Approaching the Next Evolutionary Eventhorizon: 2012 "Convergence Syndrome" Endtimes VS. Accelerated Existence Morphology shaping our potential Future History

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Primary Catalysts of the Evolutionary Eventstream - Emergent

- Knowledge complexity, scale, and velocity is exceeding human capacity for mission critical decision rendering compressed into ever shortening time scales.
- Development and deployment of complex metasystems of artificial entities, synthetic lifeforms, and emergent intelligences becomes the acceptable "culture norm" of the near future.
- Perceived boundaries of the "synthetic" and organic, the "virtual" and the real, become enmeshed into an existence continuum.
- The internet is the cultural and functional equivalent of Gutenberg's press, combined with the Library of Alexandria, manifest in a realtime global environment





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Evolutionary Process Dynamics

"I believe that fractals respond to a profound uneasiness in man" - Benoit Mandelbrot

- Evolution tends to be a trauma induced process
- Fractal system model operates at all scales, from the individual, to the collective, entire systems
- Provided the periodicity and amplitude of trauma cycles do not exceed the system capacity to respond, *the system tends to evolve to a more robust form*



"We never stop investigating. We are never satisfied that we know enough to get by. Every question we answer leads on to another question. This has become the greatest survival trick of our species."

Desmond Morris

The collective planetary gaia organism - at the next evolutionary challenge threshold

High Frequency Active Auroral Research Program



Integrated biodevices / hybrid organisms / artificial entities

Processes dynamics of evolutionary system failure vs. "Armageddon" trauma singularity

Evolutionary system failure is the exact inverse of an Armageddon meteor impact event

Armageddon

System Failure

Order

Chaos

Problem space to solution space distribution geometry

highly linear

highly perturbed

- Problem space to solution space interface boundary is highly perturbed
- Many to many problem space driver perceived threat vectors are contextually interlinked, nonlinear interdependancies

Complexity Acceleration

 Process Elements

 of the Convergence

 Time

 Syndrome

 Connectivity

 Increase

Convergence Syndrome Triad





At the Intersection of Engineered Evolution, and the "Singularity": Approaching an Evolutionary Eventhorizon



What is the "Singularity"?

In the next few years or decades, humanity will become capable of surpassing the upper limit on intelligence that has held since the rise of the human species. We will become capable of technologically creating smarter-than-human intelligence, perhaps through enhancement of the human brain, direct links between computers and the brain, or Artificial Intelligence. This event is called the "Singularity"



The

Singularity Summit

At Stanford

http://sss.stanford.edu

http://www.singularity.org/



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The J Curve – Complexity / Acceleration Process Dynamics



First-Order Components

are Growth-Limited Hierarchical Substrates (S and D Curves)

Second-Order Hyperbolic Growth

with Emergence Singularities and a Limit Singularity



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Excerpted from: "Domain of Unbounded Potential – The Science of the Absolute"

> William Gough Dean Brown

Vastly expanded human intelligence (predominantly nonbiological) spreads through the universe

Technology masters the methods of biology (including human intelligence)

Technology evolves

Brains evolve

DNA evolves

Epoch 3 Brains

Information in neural patterns

Epoch 2 Biology Information in DNA

Epoch 1 Physics & Chemistry Information in atomic structures

Epoch 6 The Universe Wakes Up

Patterns of matter and energy in the universe become saturated with intelligent processes and knowledge

Epoch 5 Merger of Technology and Human Intelligence

The methods of biology (including human intelligence) are integrated into the (exponentially expanding) human technology base

Epoch 4 Technology Information in hardware and software designs

The 6 Epochs of Evolution

Evolution works through indirection: it creates a capability and then uses that capability to evolve the next stage.

Michio Kaku Civilization Hierarchy



Type 0 fixed localized resources **Type 1** renewable planetary resources **Type 2** invulnerable to planetary phenomena **Type 3** interstellar travel **Type 4** wormholes – transdimensional access to multiple universes

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Technology Driven Socio-Anthropological Evolutionary Threshold Domains



Evolutionary Eventstream Seminal Markers



Technology Driven Socio-Anthropological Evolutionary Threshold Domains



access >

Evolutionary Eventstream Seminal Markers



The Next Evolutionary Eventhorizon: Hybrid Forms of Consciousness -

Access to the Quantum Foam





The next Evolutionary Increment . . . Hyperdimensional Access

• Transition from 4D spatio-temporal cognition to ndimensional quantum cognition



The Holographic Perspective

- Focused intentionality as a mechanism of influence
- All living things are systematically interconnected
- Definition of "living things" extends to systems, processes, entities which behave biologically

"And the day came when the risk it took to remain tight in the bud was more painful than the risk it took to blossom." ~Anais Nin~



Contextual Cognition in the Emergent Operational Ecology > Hyperdimensional Existence Navigation

Radical Connectionism 2000 conference – Pepperdine U



The Conversational Interface (CI): Circa 2015 Developmental Attractor



Date	Avg. Query	Platform
1998	1.3 words	Altavista
2005	2.6 words	Google
2012	5.2 words	GoogleHelp
2019	10.4 words	GoogleBrain
2012 2019	5.2 words 10.4 words	GoogleHelp GoogleBrai

Average spoken human-to-human sentence length is 11 words.

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Existence Integration

- Biometric Interface
- Cognition Platforms
- Realtime Connectivity

The internet is the cultural and functional equivalent of Gutenberg's press, combined with the Library of Alexandria, manifest in a *realtime global environment*



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Quantum Biodynamics = Intersection of biophysics and quantum physics in a ubiquitous operational ecology



The "Commoditization" of Existence -Existence Valuation System Architecture



The Emergent Infotech / Biotech / Nanotech / Cognotech Operational Ecology

- **NBIC Conference**
- **Converging Technologies**
- for Improving Human Performance:
- Nanotechnology, Biotechnology, Information Technology and Cognitive Science
- NSF/DOC-sponsored report http://www.wtec.org/ConvergingTechnologies



NBIC Convergence Future arenas of Advanced Materials, Integrated Systems, Adaptive Process Morphology

- Micro-nano satellite "colonies", autonomous vehicles, intelligent swarms
- "Smart" autonomous robots, distributed sensors, intelligences, artificial entities
- Integration of humans and autonomous intelligences
- Self healing / adaptive adaptive materials, systems, networks
- Anticipatory response to hyper-virulent, xenomorphic nano-organisms



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Hybrid Lifeforms / Synthetic Organisms Integration of Living Systems

- Beta Cells
- Proteomic Targeting
- Quasi-viral components





Lifeforms on Demand - the Next Emergent Process Deliverable

Theoretical model renderings 1992 – 1994 C. Ostman

Current Synthetic Biology Systems Component Models 2005 – 2006 Osaka, Japan

Biopathogen Detection – Live Cells as Sensors



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The New Frontier - Organic Merges with Synthetic Neuro-Electronic Interface



In-Silico Biology – Schematic Engine of Biological Systems



Synthetic Biology Building Blocks > Biological Systems Architectures





Infotech / Biotech / Nanotech Development Stream Example


Synthetic Biology > Systems Architecture Development Hierarchy



Nanotechnology in Defense

Strategic Imperatives in the "Virtual" Battlefield

- Self healing network ecologies Biological Metaphors in Computing
- Recon bots, defense bots, anticipatory autonomous "hunter/killers"
- Artificial life / immune systems / intelligences
- Next Generation Reconfigurable Computing Architectures
- Defensive Banking / Financial Transaction Systems, e-Currency
- Quantum encryption / quantum information networks
- Zero time of flight weaponry



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DARPA BioComp Plasmid Distribution 1.00 of Standard Biobrick Components

- Tom Knight (tk@ai.mit.edu)
- MIT Articial Intelligence Laboratory
- May 22, 2002

This distribution consists of 300 ng aliquots of plasmid DNA for each of twelve components and compound constructs utilizing our idempotent assembly strategy. The dried DNA should be stable at room temperature for many weeks, but long term storage at -20 or -80 in the resealable foil pouch with desiccant is recommended. This document and much additional information, protocols, and detailed sequences is or will be available from the site http://ks.ai.mit.edu

Process Dynamics of the Next Evolutionary Eventhorizon





Co-Evolution with Emergent Intelligences Genetic / Biophysical Enhancement Accelerated Environmental Adaptation Extended Longevity & Functionality





Cellular / Neural Repair

Cellular / Neural Interface

Nanobiology meets Nanophotonics

- Rhodopsins, other bio-organic materials
- Nano patterned environments to enable "optical fabrics"
- Engineered bandgap, electro-photonic transition properties



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Nanostructured BioMaterials with Special Properties

- Crystallized proteins
- Structural proteomic systems



Global Consciousness Project http://noosphere.princeton.edu

GIODAL CONSCIOUSNESS Project Registering Coherence and Resonance in the World

• The Global Consciousness Project We do not feel that our minds are isolated within our bodies. In truth, we experience the world with beautiful immediacy, we know our loved ones from afar, and we leap in thought to the stars. Research on anomalies of consciousness shows that we may have direct communication links with each other, and that intentions can have effects in the world despite physical barriers and separations. Evidence compels us to consider that consciousness may operate as a nonlocal field. The Global Consciousness Project (GCP) takes this possibility a step further, proposing that the fields generated by individual consciousness would interact and combine, and ultimately have global dimensions

Roger Nelson

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Evidence of Potential Entanglement Field Artifacts of Quantum Domain State Phase Transitions Affecting RNG Datastream Statistical Variants – Mass Mental Syncronicity Event Correlation



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Quantum / Biophysical – Microtubulin / Neural Interface



Quantum / biophysical interaction - theoretical models

Quantum Brain Dynamics

quantum field-supporting biosubstrate as a dense nanolevel web of protein molecules (microtubules) which penetrates neuronal and neuroglial membrane boundaries

quasi-crystalline ordered water molecules within microtubules and associated with hydrophylic regions on the web of protein filaments, as a biosubstrate for a quantum field which supports super-radiance and self-induced transparency within the microtubules





4D Spatio-Temporal Domain of Biophysical Confinement in Localized Phenomenological Causality Linkage vs 8D / ND Quantum Domain non-Locality Space-Time Metric



We are Biophysical Manifestations of Entities Dwelling within the Ubiquitous "Quantum Jello" Manifold –

- All Living Things are Interconnected into an Operational Ecology
- This Planet as a "Living System" is Interconnected into a Cosmological Ecology





Focussed intentionality amplified and tuned as an instrument of influence for "spawning" the history of our future – system architecture overview

Collective Consciousness Enhancement

Evolution of the Hybrid Quantum Meta-Organism



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Potential Convergence Syndrome Outcome: evolution of the "empathic web"





- The next potential evolutionary increment may be the acceleration toward hybrid forms of consciousness.
- Focussed intentionality amplified and tuned as an instrument of influence for "spawning" the history of our future.





Evolution tends to be a trauma induced phenomena – Provided that the periodicity and amplitude of the trauma cycles do not exceed the system capacity to respond, the system does tend to become more robust Socio-Technical Evolution Acceleration Spiritual Maturity Index Millennia Centuries Decades ime

Info Bio Nano Cogno Tech Convergence – on the Forbidden Planet



Info Bio Nano Cogno Tech Convergence – on the Forbidden Planet



Ultimate failure point – "monsters from the Id"



Potential Convergence Outcome -Existence is Redefined

- Merging of the Virtual and the Real, Organic and the Synthetic
- Immersion into the Ubiquitous Quantum Fabric
- Life Itself is being Redefined



Convergence Syndrome" Endtimes

Accelerated Existence Morphology shaping our potential Future History

Answer = within the next decade

Convergence Syndrome" Endtimes

Accelerated Existence Morphology shaping our potential Future History

Answer = within the next decade Think Different – *Think Holographic*

Evidence of Physical Manifestations of Communication within the Empathic Web



Global Cleantech 2006 Conference Palo Alto, CA



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Understanding Process Automation

- ~ 80% of today's First World paycheck is paid for by automation
- Robert Solow, 1987 Nobel in Economics (Solow Productivity Paradox, Theory of Economic Growth)
 "7/8 comes from technical progress."
- Human contribution (20%?) to a First
 World job is Social Value of Employment
 + Creativity + Education
- Developing countries are next in line (sooner or later).
- Continual education and grants ("taxing the machines") are the final job descriptions for all human beings.



Termite Mound

The Nano-Industrial Infrastructure Development Stream



The Nano-Industrial Infrastructure Development Stream



Synthetic Biology > Systems Architecture Development Hierarchy



Primary Convergence Vectors Industries Segments in Neural Industries 2002-2020





Quantum domain interaction – "delayed thought" vs perceived photon activity experiment



FIGURE 12. A delayed-choice experiment that has been carried out in the laboratory by groups at the University of Maryland and the University of Münich.

Focussed intentionality amplified and tuned as an instrument of influence for "spawning" the history of our future – system architecture overview



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A Saturation Lesson: Biology vs. Technology

How S Curves Get Old

- Resource limits in a niche
 - Material
 - Energetic
 - **S**patial
 - Temporal

Competitive limits in a niche

Intelligence/Info-Processing



No Known or Historic Limits to Computation Acceleration

 Our special universal structure permits each new computational substrate to be far more MEST resource-efficient than the last
The most complex local systems have no intellectual competition Result: No Apparent Limits to the Acceleration of Local Intelligence, The Age of Convergence At the threshold of an evolutionary eventhorizon, probing the archeology of our future history

- accelerating change
- increasing complexity
- compression of "apparent time"



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A Book Proposal -Charles Ostman 1998