

# Contemporary Trends & Theories & Paradigms of the Future

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## Part I

### ***Contemporary Futurist Thought***

Chapter 3: Modern Times & the Contemporary Transformation

Chapter 4: Theories & Paradigms of the Future

**Trends & Developments: The 20th Century (1900 - 1960s)** (Imagery, Icons, Significant Individuals)

- Generally begins in State of Optimism - Belief in Great (Technological) Progress Ahead - Most Eventful Century
- Emergence of Science Fiction & Futures Studies - Both Utopias & Dystopias Written - Both Greater Sense of the Future & Greater Deeper Sense of the Past (Archaeology, Paleontology, Astronomy, Cosmology) - Expanding Temporal Consciousness
- Watson Describes Early 20th Century as “Disturbing the Peace” - Innovation in Science & Art/Music - Challenging the Status Quo/Moving Away from the Past into a New Future - Challenging Traditional Ways of Thinking (Einstein, Picasso, Stravinsky)
- Two World Wars & Great Economic Depression (1914 - 1945) - Violence in the Name of the Future - Potential Self-Extinction with Development of A Bomb - Loss of Faith in Progress (or Science/Technology/Human Nature) - Emergence of Cold War
- Throughout Much of Early Century Conflict of Democracy/Freedom/Individual Rights versus Collectivism/Authoritarianism/Communism - Ongoing Struggle & Advances in Rights of Women
- Growth of Pop Culture (Movies, Music, Records, Media, Radio/TV, Advertising, Consumer Goods, Popularization of American Dream) - But Ongoing Critiques of Consumerism/Materialist Hedonism/Capitalism (Beats, Hippies) - Distrust of Authority & Institutions - But Continued Spread of Modernization Across the Globe
- Existentialism & Postmodernism Critiques - Loss of Faith in West/Progress/Rationalism/Absolute Truth - Extreme Individualism/Subjectivism - Counter-Critiques Defending Western Ideals - Emergence of New Grand Narrative of Evolution in History & Science - Maze of Contradictions

Basic Trends/Developments Derived From: Peter Watson *The Modern Mind*, David Christian *Maps of Time*, & Edward Cornish *Futuring*, among Others

Accelerative Change - Accelerative Growth of Population, Accelerative Productivity, Accelerative Consumption/Energy Use/Waste, Accelerative Growth of Wealth, Emergence of Mass Agriculture, Increasing Literacy/Learning, Spread & Evolution of Industry/Technology, Continued Growth of Transnational Corporations, Death of Peasantry, Increasing Health/Longevity, Accelerative Innovation, Spread of Democracy/Human Rights, Decolonization & Independence of European Controlled Colonies, Ongoing Transformation of Environment, Increasing Globalization of Communication/Culture/Trade

**The Contemporary Global Transformation** (Last 50 Years) (Continuation of Earlier 20th Century & Modern Trends) (Imagery & Icons)

The Ambiguity of Our Times

*“Somethin's happening here,  
What it is ain't exactly clear...” Buffalo Springfield*

Expressed through Charles Dickens' *A Tale of Two Cities* (1859)

*“It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of light, it was the season of darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way . . .” Charles Dickens*

*“Unprecedented Prosperity...Unprecedented Opportunity...Unprecedented Risk”  
Ramez Naam*

### **The Contemporary Global Transformation: Basic Themes & Issues**

Additional Selected References (1970 - 2012): Alvin Toffler *Future Shock*, Club of Rome *The Limits to Growth*, Walter Truett Anderson *Reality Isn't What It Used To Be*, Dinesh D'Souza *The Virtue of Prosperity*, Walter Moss *An Age of Progress?*, John Naisbitt *Megatrends & Megatrends 2000*, Barbara Marx Hubbard *Conscious Evolution*, The Millennium Project *State of the Future*, Sally Goerner *After the Clockwork Universe*, and Richard Slaughter *The Biggest Wake-Up Call in History*

- Cross-Over Period - No Unifying Narrative - Competing Narratives & World Views (Watson, Anderson)
- Acknowledgement of Accelerative Change (Cornish, Toffler) - Multiple Views/ Reactions to Accelerative Change - Positive to Negative (Limits to Growth) - Embrace or Resist

- Crisis, Catastrophe, & Transcendence - Anticipations of Both Great Disaster & Mind-Boggling Evolution - Perhaps Crisis is Good (Hubbard)
- Multiple Waves of Transformation (Across Scientific-Technological to Ecological-Environmental to Social-Psychological-Religious) - Multiple & Different Attempts to Identify the Big (Mega) Trends (Naisbitt, Limits to Growth, Moss, Hubbard, Cornish, Anderson)
- One Fundamental Conflict/Theme/Trend is Globalization (Unity) vs. Localism (Pluralism)
- Second Fundamental Theme is Optimism vs. Pessimism About the Future (Slaughter, D'Souza)
- Integral, Connectivist, and Holistic Visions Attempt to Synthesize Human Reality & Future (Goerner)
- *State of the Future*: Ongoing Collective Effort to Monitor & Guide Developments at a Global Level (Progress Report Relative to Key Challenges)
- Post-Postmodernism (Attempts to Go Beyond Relativism of Postmodernism)

### **The Debate Over the Global MegaCrisis - *Journal of Futures Studies*, Dec. 2011 - William Halal and Michael Marien**

Expression "Global MegaCrisis" Used to Refer to Set of Interconnected Global Problems that are at a Crisis Point (Threat of Collapse of Modern Human Civilization)

Voting on by Participants/Writers in Symposium Regarding the Future: Tech-Facilitated Evolutionary Advance (Halal)(Optimism 40%) vs. Infoglut, Ignorance, Indecision, & Inadequacy (Marien) (Pessimism 60%)

Variability in Theoretical Frameworks, Cultural Mindsets, Selection & Interpretation of Facts, and Overall Disposition to Life & the Future (Emotionally)

### **Trends, Predictions, Possibilities, & Theories**

What are the Key Trends for Different Dimensions of Human Reality, Key Predictions Based on these Trends, Influential Theories for these Different Dimensions, & Possibilities (Probable, Plausible, Preferable, & Way Out/Wild Cards)

- Trends & Predictions
- Possibilities: Plausible, Probable, Preferable, Wild Cards
- Multiple Theories of the Future: Interpret & Explain the Past & Present - Predict the Future - Prescribe the Future - Theoretical (Selective/Interpretive) Nature of Facts & Values
- Multiple Paradigms (Theory + Way of Life - Ideas Structure Life & Action), Multiple Social Movements Across the Globe (Collective Paradigm with Active Agenda to Change & Influence Human Reality & the Future), World Views (General Theory of Reality that Has Implications Regarding the Future), & Multiple Grand Narratives for the Future (World View in the Form of a Story - Preferred Mode of Human Understanding - Giving Interpretive Meaning, Explanation, & Direction for Humanity)

- Everyone is a Futurist (Everyone has World View & Grand Narrative - Everyone Anticipates & Predicts & Has Goals/Plans as Part of Normal Psychological Functioning - Everyone Possesses a Theoretically Informed Future Consciousness)

## **Theories of Evolution, Change, and Time: Stability, Presentism, Progress, Decay, Oblivion, Transcendence, & Yearning for the Good Old Days**

Before Moving To Specific Dimensions of Human Existence Look at General Theories of Time & Human Reality Within Time

Provide Big Pictures of Time - How Human History & the Future Fits Within Big Pictures of Time - Theory that Evolution is Big Picture of Time & Human History Part of Evolution (Fraser, Prigogine, Morowitz, Stewart) Providing a Basis for Prediction of the Future - Has there been Progress or Not? What is the Meaning of Progress? (Moore/Simon, Slaughter) - Things are Moving/Evolving Faster & Faster - Is this Good or Bad? (Gleick, Kurzweil, Stross) - Are We Headed toward Decline/Decay/Extinction/Oblivion? (Rees) - Human Perspectives on Time, Past/Present/Future, Are Humans Evolving a Greater Sense of Time or Is Our Sense of Time Shrinking toward the Present (Fraser, Rushoff) - Should We Preserve Stability vs. Embrace Change ? (Ray, Postrel)

*Our Final Hour* by Martin Rees, *Faster* by James Gleick, *Present Shock* by Douglas Rushoff, *Order Out of Chaos* by Ilya Prigogine, *The Future and its Enemies* by Virginia Postrel, *The Singularity is Near* by Ray Kurzweil, *It's Getting Better All the Time* by Stephen Moore and Julian Simon, *The Emergence of Everything* by Harold Morowitz, *The Cultural Creatives* by Paul Ray, *Accelerando* by Charles Stross, *Evolution's Arrow* by John Stewart, and *Time as Conflict* by J. T. Fraser

As Move Through Specific Dimensions of the Future Below Will Selectively Highlight Only Some Trends, Possibilities, & Theories in the Slide Show/Video Presentation - Complete List of All Books/Authors & Trends/Developments Per Slide Included in this Printed Text of the Narration - Also Several Dimensions Not Included in Slide Show but Included in the Text

## **Science and the Growth of Knowledge**

*"...once we lift our eyes from the horrors of the past decades, the dominant intellectual trend, the most interesting, enduring, and profound development is very clear. Our century has been dominated intellectually by a coming to terms with science...science has changed how we think." Peter Watson*

## **Trends**

- Ongoing Second Scientific Revolution (Relativity, Quantum, Open Systems) Begun 100 Years Ago - Transformation in Mindset about Reality & Cosmos
- Accelerative Expansion of Knowledge & Information - Broadening/Deepening Understanding of Nature/Cosmos

- Increasing Application of (Scientific) Knowledge to All Spheres of Life - Empowerment of Humanity
- Science (Scientism) Pushes Out Other Modes of Knowing/Thinking/Experience & Other Values - Science Becomes God (Too Much Faith in Science) - Ongoing Critiques Science & Rationalism as Limiting
- Increasing Level of Uncertainty (More Answers/More Questions) - Science/ Knowledge Fragmenting - Information/Knowledge Overload on Human Mind - Loss of Big Picture (Wisdom/Enlightenment)

## Theories

*The Life of the Cosmos, The Trouble with Physics, and Time Reborn* by Lee Smolin, *A Brief History of Time, The Universe in a Nutshell, and The Grand Design* by Stephen Hawking, *The Elegant Universe, The Fabric of the Cosmos, and The Hidden Reality* by Brian Greene, *The Five Ages of the Universe* by Fred Adams and Greg Laughlin, *Parallel Worlds* and *Physics of the Future* by Michio Kaku, *Coming of Age in the Milky Way* by Timothy Ferris, *The Fabric of Reality* and *The Beginning of Infinity* by David Deutsch, *Programming the Universe* by Seth Lloyd, *The End of Science* by John Horgan, *Mind and Cosmos* by Thomas Nagel, and *Science at the Edge* by John Brockman

Multiple Efforts to Provide an Integrative & Comprehensive Scientific Understanding of the Universe (Hawking, Greene, Smolin) - Prediction that Coming in the Near Future (for example, through String Theory) to Complete Understanding of Everything (Hawking, Kaku); Optimistic Future Visions of the Spread & Application of Science (Kaku); Broad Evolutionary Visions Extending into the Far Distant Future (Adams/ Laughlin); Emerging Application of Information/Computer Theory to Science & Reality as a Whole (Lloyd & Deutsch); Doubts About Our Contemporary Scientific Understanding of Nature (Something Big Still Not Understood) (Smolin & Nagel); Toward the Future: Will We Ever Have a Complete Understanding or Not? Will Science Come to an End? (Horgan) or Still Plenty of Questions/Puzzles (Brockman)?

## Part II

### **The Accelerative & Ubiquitous Wave of Technological Evolution**

#### **Trends**

- Accelerative Expansion of Innovation & Empowerment
- Science/Technology Improved Quality of Life (More than Anything Else)
- Evolving Efficiency of Production & Energy & High Tech Decreasing Pollution
- Ubiquitous Spread of Technology - Technologized Nature - Increasing Automation - Ongoing Transformation of Jobs/Professions & Ways of Life
- Natural Born Cyborg Argument - Biology & Technology Functionally Synthesized in Humans - Technology & Technological Evolution is Expression of Evolution - Future (as in Past) Reciprocal Evolution of Humans & Machines

- Increasing Energy Usage & Projected Future Demands - Potential Resource (Non-Renewable) Depletion
- Loss of Contact/Resonance with Nature - Dependency on Technology - Increasingly Addicted to Gadgets - Loss of Community/Humanity
- Growth of Existential Risks Due to Technology - Unintended Consequences

## Theories

*Technology's Promise* by William Halal (Relatively Precise Predictions on Different Areas of Technology/Optimistic Impact), *Technopoly* by Neil Postman (Critique of Influence of Technology on Human Values/Culture), *Natural Born Cyborgs* by Andy Clark (Cyborg Argument Regarding Human Nature), *The Nature of Technology* by W. Brian Arthur (How Technology Evolves), *Visions* by Michio Kaku, *What Technology Wants* by Kevin Kelly (How Technology Fits into Evolution/Relates to Human Evolution/Facilitates and Is the Cutting Edge of Evolution - General Evolutionary Theory of Hierarchy within Nature), *The Sun, the Genome, and the Internet* by Freeman Dyson, *Evolution Isn't What It Used to Be* by Walter Truett Anderson (How Evolution & Nature is Evolving Through Technological Facilitation), *The Singularity is Near* by Ray Kurzweil (Computers Exceeding Humans in Intelligence in 21st Century - Most Significant Event in Near Future - Unpredictable/Incomprehensible Effects), *Physics of the Impossible* by Michio Kaku (Possibilities of Science Fiction Technologies, such as Time Travel, Teleportation, & Traveling Faster than the Speed of Light), and *High Tech High Touch* by John Naisbitt

## Energy, Resources, Materials, & Nanotechnology

*"The Stone Age did not end for lack of stone. And the Oil Age will end long before the world runs out of oil."* James Canyon

## Trends

- Hunter/Gatherer 5 Gigajoules per Year; Industrial Human 100 GJ; Techno-Human 500 GJ; Energy Per Capita Quadrupled since 1900
- *World Energy Consumption Increasing 2% a Year - Doubling Every 35 Years - Overall Material/Energy Consumption (with Global Industrialization) Triples in Next 30 Years - Presently 28% Use 77% of Energy*
- *Projections for Next 20 Years - Fossil Fuels (Now at 80% Total Energy) Continue to Supply Bulk of Energy (75%) - Renewable/Alternative Energy at 15% Possibly Increasing to 20/30%*
- Wind Energy 30 Times Greater in 2010 than 1995 - Solar Cell Efficiency Doubled from 1980 to 2010 - Alternative Growing 30% a Year - Sun Delivers to Earth in One Hour Energy Used by Globe in One Year
- Nuclear Fusion by 2030/2040 (Harness Energy of Stars)
- *Steady Evolution of Micro-Machines & Nanotechnologies - Intelligent Matter/Materials*

## Theories

*“...the threat to scarcity is not to try to slice our pie thinner - rather it's to figure out how to make more pies.” Peter Diamandis*

Kardashev-Dyson Scale (Levels of Civilization Measured in Terms of Energy Mastery - Planetary, Solar, & Galactic Resources), *Engines of Creation 2.0/Radical Abundance* by K. Eric Drexler (Founder - Immense Promises/Possibilities of Nanotechnology), *The Infinite Resource* by Ramez Naam (Central Importance of Human Intelligence/Innovation in Creating Necessary Energy/Materials), *The Venus Project, Abundance* by Peter Diamandis (Optimistic Vision of the Ongoing Increasing Creation of Energy, Materials, & Resources), *Technology's Promise* by William Halal, 2012 *State of the Future by The Millennium Project* (Progress Report on Energy Usage & Evolution), and Hans Rosling: <http://www.youtube.com/watch?v=jbkSRLYSojo> (Arresting Popular Video on Global Progress on Human Well Being)

## Super-Structures, Infra-Structures, & Transportation

### Trends

- Industrialization/Modernization Spreading Across Globe
- Ongoing Evolution/Expansion/Technologization/Integration of Infrastructures/ Networks (Energy/Transportation/Water/Food/Waste/Habitation/Communication/Entertainment/Weather) - Creation & Deterioration - Global Super-Projects
- The Contemporary Explosion of Mega-Skyscrapers: 27 of World's 30 Tallest Buildings Built in Last 20 Years
- Emergence of Eco-Cities
- Progressive Development of Cleaner, More Efficient, Safer Modes of (Mass) Transportation
- Evolution of Transportation: Hybrid, Electric, Fuel Cell, Intelligent Cars, Automated Highways, MagLev Trains & Cars (SuperConductors), Flying Cars, Hyper-Sonic Planes, Global Super-Highway

## IT, A.I., I.A., Computers, Robotics, Virtual Reality, Communication, & the Web

*“The distinction between us and robots is going to disappear.” Rodney Brooks*

### Trends

*“Resistance is futile...” The Borg*

- Accelerative Evolution of Computer (A.I.) Intelligence - Spreading Into Everything
- Accelerative Evolution of Internet/Web - Global Knowledge Integration & Availability - Emergence of Global Mind/Brain/Intelligence -> Possibly Leading to Cosmic Mind
- Accelerative Evolution of Mobile Computer/Communication Devices

- IT Spreading Into Everything - All Spheres of Human Life - Empowering All Forms of Technology
- Information Age - Transformation/Evolution of Professions/Jobs
- I.T. Enhancing Human Intelligence/Capacities (I.A.)
- Progressive Immersion & External Effusion of VR - Fantasy vs. Reality Distinction Breaking Down (Evolution of Reality)
- Potential Tech Singularity - Jump in Evolution ~2045 - Predicted by Kurzweil
- Ubiquity of Media - Stimulus/Info Overload - Stress & Speed
- Devolution of Mind/Intelligence (Shallow/Distracted/Fragmented) - Loss of Individuality
- Surveillance/Transparency/Loss of Privacy (GPS & Google Earth)

## Theories

*The Shallows* by Nicholas Carr (Negative Impact on Higher Level Cognitive Capacities/IT Changing the Human Brain), *The Singularity is Near* and *The Age of Spiritual Machines* by Ray Kurzweil, *Our Final Invention* by James Barrat (AI) (We Will be Transcended), *Is the Internet Changing the Way You Think?* by John Brockman (More Negative than Positive Views), *Alone Together* by Sherry Turkle (Communication Technologies Actually Diminishing Human Connectedness/Intimacy), *Wake* by Robert Sawyer (Evolution of Techno-Global Mind), *Robot* by Hans Moravec (Robots as Our Evolutionary Children), *Love and Sex with Robots* by David Levy (It's Coming/It's Here), *What Will Be* by Michael Dertouzos, *Being Digital* by Nicolas Negroponte (Excellent Introduction - Role of Intelligent Agents), and *Flesh and Machines* by Rodney Brooks (The Merging of Humans & Robots)

## Biotechnology and the Future of Medicine and Health

### Trends

- Evolution of the Theory of Evolution - Increasing Biological Knowledge & Medical/Biotechnological Progress/Power - Genetic Engineering
- Increasing World Wide Longevity - Life Preservation - Potential Relative Immortality
- Increasing Health - Physical Quality of Life - Nutrition - Relative Hunger Diminishing
- Progress (but Threats) on Diseases
- Applications of BioTech to Agriculture, Life, Nature, Humans - Purposeful Evolution
- Rapid Evolution of Agriculture/Food Production - Synthetic Food - Farming Oceans - Race with Population & Economic Level
- Diversification of Human Species/New Life Forms/Creation of Life - Integration of Bio & Technological - Cyborgs
- Creation of Ecologically Destructive Life Forms - "Out of Control" Scenario

### Theories

*Redesigning Humans* by Gregory Stock (Inevitability of Human Genetic Engineering), *Transcend* and *Fantastic Voyage* by Ray Kurzweil and Terry Grossman, *After Man* and



*Man After Man* by Dougal Dixon (Visually Imaginative & Bio-Ecologically Informed Visions of Future Life and Future Humans), *Out of Control* by Kevin Kelly (Classic Exposition on the Coming Biotechnological Age/Open Systems Theory), *Radical Evolution* by Joel Garreau (Good Integrative Review of Growing Technological Efforts to Purposefully Evolve/Modify Humans) *Our Posthuman Future* by Francis Fukuyama (Critique of Genetic/Biological Engineering Applied to Humans), *The Transhumanist Reader* by Max More and Nitasha Vita More (Good Introduction to Philosophy of Transhumanism - Through Science & Technology We Should Transcend/Improve Our Species), and *More than Human* by Ramez Naam

## **Ecology & the Environment**

*“Nature in the twenty-first century will be a nature that we make; the question is the degree to which this molding will be intentional or unintentional, desirable or undesirable.” Daniel Botkin*

## **Trends**

- Growth of Ecological Monitoring/Management/Engineering - Technology Applied to Ecological Improvement/Transformation
- Technology Evolves to be Less Polluting/More Energy Efficient - Multiple Areas of Ecological Improvement
- Growth of Clean/Renewable Energy Sources
- Growth of Ecological Awareness & Concern - But Dynamic versus Static Visions (Conservationism) of Nature
- Struggle/Debate/Conflict - Economic Growth & Well-Being vs. Environmental Concerns
- Ongoing Mass Extinction
- Global Warming/Climate Change - Changing Weather - Too Late to Stop
- Destruction of Natural Habitants/Ecosystems
- Pollution & Accelerative Waste (Atmospheric, Water, Land)
- Depletion/Imminent Exhaustion of Natural Resources
- Deforestation & Desertification
- Loss of Touch with Nature - Respect for Nature (?)
- Spread of Humanity into all of Nature - Wilderness Disappearing

## **Theories**

*Gaia*, *The Ages of Gaia*, and *The Revenge of Gaia* by James Lovelock (The Earth as a Living Entity, Its Dynamic Evolution, & the Inevitability of Global Climate/Ecological Change), *A Moment on the Earth* by Gregg Easterbrook (Optimistic View of the Future of the Environment and Life), *The New Atlas of Planet Management* by Norman Myers and Jennifer Kent (Comprehensive and Detailed Review of Environmental Challenges & How to Address Them - Scientifically Informed), *The Turning Point* by Fritjof Capra (A Holistic Vision of Humanity & Nature), *Silent Spring* by Rachel Carson (Classic Critique on Environmental Damage Due to Industry/Technology), *The Skeptical Environmentalist*

by Bjørn Lomborg (Questioning the Severity of the Ecological Crisis), *EarthDance* by Elisabet Sahtouris (Excellent Theoretical Vision of Evolution and Ecology - Integrated with Lovelock's Gaia Theory - Critique of Mechanistic Vision of Nature & Humanity), *The Future of Life* by E. O. Wilson, *Plan B 3.0* by Lester Brown (Comprehensive Practical Approach to Addressing Environmental & Global Challenges), *A New Green History of the World* by Clive Ponting (A Critique of Modernization/Industrialization and Its Effects on the Environment), and *An Inconvenient Truth* by Al Gore (The Argument that Climate Change Due to Human Activities is Occurring)

## **Space Exploration & Colonization: Survival & Evolution**

*"Dinosaurs didn't survive because they didn't have an effective space program."*  
Arthur C. Clarke

### **Trends**

*"Space exploration holds the key to the origin of the universe, the fundamental workings of nature, & ultimately the survival of our species."* Ian Pearson

- Ongoing Advances in Space Technology & Space Exploration - Multiple Robotic & Probe Journeys - Multiple Significant Telescopic/Astronomical Discoveries - Revelation of Hundreds of Extra-Solar Planets
- Increasing Private Sector/International Participation - Space Tourism
- Continued Push & Planning toward Traveling to & Colonizing Moon, Mars, Asteroid Belt, Other Moons in the Solar System - Beginnings of Colonization Solar System in 21st Century
- Space Elevator from the Earth
- Promises of Immense Resources & Stimulus to Economy
- Contributes to the Development of Science & Technology
- Necessary for Survival - Importance of Adventure/Exploration - Inevitable Next Step in Evolution of Life - Psychological & Spiritual Evolution - Cosmic (Awareness) Evolution

### **Theories**

*"Our planet is the cradle of intelligence, but one cannot live forever in a cradle."*  
Konstantin Tsiolkovsky

The Artemis Project, *The Millennial Project* by Marshall Savage (Colonizing & Greening the Galaxy in Eight Easy Steps Within a Hundred Thousands Years), *Space Chronicles* by Neil Degrasse Tyson (Evolution & Realistic Challenges Facing Space Program), *Existence* by David Brin (Comprehensive Review of Issues Regarding Alien Contact), *The Dream of Spaceflight* by Wyn Wachhorst (A Positive Psycho-Spiritual Argument for Space Travel), *Our Cosmic Future* by Nikos Prantzos (Comprehensive & Positive Historical Review of Space Efforts & Developing Technologies & Future Possibilities), *The Case for Mars* by Robert Zubrin (Why We Should Colonize Mars), *The Physics of*

*Immortality* by Frank Tipler (Through Evolution & Technology Enveloping and Controlling the Entire Future Universe - Vast Scale in Space & Time - Other Advocates Like Moravec & Kurzweil for Intelligence Spreading through the Universe & Controlling It - Cosmic Intelligence), The Mars Society, *Starstruck* by Albert Harrison, *Cosmos* by Carl Sagan (Classic History & Defense for Exploring Outer Space), *Year Million* by Damien Broderick (Far Out Visions of Space Exploration), and *Red Mars, Green Mars, Blue Mars*, and *2312* by Kim Stanley Robinson (Excellent Discussions & Images of Terraforming)

### Part III

## **Human Society, Globalization, Urbanization, & Population**

### **Trends**

- Increasing Economic Interdependency - Open Trade - Economic Boom (With Ups and Downs)
- Benefits & Negative Consequences of Modernization Spreading Across World
- Increasing Communication/Networking of Individuals, Groups, & Cultures - Cross Fertilization
- Mixing/Blending of Cultures - Emergence of World Culture - Positive & Negative Perspectives
- Emergence of Global Issues/Global Organizations/Global Consciousness
- Empowerment of Individual - Cosmopolitan Citizen
- Triumph of Democracy & Diversity/Tolerance/Human Rights (Still Innumerable Challenges)
- Global Technological Networking of Humanity & World
- Amplification of Transportation, Travel, and Migration
- Critique of McWorld - Critique of Westernization/Centralized Control/Americanization/Homogenization/Monoculture
- Critique of Capitalist/Globalization Connection - Power/Greed
- Clash of Civilizations - East vs. West - Individuality vs. Conformity

### **Theories**

*The End of History and the Last Man*, *The Great Disruption*, and *The Origins of Political Order* by Francis Fukuyama (The Ongoing Modern Spread of Democracy Across the Globe), *The Lexus and the Olive Tree*, *The World is Flat*, and *Hot, Flat, and Crowded* by Thomas Friedman (The Clash of Globalism & Local Cultures - The Technological Empowerment of Individuals to Reach a Global Audience/Market), *Megatrends 2000* and *Global Paradox* (Globalization is Happening, It is Good, & It is Empowering the Individual) by John Naisbitt, *Jihad vs. McWorld* by Benjamin Barber (The World is Controlled by Transnational Corporations That are Usurping Our Freedom), *The Clash of Civilizations and the Remaking of World Order* by Samuel Huntington (No One Dominant Culture at a Global Level - Anticipation of Ongoing Conflict Among Cultures), *Rescuing All Our Futures* by Ziaddin Sardar (The Threat of A Singular Dominant Culture

& Vision for the Future - The Argument for Diversity), *Bowling Alone* by Robert Putnam (The Loss of Community), *All Connected Now* by Walter Truett Anderson (Comprehensive Multi-Faceted Theory of Globalization & Its Future), *Metaman* by Gregory Stock (The Global Integration of Humans and Machines), *Citizen Cyborg* by James Hughes, Universal Declaration of Human Rights, *Global Brain* by Howard Bloom (The Long Term History of Emerging Global Intelligence & Human Society), *Quantum Shift in the Global Brain* by Erwin Laszlo, and The Earth Charter

## **Economics & Resources**

*“Money never made a man happy yet, nor will it. There is nothing in its nature to produce happiness. The more a man has, the more he wants. Instead of filling a vacuum, it makes one.” Benjamin Franklin*

## **Trends**

- Economic Output Increased Sixty Fold in 100 Years
- Increasing Trade & Cross Fertilization - Reciprocal Exchange & Innovation - Emergence of a Global Economic System
- Average Global Income Quadrupled - Material/Health Benefits Accelerative Growth - Relative Poverty Shrinking
- Transformation of Economy from Agriculture to Industrial to Information/Human Services (Evolution of Professions)
- Success of Capitalism Through Competition
- Value Shift: Tradition/Religious/Survival to Rational/Self-Expression
- Debate on Equality/Inequality of Economic System - Growing Disparity of Super-Rich and Poor/Everybody Else
- Economic System Slight Domestic/Nurturing/Caring Professions
- Growth of Economy Depleting Resources/Destroying Earth - Unsustainable
- Ongoing Critiques of Profit/Greed/Growth Models of Quality of Life/Progress - Creation Unnecessary Needs
- Planned Obsolescence - Disposable Society
- Economic Model Doesn't Address Overall Quality of Life

## **Theories**

*Paradigms in Progress, Building a Win-Win World, and Ethical Markets* by Hazel Henderson (The Application of Open Systems Concepts, a World of Cooperative Mutual Benefit, & Importance of Ethics in Economics), *The Rise of the Creative Class* and *The Flight of the Creative Class* by Richard Florida (The Concentration of Wealth, Intelligence, & Innovation in Local Areas in the World - World is Not Flat), *The Virtue of Prosperity* by Dinesh D'Souza (The Value of Wealth & How It Benefits Us Socially & Ethically - How Values Have Changed in Modern Times), *The Long Boom* by Peter Schwartz, et al, *The Rational Optimist* by Matt Ridley (The Immense Improvements in Quality of Life in Modern Times - The Importance of Exchange & Interdependency), *The Improving State of the World* by Indur Goklany (Everyone is Benefiting from Economic

Growth), *The Genius of the Beast* by Howard Bloom (The Power & Value of Capitalism), *The Progress Paradox* by Gregg Easterbrook (Why are We Getting Richer Yet Not Happier), *Freakonomics* by Steven Levitt and Stephen Dubner, *The Real Wealth of Nations* by Riane Eisler (The Neglected Importance of Nurture - Including it in Our Economic Models), and *Nickel and Dimed* by Barbara Ehrenreich (The Unfair Disadvantages of the Lower (Middle) Class - The Ongoing Struggle for Many to Just Get By)

## Education

Idiocracy, Udacity, Khan Academy, Udemy, "Is Google Making Us Stupid?" & iThink

*"We are learning to believe that we do not require wisdom, community, provocation, suggestion, chastening, enlightenment – that we require only information, for all the world, as if life were a packaged kit and we consumers lacking only the assembly instructions."* David Mamet

## Trends

- Increasing World Wide Literacy & Education
- Increasing Technological Access to Education - Individual Empowerment - Growing Global Resources
- "Flynn Effect" - Increasing Measured IQ
- Accelerative Growth of Online Education
- Decline of Traditional/Centralized School & University
- Continued Revisionary Attempts on Educational System
- Floundering of American Educational System
- Decline of Rationality/Intelligence in Popular Culture - Sensationalism, Superficiality, Media Immersion, Techno-Addiction & Dependency, Presentism, Loss of Standards, Fragmented/Flighty/Distracted Consciousness
- Dumbing Down of Schools, Standards, Degrees
- Continued Fragmentation & Customization of Education - Absence of Holism, Integration, Ethics/Character, Wisdom

## Theories

*Wisdom, Consciousness, and the Future* by Tom Lombardo (Central Importance of Wisdom in Education & Psycho-Social Evolution/Development), *From Knowledge to Wisdom* by Nicholas Maxwell (Centrality of Wisdom in Academia), *Wisdom* by Robert Sternberg (Diverse Theoretical Perspectives), *Toward Wisdom* by Copthorne Macdonald (A Comprehensive Application of Wisdom to Life), *The Disciplined Mind* and *Five Minds for the Future* by Howard Gardner (Virtues & Capacities To Be Taught for the Future), *A Hidden Wholeness* and *The Courage to Teach* by Parker Palmer (The Importance of the Authentic, Engaging Teacher), *How People Learn* by John Bransford, et al (The Psychology of Deep Learning), *Deep Learning for a Digital Age* by Van Weigel, *The Age of American Unreason* by Susan Jacoby (A Critique of Anti-

Intellectualism in America), *Critical Thinking* by Richard Paul and Linda Elder (Fundamental Principles & Values for an Educated Mind), *Amusing Ourselves to Death* by Neil Postman (The Trivialization & Fragmentation of American Intellect/Consciousness, and *The Dumbest Generation* by Mark Bauerlein (The Decline of American Intelligence)

## **Marriage, Love, Women & Men, & the Family**

### **Trends**

- Ebb & Flow History of Women's Power & Rights - Modern Feminist Movements - Increasing Freedom, Social Status, Power, & Economic Wealth for Women
- Shift Away from Patriarchal Marriage
- Shift Away Traditional Socially Arranged Marriage to Romance/Love-Based Individually Determined Partnership of Equality - Ethical Evolution of Marriage
- Shift Away from Sexual Stereotypes/Roles
- Sexual Revolution - Increasing Sexual Freedom
- Diversification of Marriages/Families - Gay Rights & Marriages - Diverse Households
- Divorce/Co-Habitation/Instability in Marriage & Family - Living Alone
- Secular versus Religious Tension on Nature & Ethics of Marriage
- Multiple Techno-Impacts on Gender Identity, Love, Relationships, & Sex
- Counter-Reactions Globally to Feminine Rights & Freedom/Love Based Marriage - Continued Subjugation & Brutality Against Women at a Global Level

### **Theories**

*Sex, Time, and Power* by Leonard Shlain (The Evolution & Psychological Significance of Partnership), *Marriage, A History* and *The Way We Never Were* by Stephanie Coontz (The Historical Evolution of Bonding, Romance, and Marriage & Where It Could be Heading), *The Chalice and the Blade, Sacred Pleasure*, and *The Power of Partnership* by Riane Eisler (A General Critique on the Dominance/Hierarchical Social System - It Impact on Both Women & Men - The Need for a Partnership Society), *The Joy of Sex* by Alex Comfort, *Anatomy of Love* and *Why We Love* by Helen Fisher, *The Second Sex* by Simone de Beauvoir, *The Feminine Mystique* by Betty Friedan (Two Classic Defenses for the Rights/Equality of Woman), and *The Case for Marriage* by Linda Waite and Maggie Gallagher (Why Marriage is Good for People)

### **Psychological Evolution**

*"It is easier for us to imagine ourselves living among better appliances than among better human beings."* Mihalyi Csikszentmihalyi

### **Trends**

- Ongoing Biological Evolution - Hasn't Slowed Down - Probably Has Picked Up

- Ongoing Purposeful Evolution - Religious, Philosophical, Social, Psychological, Ethical Efforts - Expansion of Consciousness
- Development of Science of Psychology - Development & Application of Mental Health Psychology - Rapid Evolution of Scientific Understanding of Brain & Consciousness
- Longevity & Health - New Stages in Human Life Span
- Emergence & Application of Pop Psychology - Self-Actualization & Positive Psychology
- Evolving Concept of Mental Well Being/Psychological Excellence
- Technological Augmentation/Evolution - Using Technology to Purposefully Evolve our Minds
- Impact of Social Trends: Globalization, Urbanization, Changing Male/Female Relations, Modernization, Increasing Education
- Emergence of New Modern Psychological Disorders - Stress/Anxiety/Drugs/Speed/Mental Fragmentation/Overload - Mental Illness Evolving

## Theories

*On Becoming a Person* by Carl Rogers, *Toward a Psychology of Being* and *The Farther Reaches of Human Nature* by Abraham Maslow (Theories of Enhanced Human Psychology), *Self Comes to Mind* by Antonio Damasio, *Consciousness* by Christof Koch, and *Phi* by Giulio Tononi (Advances in the Study & Theory of the Brain, Self, & Consciousness), *Handbook of Positive Psychology* by C. R. Snyder and Shane Lopez, *Flourish* by Martin Seligman, *Positivity* by Barbara Fredrickson (The Emergence of a Theory of Mental Well-Being in Contrast with Emphasis on Mental Illness), *The Ten Thousand Year Explosion* by Gregory Cochran and Henry Harpending (Evidence for the Ongoing Biological Evolution of Humans & Why?), *The Phenomenon of Man* by Teilhard de Chardin (Connecting Conscious Evolution with Cosmic/Spiritual Themes), *Man after Man* by Dougal Dixon, *The Evolving Self* by Mihaly Csikszentmihalyi (An Evolutionary View of the (Future) Self), *The Future of the Self* by Walter Truett Anderson (An Emerging Pluralistic/Highly Flexible Postmodern Self), *The Quantum Self* by Danah Zohar, *Mindscan* by Robert Sawyer (Downloading Consciousness, Mind, and Self into a Machine), *Supersizing the Mind* by Andy Clark (The Theory of the Techno-Physical Supported Extended Mind), and *Evolution* by Stephen Baxter (Past & Future History of Mind/Consciousness/Intelligence)

## Culture, Values, & Ethics

*"The world is too much with us; late and soon,  
Getting and spending, we lay waste our powers:  
Little we see in Nature that is ours;  
We have given our hearts away, a sordid boon!"*  
William Wordsworth

*"We are the hollow men. We are the stuffed men."* T.S. Eliot

## Cultural Trends

- Accelerative Evolution of Art, Music, Design, Clothing, Architecture, Cinema, Entertainment - Continuation of Twentieth Century Trends
- Technology Infusion of Culture/Entertainment
- Evolution/Ubiquity of the Media/Advertising - Interactive Media
- Cross-Cultural Fertilization & Globalization of Culture
- Evolution & Commercialization of Popular Culture
- Critiques of Commercialism, Consumerism, Technologism, Monetization, Advertising, Disease of Affluenza, Loss of Fantasy/Reality Distinction, Society of Spectacle, Shallow Cultural Icons, Addiction to Distractions
- Shallow, Sensationalist, & Limiting Values

## Ethical Trends

- Evolution from Mythic, Religious & Authoritarian Ethics to Secular/Philosophical/Psychological Ethics
- Evolution from Patriarchal to Feminist/Dual Gender Ethics
- Relative Shift from Tradition/Conformity to Freedom/Individualism
- Rise of Human Rights
- Rise of Global Perspective & Global Ethics Movements - Rise of Ecological Ethics
- Dialectic of Absolutism & Relativism in Ethics - Fundamentalism versus Postmodernism
- Competition/Clash of Multiple Ethical Belief Systems within the Nation/Across the Globe - Culture Wars
- Pinker: Significant/Ongoing Decline in Violence
- Continued War & Violence - (Organized Crime)
- Continued Inhumanity to Man - Slavery, Subjugation of Women, Inequality/Injustice
- Perennial Question of "Dark Side of Man" - Evil - How to Reduce/Eliminate It

## Theories

*The Lucifer Principle* by Howard Bloom, *The Lucifer Effect* by Philip Zimbardo (The Evil & Violent Dimensions in Humans/In History - Why?), *In a Different Voice* by Carol Gilligan (Feminine View of Ethics), *Moral Minds* by Marc Hauser (The Innate Basis of Ethics), *The Better Angels of Our Nature* by Steven Pinker (The Argument for Ethical Evolution in Modern Times), *The Righteous Mind* by Jonathan Haidt, *Cosmos and Culture* by Steven Dick and Mark Lupisella, *Culture* by John Brockman, *The Science of Good and Evil* by Michael Shermer (The Historical Evolution of Ethics - Function & Value), *Beyond Good and Evil* by Friedrich Nietzsche (Classic Critique of Traditional Authoritarian Ethics), *Millennials Rising* and *The Fourth Turning* by William Strauss and Neil Howe (How Ethics & Values Change Across Generations), *The Postmodern Turn* by Steven Best and Douglas Kellner (A Definitive Explanation of Postmodern Views on Values/Ethics), *Consilience* by E. O. Wilson (Integrating the Sciences & Humanities), and *The Moral Landscape* by Sam Harris (Argument that Ethics Can be Based on Science & Empirical Evidence)



## Religion & Spirituality

### Trends

- Contemporary Religious Resurgence
- Rise of Eclectic, Individualized, Global, New Age Spirituality - Modernization & Liberalization of Religion
- Cosmotheology - Synthesis of Contemporary Science/Evolution/Cosmology with Religious/Spiritual Visions - New Mythology of the Future - Cosmic/Evolutionary/Scientific Visions of God
- The Ongoing Development of Technology, Commercialism, Pop Culture of Religion - Social Functions & Social/Health Benefits of Religion
- Ongoing Conflict & Integration (Dialectic) of Science & Religion - Mythos & Logos - Creationism & Evolution
- Secular & Atheist Critiques of Religion - The New Atheism
- Counter-Reaction - Rise of Fundamentalism - Heartlanders - Decline of Mainstream Moderate Religion
- Critiques of Religion and Conformity/Tradition, Corruption, Shallowness/Unreason, Terror, Intolerance, Patriarchy, Sexual Abusiveness, Violence, & Superstition

### Theories

*A History of God, The Battle for God, and The Case for God* by Karen Armstrong (The Value & Meaning in Belief in God - Mythos and Logos - The History of Fundamentalism), *Aurobindo* by Robert McDermott (Hinduism & Evolution), *God for the 21st Century* by Russell Stannard, *The Transformation of American Religion* by Alan Wolfe (Cultural & Social Dimensions of Religious Practice), *The Power of Myth* by Joseph Campbell (The Value & Meaning of Myth), *The World's Religions* by Huston Smith (Classic Statement of the Value/Meanings of World Religions), *The End of Faith* and *Letter to a Christian Nation* by Sam Harris (Critiques on the Irrationality of Religion), *The Evolution of God* by Robert Wright (The Perception of Deities/Spirits in Everyday Life - How God has Evolved Within Human Experience), *The God Delusion* by Richard Dawkins, *The Dawkins Delusion?* by Alister and Joanna McGrath, *Evolution vs. Creationism* by Eugenie Scott, *Thank God for Evolution* by Michael Dowd (Synthesizing Evolution with God), *Religion and Science* by Ian Barbour (Integrating Philosophy, Science, & God), *EnlightenNext*, and *Evolutionary Enlightenment* by Andrew Cohen (Integrating Evolution with Theories of Enlightenment)

### Integrative Theories

*Matters of Consequence, Toward Wisdom, and The Wisdom Page* by Copthorne Macdonald (Wisdom at the Center of a Philosophy of Life & the Future), *The Future Factor* by Michael Zey, *Powerful Times* by Eamon Kelly (Fundamental Trends Set in a Yin-Yang Framework), *State of the Future* by The Millennium Project/Jerome Glenn (Collective Intelligence Dealing with Global Challenges), *The Next Enlightenment* by

Walter Truett Anderson (History & Meaning of Enlightenment - Value for the Future), *Emergence and Birth 2012* by Barbara Marx Hubbard (The Theory of Conscious Evolution as an Approach to Past/Present/Future), *A Brief History of Everything* and *Integral Naked* by Ken Wilber (Integral Philosophy), *Spiral Dynamics* by Don Beck and Christopher Cowan (Developmental Stage Model in Social Structure, Modes of Thinking, & Values), and *Chaos and the Evolving Ecological Universe*, *After the Clockwork Universe*, and *The Integral Science Institute* by Sally Goerner (Contemporary Open Systems/Evolutionary Theory Applied to Human Society)

### **Summary & Conclusion: Where Do We Go From Here?**

- Multiple Dimensions of Progress & Problems & Dangers - Multiple Views of Same Facts & Possibilities - Hope & Fear for the Future
- Ubiquity of Dynamism & Evolution (Universe, Nature, Society, Technology, & Humanity Changing) - Possibility, Uncertainty, Chaos, & Adventure Ahead of Us
- Ongoing Tension & Integration of Stasis (Past) versus Future (Change) Perspectives
- Progress of Knowledge/Science/Technology/Material Growth is Positive - But Needs to Be More Thoughtfully Guided with Wisdom/Values/Ethics
- Purposeful Evolution (Humanity/Environment/Life) is Positive - But Needs to Be Guided Thoughtfully with Knowledge/Higher Values/Ethics
- Reciprocal Evolution and Synthesis of Technology, Humanity, & Nature Ongoing
- Potential of Singularity - Transcendence of Humanity
- Value of Holism: Cosmic & Ecological Perspective on Humanity - Journey into Space
- Ongoing Integration of Society & Nature - Population, Resources, Sustainability, & Environmental Respect
- Social Dialectics of Individualism & Community – Diversity & Unity – Freedom & Order - Equality & Balance of Power - Balance of East & West - Feminine & Masculine - Justice & Human Rights - Challenges of Global Society
- Problems of Capitalism - The Economic Divide & Commercialism/Consumerism
- Pivotal Issue of Defining, Guiding, & Creating Social/Ecological Evolution - Defining/Implementing Utopian Ideals - Competitive, Pluralistic, & Interactive
- Pivotal Issue of the Global Improvement of Quality of Life - Evolution of Culture
- Ethical/Educational/Psychological Evolution - The Ongoing Pursuit of Enhanced Modes of Consciousness and Self-Identity
- Conflict of Traditional Religion & the New Spiritualities - The Quest to Synthesize Religion & Science
- The New Enlightenment & the Wise Society

### **Appendix - Millennium Project *State of the Future* 15 Global Challenges**

<http://www.millennium-project.org/millennium/index.html>

1. How can sustainable development be achieved for all while addressing global climate change?
2. How can everyone have sufficient clean water without conflict?
3. How can population growth and resources be brought into balance?

4. How can genuine democracy emerge from authoritarian regimes?
5. How can policymaking be made more sensitive to global long-term perspectives?
6. How can the global convergence of information and communications technologies work for everyone?
7. How can ethical market economies be encouraged to help reduce the gap between rich and poor?
8. How can the threat of new and reemerging diseases and immune micro-organisms be reduced?
9. How can the capacity to decide be improved as the nature of work and institutions change?
10. How can shared values and new security strategies reduce ethnic conflicts, terrorism, and the use of weapons of mass destruction?
11. How can the changing status of women help improve the human condition?
12. How can transnational organized crime networks be stopped from becoming more powerful and sophisticated global enterprises?
13. How can growing energy demands be met safely and efficiently?
14. How can scientific and technological breakthroughs be accelerated to improve the human condition?
15. How can ethical considerations become more routinely incorporated into global decisions?