

**AN
ETERNITY
OF
TOMORROWS**

**Everlasting
Life**

**and
Quantum Theory**

by Chongo in collaboration with José

**“Infinite reality is once
and only once.
Finite reality is endless.”**

**AN
ETERNITY
OF
TOMORROWS**

by Chongo in collaboration with José

**Everlasting
Life
and
Quantum Theory**

This work is dedicated to the memory of a courageous and determined athlete, an undisputed world-class champion, the man who taught me the correct way to physically train walking upon nylon, as well as always my loyal friend, Dean Potter.

To observe forever means running out of things to observe with a whole eternity left of observing, and without any hope at all – absolutely none – for observing anything new or different ever again, or for even imagining such a thing, either; simply an endless perpetuation of unceasing monotony, from which, for all our want, there would be no escape, nor ever the hope for any again; except that – most fortunate for us – nature is wholly incapable, of being so unkind to its own.

– Opening quote, Chapter Six, of *No Accident, How Quantum Theory Disproves Randomness*

COMPLETION DATE: April 2018

REGISTERED: United States of America
Library of Congress. Copyright pending.

SOURCE OF CONTENT: *NO ACCIDENT, How Quantum
Theory Disproves Randomness*, Chapter Six

EDITOR: Cybelle Blood

TECHNICAL ADVISOR: Lee Parks

INQUIRIES: www.chongonation.org

**Copyright © 2018, Charles Victor Tucker III (Chongo)
All rights reserved.**

No text whatsoever, in whole or in
part, may be copied or reproduced.

**AN ETERNITY OF
TOMMORROWS**

by Chongo in collaboration with José

**Everlasting
Life
and
Quantum Theory**

April 2018

Copyright © 2018, Charles Victor Tucker III (Chongo)
All rights reserved.

No text, in whole or in part, may be copied or reproduced in any way.

CONTENTS

I. PHYSICAL CHARACTER OF LIFE . . .	1
II. THE PHYSICAL EFFECT OF THE OBSERVER, OBSERVING . . .	5
III. WAVE COLLAPSE IS . . .	9
IV. OBSERVATION IS . . .	11
V. INFINITY AND THE MANGO TREE . . .	13
VI. SCOPE OF PERCEPTION . . .	15
VII. THE INSURMOUNTABLE LIMIT: PLANCK'S CONSTANT . . .	20
VIII. THE SUBSTANCE OF AWARENESS: OBSERVATION . . .	22
IX. THE COMPLEXITY THAT IS LIFE . . .	25
X. THE PHYSICAL NEXUS OF AWARENESS: BEING ALIVE . . .	27
XI. A CIRCUIT THAT LEARNED HOW TO IMPROVE, AND IMPROVING, THEN NEXT LEARNED HOW TO THINK: CONSCIOUSNESS . . .	33
XII. THE TREASURE THAT IS FINITENESS . . .	36
XIII. CHANGE: THE PERMANENCE OF IMPERMANENCE . . .	39
XIV. ORDERING REALITY: THE INESCAPABLE MARCH OF TIME . . .	41
XV. THE CREATIVE DESIGNS OF RANDOMNESS, LIKE LIFE, AND ALL THAT LIFE MAKES . . .	44
XVI. PATTERNS AMIDST CHAOS: BECAUSE THERE IS NOWHERE ELSE AND THERE IS NOTHING ELSE . . .	47
EPILOGUE . . .	49
APPENDIX A – THE TWO-SLOT EXPERIMENT . . .	53
APPENDIX B – ASSUMING OTHER AWARENESS: COPENHAGEN INTERPRETATION (A SINGLE UNIVERSE ALONE, HAPPENING ONLY A SOLITARY ONCE, FOR ETERNITY) . . .	65
GLOSSARY . . .	71

“Representing eternity is not imagining it.”

–Unknown

I. *PHYSICAL* CHARACTER OF LIFE

The Theory of Quantum Mechanics defines observation as an actual element affecting physical phenomena. The presence or absence of a scientist observing an experiment changes its outcome, in a precisely predictable, yet nonetheless inexact manner. The results of the experiment vary, according to the "way" that an experiment happens to be observed – different ways yielding unique and distinctly different outcomes. This is readily and easily* demonstrated by the well-known physics experiment, named the 'two-slot' experiment of quantum mechanics (see Appendix A, on page 53, which describes this experiment and its meaning in detail).

In the two-slot experiment, when we look at two slots, together, as a whole, we see one thing: bands of light and dark, reflecting a wave-interference pattern between the slots (see the illustration at the top of page 54). However, when we

* - This experiment is 'easily' demonstrated because so demonstrating requires nothing more than a laser laser pointer, several pencil leads, and a suitable surface upon which to project the resultant beam for viewing the pattern that is the output of sending the beam between adjacent pencil leads to re-create this very experiment for their selves. (Please note that distances matter for proper results.)

Everlasting Life and Quantum Theory

look at just one of these slots alone (individually), we see something completely different: a single beam through each slot, no wave interference whatsoever between the slots, and so, no bands, but instead, two distinct, individual beams, each corresponding to a slot through which part of the initial beam passes. In other words, when we observe something in one, particular way, one thing happens. Yet, when we observe exactly the same thing, but observe it in what is a different way, something *else* different happens instead, something *physically distinct*, altogether, all as a consequence of no more than changing *how* we observe, and of changing nothing else whatsoever except that (because nothing else whatsoever varies except the manner of *how* we observe the same, exact experimental phenomenon). Everything in the experiment is otherwise absolutely identical in every way, except again, for the single distinction of *how*, a living organism, like our selves (scientists), observes. No other, different, distinction at all exists, only the one: a living observer, observing one thing, or a living observer observing something else (a different thing), or a living observer not observing, anything (albeit by intentional design).

Most amazingly, *two wholly distinct outcomes from the experiment result, depending upon nothing else at all other than what is “knowable” to* (detectable by), and likewise what is *not* knowable to (again, *not* detectable by), a living organism as an observed outcome. Moreover, it shows how “one,” “single” thing can and must be in “many” distinct places together, at once, incredibly, *apparently all purely to the end of rendering information to a living organism as an observer, all for the sake of itself (that is, the patterns that are the organism), along with everything else, physically existing!*

Quantum theory calls this ‘rendering of information’ to a living observer, the ‘collapse of the wave function’. It is so named as a consequence of long established,

AN ETERNITY OF TOMORROWS

historically traditional, standard convention and, of course, under the long established, historically traditional, standard presumption of a single, isolated universe alone being all that exists, and therefore, our uniquely ‘real’ universe having no connection in any physical way to any other universe anywhere else or to anything else outside; all this, again under the long established, historically traditional, foundational notion that nothing physically real exists outside of our universe, hence no outside itself exists.

Among all of the amazing phenomena in our universe, the two-slot experiment (again, Appendix A, page 53) is unquestionably perhaps the most remarkable that there is, because it is the most clear and concrete scientific proof that exists of how “one” thing can be in two, indeed at many places together (an infinity of places together, to be exact), at precisely the same moment in time. More than that, it shows not only how “one” thing can be in many places together, but that one, single thing **MUST** be in many places together, at once, if, for no other reason (as no other seems manifest), *for the apparent sake of life existing in the universe!* It is a fact that, again, can be readily demonstrated, either in a laboratory, a science classroom – or, most notably, outside of either (i.e. anywhere), as well.*

Observed, a multiplicity of *coexistent* potentially possible realities (the details of which will be subsequently explained) ‘collapse’ into (what is effectively) a “single” actual one. Unobserved, this coexistence (correctly termed “superimposition” by quantum physics) of possibilities prevails and there is no collapse, no actual reality, but in place of it, a ‘virtual’ one, exclusively, instead. Real reality is “made” (consists) of both realities (both universes, the actual and the virtual), together, creating our seemingly singular world from a seemingly infinite multiplicity of other worlds,

* - See footnote at the bottom of page 1.

Everlasting Life and Quantum Theory

operating together, collectively, yet yielding only a seemingly single, individual, actual world, based upon a seemingly infinite collection of distinctly individual virtual ones.

Thus, according to the two-slot experiment (Appendix A) *how* something is observed determines in what way the wave function collapses. Most importantly, by simply 'being' observed, the universe operates in a *completely different* way, from how it works when it *is not* being observed. *Observation physically affects reality*, and does so *in a predictable manner*, yet not a precisely exact one, since how accurately its effects upon reality can be predicted cannot be reduced to more than a distribution (a set, a collection) of probable, and improbable, outcomes, and can NEVER be reduced to any fewer – that no physical manipulation whatsoever can ever yield fewer than a distribution of probable outcomes. Furthermore, we can only 'assume' awareness beyond our own individual, personal awareness, because we can never experience the awareness of another, first hand, which is what it would take to do more than assume. So assuming, and assuming further that the universe has no preference whatsoever for the species or the occupation of the observer (in the absence of any reason for so assuming), we can assume that an observer need not be a scientist or be human, and that *any* observer at all, again, regardless of profession or species, affects physical reality by observing the universe, or, as quantum mechanics calls it, by collapsing the wave function, just as any other observer does, again, regardless of *what* they are – except, *apparently* (that is, under the presumption that our single universe is *everything*), **whether they are alive, or instead, are not alive.**

II. PHYSICAL EFFECT OF THE OBSERVER, OBSERVING

With only two distinct outcomes for the two-slot experiment that was introduced in the preceding chapter, and, as stated in that chapter (and described in detail in Appendix A, page 53), clearly, the wave function does not differentiate between one observer and any other observer; nor does it differentiate between the number of observers, observing, either, as only a solitary observation by a single observer alone is all that is required. According to the two-slot experiment, nature differentiates solely between the *presence* of an observer, observing 'directly', or the *absence* of one ('not directly') observing, and again, as stated in the preceding chapter, according to the single world of the Copenhagen interpretation of quantum theory that was mentioned in the first chapter (see Appendix B, page 65), as a consequence of *absolutely nothing else whatsoever*, except that single, solitary, surprising distinction (element) alone, which is merely *how* we happen to observe, or, if we actually do indeed observe, or instead, actually do not observe, different consequences (outcomes) resulting for each.

So the wave function collapses for *any* observer whatsoever, regardless altogether of who they are (as Appendix B, page 65 explains), and regardless altogether of *what* they are, as well, be they a scientist or not, or, be they human, or not. Apparently, being alive is all that seems to matter for being an observer, and not being alive all that is necessary for not being one, with anything that is alive apparently being capable of collapsing the wave function, and anything that is not alive, being apparently incapable. Predictably, experiments testing quantum theory demon-

Everlasting Life and Quantum Theory

strate that when there is an observer, observing, the wave function collapses at the slots, thus yielding one particular outcome in the experiment, corresponding to a single, actual, definite, determinate history, among many other distinct histories that could have been instead, which, of course, corresponds also to the rendering of what is always *limited** information; and that when there is no observer, observing the slots, the wave function collapses at the screen instead, and thus yields a distinctly different experimental outcome, from that which the experiment yields when it *is* observed (bands of light, or distinct beams). For the latter, reality never does collapse into a single, actual, definite, determinate history, but instead, exists only virtually, as a set of many coexistent potentially possible realities, operating together, collectively, and in the process, yielding our very real, and seemingly individually singular and solitary, actual reality, instead of a simple, singular classical actuality, operating wholly alone.

Additionally, no differentiation is made with respect to the observer's displacement in time, space, or events, from the observation, as well, because the wave function collapses for our *indirect* observations just as much as it does for our direct ones. The wave function collapses, regardless. This means that a scientist (or whoever it might be that is observing) need not be at the detector at the very moment of detection. Removal in time, space, and events, from the 'direct' observation, just as the experimenting scientist observing the two-slot experiment 'indirectly' by means of viewing the output of the experiment by seeing what was recorded on the detecting screen usually is, means that the *existential* extent of the removal makes no difference, either. What this means is that the results of the experiment can be recorded, the recordings sent to what is possibly an 'unknowing', 'unaware' observer, thousands or even millions of miles away, who can wait years (to be born, if

AN ETERNITY OF TOMORROWS

necessary, and then wait still many years more) to finally examine the results of the experiment (implying that no temporal limit seems to exist), and have no one else ever 'know' the results or have anyone else even know that an experiment was ever conducted, yet the wave function will always collapse appropriately, according to the information ultimately rendered to an observer. Taking this one step further, *life need not even exist in the universe 'yet'* (with respect to our stipulated 'now'), either, meaning that the wave function collapses leading to life, and hence, ultimately leading to observation, if nowhere else but here on Earth alone, occurred, because these wave collapses, these events leading to life, ultimately *would*, with absolute certainty, do so, or they *would not* be actual events in the first place. In plain terms, according to quantum theory, without life, observing nature, there is simply no such thing as physical reality; there is, at best, instead, not even the future *possibility* for physical existence, because if there were, then it would already be in place, along with wave collapses defining this actual reality.

Removal in time, space, and number of events, from the direct observation, just as the experimenting scientist observing the two-slot experiment 'indirectly' by means of viewing what was recorded on the detecting screen as an outcome is, means that the *existential* extent of the removal makes no difference, either. What this means is that the results of the experiment can be recorded, the recordings sent to what is possibly a fully 'unknowing', 'unaware' observer, thousands or even millions of miles away, who can wait years (to be born, if necessary, and then wait still many years more) to finally examine the results of the experiment (implying that no temporal limit seems to exist), and have no one else ever 'know' the results or have no one else even know that an experiment was ever conducted, yet the wave func-

tion will always collapse appropriately, according to the information that is ultimately rendered to an observer.

Taking this one step further, *life need not even exist in the universe 'yet'* (with respect to our stipulated 'now'), either, meaning that the wave function collapses leading to life's emergence on planet Earth, and hence, ultimately leading to actual life capable of observing, if nowhere else but here on Earth alone, occurred, because these wave function collapses, these events leading to life, ultimately *would*, with absolute certainty, do so, or they *would not* be actual events in the first place. In plain terms, according to quantum theory within the context of our single universe being the full extent of physical existence, without life, observing nature, there is simply no such thing as physical reality; there is, at best, instead, only what would have been the potential possibility for physical reality, but, lifeless, never for its actuality.

Regardless of how the observer may be removed from the initial observation, the wave function still collapses into each of the events in the *sequence* that ultimately leads to a living observer, though that sequence is 'actualized' upon rendering the 'real' information, as energy, to the organism. Consistent with the Copenhagen interpretation (again, Appendix B) of our universe being the only, no wave collapse (no real event) ever occurs unless it somehow ultimately leads to a living organism's awareness of it, regardless of how subtle that awareness might be and irrespective of how simple the life form. It need only be alive without it needing to be anything else; and that is all! The universe seems to operate one way in the presence of life observing it, and to operate a completely different way in the absence of life observing it, with each way being clearly unique and distinctive from the other.

HOW TO ORDER

You can read the remaining pages of *AN ETERNITY OF TOMORROWS, Everlasting Life and Quantum Theory* (the bulk of the content) by clicking on the appropriate link at either the chongonation.org home page or at the chongonation.org Library page and ordering a copy for \$14.95 (plus packaging and shipping).

To go directly to the link, you may use the address below and paste it into the address bar to get to the purchase page.

www.chongonation.org/EternityofTomorrows.htm

GLOSSARY

actual – constituting observed reality;

axiom – a fundamental assumption based upon no other assumption or assumptions more fundamental than it;

Bell's Theorem – a mathematical theorem that specifies that there will be a difference between statistically formulated (i.e. classical) outcomes and those outcomes that quantum solutions would yield, creating a means to validate one outcome over the other;

collapse [of the wave function] – also called wave [function] collapse; the rendering of information as a constraint upon the many potential possibilities into a single actual reality;

continuity – a smooth, unbroken, and uninterrupted series of points adjacent in every linearly independent direction; space and time, together, each being inseparable from the other, constitute the space-time continuum;

continuum – the continuity of all space and time locations together, in smooth, continuous proximity, in every spatial and temporal direction, or in any combination thereof;

consciousness – a circuit that learned how to improve (evolve), and by improving, next learned how to think (recursion);

energy – everything lying within space and time that is not space and time; this includes all light (all radiation) and all matter; nature consists solely of energy and gravity (shaping space and time); in terms of energy, space and time are effectively made of light; this light and everything else in the universe, are shaped by space and time, which shapes the distribution of all energy within it (as a consequence of gravity);

ephemeral – of finite duration (all complex living patterns are ephemeral);

evolution [of the wave function] – the development of potential possibilities from an initial set of actualities;

Everlasting Life and Quantum Theory

explanation – the formalization of meaning (noting that meaning and scope of precision for it are based upon structural context);

massive – having the property of mass (manifest as weight and inertia); matter has mass, light (radiation) and gravity do not have mass;

mathematics – a precise, formalized, universal *language*, based upon logic; math is the language of *genuine* science;

matter – energy that has *temporal* extent (mass); light and gravity are momentary and thus have no temporal extent (having only spatial extent);

nature – everything existent;

phase space – a finite dimensional geometry that accommodates and infinite number of trajectories, analogous to infinite-dimensional Hilbert space, which accommodates an infinity of trajectories into a single one;

pattern – repeating series of symmetrical transformations, with transformations being either translations (e.g. projections), rotations, reflections, scalings, or any combination thereof;

photon – a particle of radiation (light)

quantum mechanics/quantum theory – the theory of energy (as opposed to relativity, the theory of space and time: gravity); short for the Theory of Quantum Mechanics;

[quantum] state – in classical terms, an ‘events’ associated with motion;

radiation – any and all forms of light; (the term is also applied to high speed, massive particles of extraterrestrial origin, which, by virtue of being massive are not light);

science – the genuine pursuit of the identification of accurate truth in nature; effectively a synonym to epistemological pursuit;

sentient being – an active physical system capable of sustaining configurations corresponding to pleasure, pain, fear, or sorrow.

space-time – the four-dimensional, inseparable combination of spatial distance and temporal extent in our universe;

temporal – having to do with time; temporal displacements and locations are locations and distances in time, respectively;

AN ETERNITY OF TOMORROWS

theoretical physics – (also called physical theory or the theoretical model) a body of ideas that describes nature more accurately than any body of ideas ever conceived, and which underlies ANY and ALL *genuine* and accurate science; theoretical physics is based upon two foundational scientific theories, relativity, for space and time, and quantum mechanics, for energy (with anything else lying within the realm of statistical mechanics);

[scientific] theory – a body of ideas with demonstrable predictive power, that has never been demonstrated to have ever failed to accurately model reality, and which underlies ALL *genuine* science;;

three-dimensional – having length, width, and height; a spatial volume is an example of a three-dimensional object;

two-dimensional – having length and width; a surface is an example of a two-dimensional object;

uncertainty principle – the inescapability of an absolute limit upon precision;

understanding – a demonstrable isomorphic correspondence between that which happens and that which is imagined to;

virtual – constituting observed reality;

visible universe – the scope (i.e. physical extent) of our unique and individual light cone;

wave function – collection of potential quantum states corresponding to a system;

zero-dimensional – lacking length, width, and height, or any physical extent whatsoever; a point is an example of a zero-dimensional object;

~ The End ~

“Imagine imagining eternity, or better yet, imagine *not* imagining it.” – Eric Ladizinski

OTHER EDUCATIONAL PUBLICATIONS BY CHONGO

...conceptual physics (in collaboration with José)

HOMELESS INTERPRETATION OF QUANTUM MECHANICS, NO MATH (Formerly, *The Infinite Pattern*)

A purely conceptual description of relativity and Quantum Theory

THE INFINITE VOID

Relativity's Space and Time Without Math

Einstein's Theory of Relativity in a purely conceptual description

AN ETERNITY OF TOMORROWS

Life, the Multiverse, and Immortality

TOUCH OF THE OBSERVER

Everlasting Life & Quantum Theory

CLOCKS ON A TRAIN

Experiment Showing How Einstein's Theory of Relativity Disproves the Big Bang as 'Creation'

...religion

HONOUR THY FATHER

Foundations of Monotheism

THE CHRISTIAN STATE

When Religious Law Rules a Nation

...philosophy (series)

THE QUOTABLE CHONGO

Terse expression of fact, folly, and wisdom in a collection of works on topics ranging from quantum theory to how to be "bitchin."

THIS BOOK IS INTENDED TO OFFEND... (multiple topics)

MONKEY IN THE MIRROR

DECISIONS OF NATURE

...outdoor humor & wisdom

COMPLETE BOOK OF BIG WALL CLIMBING

A Book about Wall Partners

The most comprehensive big wall climbing, instruction manual in existence on Earth

LOVE AND HATE AT SEA

...big wall field guides

Big Wall Leading Equipment

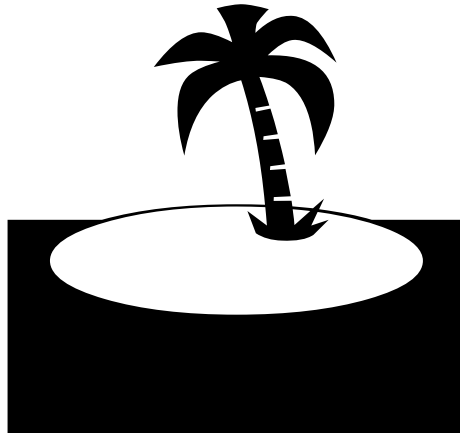
Advanced Big Wall Stations and Hauling

Advanced Big Wall Ropes & Rope Management

Big Wall Racking

\$19.95 (U.S.)

**SCIENCE
TEACHING
LEARNING
PHILOSOPHY
EPISTEMOLOGY
BIG WALL CLIMBING
OUTDOOR ADVENTURE
CONCEPTUAL PHYSICS
HUMOR/SOCIAL COMMENTARY**



visit:

chongonation.org

...because the world needs a real education.

HOW TO ORDER

You can read the remaining pages of *AN ETERNITY OF TOMORROWS, Everlasting Life and Quantum Theory* (the bulk of the content) by clicking on the appropriate link at either the chongonation.org home page or at the chongonation.org Library page and ordering a copy for \$14.95 (plus packaging and shipping).

To go directly to the link, you may use the address below and paste it into the address bar to get to the purchase page.

www.chongonation.org/EternityofTomorrows.htm