding well described in this work. In light of the constraints we face in knowing the right,** it also calls for keeping Abraham Lincoln’s faith that right makes might.”

Chapter 7, The Scope of Biological Evolution, title

Deleted “**Biological**” from title.

Chapter 7, The Scope of Evolution, first paragraph, last sentence

“**We distinguish between biological and cultural evolution.**”

was changed to:

“**To prevent logical contradictions that arise from self-reference, we do not apply the process of refining everyday thinking to itself. We exclude refining everyday thinking from refining everyday thinking.**”

Chapter 7, The Scope of Evolution, second paragraph, second through fourth sentences

“Our national goal is **the grand strategy of** deciding well using the boundless approach. We recognize that what happens to us may change how our genes and our yet unborn descendants’ genes work. **We also recognize that our genetics and culture coevolve.**”

were changed to:

“Our national goal is deciding well using the boundless approach. We recognize that **the process of refining everyday thinking applies to itself.** We **also** recognize that what happens to us may change how our genes and our yet unborn descendants’ genes work.”

Chapter 7, last footnote, second through fourth sentences

“**One of the most important discoveries arising from** this claim is the microbiome theory of disease, which states that microorganisms living on and in hosts play essential roles in maintaining host health. This theory has opened new opportunities for both preventing disease and slowing aging. **It** has also opened new possibilities for food processors to create products that cause food addictions.”

were changed to:

“**Related to** this claim is the microbiome theory of disease, which states that **some** microorganisms living on and in hosts play essential roles in maintaining host health. This theory has opened new opportunities for both preventing disease and slowing aging. **Unfortunately, it** has also opened new possibilities for food processors to create products that cause food addictions.”

Chapter 7, The Scope of Evolution, last paragraph

Changed “**biological** evolution” to “evolution” in the second sentence.

Chapter 8, introduction, sixth paragraph

Changed “**an ideal**” to “**the best**” in the second sentence.

Chapter 8, Governing Our Minds Well, last paragraph, sixth sentence

“**Neurons the fire together wire together.**” was deleted.

Chapter 8, Reunifying the Reason of Plato and Aristotle, last paragraph

Changed “**ourselves**” to “**our minds**” in the first sentence.

Chapter 8, fourth footnote

Changed “governing people well” to “**for** governing people well” in the second to last sentence.

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Appendix A, introduction, second from last paragraph, second to last sentences

“Rather than a many-sided polygon, this object may be a circle **or an apeirogon (a polygon having an infinite number of sides)**. Applying the first transformation process to a circle yields a circle. **Similarly, an apeirogon yields an apeirogon.** In contrast, the second process produces a closed left-hand semicircle **and a closed left-hand semi-apeirogon.**”

were changed to:

“Rather than a many-sided polygon, this object may be **either an apeirogon (a polygon having a countably infinite number of sides) or a circle**. Applying the first transformation process to **an apeirogon yields an apeirogon, and to a circle yields a circle**. In contrast, the second process yields a closed left-hand **semi-apeirogon and a closed left-hand** semicircle.”

Appendix A, The Big Picture, third paragraph

Reversed order of circles and apeirogons in all tables.

Changed “**Replace** the rightmost vertex and its sides with a line segment connecting its adjacent vertices.” to “**For polygons, replace** the rightmost vertex and its sides with a line segment connecting its adjacent vertices. **For circles, remove the rightmost point.**” in the first case line of the third table.

Appendix B, introduction, first paragraph

“From the **boundless** view, producing well is **a matter of producing wealth** ever more wisely. **In complex production systems, this process has** two steps. The **first** step is replacing scarce non-knowledge resources with knowledge in some part of the system. The second **step** is adapting other parts of the system to this change. The following uses the metaphor of folding and smoothing to explain Taiichi Ohno’s approach to this two-step process.”

was changed to:

“From the **modern** view of **marginalist economics, factories are great machines in which people are interchangeable parts. The goal is producing ever more efficiently.** From the **boundless** view, **factories are learning organisms in which people are the most important part, the part that learns. The goal is producing ever more wisely. We may think of producing wisely as having** two steps. The first is replacing scarce non-knowledge resources with knowledge in some part of the system. The second is adapting other parts of the system to this change. The following uses the metaphor of folding and smoothing to explain Taiichi Ohno’s approach to this two-step process.”

Appendix B, *Machine Tools*, first paragraph

Changed “Production equipment and **small storage areas**” to “Production equipment (**machine tools** and conveyance equipment)” in the second sentence.

Appendix B, *Machine Tools*, third paragraph

“From the **modern scientific view of management and economics, factories are great machines in which people are interchangeable parts. The goal is efficient production.** From the **boundless** view, **factories are learning organisms in which people are the most important part, the part that learns. The goal is wise production.** Rather than trying to get the most out of each machine tool, team leaders try to get the most out of each full day’s work. A full day’s work is the effort a team member can put forth over a long period without ill effect.”

was appended to the second paragraph and changed to:

“Rather than trying to get the most out of each machine tool, team leaders try to get the most out of each full day’s work. A full day’s work is the **daily** effort a team member can put forth over a long period without ill effect.”

Appendix B, *Machine Tools*, fifth (new fourth) paragraph

Changed “**cheap**” to “**inexpensive**” in the third sentence.

Appendix B, *Machine Tools*, sixth (new fifth) paragraph

Changed “**cheap**” to “**inexpensive**” in the fourth sentence.

Appendix B, *Machine Tools*, seventh (new sixth) paragraph

Changed “**cheap**” to “**low-cost**” and “**only one**” to “**a single**” in the second sentence.

Changed “**cheap**” to “**low-cost**” in the third sentence.

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Appendix B, *Production Links*, third paragraph

Changed “worker” to “team member” in all (three occurrences).

Appendix B, *Inducing the Creation of Knowledge*, last paragraph

Changed “worker” to “team member” in the fourth sentence.

Appendix B, *Less is More*, first paragraph

Removed parentheses around “of products for sale” in the sixth sentence.

Appendix C, *Inducing the Creation of Knowledge*, last paragraph

Changed “worker” to “team member” in the fourth sentence.

Appendix C, *Black Clouds in Theology*, second paragraph

Changed “(with its rope in the theology wedge)” to “with its rope clearly in the theology wedge” in the seventh sentence.

Changed “(with its rope in the fire wedge)” to “with its rope clearly in the fire wedge” in the eighth sentence.

Appendix C, *A Boundless View of the Whole*, last paragraph, first sentence

“We can find these two mindsets personified in Aristotle and Plato’s figures at the philosophy wall’s center.” was changed to:

“We can find these two types of mindsets personified in the figures of Plato and Aristotle at the philosophy wall’s center.”

Appendix A, *Imagining the Chief Designer*, second paragraph, last two sentences

“To do so well, you needed to show the logical relations between facets of Holy Wisdom and the virtually logical relations between these boundless ends’ pursuits near their limits. You also needed to show that we lack the knowledge to pursue these boundless ends rationally.”

was changed to:

“To do so well, you needed to show the logical relations between perfectly known factors of deciding well while showing that we lack the knowledge to pursue these boundless ends rationally.”

Appendix A, *The Problem of Heraclitus*, last paragraph, first sentence

“The image on the left represents Plato and Aristotle’s philosophy; the one on the right represents Protagoras and Vitruvius’s sophistry.”

was changed to:

“The image on the left represents Plato and Aristotle’s philosophy, their love of Wisdom; the one on the right represents Protagoras and Vitruvius’s sophistry, their apparent Wisdom.”

Changes from 20210901 to 20210925

Chapter 1, *Choosing Frames Well*, second paragraph, third and fourth sentences

“One way is to think about the way we overcome constraints in pursuing our ends. These constraints include scarcity of such factors as time, knowledge resources, and material resources.”

was changed to:

“One way is to think about how we overcome scarcity of time, knowledge resources, and material resources.”

Chapter 3, *Boundless Explanations of Quantum Mechanics*, last paragraph

Changed “explaining well” to “explaining how best to decide well” in the last sentence.

Chapter 5, *Judge Interventions*, last paragraph

Changed “local farmers” to “the politically powerful and the bureaucracies that serve them” in the sixth sentence.

Chapter 5, *Promote Public Welfare*, third paragraph

Changed “Policymakers” to “Bureaucracies” in the third sentence.

Chapter 5, *Liberalism*, first paragraph, second through fourth sentences

“Given the key role that liberty plays in the boundless approach, we may call its civil faith *boundless liberalism*.

The desire for boundless liberalism is not new. During a war that started in his boyhood home of Boston and

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spread across the world, Benjamin Franklin wrote the following to Joseph Priestley, who was then living in the enemy city of Birmingham, England:”

were changed to:

“Given the key role that liberty plays in the boundless approach to deciding well in living well, we may call its civil faith *boundless liberalism*. In putting our faith in science as a process, we put our faith in freedom, cooperation, and self-interest enlightened by boundless reason.

“The desire for boundless liberalism is not new. During a war that started in his boyhood home of Boston and spread across the world, Benjamin Franklin wrote the following to fellow amateur scientist Joseph Priestley, who was then living in the enemy city of Birmingham, England:”

Chapter 8, *Governing Our Minds Well*, last paragraph, second through fifth sentences

“We can see this in the sad ends of Georg Cantor and Kurt Gödel. The part of their minds they believed to be perfectly good would not let them give up trying to find logical solutions to open-ended problems. Cantor died in an asylum. Gödel starved himself to death. Conscious control of our daemons may result in opening consciousness to more of our daemons. Genius may lead to madness.”

were changed to:

“Opening our daemons to consciousness may result in opening consciousness to our daemons. Genius may lead to madness. We can see this in the sad ends of Georg Cantor and Kurt Gödel. The daemons they believed to be perfectly good would not let them give up searching for logically consistent and complete solutions to open-ended problems. Cantor died in an asylum. Gödel starved himself to death.”

Chapter 8, *Reunifying the Reason of Plato and Aristotle*, last paragraph, end

Added the sentence:

“The science of deciding well put forth in this work addresses this bounds-blindness problem.”

Appendix A, introduction, third to last paragraph, first sentence

“If we used our first scheme for representing objects, this sequence would make little sense: R8, I5, R7, I6, R6, I5, R5, I4, R4, I3, R3.”

was changed to:

“If we used our first scheme for representing objects, this sequence (R8, I5, R7, I6, R6, I5, R5, I4, R4, I3, R3) would make little sense.”

Appendix A, The Big Picture, third paragraph, first table

Deleted “(aleph one)” from the real number entry.

Appendix A, Ideal Forms, third paragraph

Changed “his postmodern view” to “Gödel’s view” in the third sentence.

Appendix C, *Imagining the Chief Designer*, third paragraph

Changed “octagonal oculus” to “octagonal oculus centered on a circle” in the first sentence.

Changes from 20210925 to 20211115

Introduction, seventh paragraph, third sentence

Deleted the ending clause: “, which we may think of as transformations of world views.”

Chapter 1, *Choosing Frames Well*, second paragraph, third and fourth sentences

“One way is to think about the way we overcome constraints in pursuing our ends. These constraints include scarcity of such factors as time, knowledge resources, and material resources.”

was changed to:

“One way is to think about how we overcome scarcity of time, knowledge resources, and material resources.”

Chapter 1, *Ever More Complete Boundless Models*, last paragraph, last two sentences

“In the end, all that we presume is True is the reason underlying the boundless approach. For a 500-year-old depiction of this universal form of reason, see Appendix C (Renascent Art).”

was changed to:

“In the end, all that we presume is True in the science of deciding well is the reason underlying it. For a 500-year-old depiction of an instance of this universal form of reason, see Appendix C (Renascent Art).”

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Changes by Ranges of Versions

Chapter 2, introduction, first paragraph, last sentence

“The less well we can predict, the more important what we may learn becomes relative to what we currently know.”

was deleted.

Chapter 2, introduction second paragraph

Changed “in deciding well” to “in deciding well in the timeless pursuit of living well” in the second to last sentence. Appended paragraph to the preceding paragraph.

Chapter 2, introduction, last paragraph

Changed “deciding well” to “deciding well in living well” in the first sentence.

Chapter 2, introduction, last paragraph, footnote, second through last sentences

“Controversy over this claim made this essay the most cited paper in economic literature. Some of the harshest criticisms came from members of the Austrian School (of evolutionary economics). When asked whether he regretted not criticizing his friend John Maynard Keynes’ General Theory, F. A. Hayek said he did. He added he regretted as much not criticizing Essays in Positive Economics, which he thought was “quite as dangerous a book” (Hayek on Hayek: An Autobiographical Dialogue, Chicago: University of Chicago Press, 1994, p. 145). From the boundless view, Friedman accepted the modern concept of science as a product rather than the process of refining everyday thinking.”

were changed to:

“Because normative models provide more personal power and prestige than positive ones, this claim was sure to face tremendous resistance. The resulting controversy made this essay the most cited paper in economic literature. Some of the harshest criticisms came from members of the Austrian School of evolutionary economics. When asked whether he regretted not criticizing his friend John Maynard Keynes’ General Theory, Austrian economist F. A. Hayek said he did. He added he regretted as much not criticizing Essays in Positive Economics, which he thought was “quite as dangerous a book” (Hayek on Hayek: An Autobiographical Dialogue, Chicago: University of Chicago Press, 1994, p. 145). From the boundless view, Friedman needed a supplementary normative model based on pursuing the timeless end of living well. For this, he needed to address the problem of self-reference in the science of forms, hence the whole of science:”

Chapter 3, Boundless Explanations of Quantum Mechanics, last paragraph

Changed “explaining well” to “explaining how best to decide well” in the last sentence.

Chapter 3, Boundless Explanations of Quantum Mechanics, last paragraph

Changed “exist” to “cease exist for living beings bound to live well in the flow of time” in the third sentence.

Chapter 5, Judge Interventions, last paragraph

Changed “local farmers” to “the politically powerful and the bureaucracies that serve them” in the sixth sentence.

Chapter 5, Promote Public Welfare, third paragraph

Changed “Policymakers” to “Bureaucracies” in the third sentence.

Chapter 5, Liberalism, first paragraph, second through fourth sentences

“Given the key role that liberty plays in the boundless approach, we may call its civil faith *boundless liberalism*.

The desire for boundless liberalism is not new. During a war that started in his boyhood home of Boston and spread across the world, Benjamin Franklin wrote the following to Joseph Priestley, who was then living in the enemy city of Birmingham, England:”

were changed to:

“Given the key role that liberty plays in the boundless approach to deciding well in living well, we may call its civil faith *boundless liberalism*. In putting our faith in science as a process, we put our faith in freedom, cooperation, and self-interest enlightened by boundless reason.

“The desire for boundless liberalism is not new. During a war that started in his boyhood home of Boston and spread across the world, Benjamin Franklin wrote the following to fellow amateur scientist Joseph Priestley, who was then living in the enemy city of Birmingham, England:”

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Chapter 8, *Governing Our Minds Well*, last paragraph, second through fifth sentences

“We can see this in the sad ends of Georg Cantor and Kurt Gödel. The **part of their minds** they believed to be perfectly good would not let them give up trying to find logical solutions to open-ended problems. Cantor died in an asylum. Gödel starved himself to death. **Conscious control of our daemons may result in opening consciousness to more of our daemons. Genius may lead to madness.**”

were changed to:

“**Opening our daemons to consciousness may result in opening consciousness to our daemons. Genius may lead to madness.** We can see this in the sad ends of Georg Cantor and Kurt Gödel. The **daemons** they believed to be perfectly good would not let them give up searching for logically consistent **and complete** solutions to open-ended problems. Cantor died in an asylum. Gödel starved himself to death.”

Chapter 8, *Reunifying the Reason of Plato and Aristotle*, last paragraph, end

Added the sentence:

“**The science of deciding well put forth in this work addresses this bounds-blindness problem.**”

Appendix A, introduction, fourth paragraph, first sentence

Changed “transformation process” to “**complex (multiple-step)** transformation process.”

Appendix A, introduction, fifth paragraph

Deleted “**(multiple-step)**” from the first sentence.

Appendix A, introduction, seventh paragraph, second to last sentence

Changed “transformation process” to “**complex** transformation process.”

Appendix A, introduction, third to last paragraph, first sentence

“If we used our first scheme for representing objects, this sequence would make little sense: **R8, I5, R7, I6, R6, I5, R5, I4, R4, I3, R3.**”

was changed to:

“If we used our first scheme for representing objects, this sequence **(R8, I5, R7, I6, R6, I5, R5, I4, R4, I3, R3)** would make little sense.”

Appendix A, The Big Picture, third paragraph, first table

Deleted “**(aleph null)**” from the counting number entry.

Appendix A, The Big Picture, third and fourth tables

Changed “All geometric **representations**” to “All **three** geometric **sequences**” in the last entry of both tables.

Appendix C, *Imagining the Chief Designer*, third paragraph

Changed “octagonal oculus” to “octagonal oculus **centered on a circle**” in the first sentence.

Changes from 20211115 to 20211231

Preface, second paragraph

Changed “**replacing scarce non-knowledge resources with**” to “**creating**” in the third to last sentence.

Chapter 3, *Boundless Explanations of Quantum Mechanics*, last paragraph

Changed “view” to “view of science **as the process of refining everyday thinking**” in first sentence.

Parenthesized “**for living beings bound to live well in the flow of time**” in the third sentence.

Chapter 4, introduction, last paragraph

Changed “from within **their respective frames**, we ought to choose **the description** that rings truest” to “from within **themselves**, we ought to choose **those** that ring truest” in the fourth sentence.

Chapter 4, introduction second paragraph

Changed “in deciding well” to “in deciding well **in the timeless pursuit of living well**” in the second to last sentence. Appended paragraph to the preceding paragraph.

Chapter 4, Self-similarity, first paragraph

Changed “what we choose” to “what **scale** we choose” in the second sentence.

Changed “**When we choose** a problem” to “**In choosing** a problem **to solve**” in the third sentence.

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Chapter 5, Good Policies, first paragraph, footnote

Changed “presently” to “currently” in the last sentence.

Chapter 8, introduction, first paragraph

Changed “discover or invent ever better means of replacing scarce non-knowledge resources with knowledge resources” to “create knowledge resources useful” in the second sentence.

Chapter 8, introduction, second paragraph

Changed “discovering or inventing better means of replacing scarce non-knowledge resources with knowledge resources” to “doing so” in the first sentence.

Changed “knowledge resources” to “knowledge resources in living well” in the second sentence.

Chapter 8, introduction, fifth paragraph

Changed “in deciding well” to “well” in the second sentence.

Chapter 8, introduction

Merged first and second paragraphs; merged third and fourth paragraphs.

Appendix A, introduction, sixth paragraph

Changed “results” to “products (results)” in the first sentence.

Changed “result” to “product of the step” in the last sentence.

Appendix A, balance of the chapter

Changed “result” to “product” (4 occurrences).

Appendix A, Ideal Forms, first paragraph

Added two more terms to each of the parenthesized sequences..

Appendix A, Ideal Forms, last paragraph, footnote

Added “(transcendental phenomenology as rigorous science)” to the second sentence.

Changed “He” to “However, he appears to have”, “deciding well” to “this pursuit”, and “ability and capability” to “capacity” in the last sentence.

Changes from 20211231 to 20220228

Entire document: checked all external hyperlinks and updated their last referenced dates.

Chapter 1, *The Truth of Wisdom*, second paragraph, footnote, first sentence

“According to this “instrumental” approach to language, we use language to help us choose how to live well.” was changed to:

“According to this “instrumental” approach to language, we use language to decide well in living well. We use conceptual tools for predicting well to solve given problems and those for explaining well to find better problems to solve.”

Chapter 1, *Ever More Complete Boundless Models*, second paragraph, footnote

Changed “his most famous work (*A Theory of Justice*,” to “*In A Theory of Justice*, (” in the first sentence.

Chapter 1, *Ever More Complete Boundless Models*, fourth paragraph, footnote

Removed quotation marks around “Completeness” (2 occurrences).

Chapter 1, *The Learning Age*, last paragraph

Changed “cybernetics” to “the science of goal-seeking (*cybernetics*)” in second sentence.

Chapter 1, *The Learning Age*, last paragraph, footnote

“For more on cybernetics, particularly on the differences between the ends of first-order, higher-order, and infinite-order cybernetics, see the scope of game theory section of the chapter on competing well.” was changed to:

“Information theory and cybernetics both use the concept of “surprise” to do practical work. In information theory, a surprise conveys information. In cybernetics, it conveys information about the need to take corrective action. For more on cybernetics in this work, see the section on the scope of game theory in the

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chapter on competing well. For a history of the rise and fall of the cybernetic movement in modern science, read *The Cybernetics Moment: Or Why We Call Our Age the Information Age* (Kline, R., Baltimore: Johns Hopkins University Press, 2015).”

Chapter 3, *Boundless Explanations of Quantum Mechanics*, third paragraph

“Physicists have been trying to explain these strange behaviors in a way that rings true with everything else they **currently** know for as long as they have known about them. Most of these explanations fall into one of three basic classes. These are the *Copenhagen class*, the *hidden variables class*, and the *many worlds class*.”
was changed to:

“Physicists have been trying to explain these **two** strange behaviors in a way that rings true with everything else they know **about physics** for as long as they have known about them. Most of these explanations fall into one of three basic classes. These are the *Copenhagen class*, the *hidden-variables class*, and the *many-worlds class*.”

Chapter 3, *Boundless Explanations of Quantum Mechanics*, fifth paragraph

“A defining feature of the hidden variables class is the **belief that we will eventually be able** to predict the behavior of individual quantum-level objects with certainty, **which implies that the hidden variables that explain what we currently conceive as entanglement are local**. **This claim contradicts Bell’s theorem**, which states that local variables cannot explain everything quantum mechanics predicts. **Decades of experiments have failed to disprove this theorem**.”

was changed to:

“A defining feature of the hidden-variables class is the **claim that it is possible** to predict the behavior of individual quantum-level objects with certainty. **Doing so may call for knowledge of the position, condition, and rules governing all objects in the world**. **This level of knowledge rings true with Einstein’s belief that “God does not play dice.”** Whether people will ever predict such behavior successfully is another matter. Bell’s theorem, which **has survived decades of experiments**, states that local variables can never explain everything quantum mechanics predicts.”

Chapter 3, *Boundless Explanations of Quantum Mechanics*, sixth paragraph

Changed “many worlds” to “many-worlds” and “our world” to “**the world we perceive** (“our world”)” in the first sentence.

Chapter 3, *Boundless Explanations of Quantum Mechanics*, last paragraph, last three sentences

“**The** concept of time **here** is absolute. This **rings true** with entanglement and people’s ability to cooperate across space and time. **As a tool for explaining how best to decide well, this concept of time does not compete with concepts of time for predicting well**.”

were promoted to a new paragraph and changed to:

“**Note that the** concept of time **in this normative class of interpretations** is absolute. This is logically consistent with entanglement and people’s ability to cooperate across space and time **in deciding well in living well**. It is also logically consistent with the need to remove ever more waste from this process. However, it is not consistent with the claim that it is wise to invest in all research projects removing this waste. **Deciding well calls for investing in research projects well**.”

Chapter 3, *Boundless Explanations of Quantum Mechanics*, first paragraph

Changed “**deciding well hinders**” to “**explaining well hinders**” in the first sentence.

Chapter 7, *An Extraordinary Anomaly*, fifth paragraph

“In addition to being a pioneer in game theory, von Neumann was a pioneer in the science of goal-seeking (*cybernetics*). He contributed to both **first-order** cybernetics (seeking well-defined ends, e.g., missile guidance) and **higher-order** cybernetics (seeking ill-defined ends, e.g., biological fitness). In seeking the mathematics of reason, he sought the rules underlying the whole of science. From the boundless view, **he** sought the reason of *infinite-order* cybernetics, of seeking the transcendent end of deciding well by breaking this end into transcendent factors. In terms of the boundless view, he sought boundless reason.”

was changed to:

“In addition to being a pioneer in game theory, von Neumann was a pioneer in *cybernetics* (the science of goal-seeking). He contributed to both **first-order** cybernetics (seeking well-defined ends, e.g., missile guidance) and **higher-order** cybernetics (seeking ill-defined ends, e.g., biological fitness). In seeking the mathematics of reason,

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he sought the rules underlying **deciding well in living well** (the whole of science). **Regrettably, he died before completing this work.**

“From the boundless view, **von Neumann** sought the reason of infinite-order cybernetics, of seeking the transcendent end of deciding well **in living well** by breaking this end into transcendent factors. In terms of the boundless view, he sought boundless reason.”

Chapter 7, *The Grandest Possible Strategy*, last paragraph

Deleted the sentence: “**It calls for making our national goal deciding well.**”

Changed “**it also**” to “**this strategy**” in the last sentence.

Appendix A, *The Big Picture*, third paragraph, last block quote

Changed “deciding well” to “deciding well **in living well**” in the second sentence.

Appendix A, *Ideal Forms*, third paragraph

Changed “**those that ring true with modern worldviews**” to “modern ones” in the second sentence.

Changed “**However, he appears to have**” to “**He**” and “**boundless factors of this pursuit**” to “**Wisdom**” in the third sentence of the footnote.

Appendix A, *Ideal Forms*, fourth paragraph

Changed “view, **mathematics is a form of science, the science of forms.** Rather” to “view, **rather**” in the first two sentences.

Changed “*empirically*” to “**in living well empirically**” in the new second sentence.

Appendix A, *Ideal Forms*, first two paragraphs

Deleted “**The best forms (patterns) for deciding well are independent of our beliefs.**” from the first paragraph.

Changed “deciding well” to “deciding well **in living well**” in the second paragraph (2 occurrences).

Moved these two paragraphs to the end of the section.

Appendix B, *Smoothing Flows*, last paragraph

Changed “**greatest new**” to “**most useful**” in the fourth sentence.

Appendix C, *The Forgotten Role of Octagons*, third paragraph

Changed “poetry, philosophy, jurisprudence, and theology” to “poetry (**“Beauty”**), philosophy (**“Wisdom” and “Truth”**), jurisprudence (**“Justice”**), and theology (**“Wholeness”**)” in the third sentence.

Changes from 20211231 to 20220228

Entire document: checked all external hyperlinks and updated their last referenced dates. Also, changed “ever better [noun] to ever-better [noun] in all text (9 occurrences).

Preface, second paragraph

Changed “**boundless view**” to “**“boundless” view of this work**” in the fourth sentence.

Acknowledgments, last paragraph

Changed “learning in financial decision making” to “**the design of a visually-oriented computer language for learning in financial decision-making**” in the first sentence.

Introduction, eighth paragraph, last three sentences

“In this, they are like the details in compendious drawings of Mount Fuji. Bold strokes define the **scene**.

Details help us to make sense of **it.**”

were changed to:

“In this, they are like the details in compendious drawings of Mount Fuji **in which perspectives and seasons change but the mountain itself does not.** Bold strokes define the **scenes**. Details help us to make sense of **them.**”

Chapter 1, *Frames Useful in Deciding Well*, first two paragraphs

Changed “philosophical terms” to “**modern Western** philosophical terms” in all (2 occurrences).

Chapter 1, *The Wisdom of Effectiveness*, second paragraph

Changed “include” to “include **logical contradictions,**” in the third sentence.

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Chapter 1, The Wisdom of Wisdom, last paragraph

Changed “disprove it is” to “disprove it is a member” in the third to last sentence.

Chapter 1, *The Truth of Wisdom*, fourth paragraph

Changed “were” to “are” in the second and seventh sentences (2 occurrences).

Chapter 1, *Ever More Complete Boundless Models*

Changed title to “*Ever-More-Complete Boundless Models*.”

Changed “better (more wisely)” to “more wisely” in the first sentence.

Chapter 1, *Ever-More Complete Boundless Models*, last paragraph, last two sentences

“In the end, all that we presume is True in the science of deciding well is the reason underlying it. For a 500-year-old depiction of an instance of this universal form of reason, see Appendix C (Renascent Art).”
were changed to:

“At the limit of imagination, all that we presume is True is the ideal set of rules for refining everyday thinking. In mathematical terms, members of this set are the axioms (basic rules) of the science of deciding well. For a 500-year-old depiction of a partially refined version of this ideal set of rules, see Appendix C (Renascent Art).”

Chapter 1, The Learning Age, last paragraph

Changed “theory of information” to “information theory” in the first sentence.

Deleted “the concept of” from the second sentence.

Added the following footnote to the end of the third sentence:

¹³ During Ronald Reagan’s second term, George Schultz reputedly asked Eduard Schevernski how the Soviet government planned to adapt to accelerating change while restricting access to fax machines and personal computers. Since then, the need to adapt quickly has shaken apart many centrally-planned political and economic organizations, beginning with the most sclerotic. Similarly, the Learning Age’s insatiable demand for good people and good products promises to shake apart foolish cultural institutions and practices, likely starting with the most corrupt and corrupting.”

Chapter 2, introduction, first paragraph

Changed “constraints in learning to live ever more wisely” to “mistakes in doing so” in the second sentence.

Chapter 2, introduction, second paragraph, footnote

Changed “members of the Austrian School of evolutionary economics” to “leaders of the Austrian School (of evolutionary economics)” in the fourth sentence.

Changed “Austrian economist F. A. Hayek” to “F. A. Hayek” in the fifth sentence.

Changed “the science of forms, hence in the whole of science” to “science” in the last sentence.

Chapter 2, *Pleasure and Pain*, fourth paragraph, last sentence

“This is good when we find pleasure in activities that are good for us, such as eating healthy foods, but bad when we find pleasure in things that are bad for us or others, such as masochistic or sadistic acts.”

was changed to:

“This is good when we find pleasure in such activities as eating healthy foods but bad when we find them in such activities as inflicting pain for the pleasure of inflicting pain.”

Chapter 2, *Trust*, last paragraph

Changed “trusts” to “trust” in the fourth sentence.

Chapter 3, The Beauty of Self-Referential Science, fifth paragraph

Italicized “*certainty equivalents*” in the fourth sentence.

Changed “is the better” to “is currently the better” in the last sentence.

Chapter 3, The Beauty of Self-Referential Science, both subsections

Changed “like” back to “as” where appropriate (8 occurrences).

Chapter 3, *Boundless Explanations of Quantum Mechanics*, fourth paragraph

Changed “know” to “accurately know” in the first sentence.

Chapter 3, *Boundless Explanations of Quantum Mechanics*, last paragraph

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“Note that the concept of time in this normative class of interpretations is absolute. This is **logically** consistent with entanglement and people’s ability to cooperate across space and time in deciding well **in living well**. It is also logically consistent with the need to **remove ever more waste from this process**. However, it is **not consistent with the claim that it is wise to invest in all research projects removing this waste**. Deciding well **calls for investing in research projects well**.”

was demoted to a footnote and changed to:

“⁸ Note that the concept of time in this normative class of interpretations is absolute. This is consistent with entanglement and people’s ability to cooperate across space and time in deciding well. It is also consistent with the need to **refine our knowledge of deciding well wisely**. We cannot fully understand the behaviors of objects on one level of abstraction by fully understanding the behavior of objects on the next lower level. Scientists call this *the problem of emergence*. From the boundless view, emergent behaviors hinder simplifying the set of theories that predict well. We address this problem **wisely** using self-similar grand strategies for deciding well. Within these strategies, it’s context “all the way up,” not theories “all the way down.””

Chapter 3, *Expect Sudden Transitions to More Fluid Cultures*, last paragraph

“A potentially fruitful research area concerns how ignoring the distinction between reductionist theories for predicting well and holistic theories for explaining well hinders deciding well. **In general**, engineering approaches to policymaking promote preferred behaviors, and modern evolutionary approaches protect established ones. **From the boundless view**, the most pernicious abuses of science are those in which people pursuing personal ends use reductionism to deceive others. **Knowledge of boundless reason** can help people see through such deceit. **Boundless reason can help people** identify defectors in the game of deciding well in living well.”

was changed to:

“**From the boundless view**, a potentially fruitful research area concerns how ignoring the distinction between reductionist theories for predicting well and holistic theories for explaining well hinders deciding well. Engineering approaches to policymaking **appear to** promote preferred behaviors, and modern evolutionary approaches **appear to** protect established ones. **The** most pernicious abuses of science are those in which people pursuing personal ends use reductionism to deceive others. Boundless reason can help people see through such deceit **by helping them** identify defectors in the game of deciding well in living well.”

Chapter 5, *The Explicit Experiment*, last paragraph

Appended the following sentence to the end of the paragraph

“**Evidence of this possibility includes Gabriel over the Whitehouse, the 1932 fascist film financed by William Randolph Hearst and recommended by Franklin Delano Roosevelt.**”

Chapter 5, *Liberalism*, last paragraph

Changed “**like** fully human beings” to “**as** fully human beings **decide**” in last paragraph.

Chapter 6, *Maslow’s Spiritual Needs*, last paragraph

Changed “**were** living fully human lives” to “**to be** living fully human lives” in the third sentence.

Changed “**the set of** spiritual needs, **which contain those things we need to be fully human**,” to “**these** spiritual needs” in the last sentence.

Chapter 6, *Schweitzer’s Mystical Oneness*, first paragraph, first two sentences

“Unlike Maslow, Albert Schweitzer boldly identified our highest need as the need **for union with the infinite Being**. He called this the need for “mystical oneness.””

was changed to:

“Unlike Maslow, Albert Schweitzer boldly identified our highest need as the need **to link or relink with something infinitely larger than ourselves**. He called this object *the infinite Being* and union with this object *mystical oneness*.”

Chapter 6, *Einstein’s Twin Warnings*, first paragraph

Changed “**something infinitely greater than ourselves**,” to “**the infinite Being**” in the second sentence.

Chapter 7, *An Extraordinary Anomaly*, second paragraph

Changed “symmetry, but **he** failed” to “symmetry but failed” in the first sentence.

Changed “**find problems based on the belief**” to “**believe**” in the second sentence.

Boundless Reason (Second Edition)

Changes by Ranges of Versions

Chapter 7, *An Extraordinary Anomaly*, third paragraph

Changed “(rules)” to “(basic rules)” in the first sentence.

Chapter 7, *An Extraordinary Anomaly*, fifth paragraph

Changed “deciding well in living well (the whole of science)” to “the whole of science” in the third sentence.

Chapter 7, *The Scope of Strategy*, first paragraph

Changed “north and south” to “north” in the second sentence.

Chapter 7, *E–M Theory*, last paragraph

Changed “dog fighter” to “dogfighter” in the second to last sentence.

Chapter 7, *The Scope of Strategy*, second paragraph

Changed “the special case” to “a special case” in the first sentence.

Changed “deciding” to “to decide” in the second sentence.

Chapter 8, *Conclusion*, second paragraph

Changed “to knowledge” to “to have knowledge” in the second sentence.

Appendix B, *Folding in Processes*, eighth paragraph

Changed “including” to “which includes” in the last sentence.

Appendix C, *Imagining the Chief Designer*, second to last paragraph

Changed “alter knot pattern” to “alter decoration’s knot pattern” in the last sentence.

Changes from 20220228 to 20220521

Entire document: checked all external hyperlinks and updated their last referenced dates. Also, changed “ever better [noun] to ever-better [noun] in all text (9 occurrences). Abbreviated Bronowski footnotes.

Preface, second paragraph

Changed “boundless view” to ““boundless” view of this work” in the fourth sentence.

Acknowledgments, last paragraph

Changed “learning in financial decision making” to “the design of a visually-oriented computer language for learning in financial decision-making” in the first sentence.

Introduction, eighth paragraph, last three sentences

“In this, they are like the details in compendious drawings of Mount Fuji. Bold strokes define the scene. Details help us to make sense of it.”

were changed to:

“In this, they are like the details in compendious drawings of Mount Fuji in which perspectives and seasons change but the mountain itself does not. Bold strokes define the scenes. Details help us to make sense of them.”

Chapter 1, *Frames Useful in Deciding Well*, first two paragraphs

Changed “philosophical terms” to “modern Western philosophical terms” in all (2 occurrences).

Chapter 1, *The Wisdom of Effectiveness*, second paragraph

Changed “include” to “include logical contradictions,” in the third sentence.

Chapter 1, *The Wisdom of Wisdom*, last paragraph

Changed “disprove it is” to “disprove it is a member” in the third to last sentence.

Chapter 1, *The Truth of Wisdom*, fourth paragraph

Changed “were” to “are” in the second and seventh sentences (2 occurrences).

Chapter 1, *Ever More Complete Boundless Models*

Changed title to “*Ever-More-Complete Boundless Models*.”

Changed “better (more wisely)” to “more wisely” in the first sentence.

Chapter 1, *Ever-More Complete Boundless Models*, last paragraph, last two sentences

Boundless Reason (Second Edition)

Changes by Ranges of Versions

“In the end, all that we presume is True in the science of deciding well is the reason underlying it. For a 500-year-old depiction of an instance of this universal form of reason, see Appendix C (Renascent Art).” were changed to:

“At the limit of imagination, all that we presume is True is the ideal set of basic rules for refining everyday thinking. In mathematical terms, members of this set are the axioms of the science of deciding well. For a 500-year-old depiction of a partially refined version of this ideal set of rules, see Appendix C (Renascent Art).”

Chapter 1, The Learning Age, last paragraph

Changed “theory of information” to “information theory” in the first sentence.

Deleted “the concept of” from the second sentence.

Added the following footnote to the end of the third sentence:

“¹³ During Ronald Reagan’s second term, USA Secretary of State George Schultz reputedly asked USSR Foreign Secretary Eduard Schevernaski how the Soviet government planned to adapt to accelerating change while restricting access to fax machines and personal computers. Since then, the need to adapt quickly has shaken apart many centrally-planned political and economic organizations, beginning with the most sclerotic. Similarly, the Learning Age’s insatiable demand for good people and good products promises to shake apart foolish cultural institutions and practices, likely starting with the most corrupt and corrupting.”

Chapter 2, introduction, first paragraph

Changed “constraints in learning to live ever more wisely” to “mistakes in doing so” in the second sentence.

Chapter 2, introduction, second paragraph, footnote

Changed “members of the Austrian School of evolutionary economics” to “leaders of the Austrian School (of evolutionary economics)” in the fourth sentence.

Changed “Austrian economist F. A. Hayek” to “F. A. Hayek” in the fifth sentence.

Changed “the science of forms, hence in the whole of science” to “science” in the last sentence.

Chapter 2, *Pleasure and Pain*, fourth paragraph, last sentence

“This is good when we find pleasure in activities that are good for us, such as eating healthy foods, but bad when we find pleasure in things that are bad for us or others, such as masochistic or sadistic acts.”

was changed to:

“This is good when we find pleasure in such activities as eating healthy foods but bad when we find them in such activities as inflicting pain for the pleasure of inflicting pain.”

Chapter 2, *Trust*, second paragraph

Deleted “by lowering the cost of protecting knowledge” from the first sentence.

Changed “easily copy many forms of knowledge, which makes them” to “copy many forms of knowledge easily, which makes these forms” in the third sentence.

Changed “the theft” to “its theft” in the fourth sentence.

Changed “The” to “Further, the”, “knowledge” to “knowledge resources”, and “material resources as evidence and precedents are less clear-cut” to “material ones” in the fifth sentence.

Changed “using knowledge” to “using it” in the last sentence.

Chapter 3, *Three Approaches to Policy*, second paragraph

Italicized “live well” in the first sentence.

Chapter 3, *Three Approaches to Policy*, third paragraph

Italicized “decide well” in the first sentence.

Chapter 3, The Beauty of Self-Referential Science, fifth paragraph

Italicized “certainty equivalents” in the fourth sentence.

Changed “is the better” to “is currently the better” in the last sentence.

Chapter 3, The Beauty of Self-Referential Science, both subsections

Changed “like” back to “as” where appropriate (8 occurrences).

Chapter 3, *Boundless Explanations of Quantum Mechanics*, fourth paragraph

Changed “know” to “accurately know” in the first sentence.

Chapter 3, *Boundless Explanations of Quantum Mechanics*, last paragraph, second to last sentence

Boundless Reason (Second Edition)

Changes by Ranges of Versions

“This is **logically** consistent with entanglement and people’s ability to cooperate across space and time in deciding well **in living well**. It is also **logically** consistent with the need to **remove ever more waste from this process**. However, it is not consistent with the claim that it is wise to invest in all research projects removing this waste. Deciding well calls for investing in research projects well.”

was changed to:

“This is consistent with entanglement and people’s ability to cooperate across space and time in deciding well. It is also consistent with the need to refine **our** knowledge of **deciding well wisely**. Within the *problem-finding part* of grand strategies for deciding well, it is context “all the way up” to an ideal set of axioms, not theories “all the way down” to an ideal theory of everything.”

Chapter 3, *Expect Sudden Transitions to More Fluid Cultures*, second paragraph

“From a modern view, we might begin to understand these phase transitions by gradually replacing sand grains in Per Bak’s sandpile experiments with spheres of similar size and weight. However, this ignores learning from the example of others. From the boundless view, we might begin with sensitivity analysis of learning, forgetting, and revealing deceit functions in agent-based computer simulations. Such analysis can help us choose where best to invest in learning.”

was demoted to a footnote.

Chapter 3, *Expect Sudden Transitions to More Fluid Cultures*, last paragraph

“A potentially fruitful research area concerns how ignoring the distinction between reductionist theories for predicting well and holistic theories for explaining well hinders deciding well. In general, engineering approaches to policymaking promote preferred behaviors, and modern evolutionary approaches protect established ones. From the boundless view, the most pernicious abuses of science are those in which people pursuing personal ends use reductionism to deceive others. Knowledge of boundless reason can help people see through such deceit. **Boundless reason can help people** identify defectors in the game of deciding well **in living well**.”

was appended to the last footnote in the last chapter and changed to:

“**Seats of power here include those occupied by scientists, particularly those who misuse reductionist models to achieve purely personal ends**. Boundless reason can help people see through such deceit **by helping them** identify defectors in the game of deciding well.”

Chapter 5, *Liberalism*, last paragraph

Changed “**look to**” to “**seek**” in the last sentence.

Chapter 5, *The Explicit Experiment*, last paragraph

Appended the following sentence to the end of the paragraph

“**Evidence of this possibility includes Gabriel over the Whitehouse, the 1932 fascist film financed by William Randolph Hearst and recommended by Franklin Delano Roosevelt.**”

Chapter 5, *Liberalism*, last paragraph

Changed “**like** fully human beings” to “**as** fully human beings **decide**” in the last sentence.

Chapter 6, *Maslow’s Spiritual Needs*, last paragraph

Changed “**were** living fully human lives” to “**to be** living fully human lives” in the third sentence.

Changed “**the set of** spiritual needs, **which contain those things we need to be fully human,**” to “**these** spiritual needs” in the last sentence.

Chapter 6, *Schweitzer’s Mystical Oneness*, first paragraph, first two sentences

“Unlike Maslow, Albert Schweitzer boldly identified our highest need as the need **for union with the infinite Being**. He called this the need for “**mystical oneness.**””

was changed to:

“Unlike Maslow, Albert Schweitzer boldly identified our highest need as the need **to link or relink with something infinitely larger than ourselves**. He called this object *the infinite Being* and union with this object *mystical oneness.*”

Chapter 6, *Einstein’s Twin Warnings*, first paragraph

Changed “**something infinitely greater than ourselves,**” to “**the infinite Being**” in the second sentence.

Chapter 7, *An Extraordinary Anomaly*, second paragraph

Boundless Reason (Second Edition)

Changes by Ranges of Versions

Changed “symmetry, but he failed” to “symmetry but failed” in the first sentence.

Changed “find problems based on the belief” to “believe” in the second sentence.

Chapter 7, *An Extraordinary Anomaly*, third paragraph

Changed “(rules)” to “(basic rules)” in the first sentence.

Chapter 7, *An Extraordinary Anomaly*, fifth paragraph

Changed “deciding well in living well (the whole of science)” to “the whole of science” in the third sentence.

Chapter 7, *The Scope of Strategy*, first paragraph

Changed “north and south” to “north” in the second sentence.

Chapter 7, *E–M Theory*, last paragraph

Changed “dog fighter” to “dogfighter” in the second to last sentence.

Chapter 7, *The Scope of Strategy*, second paragraph

Changed “the special case” to “a special case” in the first sentence.

Changed “deciding” to “to decide” in the second sentence.

Chapter 8, *Reunifying the Reason of Plato and Aristotle*, last paragraph, footnote

Changed “well” to “wisely” in all (3 occurrences).

Changed “cells” to “our cells” in the last sentence.

Chapter 8, *Conclusion*, second paragraph

Changed “to knowledge” to “to have knowledge” in the first sentence.

Appendix B, *Folding in Processes*, eighth paragraph

Changed “including” to “which includes” in the last sentence.

Appendix C, *Imagining the Chief Designer*, second to the last paragraph

Changed “alter knot pattern” to “alter decoration’s knot pattern” in the last sentence.

Changes from 20220521 to 20221015

Entire document: checked all external hyperlinks and updated their last referenced dates. Deleted two links to discontinued online Benjamin Franklin collected works references.

Preface, first paragraph

Added “*where deciding well is a matter of learning to decide ever more wisely*” to the end of the fourth sentence.

Added “in deciding well” to the end of the last sentence.

Introduction, seventh paragraph

Added “*where deciding well is a matter of learning to decide ever more wisely*” to the end of the fourth sentence.

Introduction, eighth paragraph

Changed “concept of beauty” to “formal concept of beauty” in the first sentence.

Chapter 1, *The Wisdom of Effectiveness*, sixth paragraph, footnote

Changed “some” to “a given” in the first sentence.

Chapter 1, *The Truth of Wisdom*, second to last paragraph

Changed “faceted models” to “models” in the fifth sentence.

Chapter 1, *The Truth of Wisdom*, second to last paragraph, footnote

Moved the footnote reference to the end of the sentence. Changed:

“⁸ Earlier versions of this work used the term ‘multiplex’ rather than ‘faceted’ to describe the complex (multiple-frame) model of deciding well. ‘Multiplex’ came from biologist Jack Cohen and mathematician Ian Stewart’s book about the co-evolution of minds and environments, *Figments of Reality: The Evolution of the Curious Mind* (Cambridge, England: Cambridge University Press, 1997). Unfortunately, the authors overlooked the unity of virtue that emerges from removing waste from the process of deciding well.”

to:

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Changes by Ranges of Versions

⁸ “To call these timeless ends ‘boundless factors of deciding well’ suggests that the pursuits of these timeless ends are separate and distinct. They are not. In this respect, ‘holographic facet’ may be a better term, but it too has problems. Early versions of this work used the term ‘multiplex’ rather than ‘faceted’ to describe the complex (multiple-frame) model of deciding well. This term came from Jack Cohen and Ian Stewart’s book about the co-evolution of minds and environments, *Figments of Reality: The Evolution of the Curious Mind* (Cambridge, England: Cambridge University Press, 1997). Regrettably, ‘multiplex’ expresses neither the existence nor “holographic” nature of the unity of virtue that emerges from removing waste from the process of deciding well.”

Chapter 1, *The Truth of Wisdom*, last paragraph

“We may call this complex approach to deciding well *the boundless approach to deciding well*, or simply *the boundless approach*. We also may call the complex view of this approach *to deciding well the boundless view of deciding well*, or simply *the boundless view*.”

was changed to:

“We may call this complex approach to deciding well the boundless approach and the complex view of this approach the boundless view.”

Chapter 1, *The Truth of Wisdom*, last paragraph, footnote, third and fourth sentences

“‘Holographic facet’ would better relate to the autostereogram metaphor used to describe the new paradigm of paradigms. However, this would likely lose people who do not understand holograms.”

was appended to the previous paragraph and changed to:

“In this respect, ‘holographic facet’ may be a better phrase, but it too has problems.”

Chapter 2, introduction, first paragraph

Changed “deciding well in *the timeless pursuit of*” to “*the timeless pursuit of* deciding well in” in the fifth sentence.

Chapter 3, *Boundless Explanations of Quantum Mechanics*, sixth paragraph, footnote

Changed “This” to “*Recognizing the existence of this*” in the fifth sentence.

Chapter 3, *Boundless Explanations of Quantum Mechanics*, last paragraph

Changed “forms (*including axioms*)” to “forms” in the last sentence.

Chapter 4, *Refining Finding Problems to Solve*, third paragraph, footnote

Changed “*popular modern evolutionary*” to “*prevailing modern*” in the last sentence.

Chapter 4, Testing the Boundless Approach, paragraph

Changed “*essential set of beliefs that support*” to “*set of rules of reason underlying*” in the second sentence.

Changed “*beliefs*” to “*rules*” in the last sentence.

Chapter 7, *An Extraordinary Anomaly*, second to the last paragraph

Changed “*transcendent*” to “*timeless*” in the first sentence (2 occurrences).

Chapter 5, *Promoting Savings for Welfare*, first paragraph

Changed “decide well” to “*decide well, especially the ability to reason well*” in the fourth sentence.

Chapter 8, Proving Boundless Reason, title

Changed “*Proving*” to “*Testing*” in the section title.

Chapter 8, Reunifying the Reason of Plato and Aristotle, last paragraph, first footnote

Changed “*senescent and harmful*” to “*harmful (including senescent)*” in the last sentence.

Appendix A, headings

Restored the second heading from the first edition (deleted on 31 December 2017):

“*In mathematics, the art of proposing a question must be held of higher value than solving it.*”—Georg Cantor”

“*Georg Cantor, “De aequationibus secundi gradus indeterminatis” (Doctoral dissertation, University of Berlin, 1867).*”

Appendix A, Ideal Forms, first paragraph

Changed “toward” to “*and apriorism toward pragmatism and*” in the first sentence.

Boundless Reason (Second Edition)

Changes by Ranges of Versions

Changed “**empiricism and idealism**” to “**these qualities**” in the second sentence.

Appendix C, introduction, last paragraph, footnote, last two sentences

“The inspiration for **seeing** the decoration of the whole room came from this book. **Its** meaning did not.” was changed to:

“The inspiration for **considering** the decoration of the whole room **and much of the meaning of its details** came from this book. **The key role of octagons and its holy/holistic** meaning did not.”

Appendix C, Forgotten Role of Octagons, third paragraph

Changed “form a cross” to “form a **Greek** cross” in all (2 occurrences).

Appendix C, Forgotten Role of Octagons, last paragraph

Changed “**central** relation between Holy Wisdom and the fifth element” to “relation between Holy Wisdom and the fifth element **at the center of the ceiling**” in the first sentence.

Appendix C, *On the Theology Wall*, first paragraph

Changed “**the church’s role on earth** (the monstrance on the altar)” to “the monstrance on the altar” in the first sentence.

Appendix C, *On the Theology Wall*, first paragraph, last sentence

“**Visually linking this wall’s four circles to the ceiling’s theology circle creates a matching Latin and Greek cross pattern on the ceiling with the Latin cross grounded in the monstrance on the altar and its center the crossed-key symbol of Vatican authority.**”

was changed to:

“**Matching the Holy Spirit’s cross pattern is a much larger one created by connecting the wall’s vertical axis to the ceiling’s wall-aligned Greek cross. Grounding this Latin cross is the altar’s monstrance, which represents the church’s role on earth.**”

Appendix C, A Boundless View of the Whole, second paragraph

Changed “the floor’s coherence” to “the floor’s coherence (**as a whole**)” in the last sentence.

Appendix C, A Boundless View of the Whole, third paragraph

Italicized “*its inner borders’ curvilinearity represents the pretense of completeness found in all rational (logical) models that pretend to depict the best path forward*” in the third sentence.

Appendix C, *Imagining the Chief Designer*, fourth paragraph

Changed “two **shorter** walls” to “two **narrower** walls” in the second sentence.

Appendix C, Endless Renaissance, first paragraph

Changed “sense of **natural** beauty” to “sense of beauty” in the second sentence.

Changes from 20221015 to 22021230

Entire document: checked all external hyperlinks and updated their last referenced dates. Added additional information about public domain images.

Preface, third paragraph

Changed “to learn” to “**how** to learn” in the fifth sentence.

Chapter 2, *Three Common Mistakes*, second paragraph

Changed “**has also**” to “**later**” in the fifth sentence.

Chapter 3, *Boundless Explanations of Quantum Mechanics*, second paragraph

Changed “changes” to “**by measuring it** changes” in the fifth sentence.

Chapter 5, The Explicit Experiment, fourth paragraph

Changed “**Perhaps** the most eloquent **defender** of this competing story **is**” to “**One** of the most eloquent **advocates for** this competing story **was**” in the third sentence.

Chapter 6, *Worldly Benefits of Detachment*, last paragraph

Changed “**now mythic**” to “**legendary**” in the second sentence.

Boundless Reason (Second Edition)

Changes by Ranges of Versions

Chapter 7, *An Extraordinary Anomaly*, second paragraph

Changed “symmetry” to “**timeless symmetry of the science**” in the first sentence.

Chapter 7, *The Scope of Strategy*, first paragraph

Changed “this” to “**the popularity of this**” in the last sentence.

Chapter 7, *E–M Theory*, second paragraph

Changed “**Robert McNamara’s F-111B**” to “**the naval version of the F-111**” in the fourth sentence.

Chapter 7, *The Scope of Evolution*, first paragraph

Changed “cooperate” to “cooperate **in pursuing the timeless end of deciding well**” in the first sentence.

Chapter 7, *The Scope of Evolution*, second paragraph

Changed “cooperate” to “cooperate **in pursuing the timeless end of deciding well**” in the first sentence.

Appendix A, introduction, fourth paragraph

Changed “computer **using an object-oriented programming language**” to “computer” in the second sentence.

Appendix A, *Ideal Forms*, second paragraph

Changed “scheme for **describing**” to “scheme for **representing**” in the last sentence.

Appendix C, *The Forgotten Role of Octagons*, second paragraph, footnote

“**High-resolution photographs of this room are available online, e.g., Wikipedia**

<http://en.wikipedia.org/wiki/Raphael_Rooms> (24 August 2022).”

changed to:

“**All images of this room were derived from Wikimedia Commons high-resolution images,**

<http://en.wikipedia.org/wiki/Raphael_Rooms> (24 December 2022). This includes the front cover and front matter images but not the nested octagon-within-square drawings (e.g., the back cover image), which are original.”

(Paperback version includes the original work sentence on the copyright page rather than in this footnote.)

Appendix C, *A Boundless View of the Whole*, third paragraph

Changed “position **relative to the doors**” to “**symbology and position in the room**” in the first sentence.

Changed “**interpretation rings**” to “**rings**” in the last sentence.

Appendix C, *The Problem of Heraclitus*, second paragraph, fifth sentence (in front of the colon):

Added the footnote: “**⁵ This image was derived from a high-resolution Wikimedia Commons image,**

<https://en.wikipedia.org/wiki/Vitruvian_Man> (24 December 2022).”

Changes from 20221230 to 20221231

Entire document

Changed “deciding well in living well” to “**deciding well**” (9 occurrences).

Arguably, the former appears to favor living well over linking well. (See chapter on Linking Well.)

Acknowledgments, third paragraph

Changed “social scientists tell many stories about complex phenomenon, **and that economists do not do dynamics well**” to “**economists do not do dynamics well** and that social scientists tell many stories about **the same** complex phenomenon” in the fifth sentence.

Chapter 7, *The Scope of Evolution*, second paragraph, footnote

Changed “**yet unborn**” to “**future**” in the fourth sentence.

Chapter 7, *The Scope of Evolution*, second paragraph, footnote, end

Added the sentence:

“**In doing so, they will also make their people less attractive targets for such attacks.**”

Boundless Reason (Second Edition)

Changes by Ranges of Versions

Recent Changes to 20221231 version

All but Introduction and Appendix A (3/25/2024)

Changed “Further,” to “Furthermore,” in all (9 occurrences).

Chapter 1, Heading, quote reference (11/30/2024)

Changed “as Master Teacher Kong (Confucius)” to “in the West as Confucius (Master Teacher Kong)” in the last sentence.

Chapter 1, Choosing Frames Well, first paragraph (12/24/2023)

Changed “learning from experience” to “learning” in the first sentence.

Chapter 1, *The Wisdom of Effectiveness*, sixth paragraph (7/22/2024)

Changed “turns simple closed-ended problems into complex open-ended ones” to “creates overwhelmingly complex open-ended problems” in the last sentence.

Chapter 4, *Modern Policy Mistakes*, sixth paragraph (10/27/2023)

Changed “self-similar relation between temporal and boundless ends in deciding well, we may speculate that these networks are at least weakly fractal” to “noisy” relation between chosen temporal ends and the boundless end of deciding well, we may speculate that these networks are at least somewhat fractal” in the second to last sentence.

Chapter 7, Heading, quote reference (11/30/2024)

Changed “as Master Sun (Sunzi or Sun Tze)” to “as Sunzi or Sun Tze (Master Sun)” in the last sentence.

Chapter 7, *An Extraordinary Anomaly*, second to last paragraph (8/28/2024)

Changed “by breaking this end into timeless factors. In terms of the boundless view” to “In short” in the last sentence.

Chapter 7, Scope of Strategy, first paragraph (6/6/2024)

Changed “the north” to “flank attacks” in the second sentence.

Chapter 7, *E–M Theory*, first paragraph (6/22/2024)

Deleted “at the Fighter Weapons School” from the third sentence.

Chapter 7, *The Grandest Possible Strategy*, first paragraph, footnote (10/21/2024)

“¹⁴ Boyd was aware of the logical contradictions that applying his strategy to itself would create. He avoided this problem by taking a postmodern approach to learning. For more about Boyd’s approach, read Frans Osinga’s *Science, Strategy and War: The Strategic Theory of John Boyd* (New York: Routledge, 2007).” was deleted.

Chapter 7, *The Grandest Possible Strategy*, last paragraph (1/30/2024)

Deleted “described in this work” from the first sentence.

Changed “In light of” to “Not forgetting” in the last sentence.

Chapter 8, ABRIDGED VERSION ONLY, Testing Boundless Reason, last paragraph, end

Added the footnote: “** A complexity science adage states that when you find a power-low distribution, look for an underlying self-similar process. For more about this possibility, see Benoit Mandelbrot and Richard Hudson, *The (Mis)behavior of Markets: A Fractal View of Financial Turbulence* (New York: Basic Books, 2004). Note that this curiously labeled footnote contains material found in the last footnote in the believing well chapter, which is not included in the abridged version.”

Chapter 8, Reunifying the Reason of Plato and Aristotle, first paragraph (9/7/2024)

Changed “best acquire this virtue using the science of science” to “use the science of science to acquire this virtue” in the second sentence.

Appendix A, Heading, Georg Cantor quote (6/15/2023)

Changed “proposing a question must be held of higher value than solving it” to “asking questions is more valuable than solving problems” in the quotation. Changed the name of his doctoral thesis to “A claim he defended in his doctoral examination.” in the reference.

Appendix A, Heading, Georg Cantor quote reference (9/9/2023)

Boundless Reason (Second Edition)

Changes by Ranges of Versions

Changed “A claim” to “An English translation of a claim” in the first sentence.

Appendix A, introduction, eighth paragraph, footnote (10/30/2024)

“Note that I2 in the first process and N2 in the second are line segments, which we may or may not classify as (degenerate) polygons. For simplicity, this analysis stops short of these two objects. Including them would add little to our understanding of the natural foundations of mathematics.”

was changed to:

“Note that if we define polygons in terms of outside edges, line segments are degenerate (limiting case) polygons. For simplicity, this analysis stops short of these polygons (I3, Y3 using the replace-the-rightmost-vertex function, and N2). Including them in this example would add little to understanding the natural foundations of mathematics.”

Appendix C, Introduction, last paragraph, footnote (8/28/2024)

Changed “holy/holistic” to “boundlessly reasonable” in the last sentence.

Appendix C, *Imagining the Chief Designer*, fourth paragraph (1/26/2024)

Changed “two narrower” to “jurisprudence and poetry” in the third sentence.