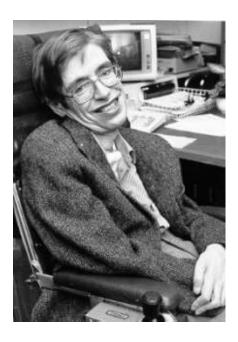
<u>Tomorrow's Science Today</u>

"If a complete unified theory was discovered, it would only be a matter of time before it was digested and simplified ... and taught in schools, at least in outline. We should then all be able to have some understanding of the laws that govern the universe and are responsible for our existence"

("A Brief History of Time" by Stephen Hawking, Introduction by Carl Sagan – Bantam Press 1988, page 168)



Professor Stephen Hawking

So let's give credit where credit is due and encourage the scientists to pursue the mathematics and measurements which we may find boring and tedious, but let's remind them occasionally that maths and measures are nothing unless we all gain "... some understanding of the laws that govern the universe and are responsible for our existence."

Beginning of

Intergalactic And Time Travel, Einstein's Relativity, Bohr's Atomic Model, Dark Matter, Dark And Negative Energy, String Theory / Unification, The Law Of Conservation, And Combining Newtonian And Relativistic Gravity With Standing Waves And Quantum Probability Waves

With Liberated Science's

Implications For Religion And Philosophy As Well As Everyday Life In The Light Of The Concept of an Electronic And Holographic Universe Shaped Like A Mobius Loop I saw a video ("Hidden Dimensions: Exploring Hyperspace" -

http://www.worldsciencefestival.com/hidden-dimensions) in which it was stated that mathematicians are free to imagine anything while physicists work in a very different environment constrained by experiment, and that the American physicist Richard Feynman (1918-1988) said scientists work in a straitjacket. Well, Albert Einstein (1879-1955) said "Imagination is more important than knowledge" so let's see what happens when we throw away everyday tradition and conformity, let our imaginations fly (while trying to stay grounded in science and technology), and thus release science from its straitjacket!

This article has its beginnings in cellular automata (in mathematics and computer science, collections of cells on a grid that evolve through a number of discrete time steps according to a set of rules based on the states of neighbouring cells) and grew into a belief that the universe (electromagnetism, gravitation, space-time and, as we'll see, 5th dimensional hyperspace) has a digital (electronic) foundation.

It logically leads to assertions of instant intergalactic travel, time travel into the past as well as the future (neither of which can be altered), of unification of the large-scale universe with small-scale quantum particles, that the universe is a computer-generated hologram, that everyone who

ever lived can have eternal life and health, that motion is an illusion caused by the rapid display of digitally generated "frames", that the entire universe is contained in (or unified with) every one of its particles, that the terms "computer-generated" and "computer" do not necessarily refer to an actual machine sending out binary digits or gubits, that we only possess a small degree of free will, that humanity could have created our universe and ourselves though unification physics says a being called God must nevertheless exist and likewise be Creator, and that Einstein's E=mc2 equation could be modified for the 21st century, reflecting the digital nature of reality. Though these things may be unbelievable in 2011, we should not ignore the possibilities of their being true or of their showing that reality is indeed digital because they are the logical product of already demonstrated electrical engineering and trips into space, science is investigating time travel and unification, the notion of motion has been suspect to some ever since the ancient Greek philosopher Zeno of Elea (490?-420? B.C.) argued that motion is absurd, and many religions worldwide speak of God and have some concept of survival of bodily death.



"Little Einstein" writing E=mc2 and poking out tongue like "Big Einstein" did for photographers on his 70th birthday

In July 2009, electrical engineer Hong Tang and his team at Yale University in the USA demonstrated that, on silicon chip-and transistor-

scales, light can attract and repel itself like electric charges/magnets (Discover magazine's "Top 100 Stories of 2009 #83: Like Magnets, Light Can Attract and Repel Itself" by Stephen Ornes, from the January-February 2010 special issue; published online December 21, 2009). This is the "optical force", a phenomenon that theorists first predicted in 2005 (this time delay is rather confusing since James Clerk Maxwell showed that light is an electromagnetic disturbance approx. 140 years ago). In the event of the universe having an underlying electronic foundation (hopefully, my summary will make it clear that this must be so - also ... an electronic universe is a necessary precursor to scientific fulfilment of Star Trek's "magic" which becomes clear as these steps are read), it would be composed of "silicon chip-and transistor-scales" and the Optical Force would not be restricted to microscopic scales but could operate universally. Tang proposes that the optical force could be exploited in telecommunications. For example, switches based on the optical force could be used to speed up the routing of light signals in fibre-optic cables, and optical oscillators could improve cell phone signal processing.

If all forms of EM (electromagnetic) radiation can attract/repel, radio waves will also cause communication revolution e.g. with the Internet and mobile (cell) phones - I anticipate that there may be no more overexposure to ultraviolet or Xrays. In agreement with the wave-particle duality of quantum mechanics, EM waves have particlelike properties (more noticeable at high frequencies) so cosmic rays (actually particles) are sometimes listed on the EM spectrum beyond its highest frequency of gamma rays. If cosmic rays are made to repel, astronauts going to Mars or another star or galaxy would be safe from potentially deadly radiation. And if all particles in the body can be made to attract or repel as necessary, doctors will have new ways of restoring patients to health.

From 1929 til his death in 1955, Einstein worked on his Unified Field Theory with the aim of uniting electromagnetism (light is one form of this) and gravitation. Future achievement of this means warps of space (gravity, according to General Relativity) between spaceships/stars could be attracted together, thereby eliminating distance. And "warp drive" would not only come to life in future science/technology ... it would be improved tremendously, almost beyond imagination. This reminds me of the 1994 proposal by Mexican physicist Miguel Alcubierre of a method of stretching space in a wave which would in theory cause the fabric of space ahead of a spacecraft to contract and the space behind it to expand. Therefore, the ship would be carried along in a warp bubble like a person being transported on an escalator, reaching its destination faster than a light beam restricted to travelling outside the warp bubble. There are no practical known methods to warp space – however, this extension of the Yale demonstration in electrical engineering may provide one.



Star Trek's warp-driven Enterprise

Elimination of diseased matter and/or eliminating the distance in time between a patient and recovery from any adverse medical condition even death - would be a valuable way of restoring health. With time travel in an electronic universe, people who have long since died could have their minds downloaded into clones of their bodies - a modification of ideas published by robotics/artificial intelligence pioneer Hans Moravec, inventor/futurist Ray Kurzweil and others - allowing them to "recover" from death (establishing colonies throughout space and time would prevent overpopulation). If the distance in time between recovery and a patient is reduced to zero; prevention of any adverse medical condition, including that of a second death for those resurrected, can occur and we can enjoy resurrection to eternal life.

Since Relativity says space and time can never exist separately, warps in space are actually warps in space-time. Eliminating distances in space also means "distances" between both future and past times are eliminated - and time travel becomes reality. This is foreseen by the Enterprise time-travelling back to 20th-century Earth in the 1986 movie "Star Trek IV: The Voyage Home" and by Star Trek's "subspace communications". Doing away with distances in space and time also opens the door to Star Treklike teleportation. Teleportation wouldn't involve reproducing the original and there would be no need to destroy the original body - we would "simply" be here one moment, and there the next (wherever and whenever our destination is).

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