

Reality is ... ?

**A presentation for
The Wessex Research Group
(Totnes)**

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*A Journey
into
Reality*

Reality is ...



... not what you might think it is.

Reality is ...

Perceptual Reality

Quantum Reality

Sub-Quantum Reality

???

... layered

Models of Reality

**Example: OSI 7-layer model
(Computer communications)**

**Application Layer
Presentation Layer
Session Layer
Transport Layer
Network Layer
Data Link Layer
Physical Layer**

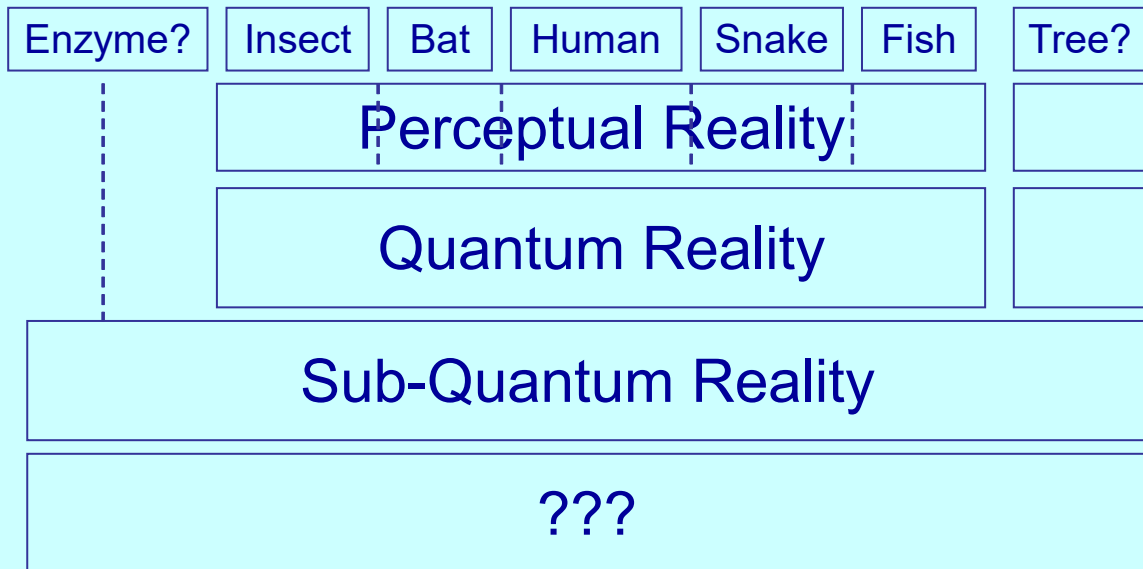
Models of Reality

**Application Layer
Presentation Layer
Session Layer
Transport Layer
Network Layer
Data Link Layer
Physical Layer**

**In our everyday life we are aware of the very top layer
of the structure of our material reality.**

**Quantum physics gives us some insights into the layer
immediately below that – the mechanisms by which
our experience of reality is ‘formatted’ for us.**

Layers of Reality



Reality is ...

... as proposed by mystics and sages
for thousands of years ...

... as envisaged by both Sir Isaac Newton
and Professor David Bohm ...

... as now proved beyond reasonable doubt

... formed from light

Common Ground

Relativity Theory tells us that matter and energy are equivalent: $E = mc^2$

Quantum Physics also tells us that matter is in some sense an energy-wave construct.

Electrons reflected off a crystal lattice form patterns that show they travel as waves.

Quantum Tunnelling

– a practical effect that won a Nobel Prize –
relies totally on particles behaving like waves.

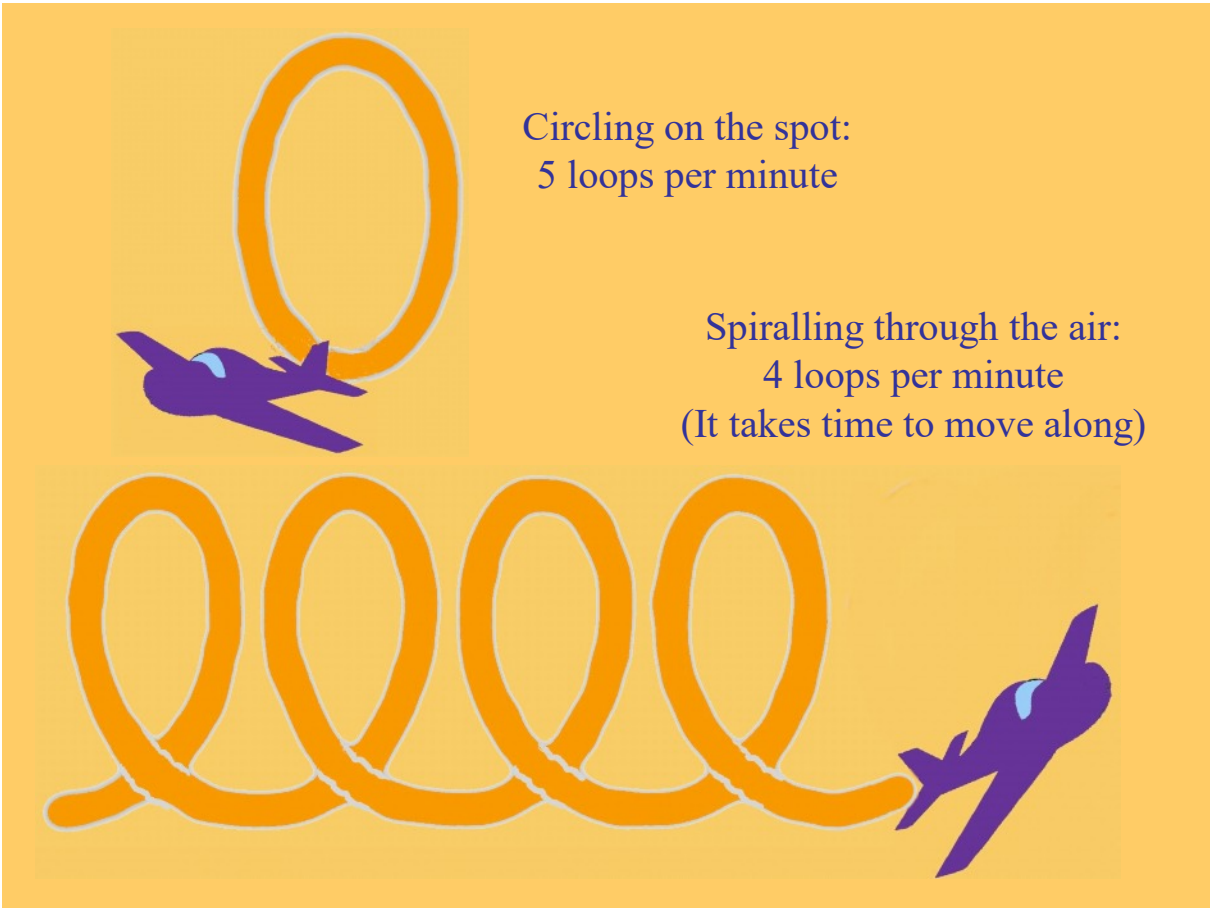
Starting Point

‘Matter is formed from cyclical patterns of wave-form (vibrational) energy.’

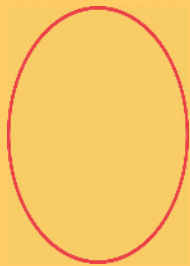
(Cyclical because particles of matter have a defined form and location, rather than racing through space as a light wave does.)

Just that – a simple statement that William of Ockham would be proud of ...

... and it's consistent with both leading theories on Material Reality.

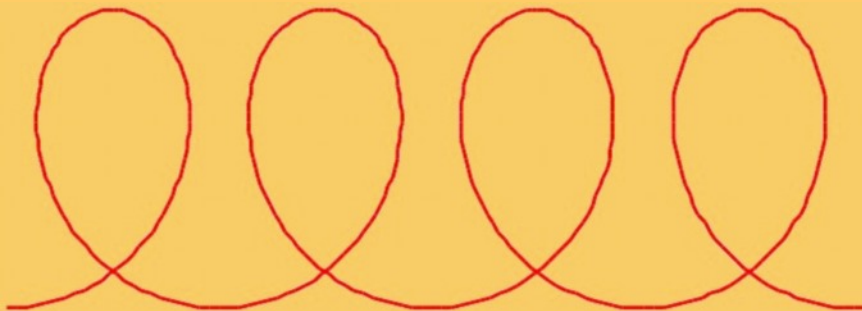


Energy Flows of Static and Moving Particles



Energy flow forming static particle.
(Flow cycles repeatedly in the same position.)

Simplified representation – flows will in general be 3-dimensional.



Energy flow forming particle moving through space.

A moving particle will experience less cycles per second of energy flow than that same particle when it's at rest.

Effects on Time-Perception

A moving particle will experience less cycles per second of energy flow than that same particle when it's at rest.

Any effects of time MUST be carried around a particle by those energetic cyclic flows.

It follows that a moving particle will experience time more slowly than that same particle when it's at rest.

This is exactly what Einstein referred to as 'Relativistic Time Dilation' (though he never offered a reason like this for it).

The formula for this slowing-down of time exactly matches the formula that Einstein worked out (which has also been proved by experiment).

Results from the Vibrational Energy-Flow description of matter exactly match ALL of the experimentally-proven findings of Einstein's Special Theory of Relativity.

(including notably $E = mc^2$)

They also provide a clear scientific and mathematical explanation for those findings – for the very first time.

They also show that those energy-flows must be electromagnetic radiation – light.

ALL MATTER IS MADE OF LIGHT

SCIENTIFIC FIRSTS

**The Vibrational Energy-Flow description of matter offers
a clear explanation for electrical charge
and for gravitational effects**

- including the curvature of space described by Einstein.

**It gives a clear explanation of the reason for inertia
- a subject of much controversy. (LHC)**


**It also provides a radically new description of
the fundamental process of time itself.**

**ALL of these are ‘firsts’ –
NONE of these effects have been explained before.**

**All of this from one simple
observation:**

**‘Matter is formed from cyclical patterns of
wave-form (vibrational) energy.’ – LIGHT**

This includes You.



*It is in light,
by light,
through light
that we live and move and have our being.
In our physical form
we are creatures of pure light,
woven of the very stuff
that treads the pathways between the stars*

*The dominion of light,
it is our heritage,
our birthright.
Let us live as children of light.*

Reality is ...

The 'cyclic photon' paradigm for matter shows that the speed of light is actually just a comparison of two distances.

This means that the rate of 'objective time' could vary wildly without affecting the nature of Reality in any way.

... timeless

Reality is ...

Time does not exist for light –
and everything is made of light.

A substantial body of scientists
regard time as illusory.

At a level below 'Planck Time' the concept
of time becomes meaningless.

... timeless

So what is time??

Time is a structural feature of the brain,
following the path of increasing entropy.

All 'instants of time' coexist, linked by the
underlying principles of reality
(corresponding to our rules of science).

The brain, being a material structure, is
subject to those rules. Consciousness,
linked to brain, follows that 'downhill path'.

Just as every other aspect of perception,
our perception of time has evolved
as a survival trait,
to optimise our ability to thrive
in the complex environment
in which our physical forms have developed.

That environment is intrinsically Timeless

What we perceive as 'different times' are
in fact different states of entropy
-which in eternal terms all coexist.

Some of the Problems We Are Facing

Fossil Fuel Depletion
'Fossil Water' Depletion
Serious Depletion of Fish 'Stocks'
Dramatic Climate Change
Rising Sea Levels
Environmental Pollution
Over-Population
Fear Culture ('Swine Flu', Terrorism)
Globalisation

Tools and Techniques

Consciousness

Positivity

Creativity / Flexibility

Holistic Science

Common Sense

Awareness of Interdependence

Respect for Life (Including Future Life)

**What is the rarest atomic element
in the world?**

Answer: Antihydrogen

**Atoms of antimatter first created
at CERN in 1995.**

**Held in a hard vacuum
by electrical & magnetic fields.
Annihilated on contact with normal matter.**

1928: Paul Dirac developed a quantum description of the electron.

That description included electron-type particles with both + and – charges.

The positron (or anti-electron) was first observed by Carl Andersen in 1932.

Positrons are produced in nuclear reactions, and are routinely used in the PET (Positron Emission Tomography) Scanner.

**One of the big questions in physics is:
Why is the universe is dominated by
'normal' matter?**

**CP (Charge-Parity) asymmetry has been established in respect of certain particles
- another clear indication of inequality
between matter and antimatter.**

2008 Physics Nobel prizewinner Kobayashi said: “Matter dominance of the Universe seems requiring new source of CP violation.”

**The Cyclic Photon description
of matter offers a very clear
and consistent explanation
for that cosmic asymmetry.**

**This observation of itself
provides substantial support
for this new paradigm.**

Limitations Imposed by Relativity Theory and Conventional Quantum Theory

The standard view of the atom says that at the quantum level particle behaviour is random, unpredictable.

Einstein said “I cannot believe that God plays dice”.

Various scientific experiments have shown particles to have a cyclic sub-structure that explains their behaviour.

Relativity Theory is founded on a unique property of light.

That (assumed) property has far-reaching implications.



A: 30 MPH

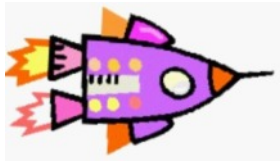
B: 60 MPH

80 MPH

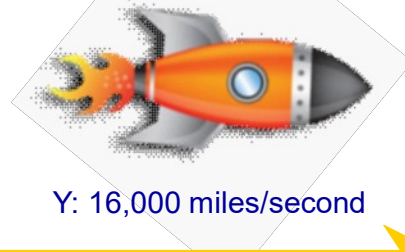


Passes A at 50 MPH

Passes B at 20 MPH



X: 6,000 miles/second



Y: 16,000 miles/second

Light: 186,000 miles/second

Passes X at 186,000 miles/second

Passes Y at 186,000 miles/second

Relativity Theory says that this is due to light actually moving at the same speed relative to all other objects.

The Cyclic Photon view of matter shows that it's due to the measuring devices themselves being made of light.

According to Relativity Theory, this means that every state of motion is equivalent, that there is no such thing as being 'absolutely at rest' in the universe.

This view is contradicted by various scientific findings.

The Relativity view effectively rules out, **for ever**, transfer of objects or information between two points faster than light can make that journey.

Exploration beyond our solar system is not a realistic possibility without FTL travel or communication. Recent scientific findings strongly suggest that FTL technologies may be a possibility.

Special Relativity and the conventional interpretation of Quantum Theory place serious limitations on our scope for both scientific development and wider exploration.

According to the Cyclic Photon view of matter, those limitations do not exist. As a species we are limiting ourselves by false assumptions – just at a time when revolutionary new perspectives are most needed.

Louis-Victor de Broglie (1892-1987) : *Recherches sur la théorie des quanta*, Faculté des Sciences de Paris, 1924, Thèse de doctorat (Annales de Physique, 10-ème série, {\bf III}, 1925, p. 22-128)

Louis de Broglie: The wave nature of the electron (Nobel Lecture, December 12, 1929)

E. Schrödinger (1930), Über die Kraftfreie Bewegung in der Relativistischen Quantenmechanik, *Sitzungb. Preuss. Akad. Wiss. Phys.-Math. Kl.* **24**: 418.

K. Huang (1949), On the *zitterbewegung* of the electron, *Am. J. Phys.* **20**: 479.

A O Barut & A J Bracken (1981): Zitterbewegung and the internal geometry of the electron, *Physical Review D* Vol **23** no. 10 (15 May) 2454 - 2463

D. Hestenes (1990), The Zitterbewegung Interpretation of Quantum Mechanics, *Foundations of Physics* **20**: 1213-1232.

J.G. Williamson (Glasgow University) and M.B. van der Mark (Philips Research Laboratories, The Netherlands)(1997): Is the electron a photon with toroidal topology? *Annales de la Fondation Louis de Broglie*, Volume **22**, no.2, 133

M. Gouanère et al (2005): *Experimental observation compatible with the particle internal clock*, *Annales de la Fondation Louis de Broglie*, Volume **30**, no 1, 109

P. Cattilon et al (2008), A Search for the de Broglie Particle Internal Clock by Means of Electron Channeling, *Foundations of Physics*, Volume **38**, Issue 7, pp.659-664

All of those papers point to matter being made of light.
All of them leave one fundamental question unanswered.

That question is answered, along with many others,
by the view of material reality
as presented in 'Tapestry of Light'.
(and in illustrated poetical form
in 'Breath of the Cosmos')

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