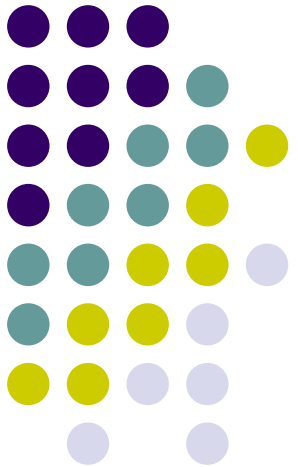
Premise: Humans are biological quantum computers

Presented at the Nov 2008

Annual Dallas Mensa Gathering



By Douglas Matzke, Ph.D.

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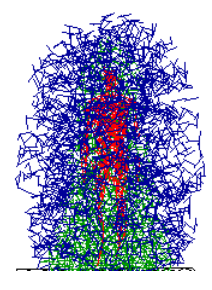
http://www.QuantumDoug.com

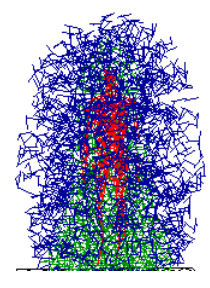
Abstract



This talk explores the presupposition that “Humans are biological quantum computers”. This author asserts this presupposition quite strongly, by stating “humans would be extinct if we were not quantum computers”. This talk includes such topics as limits of computing, myth of AI, quantum computing, models of consciousness, dreaming, NLP, law of attraction, space-time models, meaning and spirited science.

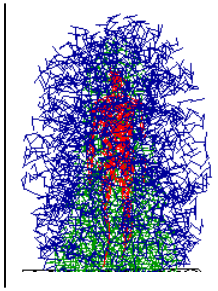
These topics will be organized around a practical approach of “how we live our daily lives” based on on our own beliefs regarding “computational models of ourselves”. This integrated model will support alternative ways to perceive and experience our daily lives.

Biography



Doug Matzke has a Ph.D in quantum computing and previously spoke about quantum computing at the 2005 North Texas Mensa gathering. Doug creates and interesting synthesis of computation models of consciousness and spiritual ideas by using quantum science based arguments as a bridge to spirited science conclusions. He is an enthusiastic and thought provoking speaker.

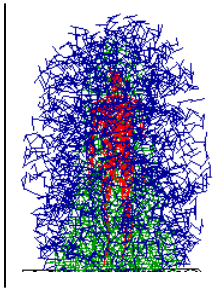
Outline



Premise: Biological Quantum Computers

- Why is this topic relevant?
  - Failure/Myth of AI – “Intelligent Machines in 10 years”
  - Models/beliefs restrict world view
- Information and Physics
  - Information is Physical
  - Black Holes (It from Bit)
  - Quantum Speedup
- Computation Leverage
  - Smarter computation requires more dimensions
  - Idealized time and space
- Quantum Mind
  - Quantum Mind and biology
  - Quantum Mind in Culture (sculpture)
  - Beliefs, context and bad science
- Quantum and East
  - Quantum vs Chi/Ki/Prana
  - Human mind as common denominator
  - Quantum in Law of Attraction and Daily Life
- Summary and Conclusions

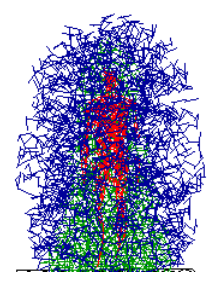
Failure of Artificial Intelligence



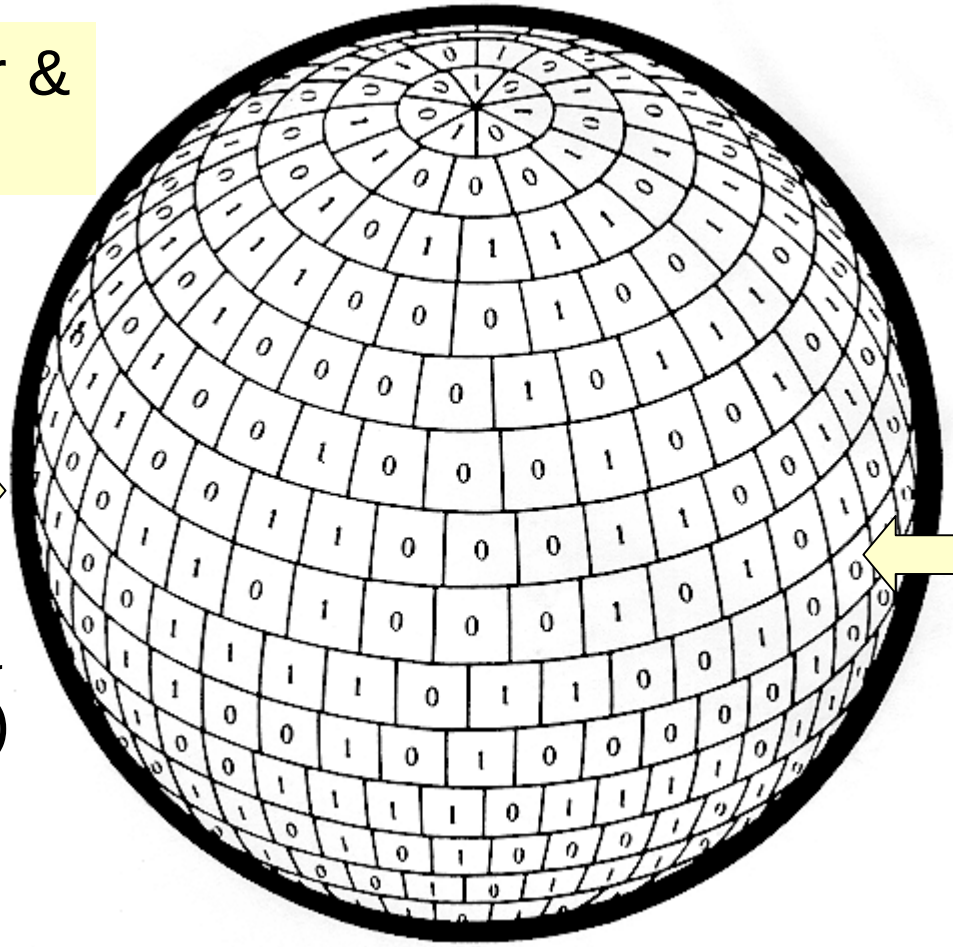
- "Intelligent Machines within ten years"?
  - Fueled by:
    - Science fiction and research program funding
    - Belief in Brain is classical computer
    - Semiconductors following Moore's law
    - Research on Neural Networks and Automatic learning
  - Myth debunked by:
    - Repeated claim over 40 years
    - Semiconductor scaling limits within next 10 years
    - Connectivity/heat limits indicating density limits
    - Architecture disconnect between brain and computers
    - Lack of representation of "meaning"

Quantum in Physics?

Information is Physical!



Rolf Landauer & phase spaces



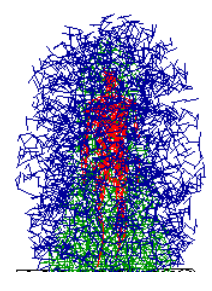
Quantum Information is consistent with Black Hole Mechanics

Black Hole event horizon (inside is a singularity)

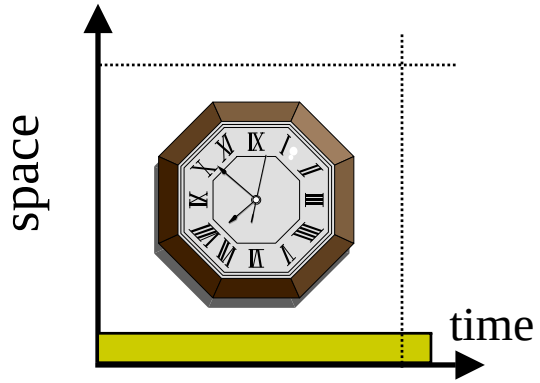
Bits as entropy (Planck's areas on surface)

Wheeler's "It from Bit"

Quantum Speedup

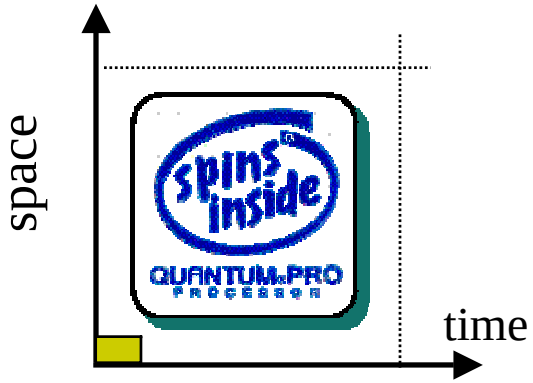


- Peter Shor's Algorithm in 1994
- Quantum Fourier Transform for factoring primes
- Quantum polynomial time algorithm



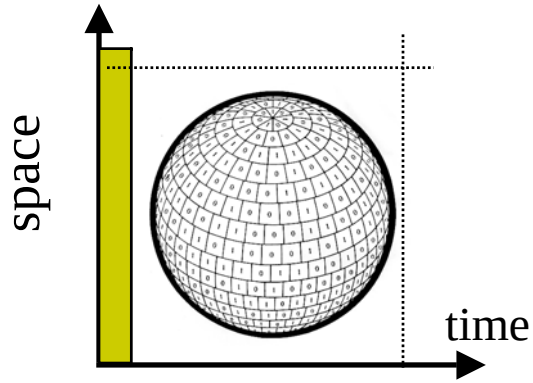
Spatially bound exceeds universe life

classical



Quantum polynomial time *can solve it*.

quantum

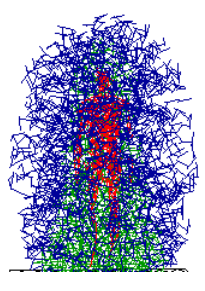


Temporal bound exceeds black hole

classical

Solutions to some problems don't fit in classical universe!!

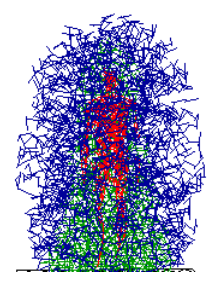
Computational Leverage



Quantum computation gives significant leverage

- Shor and Grover algorithms
- Quantum computing is Turing & Boolean complete
- “Smarter” in High dimensional Spaces – locality
- Classical brain can map to/from quantum spaces
- Brain can represent superposition
- Brain could be folded 3D antenna
- Evolutionary advantage if bio-quantum link

Why is quantum information special?

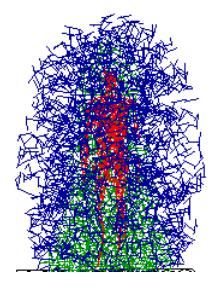


Quantum Computing requires a paradigm shift!!

- Quantum states are high dim (Hilbert space)
  - Can be smarter in higher dims with **no** time
  - Superposition creates new dims (tensor products)
- Quantum states are non-local in 3d & atemporal
  - Causality and determinacy are not the primary ideas
  - Large scale unitary consistency constraint system

Quantum information precedes space/time and matter/energy- Wheeler's "It from Bit"

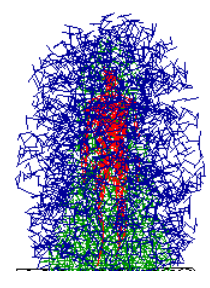
Idealized Model of Computational Costs



- *Space:* Information is in wrong place – Move it
  - Locality metrics are critical - context
  - Related to number of spatial dimensions - anisotropic
  - i.e. Busses, networks, caches, paging, regs, objects, ...
- *Time:* Information is in wrong form – Convert it
  - Change rate and parallelism are critical (locality)
  - Related to temporal reference frame (i.e. time dilation)
  - i.e. consistency, FFT, holograms, probabilities, wholism
- All other physical costs
  - Creation/Erasure, Noise/ECC, Uncertainty, Precision, ...
  - Decidability, Distinguishability, Detection, …

See my paper on this subject from 1986

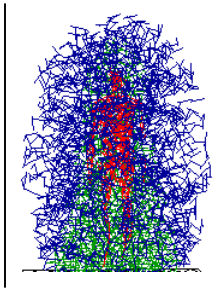
Idealized Smarter Computers?



- If Information is always in right “local” place(s)
  - Possible higher number of dimensions
  - Possible selective length contraction
- If Information is always in “correct” form(s)
  - Multiple consistent wholistic representations
  - Change occurs outside normal time
- If other costs mitigated
  - Arbitrarily high precision and distinguishability, etc
  - Arbitrarily low noise and uncertainty, etc

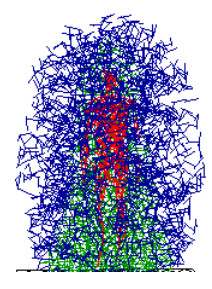
Solutions may exist within quantum spaces

Quantum Mind?



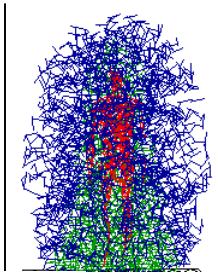
- Did biology tap into Quantum Computing?
  - Survival value using fast search
  - Single celled creatures as well as neurons
  - We might be extinct if not for quantum mind
- Research with random phase ensembles
  - Information is Physical and black holes.
  - Probabilistic computing in high dimension spaces
  - Ensemble states survive random measurements
  - See my paper “Math over Mind and Matter”

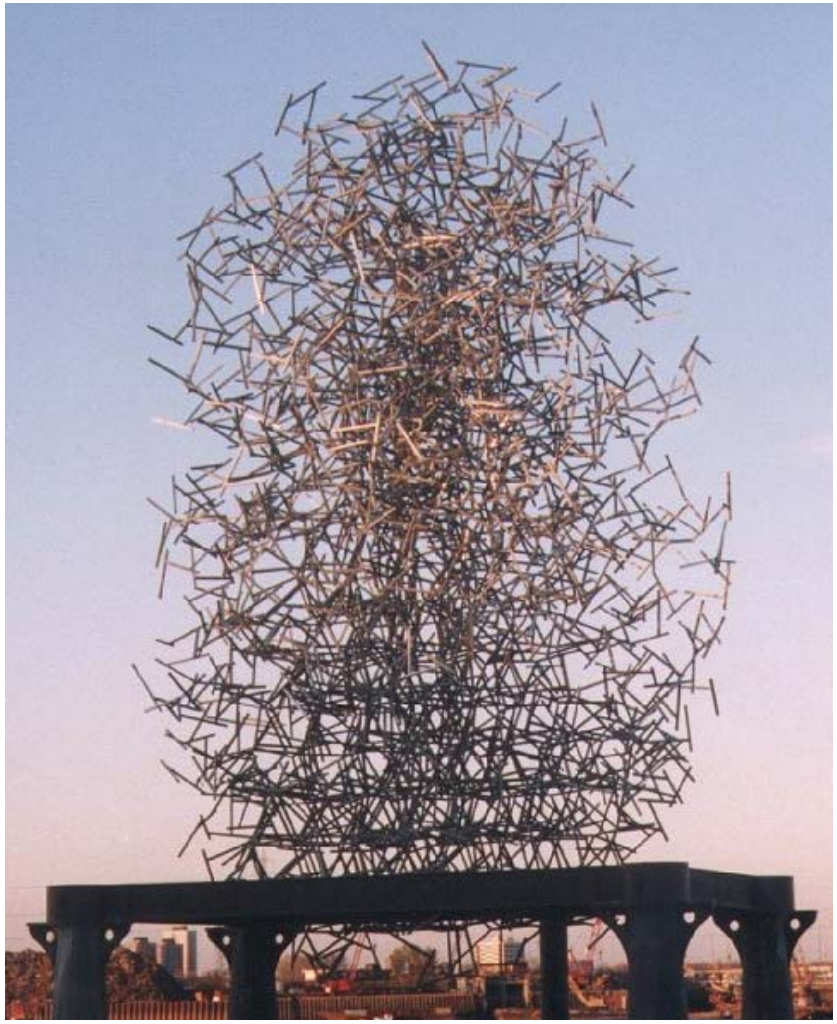
Quantum Mind in Culture



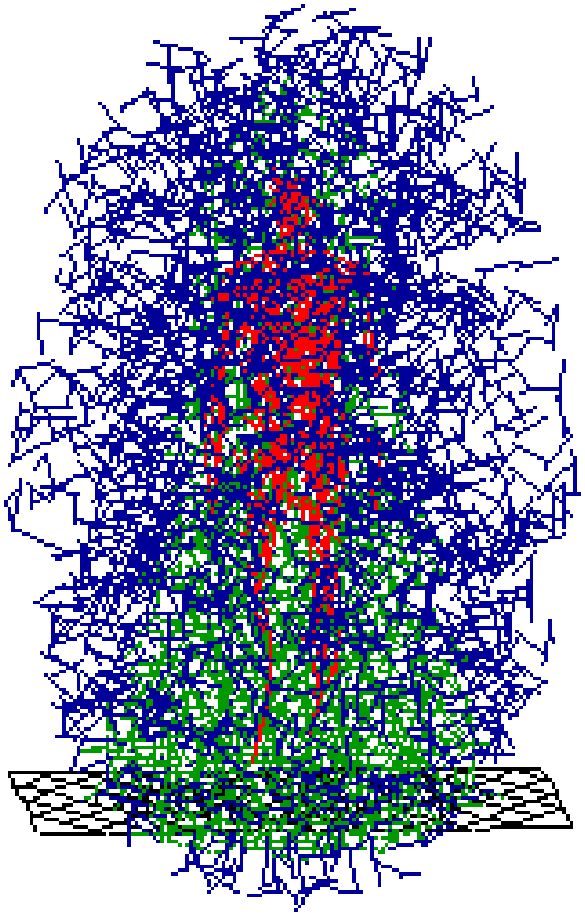
- Movies shape beliefs
  - Star Wars – the Force
  - The Matrix – Metaphor for quantum mind
  - What the Bleep do we know? – Explicit quantum mind
  - The Secret – What to do about it: presented on Oprah
  - The Secret Behind the Secret – The deep story
- Books/Conferences support research
  - Consciousness and Quantum mind conferences
  - Silva and Neuro-Linguistic Programming (NLP)
  - Unconscious Universe – Dean Radin
  - The Intention Experiment – Lynne McTaggart
  - Law of Attraction – Ester Hicks

Quantum Cloud Sculpture





30 meters high

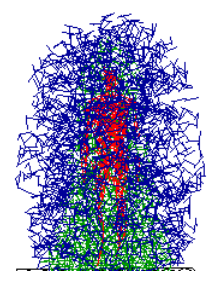


lattice core body tendrils

Quantum Cloud Sculpture by **Antony Gormley** at Millennium Park in London

DJM Nov 28, 2008

Scifi Disguised as Science



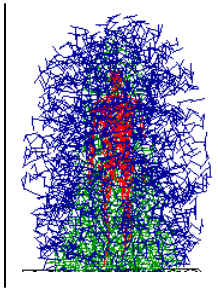
Examples of bad scifi:

- The Age of Spiritual Machines minimizes quantum
- Nano-computers (nanites) are sub-molecular
- Books that “debunk” Psi as impossible

Reasons for classical science propaganda:

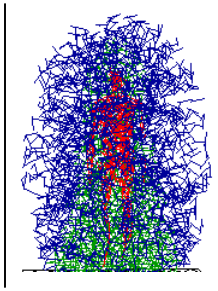
- Occam’s razor
- Separation of Science and Religion in dark ages
- Fear of unknown
- Classical science bigots (beliefs affects results)

Quantum Mind Beliefs?



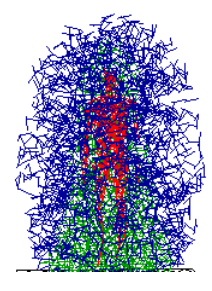
- Illusions:
  - Measurable physical world is real – no longer
  - Brain is classical computer most likely an illusion
  - Separateness is an illusion
  - Space time is an illusion
- Reality:
  - Quantum vibrations are basis of all physicality
  - Brain is transceiver to quantum mind
  - Connectedness is primary in quantum space
  - Thoughts/dreams are in quantum state space

What is Qmind context?



- East meets West
  - Meditation related to quantum dimensions?
  - Chi/Ki/Prana related to quantum dimensions?
  - Metaphysics related to quantum dimensions?
- Spirit meets Science
  - “Thoughts are Things”
  - Thought and intention as physical information
  - Intent and healing modalities
  - Law of Attraction

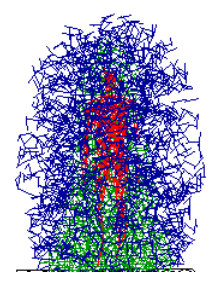
Quantum from East?



- Quantum as west rediscovery of Chi/Ki/Prana?
  - Chi is real (can generate) but not measurable
  - Quantum is real (qubits, ebits) but not observable

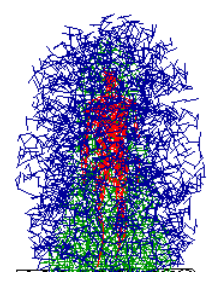
- Human mind is common denominator
  - Thoughts attract like thoughts – semantic space
  - Importance of Meditation and dreams
  - Leverage due to emotions
  - Healing modalities instigated by thoughts

Law of Attraction & Quantum?



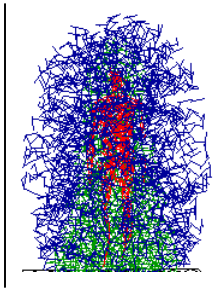
- Law of Attraction – Ester Hicks and Abraham
  - Thought/emotion is vibrational
  - We attract what we think
  - Thinking about what we *don't* want attracts it!
  - Assumes non-local interactions
- Quantum/information ideas related to LOA.
  - Quantum probabilities are vibrational dimensions
  - Information and semantic space (Correlithm Objs)
  - States are non-mutually exclusive
  - Quantum states are proto-physical and non-local.

Representation of Meaning



- What is representation of Meaning?
  - The world has no explicit meaning
  - Humans project meaning
  - How is meaning represented?
    - From Classical view, computers could replicate
    - From Quantum view, computers might not replicate
    - Myth of AI comes into play (no auto learning etc)
  - Telepathy suggests quantum-like meaning

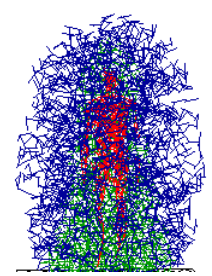
Quantum in Daily Life?



- Everything connected
  - Thoughts & emotions extend beyond body
  - People are interconnected with each other
  - Intuition/dreams tap into un/subconscious
  - Expect Telepathy/Remote viewing to work

- Thoughts affect world
  - Clean up thoughts and language
  - Law of attraction works even if you don't believe it
- Emotions leverage thought/intention
  - Violent thoughts hurt you as well as others
  - Get balanced emotionally (NLP, breathwork, …)

Summary and Conclusions



- Quantum information impacts world view
  - Information is physical and black holes
  - High dimensional spaces and simultaneity
  - Quantum connectedness and no time
  - Quantum computing may be ubiquitous
  - Biology tapped into quantum computing
  - Brain as quantum transceiver
  - Thought as quantum information
- Quantum world view impacts our beliefs
  - Media tapping into and changing beliefs
  - Quantum worldview useful in daily life
  - Be smarter with more quantum dimensions
  - Think connected not isolated
  - Attract what you think – It's the law
  - Spirit and science are compatible

Discussion and Questions