

The Hyperdimensional



of Real Intelligence

Presented for ANPA 2020

Wed Sept 2, 2020

Quantum Doug Matzke

doug@quantumdoug.com

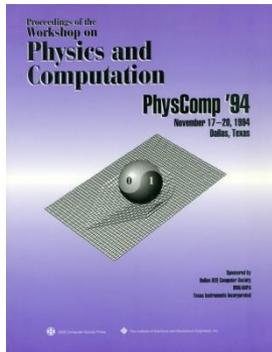
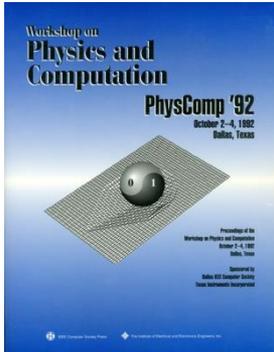
www.quantumdoug.com

www.DeepRealityBook.com

About Doug Matzke



- My moniker is Quantum Doug
- Programming for over 50 years
- Chairman of PhysComp '92 and PhysComp '94
 - ANPA Session in PC'94
- Written over 40 papers/talks and 10 patents
 - Will Physical Scalability Sabotage Perf. Gains?
- PhD in Quantum Computing in 2002 at UT Dallas
 - Quantum Computing using Geometric Algebra
 - Built GALG symbolic math tool in python
 - GALG research for last 20 years (w/Mike Manthey)
- Awarded \$1 million SBIR grants on topics:
 - Neural and quantum computing
- Certified master practitioner in Neuro-Linguistics-Programming (NLP)
- Deep Reality book coauthored with William A. Tiller
 - Source Science and bit-physics



Abstract



Humans have specific behaviors that represent the true nature of our Real Intelligence (RI) that is beyond classical physics. When these requirements are analyzed for a common representation and underlying design, then Real Intelligence is vastly different than the approach taken by Artificial Intelligence (AI) and Machine Learning (ML).

The key difference is AI is built upon classical computing and neural assumptions while RI is built on quantum bits based on non-metric protospaces where meaning emerges. This leads to a complete re-examination of humans as quantum minds and this talk is an introduction and summary of my book “**Deep Reality**” on this subject.

Source Science Foundations (It from Bit)



Richard Feynman said: “*The world is not classical dammit, it’s quantum mechanical*”

1. Information is Physical (not just mathematical)
 - John Wheeler: “It from Bit” since a bit is smallest change to a black hole
 - Rolf Landauer: Erasing information loses energy (1961 and measured in 2012)
 - Bits are physical and have an effective energy and an equivalent mass
2. Reality is Hyperdimensional (not 3 space + 1 time dimensions)
 - Bits, qubits and ebits are very real with essential novel behaviors
 - Bit is one dimensional and is used to make qubits and ebits
 - Qubit is quantum primitive for superposition with 2 private bit dimensions
 - Ebit is quantum primitive for entanglement with 4 private bit dimensions
 - Shor’s algorithm uses 2^{1000} states to compute faster than any classical computer
3. Thoughts are quantum things-not in the brain (Descartes assumption is false)
 - Thoughts are “information things” and intentions affect the physical world.
 - Thoughts can “directly” affect REG PK devices in the physical world (even brain)
 - Solution required to show how non-physical mind can influence order/disorder

“*Quantum mechanics is the dreams that stuff is made of*”

Physics of Thought

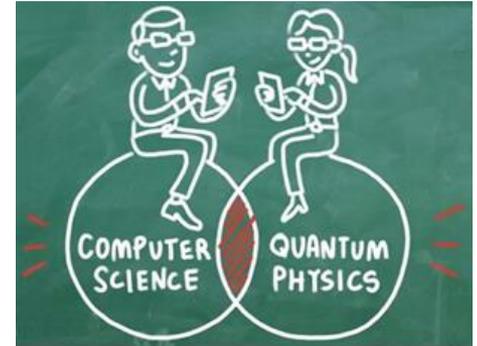


➤ Paradigm requirements

- Must have thought independent of brain (reasons will be introduced)
- Must be compatible with quantum theories (more than just classical brain)
- Must make testable predictions

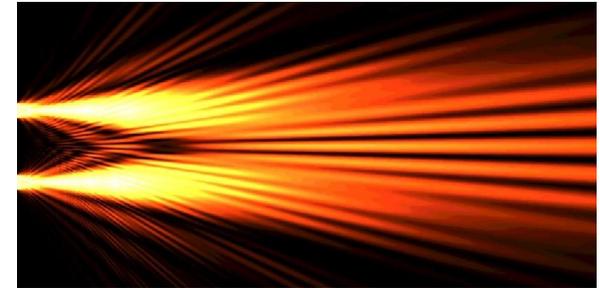
➤ Informational requirements (abstract to concrete)

- Must have memory and processing
- Must be massively parallel and scalable
- Must be compatible with information and entropy theories



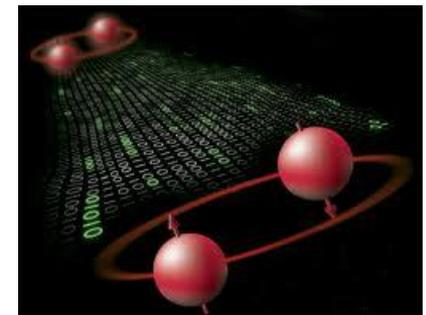
➤ Intelligence requirements

- Must support all levels of intelligence (DNA to cells to animal to human to infinite intelligences)
- Must support leaning and knowing
- Must have abstraction and language
- Must have meaning in all domains math, logic, emotions, ...



➤ Quantum Physics requirements

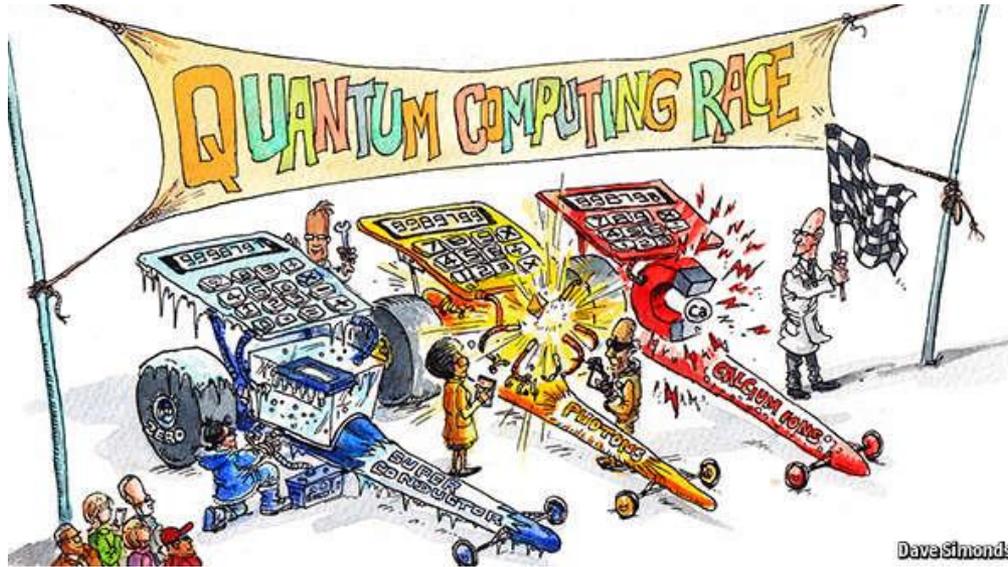
- Must have hyperdimensional representation (bits, qubits, ebits)
- Must support out of spacetime interactions (non-metric spacetime)
- Must support space-like entanglement states and quantum speedup



➤ MetaPhysics requirements

- Must support direct awareness of any* (**initiate remote viewing experiment**)
- Must support direct affect of any*
- Must support lucid and transcendence states

Quantum Speedup and Supremacy



Quantum Supremacy is reached when a universal quantum computer >50 qubits can quickly solve problems no classical computer can ever solve!!

Killer app is Shor's algorithm gives polynomial time speedup!

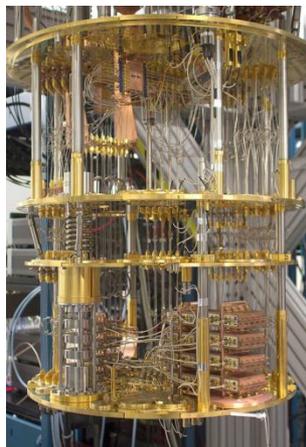
D-Wave

IBM

Google

Microsoft

Intel



Quantum and Neural Computing



Both quantum and neural computing use hyperdimensional math models

Company	Qubits	Quantum Computing	AI Computing Technology
IBM	50 qubits	Longest Time: Online IBM Q	Deep Blue & IBM Watson
Google	72 qubits	D-Wave and Bristlecone chip	TensorFlow & AlphaGo Chip
Intel	49 qubits	Tangle-Lake chip	neuromorphic chip "Loihi"
Microsoft	unknown	Topological qubits (anyons)	FPGA computing and Augmented Reality
D-Wave	2000 qubits	Adiabatic Computing	Optimization algorithms
many		Computers & Communications	deep learning neural nets

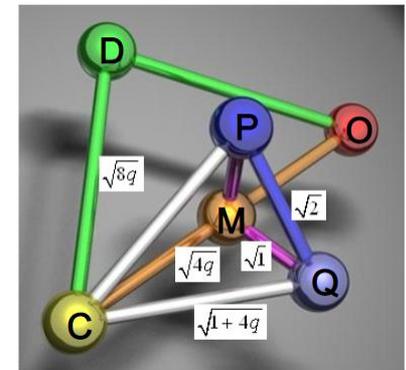
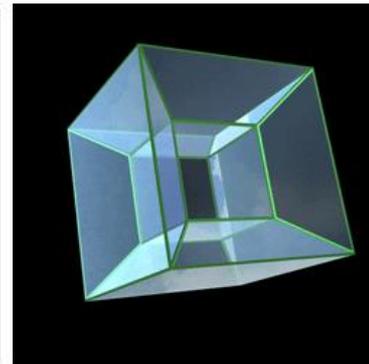
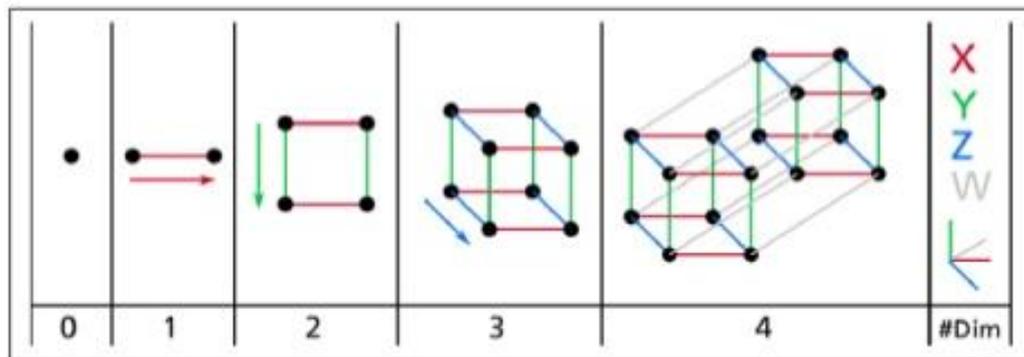


Curse of Dimensionality (it's a thing)



As the number of D features/dimensions grows:

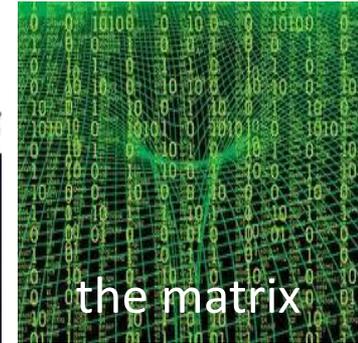
- The possible weighted subsets grows exponentially as 2^D
- Clustering requires knowing the dims to include/exclude
- No efficient hyperdimensional radar/sonar algorithm
- Non-intuitive geometry and probabilistic geometry
- Points spread-out to the hyper-volume surface/corners
- Similarity measures uses math of distance measures
- Searching for “answers” requires massive parallelism



Quantum States Simulate Universe



Classical world must emerge from quantum states and simulation is separate from simulator (except for mind)



the matrix



no spoon

DILBERT

BY SCOTT ADAMS

Quantum infrastructure is required to efficiently simulate a quantum system

No 'classical' tower of turtles

Quantum simulator info-structure



- All simulators require computational resources (implicate)
 1. State: which is a protospace bit resource (orthonormal)
 2. Change: which is a prototime resource (instantaneous)
 3. Rules: the laws in which state-change interact (verbnoun)
 4. Abstraction: how more wholeness/complexity emerges
 5. Scalability: enough resources for scope & speed (multiverse)

- Quantum proto-dimensions are info-structure

- 1-2. 4D Spacetime emerges from N-D protospacetime
3. Topology and built-in verbnoun operators is root of all laws
4. Aggregation of space-like concurrent states (multivectors)
4. Energy becomes manifest (i.e. simulating nuclear events)
4. Matter is frozen energy (unitary vs nilpotent)
5. Infinity of concurrent protodimensions and change



Basis for Shor's algorithm, quantum supremacy and RI savants

Real Intelligence is Quantum Based



Humans are intelligent and informational, but how?

- AI assumes that our mind is the classical brain (Myth of AI)
 - Engineers want to replicate intelligence in HW/SW (Turing Test)
 - Successes of AI/ML shows neural networks & ML are useful
 - Failure of AI due to no meaning or general learning
- RI demonstrates that our mind is quantum based
 - Representation is hyperdimensional bit-dimensions
 - 'It from bit' (Wheeler) is source of quantum and also mind/prana
 - Information is physical (Landauer's principle)
 - Sir Roger Penrose states that mind is non-computational
 - Mind taps into quantum speedup and space-like states (savant)
 - Mind is outside spacetime (source code)
 - Meaning emerges from hyperdimensional spaces (correlithms)
 - Brain is most likely a 3D antenna – bio-body suit

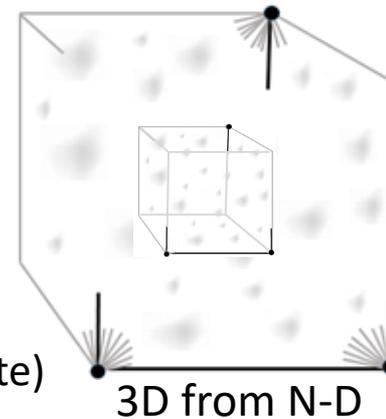
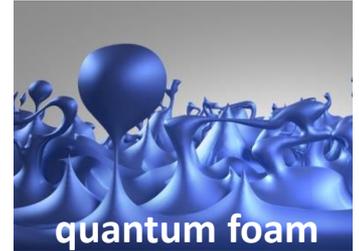
RI is more *meaningful* than AI (no singularity)

Infrastructure for Quantum Model



Richard Feynman said: *“The world is not classical dammit, it’s quantum mechanical”*

- Information and Entropy are related
 - It from Bit: Bits are smallest increment to Black hole event horizon (the entropy)
 - Bit Bang: The initial state of pre-universe was very low entropy quantum states
 - Landauer’s principle: information has an effective energy and effective mass
 - Protospacetime preexisted space/time/energy/matter (coin demo)
 - Non-metric structures are negentropy source
- Quantum States are topological proto-bits (distinctions)
 - An infinity of orthonormal bits (the implicate)
 - True concurrency exists ($\mathbf{a+b+c}$) (non-relativistic simultaneity)
 - Probabilities are fundamental (non-deterministic)
 - All space, time, matter and energy emerges from quantum (foam)
 - Infrastructure beneath quantum field theory (QFT) and mind
 - Quantum algorithm speedup and quantum supremacy
- Entanglement is ubiquitous and $\geq 4D$
 - Truly concurrent space-like states underlying all of physics (the implicate)
 - Showed how Higgs bosons, dark matter, dark energy are all entangled
 - Spacetime (3D + T) itself modeled as entangled tauquernions



Reasons for Quantum Mind



Human RI exhibits *significant* non-classical behaviors

- Myth of AI – no generalized learning or meaning
- Normal intelligence, learning, meaning, genius, savant and infinite intelligence
- Thoughts, memory and experiences without brain (single cells, dreams, NDEs, IHD, ...)
- Direct awareness/knowing of universe (anu, remote viewing, OBE, telepathy, ...)
- Intention (PK) directly affects all physics (double-slit, gas-discharge, REGs, IHD, ...)
- Awareness and intention bypasses space and time barriers (remote view, OBE, NDE, ...)
- All systems are open to mental observer (Law of Attraction and correlithms)
- Knowing, lucidity and transcendent mental states (more than just consciousness)

Human RI high level quantum connection (dualism)

- Mind is made of quantum states that informs the rest of the universe (quantum matrix)
- Mind appears to observe any* in the universe (source code of universe and QFT)
- Mind appears to change any* in the universe (source code of universe and QFT)

Source Science is bit-physics of Combinatoric Hierarchy

- Key is true hyperdimensional concurrency of non-metric space-like states
- Quantum proto-bit-states are not energy, not matter, not in space and not in time
- Quantum protospacetime operational states/rules support massive concurrency
- Meaning, knowing and abstraction using GALG N-vectors and correlithm ensembles
- GALG and correlithms are verbnoun balanced (all states are also operators)

any* = anywhere, anywhen, anything, nowhere, nowhen and nothing

Non-classical Behavior Matrix

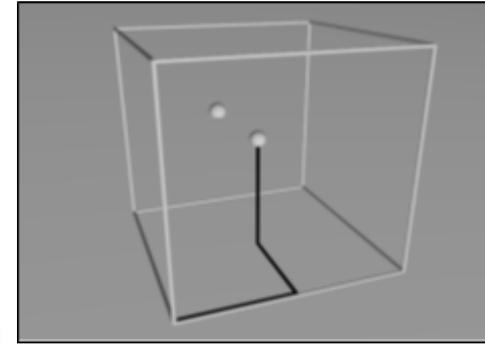


Mental category and specific examples		Non-classical traits for component			
		Information	Space	Time	Energy
Awareness	Clairvoyance, _audience, _sentience	rotes	remote		
	Remote staring/presentience	physiology	remote	remote	unconscious
Perception	Remote Viewing/NDE/OBE/chakras	rotes	remote	remote	prana
	Anu (occult chemistry)/remote view	quantum	atomic		atomic
	Medical intuition/muscle testing	prana	remote	remote	
	Precognition/dreams/presentience	rotes	remote	remote	
Knowing	Intuition/downloads/zone state	thoughts	remote	remote	
	Intelligence/meaning/savants/infinite	thoughts	memory	speedup	quspeedup
	Telepathy/shared dreams	thoughts	remote	remote	
	Channeling/orbs/walk-ins	thoughts	remote	remote	brain
PK Effects	NLP Anchoring/Timeline/elementary	prana	remote	remote	prana
	Mind/Brain interface	intention	remote		negentropy
	Double-slit/gas-discharge/global cons	quantum	remote	remote	quantum
	REGs (psychokinesis)	quantum/many	remote	remote	quantum/many
	Intercessory prayer/healing	prana	remote	remote	prana
	Intention Host Device (no brain)	thoughts	remote	remote	many

Content Addressable Memories 101

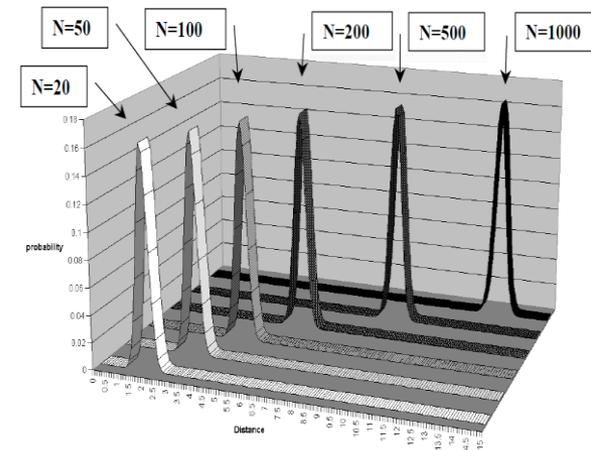
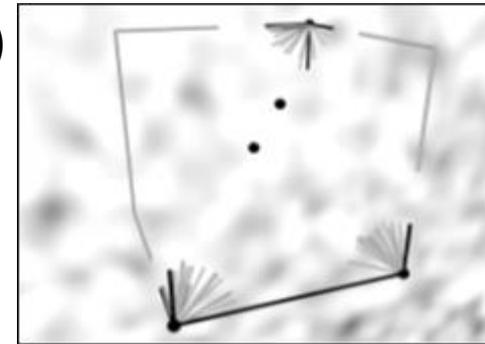


- Pick a random point P in a 3 dimensional space – easy
- Pick a random point P in a 100 dimensional space – hard
- Pick 2nd point Q in a each space – compute distance
- Pick many points X in a each space – compute distances
- Find the distances have an average value and std deviation



Correlithms for dimensions $N > 20$ and midpoint M: (unit cube)

- Euclidean Distance PQ is $\sqrt{N/6}$ (standard distance)
- Standard dev of PQ is $\sqrt{7/120}$ (independent of N)
- Distance MP or MQ is $\sqrt{N/12}$ (standard radius) & $\sqrt{1/60}$
- For big N standard distance/radius are constants
 - Intrinsic normalization measure (similar to light year)
- Correlithms known as CAM/sparse distributed coding
 - related to CDMA and spread spectrum

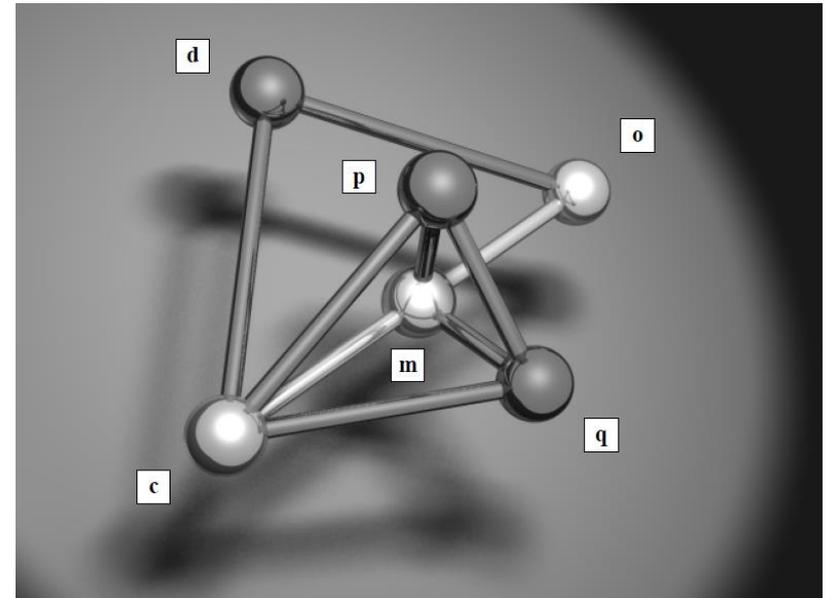


Mathematics for emergence of meaning,
the data (bits) is the address

Unusual probabilistic geometries from randomness

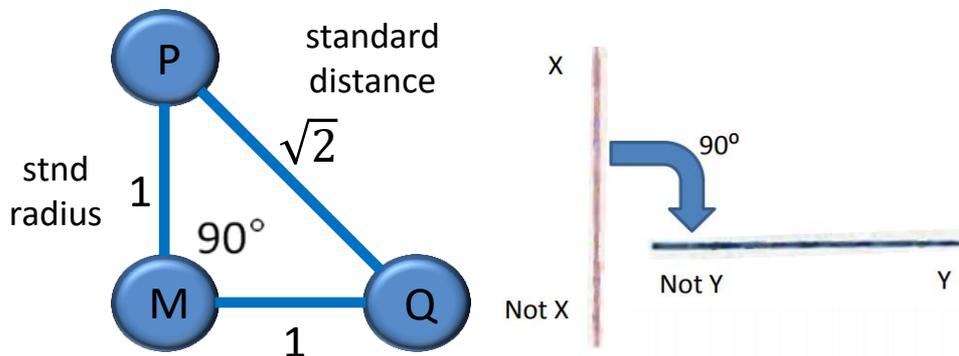


Points	Raw Distance	Normalized Distance
MQ=MP	$\sqrt{N/12}$ (radius)	1
PQ	$\sqrt{N/6}$ (distance)	$\sqrt{2}$
MC=MO	$\sqrt{N/4}$	$\sqrt{3}$
CP=CQ	$\sqrt{N/3}$	$\sqrt{4}$
DC=DO	$\sqrt{N/2}$	$\sqrt{6}$
CO	\sqrt{N}	$\sqrt{12}$



12 dims is special since $MP = 1$
M = mid/null/void point

M = middle
 C = corner
 O = opposite corner
 D = random corner
 P/Q = random points

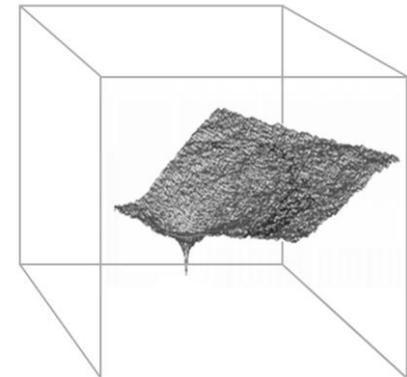
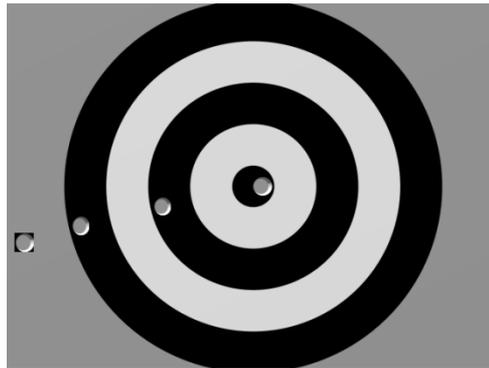
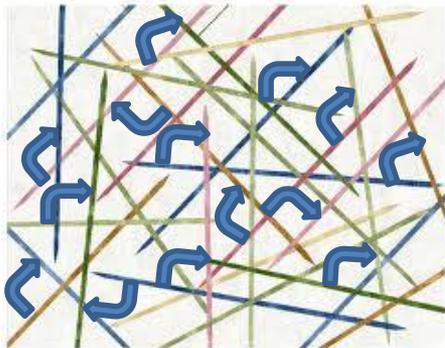


Big thought vectors built from small bit-vectors are orthogonal in hyperdimensional spaces. Related thoughts are < 90 degrees

Meaning using Correlithms



- True for any and all hyperdimensional spaces of any cell type (bit, qubit, ebit, ...)
- Self normalizing using standard distance and standard radius (like qubit unitarity constraint)
- Boolean complete and Turing complete, plus verbnoun balanced
- Orthogonal thought vectors are random (from middle of space)
- Meaning emerges from space-like addresses (mental observer frame)
 - Thought vectors exist in random nonmetric space
 - Distance represents a correlation not a distance metric (equivalent to inner prod)
- Non-orthogonal vectors represent information
 - Highly unlikely vectors represent negentropy (the bulls eye)
- Emergence of superposition and probabilities for thought vectors (string correlithms)
- Inefficient hyperdimensional nearness in 3D (radar/sonar/cluster) (curse of dimensionality)
- Hierarchical meaning scales since all bit states are protodimensions (no mass/energy)
- This is the mathematics of law of attraction (bulls eye and vortex)

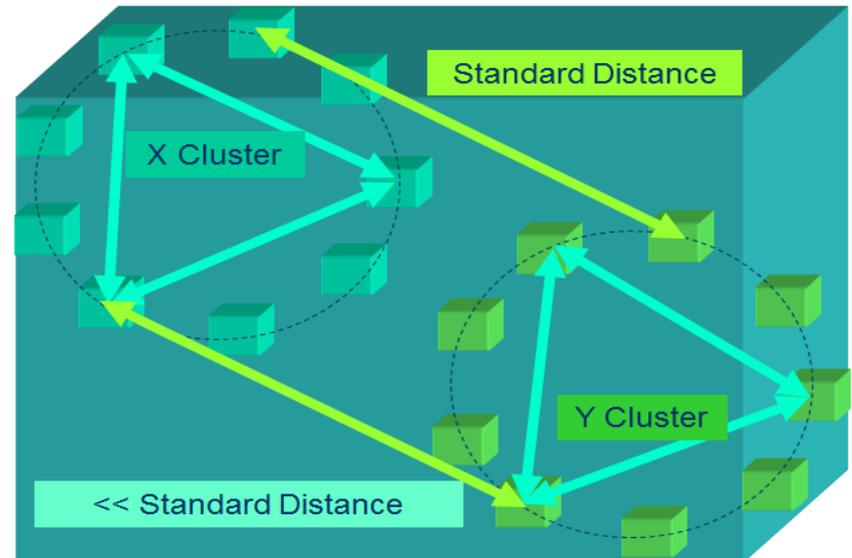
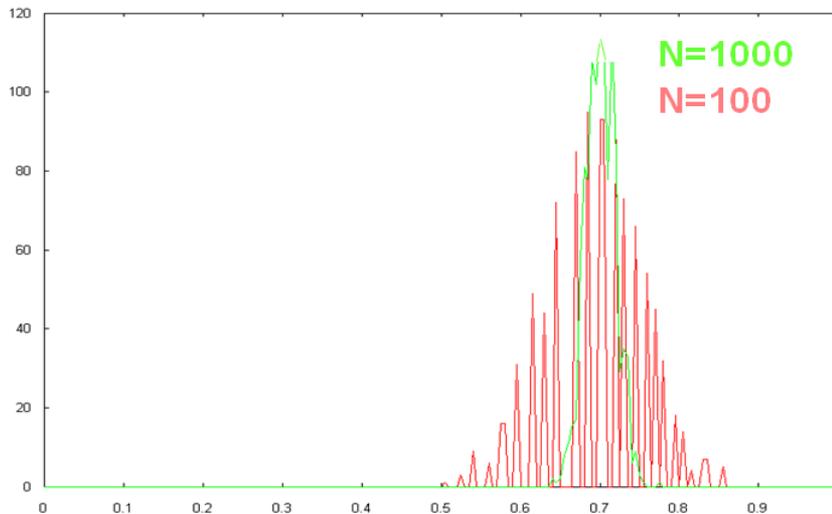


Correlithm supremacy for RI, using actual vs simulated hyperdimensional spaces

Quantum Correlithm – uniform phase ensembles



- Start with 2 ensembles X&Y each of 1000 qubits – all with random phase
- Start with 2 measurement x&y ensembles (1000) each with random phase
- Remember all those starting phases to repeat in each trial
- Repeatedly Measure X with x and Y with y measuring distance vs last one
- Repeated $(X.x)_1$ dist $(X.x)_2$ is 70% of stand dist compared to $(X.x)_2$ dist $(Y.y)_2$
- Distinguish X from Y even with random phases (patent issued)



Mechanism for quantum mind interacting with the antenna brain

Real Intelligence Substrate



Propose that thoughts are quantum dimensions!

Then thoughts have these properties:

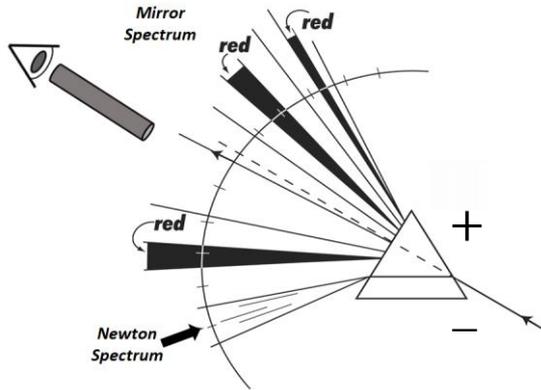
- Formed as quantum based orthonormal bits - not in brain (verb-noun balanced)
- Scale maximally with arbitrary dimensions (abstraction)
- Are maximally concurrent and space-like (non-metric protospacetime)
- Rotes/IHD are thought packet meaning automata (submodalities)
- Meaning emerges using hyperdimensional correlithms (with superposition)
- Allows brain/mind interface (correlithms)
- Attention is choosing a protospacetime address (hyper-observer frame)
- Space-like: meaning/attention/aware/intention/knowing/consciousness
- Exist outside space/time/matter/energy (survival)
- Intention/telepathy are built on entangled states (Aka cords)
- Supports lucidity and transcendent experiences (stepping out of time)
- Supports RI, savant and infinite intelligence (LOA and Akashic records)
- Quantum mind is source code of universe (all systems are open)

Next slides are real examples of this model

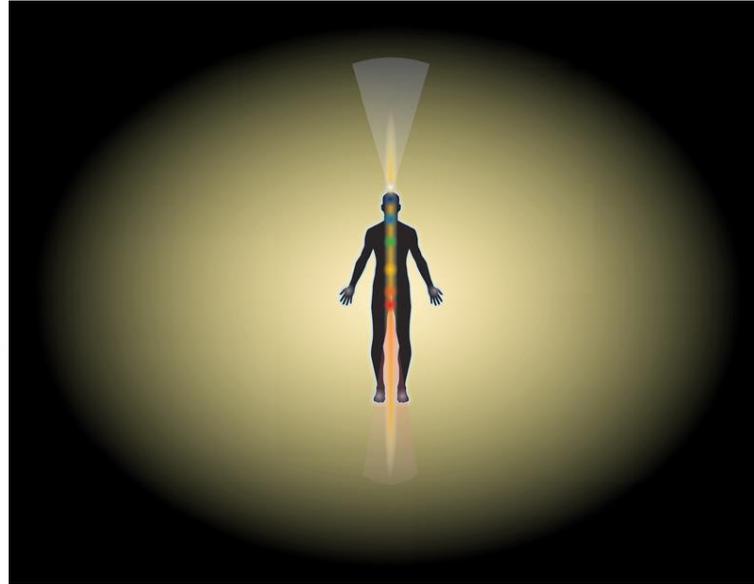
Awareness of quantum states



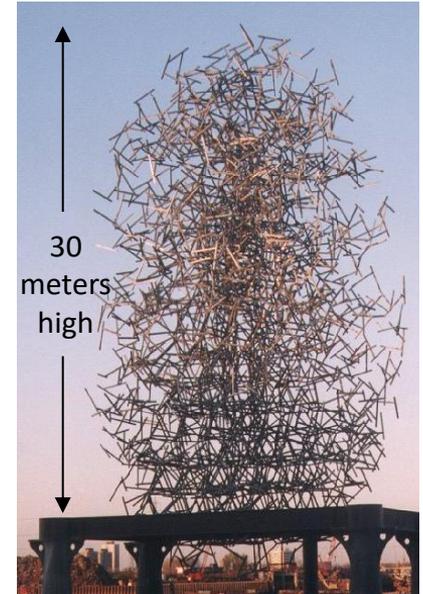
Auric probability cloud Quantum Cloud 1999



Mirror spectrum using prism and high voltage by William Tiller

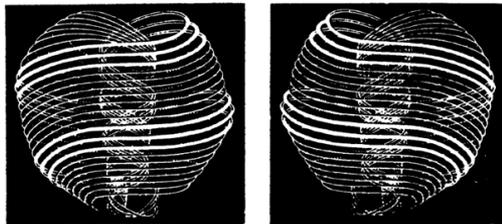


As perceived by Deborah Singleton



Antony Gormley (London)

Anu (right and left)



from occult chemistry

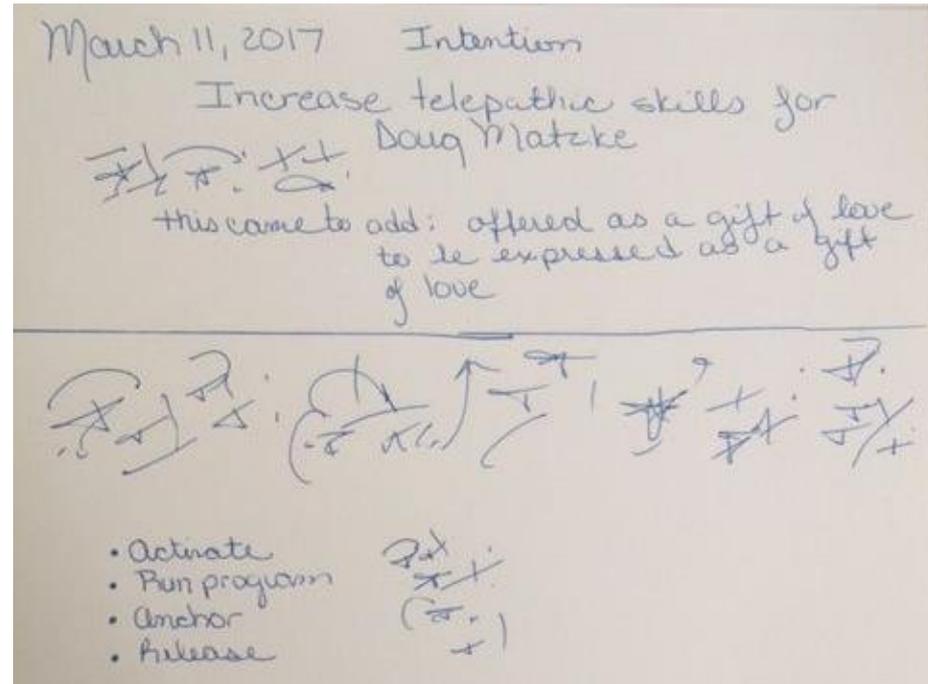


Auras and orbs



Direct Meaning with Telepathy

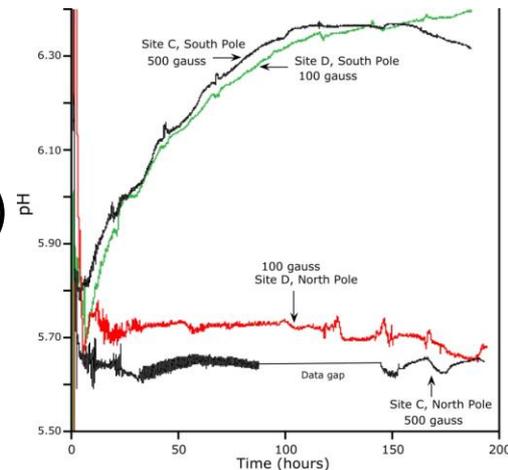
- I know telepaths & have experienced telepathy
 - A friend revealed all my thoughts have parenthesis
 - Spirit guide connection at Monroe Institute
 - All humans are telepathic (meaning before words)
- Suzy Miller Awesomism
 - Her autistic child clients taught her telepathy
 - She teaches telepathy as part of her business model
 - Her telepathy knowing is now written and spoken (light language)



Thoughts/Intentions without brains



- Learning by single cell creatures
 - Anticipation of feeding intervals (microtubules and no brain cells)
 - Jellyfish are cell aggregates
 - Morphogenetic fields and DNA
- Direct download of thought forms
 - Download of thought forms (mathematics)/dreams/Akashic records
 - Rotes/archetypes/automaton/encoding water (modalities/submodalities)
 - Subtle/Vital Energy Patterns/elementary/elementals
 - Channeling/Walk-ins (Abraham and Law of Attraction)
- Near Death Experiences (NDE)
 - Neurosurgeon Eben Alexander – coma for a week
 - Anita Moorjani – Stage 4 Cancer was healed after coma
- Intention Host Device (IHD) stores intentions!
 - Program IHD with intention in meditation (Tiller)
 - Use IHD in laboratory experiments (conditioned spaces)
 - Inorganic: pH change of water (up or down)
 - Organic: increase the reaction rate of ALP (liver enzyme)
 - Living: reproductive rate of living fruit fly larvae

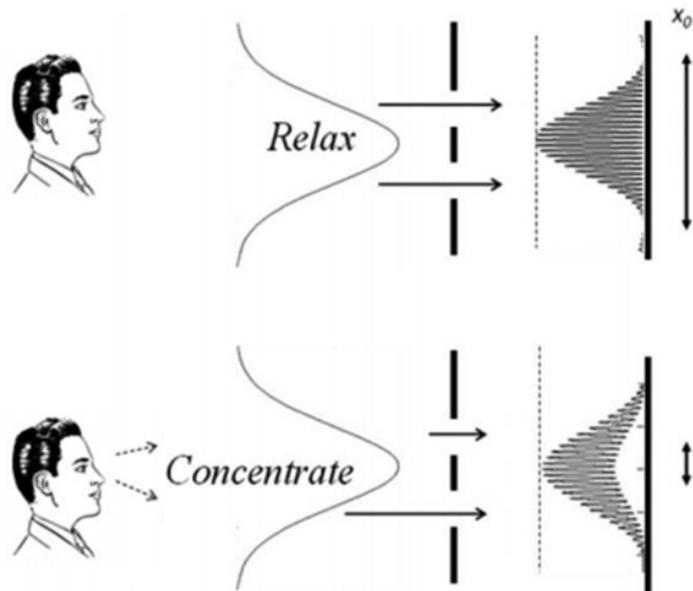


Key Mind interactions with Qustates



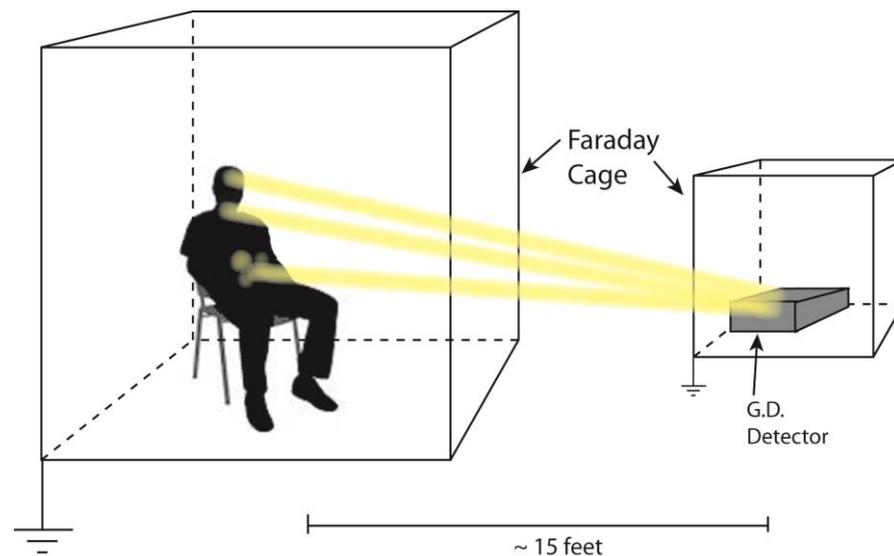
Significant numbers of REG and PK experiments, and these stand out

Dean Radin double-slit PK



- Shielded double-slit with photo detector
- Direct influence of quantum interference
- Worked online using remote volunteers

William Tiller gas-discharge PK



- Shielded gas-discharge near threshold
- Shielded volunteer from device
- Direct influence of avalanche rate (tunneling)
- Aka chords observed from three chakras

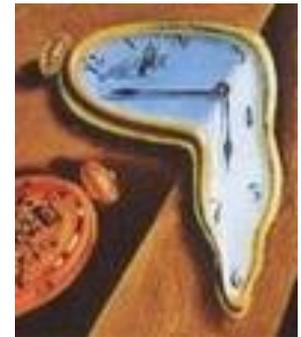
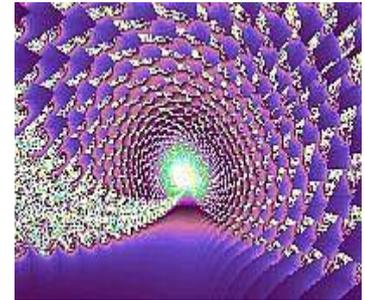
Significant: since no electromagnetic effects would be possible

Out of Time Knowing



“Time is what prevents everything from happening at once” - John Wheeler

- Quantum physics consistency vs causality
 - Bell entanglement and self consistency
 - Delayed-choice quantum eraser experiments
- Presentience (conscious or unconscious)
 - Physiology responds to future emotional images
 - Found in base data for conventional psychology research
- Precognitive
 - Dreams
 - Remote Viewing – predicts newspaper content from 2 days later
- Retrocausation (tap into future knowing)
 - Future knowledge affects decisions in now
 - Study answers after test improves score on test
- Panoramic time and time distortion
 - NDE life review as panoramic time
 - NLP Time line therapy and Monroe Inspec
 - Monroe Institute, in the zone, NDE and NLP hyperesthesia



Personal Example of Precognitive Remote Viewing



Target for Patricia Cyrus Apr 2005:

Describe the appearance,
purpose and mechanism
of device using
"Invariant Phase Shifting"

Original Drawing April 2005

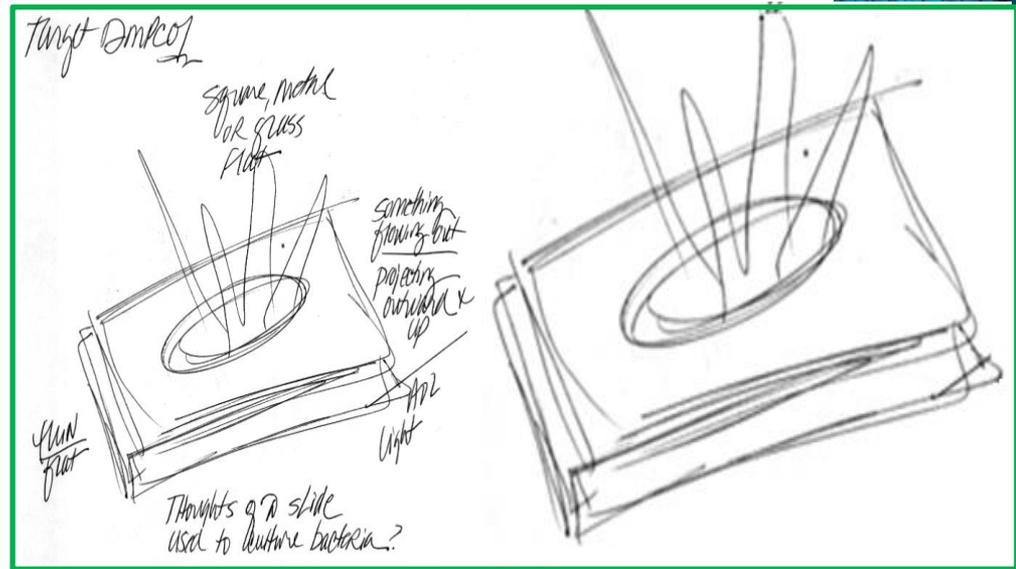
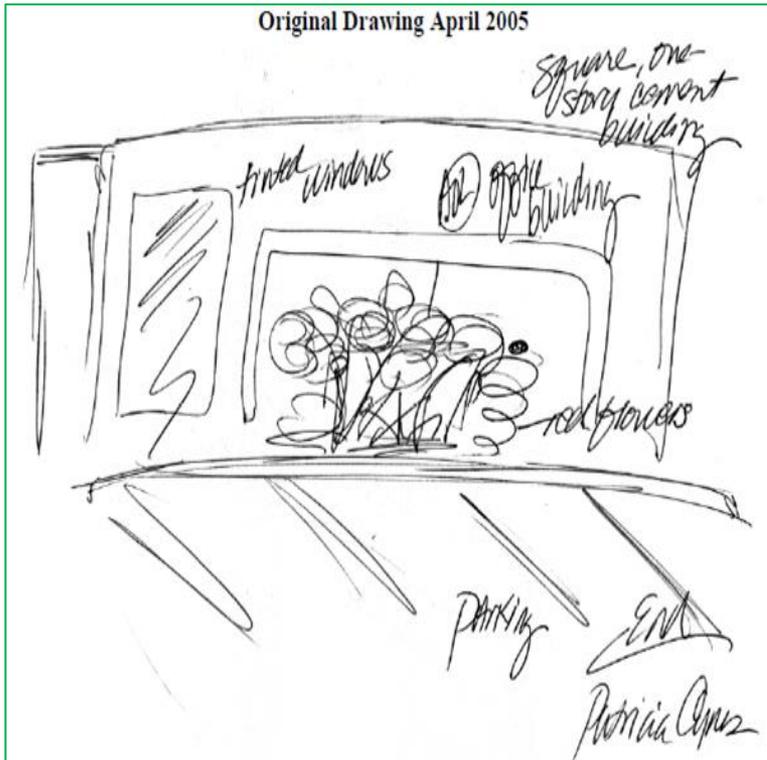


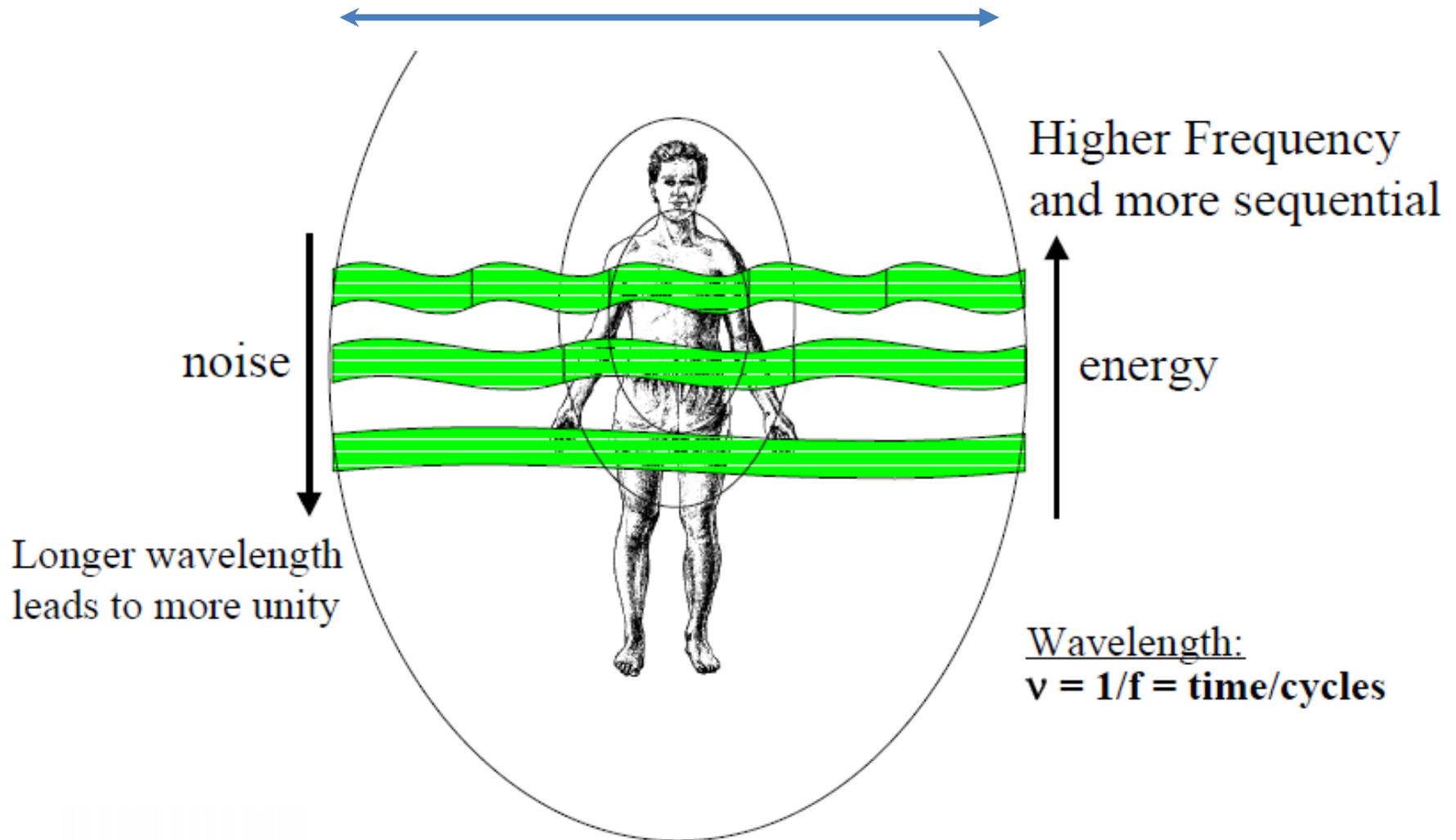
Photo of Building Nov 2008



Mental States affect Temporal Window



Wavelength determines Size of 'Now' Bubble



Slowing thoughts – step out of time

Real Intelligence is Quantum Mind



Everyone has these real intelligence capabilities:

➤ Thoughts

- Thoughts are separate from brain and auric bodies and prana are quantum bits
- Thoughts/attention/perception/intention/consciousness are space-like
- Visual/auditory/kinesthetic modalities and submodalities (NLP)
- Thought affects water, people, electronics and REGs (global consciousness)

➤ Knowing

- Generalized learning, knowing and meaning
- Memories are dependent on emotions (emotional ladder)
- Intuition and coincidence (tapping into high self)
- External thoughts from “outside helpers” (telepathy)

➤ Transpersonal

- Grounding, meditation and nightly dreams quiets mind
- Connect with animals, nature and earth
- Telepathy, remote viewing, dreams, OBEs, presentience & retrocognition
- “In the zone” and “touching the divine” experiences (supermind)
- Survive death, since we are mental spiritual beings with physical bodies

➤ Meaning of source science

- We can amplify these capabilities if we believe/focus (do not cancel)
- We are more powerful than we imagine or allow!! (source code)

Remote Viewing Target



Write down impressions and submodalities (draw vs name)
(lines, colors, shapes, orientation, motion, emotion, purpose, ...)



How many symbolic modalities matched?

Source Science Predictions



- Training for supermind awareness in society
 - Practice meditation, grounding and emotional balance
 - Practice LOA, NLP, OBE, hyperesthesia & lucid dreaming
 - Use Intention Host Devices to advance personal prana
 - Encourage transpersonal and touching the divine
 - Notice presentience and use retrocausation (time warp)
 - Learn telepathy, deep meaning and light language
 - Develop training and movies for source science topics
- Source Science experiments and development
 - Confirm new standard model predictions
 - New PK research using entangled states (collapse or rotate)
 - Design, build and train with high gain PK ehostbrain
 - Demonstrate PK with all high sensitivity physics experiments
 - Design and build to make electronic circuits thought-hard

Create a well funded development and research organization!

Endorsements for Deep Reality



“This remarkable book is a fresh look at the connections between science and spirituality. Written in an easy-flowing conversational style, it dives deep into what authors Matzke and Tiller call ‘Source Science.’ Fully grasping the implications of their expansive view of reality will make your head spin. *Deep Reality* is not for the faint of heart or those with rigid heads, but it is heartily recommended for everyone else.”

—**Dean Radin, PhD**

Chief Scientist, Institute of Noetic Sciences,
and Distinguished Professor, California Institute of Integral Studies.

“Powerful, paradigm changing information that all scientists and those interested in the evolution of thought must read.”

—**Dr. Ervin Laszlo**

author of *Science and the Akashic Field*

"*Deep Reality* is a fascinating and thought-provoking exploration of the nature of reality. The authors weave together science from a diverse array of disciplines to challenge many commonly held assumptions about consciousness, life/death, artificial intelligence, the power of thoughts, and beyond. It is this sort of open-minded discussion that will usher in a more comprehensive scientific framework than the reigning (and deeply flawed) materialist paradigm."

—**Mark Gober**

Author of *An End to Upside Down Thinking* and
Board member at the Institute of Noetic Sciences

Endorsements for Deep Reality (cont.)



“Fascinating ... Matzke and Tiller’s *Deep Reality* is like a rich and splendid conversation with two learned friends probing quantum science and hyperdimensional space. Their sharing is like a devotional exercise weaving timeless truths with what we know about the science of quantum mechanics. It engages the mind and the heart, to the ultimate benefit of both.”

—**Nisha J. Manek, MD**

Author, *Bridging Science and Spirit: The Genius of William A. Tiller’s
Physics and the Promise of Information Medicine*

“This book is an amazing, dynamic piece of work. Two inspired and unique minds came together to achieve something that transcends their individual work. Doug Matzke and William Tiller are both brilliant producers of information on science and human consciousness. In this book, they bring together the science behind how we, as individuals and collectively, live, love, and exist with each other in the Universe, emotionally, mentally, and spiritually.”

—**Deborah Singleton**

President, A Healing Place Enterprises

“*Deep Reality* takes readers on a highly educated and insightful exploration of the intersection between physics and metaphysics. The connections made in the conversations between Dr. William Tiller and Dr. Doug Matzke effortlessly ground metaphysics, while simultaneously expanding physics. The two become one, and expand beyond both. As someone who has lived my life trying to negotiate these realities, it is nice to be introduced to an integrated option!”

—**Suzy Miller**

Visionary speaker, author, telepathic communicator, multidimensional seer.

Questions and Answers



Real intelligence is built on hyperdimensional quantum protodimensions, the source of all thoughts and meaning.

Real Intelligence is
Hyperdimensional

