

## ABSTRACT

### THE QUANTUM AS BACKWARDS TIME, AND HOW THIS PERMITS A FIRST-EVER WORKING ALGEBRAIC QUANTUM GRAVITY

By Jonathan Deutsch

Backwards time is inferred to exist from the superluminal implications of the universe's proven non-locality. It exists as well in the standard quantum-mechanical formalism as an "advanced solution" to the Schrodinger wave equation. Regrettably, backwards time is ignored by most physicists, students, and by the general public. Very, very recently, however, careful experiments performed in Europe have confirmed the existence of backwards time in certain quantum situations. But nature makes absolutely no distinction at all between the quantum and the classical realms! Therefore, it won't be long before backwards time is experimentally confirmed for you and I.

We begin by creating and then using three original postulates:

- 1) The deBroglie wavelength (in centimeters) associated with the proton is really equal to  $-1$ .
- 2) The mass of the proton (in grams) is really equal to  $+1$ .
- 3) The time (In seconds) it takes light to travel the deBroglie wavelength associated with the proton is really equal to  $i$ , the square root of  $-1$ .

With these three postulates, we demonstrate that the quantum,  $h$ , could really be a unit of backwards time. The inscrutability of quantum mechanics would then be seen as entirely due to the inscrutability of backwards time. We then combine Newton's equation for universal gravity with the three postulates to create the first algebraic equation for quantum gravity that works for planets, quanta and everything in-between. The new gravity equation contains four elements:

- 1) The tiny quantum,  $h$
- 2) The minute deBroglie wavelength associated with the proton
- 3) The miniscule time it takes light to travel that distance
- 4) A variable - - a coefficient for  $h$  - - that's actually composite "quantum Newton"!

We then demonstrate that this new equation magically reproduces, exactly, Newton's classical gravity results! We begin to realize that the quantum,  $h$ , lies hidden in EVERY classical equation - - gravity, electromagnetism, etc. Therefore, classical physics becomes fully quantized too, uniting for the first time the very

large - - classical physics, including gravity - - with the very small - - quantum physics - - into one essentially indivisible whole.

We conclude by seeing that spacetime is the universe's prime mover. Though invisible, it is physically real and powerful enough to create all the matter and all the gravity in the entire universe. What's thought of as the geometric backdrop for matter is really the creator of it as well. Matter affects (warps) spacetime causatively in the forwards time-direction in Einstein's General Relativity. And spacetime affects (creates) matter in the backwards time-direction equally significantly. Thus, a completely new window to understanding matter and gravity is opened up to us.

But the outstanding feature of all this is backwards time - - a healing backwards time. Does the omnipresent existence of backwards time hold out any hope that we can get younger as we age? We strongly believe that such is the case, both quantumly and at the human, macro level. Older and younger simultaneously IS very quantum-like, after all. Could they somehow be EQUIVALENT? Again, we strongly believe that the answer is in the affirmative, and is mathematically provable!

I encourage readers to respond in the Disqus comment section on the Abstract page. Or contact me personally at [spgrwin@outlook.com](mailto:spgrwin@outlook.com). I will reply to all. My next article, to be published in March or April, intends to remove quantum contradictions by proving that supposed opposites are really identical.

## KEYWORDS

Advanced solution: a backwards-time solution

Backwards time: time running in reverse, from present to past; future to present; or future to past. This can be continuously, or discontinuously - - i.e., JUMPING to a much earlier time.

c: the speed of light

Classical physics: the science and mathematics of relatively large entities - - e.g., apples, people and planets. It also includes electromagnetism (See Entry.)

Coefficient: the number (amount) of something, e.g., for 5 quanta (5h), the number "5". A coefficient needn't be a whole number, but it is, or should be, a positive number.

deBroglie wavelength: the wavelength associated with every particle, according to Prince Louis deBroglie, famous 20th-century theoretical quantum physicist. Whether or not this deBroglie wavelength is physically real or not is a matter of some dispute, but the consensus leans toward the negative.

Electromagnetism: the classical science of visible light and of invisible rays such as X-rays, infrared rays and ultraviolet rays. Electromagnetism has a quantum counterpart.

General Relativity: Einstein's theory of gravity (See the Entry for Gravity.) Its two essential ideas are:

- 1) Gravity is acceleration, not a force.
- 2) Gravity is matter warping (curving) spacetime, rather than "spooky action at a distance" - - one piece of matter affecting another without touching it.

Gravity: for Newton, the attractive force between any two pieces of matter. For Einstein, it's the warping (curving) of spacetime, caused by the presence of matter.

h: the quantum of action, also known as Planck's constant. It is absolutely central to all of quantum physics.

Newton's equation for universal gravity: the product of the two masses involved, divided by the square of the distance between them, multiplied by the strength of gravity.

Non-locality: the proven fact that our world is supported by an invisible reality which links all points in space, making extremely large distances seem "on top of each other" - - i.e., very small. This means that SOME form of communication faster than light-speed exists, implying that backwards time exists for our whole universe. Non-locality does not diminish with distance.

Postulate: an assumption, at least initially unproven. Our theory contains just four - - all eventually proven true.

Quantized: measured in quanta - - i.e., in units of  $h$  (See Entry for  $h$ .) - - measured discontinuously, in little “chunks” or “packets”.

Quantum gravity: the as-yet unaccomplished union of Einstein’s theory of gravity - - General Relativity - - and quantum mechanics. We firmly believe that our theory takes a huge first step in this direction.

Quantum mechanics: that area of quantum physics which deals with the motion of extremely small subatomic particles.

Quantum physics: the science and mathematics of very small subatomic particles - - e.g., protons, electrons, neutrons and neutrinos - - and their antiparticles.

Schrodinger’s wave equation: the quantum mechanics equation that many physicists consider to be the only physical reality in the universe. Some physicists even believe that THIS is not physically real either.

Superluminal: faster than light-speed.

Unitless: a “pure” number - - e.g., 20.5 - - as opposed to 20.5 CENTIMETERS, in units

Universal G: the strength of gravity - - a universal constant

Variable: an entity with two or more possible values, as opposed to a constant which has one value. Variables are heavily used in algebra.

THE QUANTUM AS BACKWARDS TIME, AND HOW THIS PERMITS A FIRST-EVER  
WORKING ALGEBRAIC QUANTUM GRAVITY

By Jonathan Deutsch

B.A. Columbia College 1970

Magna cum laude, Phi Beta Kappa

Three original, DECEPTIVELY simple protonic postulates are required. A proton is the nucleus of the hydrogen atom, atomic number "1". And hydrogen is by far the most common element in the universe, making protons extremely fundamental indeed. We will use, consecutively, +1, -1, and  $i$ , the square root of -1, in a unique way.

- 1)  $\lambda_{\text{proton}}$  - - the tiny deBroglie wavelength associated with the proton - -  $1.32141 \times 10^{-13}$  centimeters (cm) - - is really equal to exactly -1! This provides us with a unitless negative value for a centimeter, and thus, a unitless negative value for all distance or space.  $\text{cm} = -.7567674 \times 10^{13} (= 7.567674 \times 10^{13} \lambda_{\text{protons}})$ .
- 2)  $m_{\text{proton}}$  - - the minute mass of the proton - -  $1.6726216 \times 10^{-24}$  grams (gm) - - is equal to exactly +1. This provides us with a unitless positive value for a gram, and thus a unitless positive value for all mass.  $\text{gm} = 5.9786385 \times 10^{23} (= 5.9786385 \times 10^{23} m_{\text{protons}})$ .
- 3)  $t_{\text{proton}}$  - - the infinitesimal time for light to travel  $\lambda_{\text{proton}}$  at velocity  $c$  - - known to equal  $\lambda_{\text{proton}}/c = 4.4077492 \times 10^{-24}$  seconds (sec) - - is really equal to  $i = \sqrt{-1}$ . This gives us a unitless value to a second, and thus, a unitless value for all of time.  $\text{sec} = 2.2687316 \times 10^{23} (\sqrt{-1}) (= 2.2687316 \times 10^{23} t_{\text{protons}})$ . Real time = imaginary time! In short, we have a brand new way of measuring, and thus of perceiving, reality - - distance, mass and time. This approach will be fully justified in Part II.

I. WHAT IS THE QUANTUM,  $h$ ?

Our postulates supply an enticing answer.  $h$  is known to equal  $mc\lambda$  for all  $m$  and associated  $\lambda$ . For the proton,  $h = (m_{\text{proton}}) (c) (\lambda_{\text{proton}})$  - - easily confirmed. Therefore,  $h = (1) (c) (-1) = -c$ . But  $c = \lambda_{\text{proton}} / t_{\text{proton}} = -1 / \sqrt{-1} = \sqrt{-1} = t_{\text{proton}}$ . Time is thus finally demystified. It is felt to be some sort of SPEED intuitively; and, since Einstein (1907), it is also known to be intimately related to the speed of LIGHT. But the new physics and math

says that we can COMBINE these two facts, and declare that time IS the speed of light, pure and simple!! Moreover,  $-c = -t_{\text{proton}}$ , implying that  $h = -t_{\text{proton}}$ . What does this new equation mean? THE QUANTUM IS REALLY BACKWARDS TIME!  $h$  is, of course, a universal constant, so  $-t_{\text{proton}}$  must be one too. Backwards time is strongly inferred to exist from the superluminal speeds implied by the universe's non-locality. These superluminal speeds are not, of course, generated by accelerating subluminal matter; that would violate special relativity. Rather, these vastly superluminal speeds are superluminal by their very nature. Therefore, vast amounts of backward time must exist in the universe. Very, very recent experiments (November, 2017), performed in Europe, confirm the existence of backwards time in certain quantum situations. But nature makes absolutely no distinction at all between the quantum and the classical realms, so backwards time is real for us too!

Backwards time is as omnipresent and omnipotent as the quantum is. Feynman's "Nobody really understands quantum mechanics" is true only because nobody really understands backwards time. Eggs DO spontaneously unsplatter. We don't ever observe this ONLY because backwards time "ticks" far, far too quickly for current human observation. (We don't see dark matter, yet we're pretty sure it exists.) If one COULD slow down time, we would DEFINITELY see eggs spontaneously unsplatter! But one CANNOT murder one's parents before one is born, even in backwards time. In poetic English, eggs spontaneously "heal", all the time. Backwards time is in fact the universe's power of all genuine healing and being healed. This includes total PHYSICAL healing from all so-called incurable diseases and conditions. All curing, all RECOVERY. Think about what the word "recovery" means: GETTING BACK something healthier that one had IN THE PAST! The quantum and thus backwards time is really something extremely positive. It seems that very few physicists see things this way. The quantum is usually associated with "unrest" and "turbulence".

## II. AN ALGEBRAIC QUANTUM GRAVITY

To remove any remaining doubt that  $h$  really  $= -t_{\text{proton}}$ , we will utilize this new equation to generate quantum gravity, for the first time. It is, like general relativity, equivalent to Newton's  $F=Gm_1m_2/r^2$  in every way, but far more explanatory. Example:  $m_1 = 9.8 \times 10^{23}$  gm;  $m_2 = 7.6 \times 10^{25}$  gm; and  $r = 5.4 \times 10^{13}$

cm. Universal  $G = 6.6728674 \times 10^{-8} \text{ cm}^3 / \text{gmsec}^2$ . Gravity here can easily be calculated via  $Gm_1m_2/r^2$  to equal  $1.7043729 \times 10^{15} \text{ gmcm}/\text{sec}^2$  (= dynes).

Now our three postulates come into play. Universal  $G$  (quantized) can thereby now be calculated as exactly  $.9397905 \times 10^{-39}$  unitlessly. This is firmly in line with experiment - -  $10^{-39}$  relative to the strength of the nuclear force, which is approximately  $1 \times 10^0$ .  $F_{\text{gravity}}$  in its entirety can therefore be calculated unitlessly, as a positive number we'll call  $b$  ( $b$  is a variable.) Here,  $b$  is calculated to be  $1.4981766 \times 10^5$  Now:

$$\begin{aligned}
 &= 1.4981766 \times 10^5 = 1.4981766 \times 10^5 (1) \\
 &= 1.4981766 \times 10^5 (-t_{\text{proton}}) (1/-t_{\text{proton}}) \\
 &= 1.4981766 \times 10^5 (h) (1/-t_{\text{proton}}) (-t_{\text{proton}}!!) \\
 &= 1.4981766 \times 10^5 (h) [1/[(\lambda_{\text{proton}}) (t_{\text{proton}})]] \\
 &= 1.4981766 \times 10^5 (h) /[(\lambda_{\text{proton}}) (t_{\text{proton}})] \\
 &\quad (h = 6.626069 \times 10^{-27} \text{ gmcm}^2/\text{sec})
 \end{aligned}$$

Calculating carefully, we indeed do find that  $bh/\lambda_{\text{proton}}t_{\text{proton}}$  MAGICALLY, SHOCKINGLY (and 100% non-circularly) equals exactly  $1.7043724 \times 10^{15} \text{ gmcm}/\text{sec}^2$  - - Newton's result! Einstein would not object (except to the indeterminacy of  $h!$ ). This immensely satisfying result justifies our entire approach, and guarantees that  $h$  does equal  $-t_{\text{proton}}$ . And this will clearly work for ALL  $m_1$ , ALL  $m_2$  and ALL  $r$  - - i.e., for ALL  $b$ . Universal gravity - - quantum gravity - - is therefore A RATE (as well as an acceleration) - - in every case, a number ( $b$ ) of quanta ( $h$ 's) per backwards time unit ( $-t_{\text{proton}}$ ). This is due to  $(\lambda_{\text{proton}}) (t_{\text{proton}}) = (-1) (t_{\text{proton}}) = -t_{\text{proton}}$ . Quantum gravity is  $bh/\lambda t$  in dynes, and  $bh/-t$  in "ergs"! So gravity - - quantum gravity - - is anti-energy,  $-E (= -mc^2)$  - - energy INWARD, not outward.

CONCLUSION 1: One simply can't do quantum gravity without backwards time, so backwards time has meaning in the real world.

CONCLUSION 2: Quantum gravity with backwards time also works between two protons, for example - - strict QUANTUM gravity.

CONCLUSION 3: The quantum,  $h$ , exists, hidden, in classical gravity - - as a matter of fact, hidden in EVERY classical equation.

CONCLUSION 4: PLANETARY gravity is seen as caused by three tiny QUANTUM entities.

#### NOTE 1

The indeterminacy of  $\hbar$  is the primary reason why  $-t_{\text{proton}}$ , backwards time, is not understood; and backwards time not being understood is in its own right the ONLY reason why quantum physics seems incomprehensible. Two separate but related truths, only APPARENTLY circular.

#### NOTE 2

Higher mathematics is not required here at this most fundamental level.

#### NOTE 3

As is known, Einstein's general relativity incorporates Newton's gravity equation, so our work is compatible with Einstein's theory too.

#### NOTE 4

Our work is meant to inspire other thinkers and experimentalists to explore gravity, matter and backwards time further.

#### EPILOGUE

The resulting first-ever universal union of the very small and the very large is this: Incredibly TINY bits of QUANTIZED backwards SPACETIME are physically real and powerful enough to CREATE ALL the ENORMOUS planetary (and tiny quantum) GRAVITY and ALL the visible MATTER in the entire universe. We believe we can prove this. Einstein stated that matter affects (warps, or curves) spacetime; we believe that, in ADDITION to this, spacetime affects (creates) matter, in the backwards-time direction to Einstein's forwards-time General Relativity.

The QUANTUM,  $\hbar$  - - as backwards time and as  $\hbar$  - - exists, hidden, in EVERY CLASSICAL equation! Therefore, classical physics is fully quantized too! Spacetime is the universe's prime mover; our macroscopic classical world - - the world of you and I - - is entirely quantum, and always has been - - long before quantum physics was even conceived of.

In short, we strongly believe that as we age, we can and do get younger! The two are equivalent, identical events. As we get sick, we can and do fully RECOVER! Also identical events. Exciting, real and mathematically provable!! Aging (in the



negative sense), decay, sickness and especially death are ALL illusions, just as much as the belief that our world contains only forwards time. The absolute truth is all good, always.

Again, I encourage all readers to contact me personally with comments or questions at [spqrwin@outlook.com](mailto:spqrwin@outlook.com). I will definitely respond to everyone fairly and honestly.