A Nutshell Key Perspective on the Neppe-Close “Triadic Dimensional Distinction Vortical Paradigm” (TDVP).

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Erin J Morgart
Jaromír M Červenka
Jason Munn
Kit O’Saoraidhe
Louis Sauter
Marilyn Grimble
Mark van Vuuren
Stanislav Riha
T.G. “Torg” Hadley
Vernon M Neppe

“Even though scientists are involved in this Journal, I and all involved in the IQ Nexus Journal have tried to keep the content (even though it is a Hi IQ Society periodical) on an ordinary human level as much as possible.

In fact, is it not the case, that to be a human being is the most intelligent way of life?"  
Stanislav Riha

Contact us at
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Non-members’ contributions are welcome and every contribution has to be accompanied by an introduction from the contributor.
Dr. Edward Close and Dr. Vernon Neppe were honored (August 2016) with the coveted 2016 Whiting Memorial Award for “expanding boundaries of scientific understanding”. The Whiting Memorial Fund is a philanthropic fund administered by the International Society for Philosophical Enquiry ("ISPE") (thethousand.com) to reward individuals and groups, whose accomplishments and goals exemplify the ideals of ISPE. (http://www.thethousand.com/about/whiting-memorial-award/2016-dr-vernon-neppe-and-dr-edward-close/)

In the background to the cover is the front page of the epic 500 page, 50 chapter classic e-book, Reality Begins with Consciousness: A Paradigm Shift That Works (Fifth Edition). This is authored by Dr Vernon Neppe and Dr Edward Close. It describes in detail their famous metaparadigm shift, the "Triadic Dimensional Distinction Vortical Paradigm" (TDVP) This is available at www.brainvoyage.com
A Nutshell Key Perspective on the Neppe-Close “Triadic Dimensional Distinction Vortical Paradigm” (TDVP).

Special Press Release: Dr Vernon Neppe and Dr Edward Close win prestigious ISPE international prize: The Whiting Memorial Award for 2016.

THE THEORY OF EVERYTHING HAS NINE DIMENSIONS
By Erin J Morgart; “USA Today Magazine”

A data analysis preliminarily validates the new hypothesis that the ratio of dark matter and dark energy to gimmel and TRUE units (Triadic Rotational Units of Equivalence) is ‘contained’ in the atom: Dark matter correlates with gimmel in the atomic nucleus and dark energy with gimmel in electrons.

Mark van Vuuren - The chairs murderer

J M Cervenka - Ambivalent face of Iran

Nutritional help to ease Anxiety & Depression part 4.
Interpreted by Stanislav Riha from Fraser Health Authority publication.
**Fine Arts**

**Music:**
- Louis Sauter - Air (short piece for guitar)
- Kit O’Saoraidhe - Fugue on BEADED
- Jason Munn - Village

**Poetry:**
- Tao Te Ching
- T.G. “Torg” Hadley
- Anja Jaenicke

**Stone Wall Gallery of Art:**
- Mark van Vuuren
- Marilyn Grimble
- Jase Munn
- J M Cervenka
- Stan Riha

**Puzzles & Calendar**

- Killersudoku
- Three months calendar
- Products of IIS, ePiq and ISI-S societies
- Appreciation sheepskin
Vernon M Neppe and Edward R Close

A Nutshell Key Perspective on the Neppe-Close “Triadic Dimensional Distinction Vortical Paradigm” (TDVP).

A data analysis preliminarily validates the new hypothesis that the ratio of dark matter and dark energy to gimmel and TRUE units (Triadic Rotational Units of Equivalence) is ‘contained’ in the atom: Dark matter correlates with gimmel in the atomic nucleus and dark energy with gimmel in electrons.

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Stanislav Riha
Nutrition Against Anxiety and Depression
A Nutshell Key Perspective on the Neppe-Close “Triadic Dimensional Distinction Vortical Paradigm” (TDVP).

Vernon M Neppe MD, PhD, FRSSAf and Edward R Close PhD, PE

Citation: Neppe VM, Close ER A Nutshell Key Perspective on the Neppe-Close “Triadic Dimensional Distinction Vortical Paradigm” (TDVP). IQ Nexus Journal 8:3 7-79, 2016

Drs. Neppe and Close win prestigious international prize.

Dr. Edward Close and Dr. Vernon Neppe were honored on 9 August 2016 with the 2016 Whiting Memorial Award for “expanding boundaries of scientific understanding”. The Whiting Memorial Fund is a philanthropic fund administered by the International Society for Philosophical Enquiry (“ISPE”) (thethousand.com) to reward individuals and groups, whose accomplishments and goals exemplify the ideals of ISPE. This international award is open to everyone, and is given to a person/persons or organization (outside or within ISPE) who typifies the I.S.P.E. ideal of “someone who strives to benefit society in general through advanced enquiry, original research and/or creative contributions, and who has demonstrated significant progress in these endeavors”. The award may be conferred yearly but historically has been seldom awarded, because it is only conferred when the committee unanimously chooses a worthy nominee. ISPE’s only mission is “to attract the world's most intellectually gifted individuals and hopefully direct their achievements for the betterment of all humankind.” ISPE advances no political, governmental, religious, race, gender, ethnic, activist or academic agenda. Dr. Neppe and Dr. Close are already “Diplomates of

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a Vernon M. Neppe MD, PhD, Fellow Royal Society (SAf), and Edward R. Close PhD, PE: Pacific Neuropsychiatric Institute, Seattle (pni.org) (Neppe: Director; Close: Research Associate); and Exceptional Creative Achievement Organization (ECAO) (Neppe: Distinguished Professor and Executive Director; Close, Distinguished Senior Fellow).

b Acknowledgments: We gratefully acknowledge the ECAO for publishing permission. © Thank you for the editorial assistance particularly of Jacqueline Slade. Thanks to Susan Wilson, Erin Morgart, Laura Jackson, Stanislav Riha and anonymous referees. Neppe V, Close E. Nutshell on TDVP. IQNJ 8:3, 7-79 September 2016. V10.36
What is special about the reasoning behind this Whiting Prize award?

1. First, Dr Vernor Neppe and Dr Edward Close developed a new scientific model, the “Triadic Dimensional Distinction Vortical Paradigm” (TDVP). What’s its relevance? TDVP has universally applicable groundbreaking implications being multidisciplinary, especially impacting specialists in the sub-disciplines of mathematics, quantum physics, cosmology, systems theory, biology, consciousness research, psychology, philosophy, phenomenology and philosophy of science.

2. The fundamental TDVP axiom is that not only are there substrates of Space and Time, but there is also a third substrate, the extent of Consciousness. All three are separate and yet tethered together like an arm to a shoulder, never to be completely separated. TDVP changes the fundamental basis of reality: Why’s this important? Because before scientists spoke about Space-Time. Now they can talk about Space-Time-Consciousness, a dramatic paradigm shift.

3. Not satisfied with these findings, these scientists then mathematically proved (they did not just hypothesize or theorize) that our finite reality consists specifically of 9 spinning dimensions (9-D) (not any other low number). Why is 9-D important? Because, before we had thought that we could explain everything in our experience applying 3 dimensions of Space in a moment in time (“3S-1t”). Close and Neppe showed that 3S-1t was insufficient to describe some of the more subtle rules of physics. Nevertheless, our 3S-1t experience of living is not negated, it’s just there’s much more to our existence, including these added dimensions.

4. Fourth, Drs. Neppe and Close proposed that these 9 spinning dimensions are quantized —they consist of whole three-dimensional pieces —and have volume. These are contained (‘embedded’) in an infinite reality that is continuous and extends forever. Why is that important? This means that we all exist in a single unit. Furthermore, the so-called ‘spiritual’ can impact on our experience all the time, and with feedback both ways, we can change and modify our free-will. Everything is part of each other. Science finally is not an enemy of the mystical but a unified with spirituality.

5. But does TDVP fundamentally change reality? Yes, it constitutes possibly the most important paradigm shift of this century, because it is so far-reaching: Now, not only is there a measurable extent of Space, Time and Consciousness (STC), but Close and Neppe have maintained that this STC only has meaning when the ‘container’, a mathematically demonstrated third substance (called ‘gimmel’) comes into play. The presence of gimmel ultimately unifies, for the first time ever, quantum, macroscopic and cosmological reality: There is now just one set of rules. Gimmel is the container—the receptacle—of consciousness, and because gimmel is necessarily quantized and volumetric, the

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*Gimmel (also ‘gimel’) ג is the mystical third letter of the Hebrew alphabet. Mystically, it means appropriately a ‘linkage’, ‘bridge’, and ‘nourish’. Daled (also ‘dalet’) ד is the fourth Hebrew letter and mystically means ‘door’, ‘lift up’, and ‘charitable’.

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mathematics produces dramatic results: *Gimmel is astonishingly important for multiple reasons!*

a. They have mathematically proven that even *dark matter and dark energy* is linked with gimmel: Neppe and Close argue gimmel is in part or completely consciousness. Imagine an age-old problem of *cosmology* being linked with consciousness!

b. Close and Neppe even have introduced a math *equation for consciousness*. This is the first ever such equation.

c. Additionally, the two scientists have demonstrated mathematically that the atom as we know it, with protons, electrons and neutrons but no gimmel, simply cannot exist as atoms would then just fly apart. This means that they have refuted the idea of *materialism* at the level of an atom. The only way the atom could be stable is for its fundamental particles have to have that third substance (gimmel)—they need extra for the mathematics to balance.

d. The correlation of the Life Elements in the Periodic Table of the Elements has confirmed expectations in biology: We would expect *the elements of life* to be Oxygen, Carbon, Nitrogen, Sulfur, Calcium, and Magnesium. But strangely Silicon is also one. All these Life Elements are in union with more gimmel than the other reactive elements and in exactly the same proportion! Even more so, the most abundant element in the cosmos, Hydrogen (H1), is in union with the most gimmel consciousness: This is likely because H1 replaces its absent neutron with more ‘gimmel’ equivalent. Next, not surprisingly, comes water, which has more gimmel than any other compound! And phosphorus is not a symmetric element of life: Instead, it is asymmetric, allowing for energy exchanges in the life elements. The abundant noble gases Helium and Neon have the same amount of gimmel as the life elements, but they are not life elements because they’re inert and non-reactive because of their complete electron shells.

e. Moreover, remarkably, Murray Gell-Mann won the Nobel Prize, mainly because he discovered the subatomic particles called *Gluons*, regarded as the ‘glue’ for quarks. Neppe and Close have shown that the gluon concept that influences the tiny particles in the nucleus and protons is likely to be wrong. Instead, this effect is due to gimmel, which, by contrast, markedly impacts the electrons and also rotates through the 9 dimensions.

f. Moreover, the presence of this container, Gimmel, which almost by exclusion reflects at least in part a broader ‘consciousness’, allows for an appreciation of something that is debated but which Close and Neppe—and even apparently Einstein in his later years—regard as correct: *Mathematics is not just for calculation, it reflects part of our fundamental reality.*

6. *What about now? What is the current thinking?* After seven years, even the fundamental axioms of TDVP appear to work: Space-Time-Consciousness (extent) have always been tethered together, and the infinite is a central and necessary aspect to our whole, unitary dynamic reality that constitutes TDVP. And from this many different applications and models have evolved.
7. *Is there a role for TDVP beyond Science?* Yes, there is. TDVP and its many tentacles are applicable not only in *Science*, but even in *Philosophy*. Indeed, Neppe and Close have developed a new model called “*Unified Monism*” (UM). This is apparently the first philosophical model based on Science initially. Additionally, UM might be the only versatile ‘mind-body model’: It can work in our real world of 3S-1t experience; in ‘altered states of consciousness’ which is hypothesized to reflect some of these higher dimensions; and, it’s applicable even in alleged survival after bodily death. Each explanation appears to reflect a different level. This means that Unified Monism can incorporate several of the other philosophical models that might be applicable but only relative to a specific standpoint: Idealism, in which nothing else besides mind exists may be pertinent in the context of the infinite alone; and TDVP avoids the problem of the absence of a need to locate where the Descartes Dualistic mind and body interact (because they’re part of the same all-encompassing unit); and Spinoza’s deity in his Pantheism can be incorporated into UM, but UM ‘impacts’ occur not only from a possible divinity, but from other consciousness, plus mass and energy; and the final versatile aspect of UM, is that it still is able to relate to our simple practical 3S-1t world of physical overt experience (but in TDVP, and UM, we recognizing the ostensible materialism is simply part of our existence, and much of this is covert at higher dimensional levels and intruding through the influence of the infinite.

These findings, obviously, make TDVP groundbreaking and a revolution because of its multiple paradigms in different disciplines. Because it is so broad ranging, already at least three different scientists who’ve studied the Neppe-Close work are mentioning a Nobel Prize. One has even verbalized *more than one* Nobel, because several of the findings above independently are worthy of this prize.

Moreover, there are already numerous practical applications in the physical, consciousness and life sciences. There are also hundreds of other testable hypotheses, which should keep scientists busy for centuries. TDVP is a model that has never been refuted. Instead, it has grown enormously over the years, supporting more and more testable proofs and scientific applications.

As Dr Neppe explains: “*Some of our work is definitive because it can be mathematically proven like the 9 dimensions, the atom not being stable without gimmel, and the dark matter, dark energy linkage with gimmel. And some is speculative though supported, such as the links with infinity. The properties of infinity cannot be greatly understood, but we postulate the infinite is responsible for the order in reality and, indeed, for life. If that is so, and we think it is, that is huge!*”

And Dr Close added, “*Please remember that that ‘highest level of proof’ in these cases is mathematics. That is why much of our work is so definitive. Moreover, anyone can replicate our work provided they know the several mathematical techniques required.*” Neppe adds: “*Despite the proof of many aspects, we cannot just neglect the other portions that still require major aspects to be demonstrated. Even more so some components, particularly the exact content of* Neppe V, Close E. *Nutshell on TDVP. IQNJ 8:3, 7-79 September 2016. V10.36*
infinity, remain speculative. In these instances, the proposed ideas still fit, but they’re like pieces in a massive incomplete jigsaw puzzle that need to be further studied: Our findings vary in advancement in the number of jigsaw pieces already fitting, but seven years of working together have suggested that the majority of our work is fundamentally correct. We have not encountered a significant stumbling block, which most other models discover early on.”

Close amplified: “This is so much so that our TDVP model has been regarded by some others as the first possible ‘Theory of Everything’ (TOE). Whether that’s so, time might tell.” Neppe had the last word, “Certainly, TDVP appears, at this point, to be the major competitor: It scores a perfect 39/39 on criteria. Nevertheless, we both dislike the ‘TOE’ term because it implies all-knowingness and has varied meanings. Our ‘TOE’ is certainly not all-knowing — only a divinity is. Instead, the concepts fit many ‘metaparadigms’, extending many aspects of new knowledge: TDVP is a paradigm shift that still works flawlessly in the specifics that it addresses.”

But there is more: A critically contribution to the discipline of the Philosophy of Science. This is the remarkable related principle of the Neppe-Close LFAF (Lower Dimensional Feasibility, Absent Falsification) technique to test new paradigms and hypotheses in science. The feasibility concept of LFAF extends science, and this is very pertinent, inter alia, to the study of extra dimensions, to evolution, to cosmology and to medicine, as well as to studying TDVP, itself. LFAF is, therefore, separate from the Close-Neppe TDVP, but TDVP applies LFAF.

As Edward Close mentions: “Extending science and the scientific method is enormously important in today’s complex world. Effectively, this technique has been used frequently in science, but it’s often labeled as ‘metaphysics’. We’ve been using this in evolution and cosmology and in Medicine and in Psychology, at times, though we perceive that as solid science when it would not fit Carl Popper’s definition at all. We haven’t formally recognized this application, though tacitly realized it was needed. Imagine Evolution without it, for example.” In effect, Drs Neppe and Close have extended the basic paradigm of science that previously required Popperian falsifiability. “The data of what has not been falsified can be perceived as part of that gigantic jigsaw puzzle, but each piece must definitively add a little more to that puzzle, ” added Vernon Neppe.

“Does it all work?” To Close “The proof of the pudding is in the eating: We’ve tried to emphasize the empirical applications all the time.” And Neppe adds: “Some of these puddings are already very palatable—they’re proven and demonstrated though we or others can add some more spices; some are being cooked at this point —there are already important findings; and some have barely begun—these are speculative and based on our current presumptions.

“Has it been worth it?” To Vernon Neppe: “Yes, indeed. This has literally been a labor of love—but a labor, too, of blood, toil and sweat: We’ve not yet had a single penny of funding, but we’re doing all this, sometimes at 4AM, because we ‘know’ it has to be done. It’s our hope that some wealthy benefactor will recognize the value of our work, and allow us time to work full-time at it, with several collaborators. This has been the song we’re trying to sing in this world.”

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“Who comes first, Close or Neppe? Dr Close explains further: “Neither and both! We regard ourselves as equal first authors on all of this. We have needed each other, because we started as different specialists who came together to pioneer a new discipline—what we’ve called ‘Dimensional Biopsychophysics’.” And Dr Neppe adds: “We could not have done it on our own! There are just too many components. Metaphorically, if we were circular, we would each be at different rotational points, but with no beginning—that comparison is ironic because it’s like the spinning vortices that are part of our model! We’ve often relied on extending our consciousness, and our apparent creativity.”

B. Historical connection of Drs Neppe and Close:

Edward Close PhD, PE, formally a Mathematician, Physicist, Cosmologist and Engineer, and Vernon Neppe MD, PhD, FRS[SAf] DFAPA, BN&NP, a Neuroscientist, Neuropsychiatrist, Research Methodologist, and now a ‘Dimensional Biopsychophysicist’ involved in mathematical physics and higher consciousness, began working together in 2008. In these 8 years, despite being seniors working full-time in other professions, they have allocated, without funding, as much as 4000 hours each to TDVP. They regard this task as being the song they’ve been singing for the world, and they still hope to obtain funding for this profound paradigm shift, including for education of colleagues and creative laypersons in books and papers, where others can more easily evaluate these findings and extend them.

Neppe and Close emphasize that over this time period, neither the fundamental nor the demonstrable provable hypotheses of TDVP have been refuted. Even more so, with each passing year, sometimes every week, their model has become stronger. Some, such as Drs David Stewart and Adrian Klein, who know their work better than anyone else, regard TDVP as the single most important paradigm shift this century because it is groundbreaking, extending yet not denying the model of the current standard reductionist physical model.

There are now >200 publications which have been reviewed by colleagues (See ‘T. Key Publications with Dr Neppe involving Dr Close’ for a partial bibliography). The ideas generated create topics on either already published Close-Neppe research on the topic or further suggested hypotheses to test. And with each hypothesis advanced being demonstrable, they may get closer or use a little more of that jigsaw puzzle that is available in our experiential physical and likely in our spiritual reality.

C. Key features:

“Triadic Dimensional Distinction Vortical Paradigm” (TDVP) has universally applicable groundbreaking implications. This metaparadigm (broad spectrum “Theory of Everything” across multiple disciplines) contains seven major components:

1. The fundamental original TDVP model (2011) involving
   a. “Consciousness”,
   b. Higher “Dimensions”, with

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c. “tethering” of the dimensional substrates — Space (S), Time (T) and “the extent of Consciousness” (Cₑ) (STCₑ). Moreover, in TDVP,
d. the quantized finite interchanges with the continuous uninterrupted infinity without requiring any dualistic separation (the finite and infinite are one).
e. producing unification of everything, and
f. conforming to the Laws of Nature.

2. The conceptualization of a quantized finite reality as involving 9 spinning dimensions (9-D) (2014). Higher dimensional domains (collections of dimensions) hierarchically embed (contain) lower dimensional domains. These lower ones include our overt interpretations of our limited experiences in three dimensions of space embedded in a moment in time (3S-1t). TDVP does not reject the findings in 3S-1t. The TDVP paradigm just extends the findings of 3S-1t explaining several conundrums that are unsolved (e.g. Cabibbo angle explanation, entanglement, relative non-locality), incomplete (e.g. relativity and gravitation), or ostensibly contradicted (e.g. why there are laws that appear different for quantum, macrophysics, and cosmology).

3. The quantized spinning 9-D are contained in (embedded in) the higher dimensional domains of the transfinite (“tenth plus dimensions”) (2012).

4. Ultimately, this metafinite (the 9D finite plus the transfinite) is contained in a continuous infinite: This is required for TDVP to be correct, because applying the Gödel Incompleteness Theorem, finite reality would be incomplete without an infinite (2011).

5. This embedding of the quantized finite with the continuous infinite reflects the unification of the TDVP model (2012).

6. Besides mass and energy, the application of “gimmel”—the third substance that is in union with all subatomic particles—provides stability to atoms and ultimately everything in the cosmos (2015-2016). Without a third stabilizing substance, there would be no world as particles would simply not stay put.

7. The new innovative mathematicological applications allowing many new paradigms to be derived and proven by applying individual hypotheses (2008-2016).

Each of these 5 components appear to be of earth-shaking significance because they modify the fundamental basis of reality allowing entirely new paradigmatic approaches which impact profoundly on different sciences. These models are intercorrelated.

D. Colleagues’ interpretations:
Some comments from colleagues are contained in Appendix A. This is useful because it’s difficult to find peers who can evaluate this work. We quote three in some detail:

• Dr David Stewart, PhD, DNM. Physicist, Mathematician: “I rank Dr. Edward R. Close and Dr. Vernon M. Neppe as peers of the major authors of modern physics and mathematics. I equate them with greats, such as Planck, Einstein, ... Newton.... Their work has clarified, and extended the science and mathematics that these geniuses originated ... I foresee the day when they will both be awarded other honors, such as a Nobel Prize in Physics and (equivalent in) Mathematics.”

• Dr Adrian Klein, MDD, PhD, PhD, Israeli Dimensional Biopsychophysicist and

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Consciousness Researcher: “The 21st Century’s revolutionary paradigm shift”; ...“unprecedented brilliance and potentially limitless scientific and philosophical outreach ...yielding a fresh and accurate understanding of various investigation fields of Nature, and opening ... groundbreaking development perspectives for Sciences (emphatically plural!)”.

- **Dr Alan Hugenot DSc**, Physicist and Engineer: “When taken altogether, the entire work is worthy of several separate Nobel Prizes”.

- A fourth quotation series is collective, from SCERS as a group of eight including Dr Joyce Hawkes PhD, FAAAS, biophysicist: “...any one of these [31] areas, let alone the combination would be a very substantial reason for Drs Neppe and Close to be recipients of major prizes”.

- There are then brief comments by seven others in seven different disciplines (first the two leading experts in their disciplines in the world namely:
  - Stan Krippner PhD: “destined to become a classic in the literature on shifting paradigms and worldviews”;
  - Dean Radin, PhD: “RBC [is] in a radical multidisciplinary class by itself”;

- and then five other prominent scientists:
  - Alan Bachers PhD: “an astonishing and prodigious accomplishment!”;
  - John Poynton PhD: “encyclopedic ... broad exploratory paradigm for new scientific ideas”;
  - Lance Storm PhD: “a paradigm shift that hails in, if not, beckons for, a kind of scientific overhaul and shift in thinking”;
  - Helmut Wautischer PhD “will shape philosophical discourse ... a profound value to the future of humankind...masterful...”;
  - Dr. Frank Luger (Canada) “astonishing that you could combine deep scientific notions with mysticism”.

- Therefore, Appendix A encompasses eighteen scientists and researchers who support the TDVP model.

**E. Chronology of discoveries:**

**2011:**
We (Vernon Neppe and Edward Close) proposed our very detailed model, the “Triadic Dimensional Distinction Vortical Paradigm” (TDVP).

- The Neppe Close 358 page E-book “Reality Begins with Consciousness” *RBC1* (First edition officially published in 2012 but produced in October 2011). 45 chapters. 393 references; xlvi (46) preliminary pages so 404 pages. This explained the key features of what others are regarding as a groundbreaking new paradigm shift and it went out to readers in 20 countries and more than 200 scientists. This was the first E-book ever to have a special inscribed message for the readers making it a valuable collector’s item.
1. The most fundamental “deep axiom” in TDVP is that “Consciousness (extents)” (Ce) as a measure exists quite separately to Time and Space; and yet these three substrates (Space, Time and Consciousness —STCe) are necessarily inseparably tethered together. This triad is always in union with each other—“tethered”—like an arm to a shoulder. This never before proposed idea has now been perused by hundreds of scientists in some twenty countries, and it still remains fundamental five years after we proposed it.

2. As indicated by some of the scientists above, this is enough of a breakthrough to change a paradigm that existed for a century: It extends Minkowski’s 1908 concept of “Space-Time”—Space always being in union with Time, creating a new very broad paradigm shift.

3. We provided persuasive evidence that our current model of three dimensions of space in a moment in time (the present) (3S-1t) is insufficient to explain reality (technically RBC1 was available in October 2011).

**2012:**

- *RBC1 officially published;*
- *RBC 2 published in January 2012 (355 pages). Technically a Deluxe and Standard Edition existed; the Deluxe had the inscription by Drs Neppe and Close. Xlix (49 pages of preliminary appendices so 404 pages total; 400 references).*
- *A revised second edition was published mid-2012 (with insufficient changes to warrant a new edition). Although there were significant alterations to these books, the chapter numbers and pages were deliberately kept the same.*

1. Based on cogent TDVP empirical and mathematical suggestions, we hypothesized that finite reality had to consist of 9 dimensions. This was linked with the demonstrated findings of 2013.

2. Neppe and Close also proposed the Philosophy of Science model of LFAF (Lower Dimensional Feasibility, Absent Falsification).

**2013:**

- *RBC3 (January 2013) published. 415 pages, 47 chapters, 445 references.*
- *RBC 4 (V4.8; April 2014; 437 pages +; 496 references; 50 chapters) published.*
We demonstrated two related hypotheses on the mathematical derivation of the Cabibbo mixing angle:

1. It can be derived only from a nine-dimensional mathematical model.
2. It supports the TDVP hypothesis that the finite reality consists of a 9-dimensional vortical (spinning) model.

**2014:**


Close and Neppe definitively mathematically demonstrated and replicated that finite reality, as proposed in 2012, spins specifically through 9 dimensions (9-D) — as measurable extensions of “Time”, “Space” and “Consciousness extent”:

- No other low number like 4, 5, 8, 10, 11 or 26 works for dimensions, though this derivation extrapolating through dimensions, still requires examination of multiples of 9 like 81 or 729 dimensions which could be another solution or possibly even 27.
- The 9-D derivation effectively was shown to exist by deriving the Cabibbo mixing angle—an angle that had befuddled scientists for 50 years (because they needed to use the 9-D model and had not) and subsequently, we replicated the Cabibbo angle in a thought experiment. There were also several other cogent derivations:
  - how intrinsic spin and angular momentum of the electron are markedly linked;
  - the reason for the disappearing electron cloud in 3S-1t;
  - and how 9D together explains what the apparent “half-spin” in fermions is.

Effectively our reality is not just the restricted length, breadth and height (3S) in a moment in time (1t) (and so “3S-1t”). That 3S-1t is only the overt experiential part of the existing finite 9D. Finite Space, Time and Consciousness all extend forever as measures through to the transfinite.

- There are also covert dimensions which impact our lives.
- We further postulate, but cannot completely prove, that these proven 9-dimensions likely sometimes consists of 3S, 3T and 3CE.
• The multidimensional model of TDVP specifically requires 9 discrete, quantized dimensions that rotate through the first to ninth dimensions. TDVP does not involve curlings or foldings as in variants of String Theory, nor specifically multiple “Spaces”.

Their (now) 500 page book “Reality Begins with Consciousness” was revised again: The first edition was published in 2012—RBC1, and is now in its 5th edition —RBC5.

2015:

Golden Year:
Furthermore, in 2015, Close and Neppe recognized that the ‘extent’ of STC® had a major empirical application and definitively and necessarily incorporated a third substance (“gimmel”) which they regard as mainly or completely “consciousness”, depending on circumstances.
• Gimmel is the massless, energyless third substance involved in analyses of “Triadic Rotational Units of Equivalence” (“TRUE”) which also analyzes mass and energy.
• Gimmel may partly or completely reflect the container (‘content’) of consciousness that is linked with mass and energy.
• Gimmel appears to explain what exists extremely well, even if much of it cannot be experienced directly.
• The demonstration that the atom and the subatomic particles are all in union with a third substance (called gimmel) throughout existence has universally applicable groundbreaking implications and constitutes what some regard as the major paradigm shift of this century.
• The application of gimmel, and the techniques involved, changes physics, chemistry, biology and empirical mathematics.
• The applications of TRUE units show why quarks necessarily must come in threes.
• The concept of STC and of MEC with gimmel allows some level of mathematical and empirical appreciation of how the quantized finite and the continuous infinite are not only linked but how the finite and transfinite is embedded in the infinite.
• Gimmel involves earth-shattering paradigm shifts because it changes our basic understanding of reality, of existence and our world.

F. 2016: From Gold to Platinum:
The advances of 2016 relate to the major discoveries of the implications of gimmel. This impacts our very existence.
• Gimmel and “TRUE” units refute Atomic Materialism. Without gimmel, the atom would fly apart.
• Gimmel appears to be Gluons. This finding changes a fundamental area of particle physics showing that a concept that won a Nobel Prize is incorrect (Laureate Murray Gell-Mann). Gluons are not linked with electrons; gimmel is necessarily: In fact, we have found there is more gimmel in union with electrons (105 for each electron), than any other finite substance.
• Photons, we postulate but cannot definitively prove, also have 105 gimmel units for each photon from the 3S-1t framework, but photons may be in union with an infinite number in the infinite reality. **We propose that transformation might reflect part of the gimmel matrix.** Based on this hypothesis, energy and gimmel transform with different implications in the infinite compared with the different finite dimensional domains. This has to be so if the infinite contains gimmel as a vehicle of consciousness content and that receptacle contains mass and energy too. At the 3S-1t level, this is different.

• Gimmel and TRUE shows the links with the life elements. Hydrogen H is the most abundant element in union with gimmel, then equally O, N, C, S, Ca, Mg, the elements that we would expect to be part of life. Separately, H1 is the most abundant element in the universe, and that is a separate issue pertinent in cosmology.

• Remarkably, perhaps most amazingly, Neppe and Close hypothesized that, if indeed the concept of gimmel is correct, the proportion of gimmel to TRUE in the elements that are most abundant in the universe (predominantly hydrogen with some helium and incorporating others proportionately should be within 2% of the proportion of the combined volumetric (i.e. cubic) dark matter and dark energy. The figure is not only within two percent but almost exactly equal (86.01 to 86.09%!!!). Remarkably, gimmel is even in union with or perhaps is Dark Matter and Dark Energy.

• This finding is profound. For the first time in history, there are now the same laws for quantal physics, and these extend all the way through to the cosmological.

• Gimmel demonstrates the requirements for stability to physically survive.

• Phosphorus is asymmetric as an energy element, and iron has the highest amount of gimmel. Helium and Neon have as much gimmel as the life elements but inert and different.

• We can now understand the shells in the Periodic Table of the Elements, a major finding. These findings are amplified below.

**G. The future for other scientists:**

We recognize the need for any mid-course corrections on the details, and particularly amplifications, so that we can further improve our models.

• TDVP has not only not been refuted, but it is a much more powerful paradigm than it was five years ago and it is extraordinarily strong in empirical and mathematical support for the small number of qualified individuals who can and do study it in detail.

• TDVP involves some 600 secondary testable hypotheses that attempt to answer some of the most cogent questions. These hypotheses can be either through replication of the often mathematically proven phenomena, or in extending knowledge. For example, we can combine more than one new mathematical techniques—the Calculus of Distinctions and Dimensional Extrapolation. Moreover, we can use these new applications with novel applications of old ones, such as “Diophantine” equations across 9 dimensions. We can also extend the Pythagorean theorem to a new kind of geometry (“dimensionometry”) or we can apply Fermat’s Last theorem. There are numerous other aspects that can be solved depending on the specific tests.
• We are currently proposing a special role for photons as units of light. There is a vast amount of gimmel in photons in the infinite—we speculate it might be an infinite amount of photons. Because of the photo-electric effects, relative to 3S-1t, photons should convert to a union with the same amount of gimmel – 105 TRUE units—as electrons.

• We may be wrong or only partly correct. Consequently, each of our individual findings should be tested and amplified. This might take a long time (e.g. centuries to complete). But so far, everything is replicable.

**H. Future for the continued work of Dr Close and Dr Neppe:**

Several of our publications prove solutions to more than 20 different major conundrums of reality. Furthermore, tens of other or subsidiary findings have been proposed. We’re, therefore, now writing books for the layperson, as well, hoping to stimulate scientists who are not expert in all these fields (and there are many). We’re also hoping for funding. This requires a support system and an influential group might benefit from that support as well. Such awards do not mean the work is being confirmed as correct, just that this is already a major achievement that needs to be taken seriously and further examined. Clearly, we’re looking for collaborators to replicate our work independently and this could be easy because the mathematics proves certain areas. The challenge is just learning this new math which even most mathematicians are not expert in (it requires, inter alia, expertise in Number Theory, the new Calculus of Distinctions, and the discipline we now called Dimensionometry).

**I. Two separate significant broad advances:**

1. **LFAF:** To allow scientific progress, we (Neppe and Close) developed the fundamental principle of “Lower Dimensional Feasibility, Absent Falsification” [LFAF]— a new *Philosophy of Science model* involving feasibility where science can still be applied provided the model is feasible, but has not been falsified (in Popperian terms). *This extends the range of science* because we can scientifically use known “pieces” of a jigsaw puzzle. It can be applied to many groundbreaking findings and paradigms. Whereas other areas of science such as evolution and medicine and cosmology can benefit enormously, so can studies of extra dimensions including TDVP. LFAF extends science in some areas previously regarded as metaphysical. Particularly when applying the various mathematical models, aspects that were previously impossible to solve become scientifically feasible pieces of the jigsaw puzzle.

2. **Precise definitions:** Additionally, we have necessarily carefully and precisely applied our >250 precise operational definitions. Many of these had to be developed and effectively Dimensional Biopsychophysics is a new language, for example:

   • “dimensions” are necessarily precise, involving extension and therefore measurable intervally or ordinally (consciousness is ordinal and time and space are at higher dimensional levels, too);

   • “consciousness” has several different defined faces: When it’s a dimensional substrate we refer to “Consciousness extent” (C^e) and yet as a component possibly of “gimmel” it is a “content of Consciousness” (C^c) similar to other containers like mass.
and energy. These are all measured indirectly by density involving the extended STCe measures. We also published a detailed clarification paper on Consciousness.

- “Tethering” is more than just a linkage, but an inseparability like a shoulder and an arm.
- Everything in nature is on the move, spinning and Vortical in TDVP refers to the rotating or spinning movements across and between dimensions (“indivension”). These techniques of the resultant “vortical indivension” allow for explanations of many anomalous (“psi”) phenomena.
- “Quantized” is specific to the finite: it implies each particle is necessarily composite wholes and integral: they’re discrete like computer “bits” or movie “frames”.
- Moreover, the discrete quantized (pixilated) volumetric (cubic) nature of finite subreality is embedded (contained) in the continuous infinite reality. The finite and infinite therefore need not meet because the one is in the other: The continuous infinite involves the same STCe substrates. However, at that infinite level, we propose that Space-Time is entirely embedded in the in extent of Consciousness (C£). This markedly contrasts with our physical 3S-1t reality where Consciousness is conventionally conceptualized as largely latent other than in its direct neurological expressions, and effectively mainly contained in our Space-Time.

This may be a reason why two contrasting mind—body (brain)(matter) philosophical Monistic models arose: Some Materialists regarded consciousness as an epiphenomenon of “brain”; and some Idealists denied the real existence of matter, regarding it as simply derivative of, or epiphenomenal to, mind. Applying the Neppe-Close TDVP model and its secondary philosophical ’mind-matter’ model, neither the materialist nor idealist models is correct. However, each mind-matter model can technically be comprehensible, by only when applying them as limited and relative to specific frameworks of the Infinite Mind or the Physical 3S-1t Matter.

- The infinite is involved with ever present multidimensional “order” (ordropy) (as opposed to “entropy” in the finite) and could explain even continued existence and so-called “non-local phenomena” which are recognized as only “relatively non-local” from a specific “observer” “framework”.

### J. Key findings to accentuate:

We list eight remarkable key esoteric examples of scientific findings begging for future applications.

1. “Close’s Conveyance Equation” is replicable and incorporates consciousness directly into the equations of physics, but the empirical proofs behind it may be amplified in many ways. It specifically can focus on the 9-dimensional model and is a Diophantine Equation. We now have an “equation of consciousness”.
2. Relativity beyond 3S-1t: The TDVP model also allows for extending well-known models of physics such as Einsteinian relativity beyond 3S-1t.

There are six other special areas that particularly may need further examination because of their enormous implications:
1. **Extensions of the Cabibbo angle** type of research because this has implications for fermions and 9D;

2. ‘**Intrinsic electron spin**’: For decades, physicists have referred to the property of the ‘half-spin’ of fermions. They recognized that this ‘half-rotation’ could not be ‘real’ and so regarded it as a theoretical construct. However in 9D, the rotation is real because when electrons are intrinsically rotated eight times via their ‘angular momentum’ through dimensions 1 to 9, this unexplained construct is clarified enormously as there are four complete rotations.

3. **The equations of Consciousness**: This is because, finally, not only can we incorporate energy, mass and speed of light as in $e=mc^2$, now there is a way to incorporate ‘consciousness’ for the first time.

4. ‘**Non-locality**’ becomes pertinent as well. This has become of great relevance to solving phenomena such as psi: However, understanding non-locality requires utilizing concepts such as ‘relative to’, ‘from the framework of’, and ‘observer’.

5. **The new atom**: Also even without Gimmel, Neppe and Close showed two other disproofs of our current model of the atom based on the Periodic Table of the Elements.

6. **The new math**: The mathematical techniques used are also new paradigms and can be tested. We can mathematically prove many of the groundbreaking findings, but replication, particularly independent replication by others, is important for any major paradigm shift.

7. **Examples that are very important and more difficult to research further**:
   - In TDVP, the infinite always potentially impacts the finite, and vice versa. This impact can influence mass, energy, space-time and the many forms of consciousness content and extent. This bidirectional impact from the infinite may be potentially studied by examining order and life.
   - This creates a social system and the model allows for free will and meaning in our lives.

**K. The Unification of Science and Spirituality.**

1. It could be argued that the fundamentals of all true models should endure. Therefore, a cultural or spiritual group that had lasted millennia would ‘know’ it was correct. This applies for TDVP and gimmel because after RBC1 was written (and therefore independently) we became aware that the philosophical aspect of the so-called spiritual model of **Kabbalic mysticism**. Kabbalah appears to be a replica of TDVP (without the mathematics and the science): The key elements of TDVP, namely consciousness, infinity, dimensions, tethering, STC separation, vortices are also in Kabbalah, but the mathematics and science applies what even could be called a scientific model of Kabbalah. According to some sources, Kabbalah has been around for millennia, and it supports the intuitive awareness of what could be known truths.

2. TDVP also allows the conceptualization of reality as a single unit producing secondarily the unique philosophical model of what we call “**Unified Monism**” (UM). This provides a versatile unified model that can explain the unification of both physical realities and extended consciousness and is based on a scientific justification namely TDVP. UM derives from science
and mathematics. UM was objectively compared with the several other major mind-body philosophical models (Table 1): It appears to be the only one that is so versatile that it can fit our physical world as well as existences including hypothetical survival post-mortem and infinity.

3. In 2011, with the assistance of other scientists and developers of so-called "Theories of Everything" (TOEs), Neppe and Close delineated 39 criteria (Table 2)
   - With colleagues’ help, they examined 24 TOE models.
   - All but the Neppe and Close models scored less than 20/39.
   - However, Close and Neppe did not ignore the findings of Physics. They simply incorporated the definitive findings of modern physics amplifying the limited dimensions of 3S-1t that we experience physically, but they did not in any way compromise current thinking which is relative to our 3S-1t experience. 3S-1t is just part of the greater whole.
   - TDVP therefore does not require rethinking about everything, just extensions of unexplained conundrums and explaining some contradictions. Neppe and Close are extending this to 50-60 TOE criteria, and it appears TDVP still scores perfect scores (i.e. there are no contradictions but there are questions such as Quantum Gravity that are not pertinent and not yet examined).

L. Hypothetical perspectives:
TDVP also suggests testable hypotheses to extend knowledge from what are currently strong data sets (e.g. the primary deep axiom in TDVP relating to STC⁰). By these means, gimmel can be examined by applying 44 individual hypotheses including replication of the previous Close-Neppe work (RH), addition of new testable hypotheses (TH) ranging from easy and short to complex, and also at least recognizing the limits of challenges (CH). These 44 show how all these hypotheses are so interrelated, indeed, unified into one single concept. They all link with the content receptacle of gimmel in the context of “Triadic Rotational Units of Equivalence”. Importantly, these ideas show how the applications can be groundbreaking in many different ways: Indeed, almost every hypothesis even on its own would constitute major breakthroughs—plural because they impact numerous disciplines.

M. Perspective to the above.
The Neppe-Close model of Triadic Dimensional Distinction Vortical Paradigm” (TDVP) emphasizes two major components. Extent and Content. The extent involves dimensional substrates namely, the triad of Space, Time and Consciousness extent (STC⁰). STC⁰ is particularly pertinent when these measures are based on empirical data—the content.

The content is now the focus below and deals with ‘gimmel’ and ‘TRUE’ units and other components like atomic electron shells. ‘Gimmel and TRUE units’ are critical subsets of the broader TDVP model because they reflect empirical data on the nature of reality.
The empirical content aspects reflect mass, energy and a mass-less, energy-less third substance, that we call ‘gimmel’ (MEG). MEG reflects what is contained in our reality, not only during our waking physical experience in the extent substrates of length, breadth and height in a moment in time (3S-1t) but across all dimensions extending to the infinite. Gimmel, TRUE, Mass and Energy give the meaning to the extent measures of Space, Time and Consciousness-extent in TDVP. But our current model of three dimensions of space in a moment in time (the present) is insufficient to explain reality. Instead, the model we have developed involving 9 finite spinning dimensions, and which incorporates a third substance (gimmel) linked with mass and energy, appears to explain extremely well what exists, even if much of it cannot be experienced directly.

**N. Gimmel revisited:**

Gimmel is used as a non-prejudicial term for that third substance, but because there is both no other apparent alternative and mathematical, logical and empirical support, we have strongly proposed that *gimmel reflects Consciousness content (C°) in part or in whole.*

We have tested many of the above closely related hypotheses through a series of related research programs reflecting several different aspects relating to how we can apply gimmel to existence and reality. These therefore are major paradigm shifts, and involve groundbreaking findings, if proven and that appears to be so. Moreover, we list below the fertile areas that can be studied further.

1. Our data shows that, at this stage, by applying mathematics to empirical data, we have little doubt that this mass-less energy-less substance of *gimmel* exists. This appears to be of earth-shattering significance. Particularly in conjunction with the other data, we have further persuasive evidence that our current model is supported. Therefore, there is likely a second triad of MEG—mass, energy and gimmel.

We have, moreover, proposed that everything in the finite is quantized—nothing is continuous. This has cogent empirical support, going back to Max Planck. This means that we cannot have e.g. half an atom or a half electron. In effect, such quanta are not just points but volumetric. This means that *analyses should be based on 3-dimensional cubic structures, not linearly.* This is extraordinarily important because the mathematics appears to closely reflect the nature of reality well as postulated originally by Pythagoras and Plato, and our findings have not yet been contradicted.

2. Amazingly, our calculations also prove that materialism at the atomic level is refuted. Specifically, the atom is volumetric and integral and so are the subatomic particles (electrons, protons, neutrons and quarks). As we are conventionally taught at school about them, atoms would be mathematically unstable. This requires demonstrating when applying only one method. However, the instability is demonstrated applying three different procedures (the only ones available to examine):
   a. Volumetric analyses of the atom.
   b. Mass and energy of the atom.
   c. Mass-energy equivalence applying “TRUE unit equivalents” (TRUE unit) analyses.
In effect, our data cogently demonstrates that the atom cannot be stable unless there is an additional third substance (gimmel). Atoms, mathematically, have to be very precise: They need to be whole (we cannot have half an atom) and this can be done but requires, what was previously unrecognized, namely the correct combinations of very specifically derived gimmel scores being added. Applying gimmel, we created a unit score for the electrons, and recognized all other structures must be quantized integers and they should be calculated by volume (“Volumetric Equivalence” or VE) applying the new Close-Neppe “Triadic Rotational Units of Equivalence” (TRUE) units. Unless we incorporate gimmel in the correct quantities into the atom, mathematically atoms would, as indicated, just fly apart—atoms need to be stable to exist permanently: They would be unstable without a union with gimmel.

3. We have calculated such scores in ‘TRUE unit equivalents’ for the gimmel unions as protons (7), neutrons (16), electrons (105!). We also have calculated the scores for quarks: There are 2 up-quarks and 1 down-quark in protons; there is 1 up-quark and 2 down-quarks in neutrons. Remarkably, one would think that every quark would have the same number of gimmel units, as we see that for electrons. However, each up and down quark scores differently, ranging from 1 to 8) (Table 3). We propose that these triadic differences are critical for existence and stability of the subatomic particles and this differs from the so-called “particle soup” including the Higgs–Boson which is ephemeral and unstable. Gimmel reflects a stable substance.

4. The gimmel and TRUE unit properties of specific elements yield hypotheses for further research:
   a. Remarkably, gimmel is functionally higher in TRUE proportion to any others in what empirically we know as the life elements (H,O, N, C, S, Ca, Mg). These elements are all also symmetrical, and amazingly, when empirically calculated, they are all multiples of 108 cubed applying special VE equivalents (“TRUE units”).
   b. Moreover, two inert gases, He and Ne, have special properties.
   c. We found that Phosphorus is asymmetrical we think due to providing energy sources and this is linked with the function of extending energy. But we must now reconcile that role of gimmel in compounds containing P like ATP and AMP in mitochondria.
   d. Iron has the largest union of gimmel. We postulate this is because it’s a transporter of oxygen.
   e. Surprisingly the math yields another testable hypothesis, that silicon must be an element of life.

5. Moreover hydrogen, the most basic and stable element, requires a third substance to compensate for its lack of a neutron—we call this “daled” and we postulate, but cannot yet prove, that daled could be a form of gimmel.

6. Most intriguing is that the volumetric proportions of dark matter plus dark energy in the cosmos (using the “Planck Probe” figures) is identical with the ratio of gimmel to TRUE unit
proportion of the most abundant elements in the cosmos (H and He). Based on the available data our results empirically are between 86.0% and 86.1%! This is amazingly close: We had proposed a very narrow range for the “alternative hypothesis” to be confirmed (±2% variation), yet our findings involve variation to the less than a thousandth.

This is a fertile area for further exploration as the implications are so huge: This implies, too, that there is likely gimmel at every level of our universe and that no longer do we have separate exceptional laws for quantum physics, macrophysics and cosmology, but they’re all the same when we incorporate gimmel and TRUE! This should support gimmel being everywhere as our TDVP-TRUE model applies. This revolutionizes thinking because no longer would we have rules for quantum physics, for macrophysics, and for the cosmological. In this kind of instance, the same laws of nature would apply!

7. Iconoclastically, gluons, the particles that won the Nobel Prize for Gell-Mann, produce instability alone and they may not exist with the postulated properties. ‘Gluons’, instead, appear to likely resemble the properties of gimmel. But gimmel can exist whereas gluons do not because gimmel is also in electrons and requires the 9-dimensional model. Neppe and Close have effectively refuted a Nobel finding and justified our own.

8. We have been able to calculate gimmel for all stable particles except the photon. The light or radiant energy may be a key component but difficult to score particularly with different light spectra. The gimmel score for photons could be infinite, though previously applying because of Einstein’s photo-electric effect we had proposed the same gimmel score as the electron (105) (possibly by the time the photon reaches the finite or 3S-1t certainly).

9. Water is the molecule that has the most gimmel: There are some major questions for further research:
   - Is there more or less gimmel in the fourth phase water (EZ water)? Logic, empiricism and mathematics do not yet agree here.
   - If the bonding is covalent then there should be less in EZ water, and yet it appears the most abundant water in the body.
   - Is there a unique bonding e.g. Hydrogen bonding in the hydroxyl of water?
   - And do water and other chemicals allow insights on how bonding of compounds impact gimmel? This is particularly pertinent when there is daled in Hydrogen instead of a neutron.
   - Effectively, what happens to gimmel in ionic and covalent bonding?

10. Finally, some questions that will require intensive empirical analysis:
    a. Can we calculate the gimmel values of the units (adenine, cytosine, guanine, uracil) in the DNA and RNA helix and can we combine these? We postulate that DNA and RNA are stable but not life compounds as they require the energy of phosphorus.
    b. What is the pertinence of electron shells in the context of gimmel? We have empirically found that there are vast differences between shells number 2 and 3 for example, and chemists
may find the data challenging and be able to amplify these.

C. Do the gimmel score differences in union with the 6 stable quarks in protons and neutrons imply not only a quantitative difference, but also a qualitative one of meaning? This is compatible with different kinds of gimmel consciousness in the finite: If so, it could be that a directed meaningful informational wisdom exists. This would not just be the same kind of meaningful phenomenon in every particle, such as an electron.

O. Directions for the future:

We hope to extend our research work. This involves testing whether gimmel and TRUE unit derivations allow stability of particles at all levels: Quantal, macroscopic and cosmological and in the life elements (including Hydrogen and even Silicon as special cases). The specific areas that need evaluating are:

a. Analyses of the properties—strengths and limits of carefully chosen particles, elements, molecules, as required.

b. Targeting the “why” and the “what” questions.

c. Analyses of the separate properties of gimmel and of related particles. These require re-examining and postulating key paradigmatic, currently unresolved problems in particle and cosmological physics and extending through to dimensional biopsychophysics. Each hypothesis has separate emphases, but the underlying models remain theoretically intercorrelated enough to warrant a single research proposal performed more efficiently under the same research umbrella. An advantage that Drs. Neppe and Close have in extensions of the area of gimmel is they can apply their already pre-acquired steep learning curve and specialized knowledge and expertise and collaboratively lead the detailed data re-examinations and problem solving, possibly providing short-cuts for the new tests.

Given the findings already, involving those research proposals that have already been proven, these areas are already groundbreaking. Whereas reinvention of the wheel may not be necessary, it might be simply because of the dramatic nature of the paradigm shifts that change our whole perception of reality.

We recommend to always apply the usual appropriate research standards: Literature review including the pertinent Neppe-Close findings, detailed methodology including as needed representative populations, controls, and predefined parameters with appropriate statistical comparisons should allow our already proven mathematical hypotheses to be easily replicated. This is provided, of course, the reviewers have the requisite expertise in the new areas of mathematical logic including Close’s Calculus of Distinctions, higher dimensions with Dimensional Extrapolation, and Dimensionometry, plus Number theory including Diophantine Equations, Fermat’s Last Theorem and Extensions of Pythagorean theorem, plus ordinals applied to the transfinite and infinite and Consciousness.

Moreover, if several of these proposals were replicated, that could demonstrate the unity of the paradigm shifts and if they impact different specialties, that would be metaparadigmatic. This is why these findings are such remarkably new findings and directions. But there is much more to be done. All collaborative research may shed further light on the broader question in this proposal namely that the numerous properties of gimmel support the hypothesis that it is a...
groundbreaking discovery.

Effectively, we can replicate or test some 40 plus further interrelated hypothesized areas and sometimes apply information to amplify and extend TDVP. Some hypotheses, often relating to infinity, can be eliminated as simply impossible to test at this time but possibly allow for LFAF to fill in jigsaw pieces. Most of the others are all straightforward, relatively simple empirical mathematical derivations applying the specialized mathematical logic needed (e.g. calculus of distinctions, dimensional extrapolation, Diophantine equations, Cantorial ordinals and infinites. Proof of even one research proposal would be groundbreaking). Several replications should further consolidate and extend the already demonstrated unity of the paradigm shifts and if across specialties, that would be metaparadigmatic shifts—which is why this is unified. Moreover, the further research potentially might produce remarkably new findings and directions which can provoke PhD and further studies, a reason why books and publications in this area are also important to incorporate. The specialized disciplines of mathematics, quantum physics, cosmology, systems theory, biology, consciousness research, philosophy and philosophy of science are particularly involved.

**P. Obvious practical implications:**
The Neppe-Close “Triadic Dimensional Distinction Vortical Paradigm” (TDVP) is a metaparadigm involving numerous different paradigm shifts. It is complex because the nature of reality is complex and it reflects reality. To this time, it has not been refuted, but has, indeed, grown over many years with more and more applications and potential applications. It impacts multiple disciplines. The model is the equal contribution of Vernon Neppe MD, PhD, Fellow of the Royal Society (SAf), and Edward R. Close PhD, PE, physicist, mathematician and engineer.

The information below summarizes about two dozen of the key groundbreaking paradigmatic findings of the TDVP model, but in the context of the practical significance for researchers and reality. These are examples only. The practical applications of TDVP are so far reaching that it will take centuries to extend all of these. We apologize for listing so many of these basic applications. However, fundamental truths should have applications across tens of disciplines. The Neppe-Close TDVP model fits that criterion, is extraordinarily versatile, and might, with respect, reflect a model that portrays fundamental truths.

I. THE FINITE AND 9 DIMENSIONS:
The 9-dimensional (9D) finding and the extensions of TDVP including the infinite can be applied to explain many of the conundrums of Physics and of Consciousness Research.

1. **Physics:** TDVP throws important light on:
   - **Unification of nature:** TDVP unified extensions of physics: No longer are there rules for quantum (theoretical) physics, macrophysics and cosmology. They all obey the same laws!
• **Quantum physics:** The approximations in Newtonian calculus have led to limitations in quantized discoveries. This combined with the non-recognition of a 9-dimensional finite spinning model might partly explain why Nobel Laureate Richard Feynman regarded quantum physics as strange and incomprehensible.

In TDVP, quantum physics becomes comprehensible because we are seeing the much larger picture. This is why we have discovered the derivation of the Cabibbo angle by looking outside the box to 9D.

• **9-dimensional spin (9D):** Effectively, the 9D discovery has made our laws of reality much wider. 99.9% of findings in physics can be understood when applying our conventional 3S-1t. But 0.1% cannot: By applying a 9D model mathematically, we can now derive the Cabibbo angle, explain intrinsic electron spin and angular momentum, and understand the disappearing electron cloud. Moreover, we can now understand the supposed “half-spin” of fermions: spinning through Dimensions 1 to 9 (8 rotations) involves four complete 360 degree rotations.

• **Copenhagen type interpretations:** The relative roles in explaining the observer in quantum interpretations of physics (e.g. as opposed to the 20 variants, the most well known of which is the so-called ‘Copenhagen interpretation’).

• We can predict fundamentals in atomic structure:
  - Why quarks must combine in threes,
  - Why gluons cannot fulfill their promise as an extra substance besides quarks, and yet gimmel can, and indeed may be gluons.
  - Why that third substance, gimmel, must exist.

• **Non-locality:** Understanding non-locality begins by appreciating different levels of “*relative non-locality*” in both physics and consciousness sciences.
  - In physics, the mechanisms of entanglement are comprehensible, applying both higher dimensional models and gimmel.
  - In Consciousness Sciences, the fundamental mechanisms of every psi phenomenon can be understood.

• **Cosmology:** The findings that the ratio [Gimmel: TRUE] is almost exactly the same as [(volumetric Dark Matter + Dark Energy): Cosmos] raises profound questions about the true nature of consciousness, and of reality. We may have stumbled upon the biggest mystery of all: Dark matter and dark energy—95.1% of our cosmos—appears markedly and necessarily interlinked with “gimmel”. Even more so, in September 2016, Neppe and Close confirmed their research hypothesis that Dark Matter /Dark Energy proportions closely approximate Gimmel in the Electrons/ Gimmel in union.
with the Nucleon Quarks. This suggests Dark Mater and Dark Energy may be ‘contained’ in the atom, but that that ‘containing’ is through a 9-dimensional model, and cannot be through just 3S-1t further supporting the utility of the 9 dimensional model: It contains 3S-1t—our overt experience.

- **Cosmological travel:** There are other practical but far-reaching speculations. The concept of “indivension” (moving across and between dimensions) for example, may allow for a different kind of travel across and between galaxies. Or it may allow for communications across dimensions facilitating alleged extracorporeal and extraterrestrial communications. Multidimensional time and movement across higher dimensions may totally change space travel as we know it.

II. THE FINITE SUBREALITY:

- **Biology:** The implications of TDVP and gimmel for the life elements for Biology and the Life Sciences are enormous.

- **Materialism refuted:** We have demonstrated that the atom cannot just consist of protons, neutrons and electrons. This refutes the basis of atomic materialism: It is simply mathematically impossible.

- **Dimensional Biopsychophysics:** The refutation of atomic materialism, necessarily requires an alternative. Effectively, to explain why our atoms do not fly apart requires extending the science of physics, to extra dimensions, and appreciating the links with biology, Consciousness research, and psychology. Neppe and Close called this new discipline “Dimensional Biopsychophysics” (DBP). In itself, DBP provides an entirely new way of examining physics, chemistry and biology. DBP requires applying a content of Consciousness namely, “gimmel”. Gimmel is in union with everything and manifests as a massless, energyless substance in our living experiential 3S-1t dimensional domain.

- **Consciousness Sciences:** We can now understand why Consciousness is a key to reality. This has huge implications in Consciousness Research, Dimensional Biopsychophysics and in the studies of psi. But we need to be careful in defining it. We (Neppe and Close) have recognized that “Consciousness” is not a unified term, but involves four prongs:
  1. existential components (extent, content and impact);
  2. paradigmatic elements (quantal-qualit, neurological, psychological, extended-higher consciousness);
  3. informational – meaning; and the
  4. cybernetic (input-central-output) computer model.

- **Consciousness Research:** Within the context of DBP, is an entirely new discipline involving that gimmel receptacle of consciousness. Gimmel is combined with “volumetric equivalents” of mass and energy, such as...
protons, neutrons (both of which contain quarks and other subatomic particles) and electrons making up the atom. These make up the “Triadic Rotational Units of Equivalence” (“TRUE units”) which are of critical relevance because we now understand the content receptacle of existence (mass and energy always in union with gimmel). Space, Time and Consciousness extent (STC) are the dimensional substrates, but that “STC extent” only has relevance in the context of the mass-energy-consciousness content (MEC). Moreover, besides extent and content, there is a third major existential prong, namely “Impact”, which we also call “intent” or “influence”. This is bidirectional, indeed, multidirectional, and allows us to interface with our environment.

- **Systems theory:** “No man is an island entire of itself” (John Donne). In the social sciences, we’re aware that we are not just biological individuals. TDVP incorporates this. We are “ethicospiritubiospsychofamiliosocioethnicocultural” individual-units, and interface at all these levels. TDVP does not just deal “vertically” across and between dimensions. It also applies the “horizontal” approach of these “individual-units” (individual, group, social etc.) of the different “systems levels” being taken into account. Everything continually involves rotating movements (“vortices”) through, within and between dimensions. We call that “vortical indivension” and it is a fundamental way to explain many aspects of psi phenomena.

- **Chemistry:** The implications of gimmel for the whole perspective of chemistry are profound.
  1. We can explain why the different electron shells in the Periodic Table of the Elements and why they exist as they do. (Table 4 shows the overall scores in TRUE and gimmel of some key elements).
  2. We can understand the prevalence of the most abundant elements like Hydrogen (H1, H2) and Helium (He). (Table 5A, B, C).
  3. We can clarify the relevance of valence, of elemental stability, of symmetry, and predict which elements are relevant in life. (See Table 4)
  4. We can understand the gimmel commonalities of the Life Elements (H; also C, N, O, S, Mg, Ca). (See Table 4)
  5. We can demonstrate that the elements of life that are symmetrical and stable: We can predict another, Silicon (Si); we can understand why water has the most gimmel of any compound; we can appreciate why Phosphorus is an energy element; and we can explain why iron is a transporter of a life element (oxygen).
  6. We can predict models of the pertinence of DNA and RNA for life, meaning and energy. This could fundamentally change biology.
7. We can clarify why Hydrogen (H) does not need a neutron. That lack is, indeed, why that makes H the element with far the most “gimmel” equivalent (or what we’re calling “daled” because we don’t know if the neutron substitute is the same “gimmel”).

III. THE INFINITE AND THE FINITE:
When combined with the Neppe-Close work integrating infinity and unifying the finite with the infinite, this allows for understanding of several conundrums:

- **Reality:** Existence as differentiated from experience is critically important. Experience is relative to the dimensional domain one is in: While alive, our overt reality is 3S-1t because that is the framework we experience. Experience is our overt reality. The remaining finite discrete dimensions plus the infinite continuity still impact and influence us, and that is our covert reality.

- **Psychical research:** Alleged survival after death is necessary in TDVP, and even the model of reincarnation can be explained via TDVP.

- **Philosophical phenomenology:** The experience-existence dichotomy also has relevance in Kantian philosophy. We differentiate the “phenomenal” which is experienced from the “noumenal” which exists in itself. However, given that in TDVP, the infinite is always part of the reality, and reality obeys the laws of nature, what is “noumenal” could be argued to still be part of the observation of a higher divinity.

- **Spirituality and Theology:** In TDVP, the infinite still fits the extended Space, Time and Consciousness but those substrate extensions re “without end” (“ein sof”) in the infinite. Nevertheless, the laws of the infinite are still within that vast unending extension of the laws of nature, which therefore incorporate so-called “miracles” and the “supernatural”. These miraculous events are experienced as miraculous because they turn out to be outside our experiential dimensional domain. Yet the conform to the laws of nature, but phenomenologically and experientially are interpreted as “miraculous” because of their specific occurrence in space, timing at that exact moment, and profound “meaningful relevance” in consciousness.

- **The Science- Spirituality Unification:** Effectively, TDVP accomplishes the long sought after unification of science with spirituality. This is why Kabbalic mysticism scores so high in the (RBC published) Theory of Everything model at 19/39. TDVP adds the scientific and mathematicologic elements, and careful unique and specifically defined features, allowing the TDVP paradigm to be explained across multiple specialties, to a perfect 39/39 score. This is why TDVP is named a “metaparadigm”.

Neppe V, Close E. Nutshell on TDVP. IQNJ 8:3, 7-79 September 2016. V10.36
• **Philosophical (mind-body):** The philosophical mind-body debate jumps to a new high for two reasons when applying the Neppe-Close Unified Monism philosophy:

  a. For the first time there is a way to explain practical 3S-1t regular daily reality plus psi phenomena including survival after death.

  b. This Unified Monism philosophy is the first that is secondary to science, a consequence of a paradigmatic model in this instance TDVP.

• **Meaning in science, spirituality and philosophy:** We postulate meaning may be associated with gimmel reflecting *meaningful consciousness* in the finite. We speculate that gimmel flows from the infinite, possibly via a vortical gimmel matrix. It may be linked with photons which at that infinite level contains an infinite amount of gimmel; whereas in the finite, photons are in union with the same amount of gimmel (105 TRUE units) as electrons. The concept of *meaning* is enormously relevant in psychology and consciousness research. There is indirect, but cogent support for this: As dramatic as the refutation of atomic materialism is, the same might ultimately apply to the finding of *different* gimmel values for the six stable quarks because it may imply individual meaningful differences.

### IV. MATHEMATICS AND LOGIC

• **Mathematical Number Theory:** The subdiscipline of “Diophantine Equations” is a subcomponent of Number Theory. This area deals with integrals only and is very applicable for our finite reality because everything is quantized and volumetric. Diophantine Equations have allowed Neppe and Close to re-conceptualize these quantized volumetric aspects of the discrete finite, and apply cubes such that calculations, and indeed reality remarkably fall into place, as if there is template—a structure—to our existence.

• **Mathematics of consciousness:** For a century, Consciousness Researchers have tried to find a way to incorporate Consciousness into the equations of physics and science. Perhaps the most dramatic finding is to develop an equation for consciousness. In that way, e=mc² is extended. We call this the “Close’s Conveyance equation” which is part of the Conveyance Expression: \[ \sum_{n=1}^{m} (A_n)^m = A^m \text{ yielding } (X_1)^3 + (X_2)^3 + (X_3)^3 = Z^3 \] for triplets when \( n = m = 3 \).

• **Mathematical empiricism:** Because of the requirement of “content” to make “extent” meaningful, and adding even Einstein’s awareness late in his life that Space and Time were only pertinent in the context of Mass and
Energy (and hence $e=mc^2$), we argue that mathematics is directly part of reality, not just a way to do calculations.

- **Mathematical logic:** The “calculus of distinctions” (CoD) is a new method of mathematical logic developed by Dr Edward Close and extended by Close and Neppe. Effectively, because our finite reality is quantized and volumetric, we cannot keep moving to less and less forever: Infinitesimal Newtonian-Leibnizian calculus is wonderful when miniscule approximations don’t matter, but there remains a bottom volumetric component, so that a new calculus is needed. This Calculus of Distinctions should specifically be applied to any finite reality and has enormous implications when so done.

- **Dimensional extrapolation:** Close and Neppe have described a method of moving across dimensions by “extrapolation” of rotations. This is sometimes much easier for what we’re doing than many of the other applicable multidimensional mathematical techniques such as Hamiltonians or Lagrangians, Riemann Algebra, Hilbert Space and Euclidean Geometry. We also apply *multidimensional scaling* and extend geometry to “dimensionometry”.

- **Infinity and mathematics:** The work of Georg Cantor and of Gödel’s incompleteness theorems has been extended.

**V. PHILOSOPHY OF SCIENCE:**

The proposal of Lower Dimensional Feasibility Absent Falsification (LFAF) is a dramatic breakthrough in the Philosophy of Science and indeed for scientific endeavors, including but not limited to, Medicine, Evolution, Cosmology, Psychology, Parapsychology, Dimensional Biopsychophysics, Consciousness Research, Creativity, and indeed to paradigms such as TDVP.

**Q. Videotapes and Blogs and more information**

A starting point is [www.vernonneppe.org/presents.html](http://www.vernonneppe.org/presents.html). Particularly pertinent may be the eight posted YouTubes involving Dr Jeffrey Mishlove (April 2016) interviewing Dr Vernon Neppe, directed for the intelligent layperson.

Directly below is an important series of *Science and Spirituality TV* by Dr Edward Close also on YouTube. This reflects a whole science and spirituality series.

There are several other You-Tubes with different levels of complexity (listed as such and lengths).

Also there is more detailed information on some of these findings such as the Cabibbo mixing angle (the original mathematical proof of 9 dimensions)

Also on VernonNeppe.org are various aspects of our research.
You may want to read more at www.brainvoyage.com. This includes our e-book "Reality Begins With Consciousness" now in its fifth edition.

There are also many blogs by Dr Close on http://www.erclosetphysics.com/

More information: is summarized under: http://www.vernonneppe.org/research.php. This includes relativistic understanding, freedom of choice and will and its restrictions, development of new models, applications of psi given that a model is proposed, studies of altered states of consciousness, creativity, survival, integration of multidimensional models and re-examining mathematical constants.

**R. Speaking engagements:**

Dr Vernon Neppe has lectured in a dozen countries, and performed far more than 1200 invited lectures. He has appeared on TV, radio and media interviews worldwide, and given grand rounds in more than 90% of USA medical schools. He talks on tens of different topics to a wide variety of audiences. He has repetitively been an invited keynote – plenary speaker at international conferences involving Consciousness Research.

Dr Edward Close is also a very gifted and experienced speaker. He, too, has lectured internationally, extensively, on a wide variety of topics, and to multiple different audiences, and has interacted with the media and has performed many live radio interviews.

Recently, Drs Close and Neppe have been performing very successful whole-day workshop symposia on TDVP in the USA and Mexico. *This allows funding of their speaking engagements at these conferences because the workshops can generally the day before or after the conferences.*

Both continue to be invited to do Plenary and Keynote addresses in many international organizations of Consciousness and Psi research.

Drs Neppe and Close can lecture at any level, to any audience.

They are now writing books for the layperson.

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They are now writing books for the layperson.

**Examples of Dr Neppe’s Keynotes on TDVP**

- *Keynote address.* June 2016. Academy for Spiritual and Consciousness Studies, Chapel Hill, USA. Dr Close was a Plenary speaker, too.
• **Keynote address.** May 2013. Academy for Spiritual and Consciousness Studies, Virginia Beach, USA.

• **Plenary Address and Workshop,** February 2013, Opening Plenary Address, First International Conference on Science and Spirituality, Puebla, Mexico. Dr Close was a Plenary speaker, too.

**Symposia and Workshops:**

• **Symposium/ Workshop whole day (with Edward R. Close PhD).** First International Conference on Science and Spirituality, Puebla, Mexico.

• **Symposium/ Workshop whole day (with Edward R. Close PhD).** June 2016. Academy for Spiritual and Consciousness Studies, Chapel Hill, USA.

**International Schedule (examples of presentations by invitation)**

**Keynote address.** June 2016. Academy for Spiritual and Consciousness Studies, Chapel Hill, USA.

**Symposium/ Workshop whole day (with Edward R. Close PhD).** June 2016. Academy for Spiritual and Consciousness Studies, Chapel Hill, USA.

**Keynote address.** May 2013. Academy for Spiritual and Consciousness Studies, Virginia Beach, USA.

**Plenary Address and Workshop,** February 2013, Opening Plenary Address, First International Conference on Science and Spirituality, Puebla, Mexico.

**Symposium/ Workshop whole day (with Edward R. Close PhD).** First International Conference on Science and Spirituality, Puebla, Mexico.

Addresses to the Royal Society of South Africa, South Africa (*e.g.* 2006, 2004, 2002)


Serotonin 1A neuropharmacology in the aged. Rome, Italy, August 1991

Carbamazepine in dyscontrol and nonresponsive psychosis. Basle, Switzerland, January 1989 (by special invitation of ten speakers from around the world).

Carbamazepine in behavioral states. Jerusalem, Israel, April 1989


Psychosocial aspects of epilepsy. Epilepsy Institute, Conference, New York, United States, June 1989 (by invitation: other epileptologists Drs. Dreifuss, Penry, Engel, Leppik) (billed as one of the “finest half-day conferences of superepileptologists ever held”.)

Anticonvulsant Drugs and Psychosis. Special Plenary Pre-conference, Symposium to the American Psychiatric Association, on Biological Aspects of Psychoses and Mood. Montreal, Canada, May 1988

Five presentations to the Epilepsy International Congress. Hamburg, Germany, 1985

The Sheldrake hypothesis: perspectives on a controversy. Invited lecture to the Royal Society of South Africa, Johannesburg, South Africa 1985

Non-responsive psychosis: Neuropsychological rehabilitation by antikindling agents. SA Brain and Behavior Society. 1984

Research contributions in anomalistic psychology. SPICA Conference, Medical School, Harare, Zimbabwe (Special Guest Speaker). 1981

* Presentations: Listing Of Selected Institutions:
Invited Address, Nutritional supplementation and biopsychosocial issues. Obesity Course.
American Society for Bariatric Physicians, Seattle, WA, April 2010
Grand Rounds and lectures or CME presentations in the Departments of Psychiatry, Neurology, Medicine, Family Practice or Psychology
include the following institutions (date indicates earliest if > 1 talk):

* United Kingdom:
University of London (Maudsley Hospital & Institute of Psychiatry) London, England 1985
University of Charing Cross, London, UK 1985

* United States and Canada (far more schools than listed here).
Case Western Reserve 1991
Columbia University 1985
Cornell University 1982
Duke University 1997 and most recently June 2016.
Mayo Clinic 1991 Internal Medicine; Family Practice; 1999 Psychiatry
Maryland Psychiatric Research Institute, Baltimore, MD. 1983
NIMH 1983
St Louis University 1989
Stanford Medical School 1989
University of Minnesota 1991
University of Oregon 1991
University of Washington 1986
University of British Columbia 1986
Washington University, 1991
Yale University 1983
All the Chicago area Medical Schools (7)
All the New York metropolitan area Medical Schools (6)
All the Southern California area Medical Schools (7)

* South Africa
More than 150 presentations predominantly 1976 to 1985 and thereafter during several visits.

* China
Beijing University, 2006
University of Shanghai, 2006

* Chairperson of International Conferences on four continents
Chairperson, APA satellite symposium, Washington, DC 1992
Chairperson of Symposium at World Congress of Biological Psychiatry, Jerusalem, Israel 1989.
Organizer and Chairperson "Carbamazepine Use in Neuropsychiatry", Seattle, WA, Oct. 1987
Chairperson, Symposium, World Congress of Biological Psychiatry, Philadelphia, 1985

S. Appendices.

Appendix A: Comments on TDVP model of Dr Close and Dr Neppe. Critiques by qualified colleagues.

Appendix B: Comments By Other Prominent Scientists: One each has been chosen to represent specific disciplines.

Appendix C: Index of key tables referred to in the above documents. These are broad and reference to the original sources may be useful.
Table 1 compares the different key philosophical models.
Table 2 tabulates broadly 24 major “theories of everything”.
Table 3 tabulates mass energy equivalent scores and gimmel in atoms including the fermion components (electron plus quarks).
Table 3b: Cosmological “Dark” Data and proportionate gimmel analysis
Table 3c. Atomic ratios of dark matter correlated to gimmel in nucleons and dark energy
Table 4 TRUE unit and gimmel analysis of chosen elements (Life elements, Abundant elements, Specific examples).
Table 5 Scores of gimmel and TRUE for some examples of key elements.
  • Table 5A: Typical Element example: Helium Atom.
  • Table 5B: Hydrogen 2 (Deuterium)
  • Table 5C: TRUE-Unit Analysis for Hydrogen 1 (Protium).
  • Table 5D Oxygen.

Appendix D: Summary of the TDVP work for the intelligent layperson.

Appendix E: Videos, Audios and YouTubes

4. Morgart E: The theory of everything has nine dimensions: The sparkling diamond and the quanta jewel turn quantum physics and the nine-pronged world of consciousness— on its ear, USA Today Magazine: 1 (January); 66-68, 2014.

Neppe V, Close E. Nutshell on TDVP. IQNJ 8:3, 7-79 September 2016. V10.36
Appendix A: Comments on TDVP model of Dr Close and Dr Neppe. Critiques by qualified colleagues:

There are few individuals worldwide who can in honesty express expert opinions on TDVP. At this stage, we have encountered three possibly on the Neppe-Close work as follows:

**Dr David Stewart**, PhD, DNM. Physicist, Mathematician, Earth Scientist, and Doctor of Natural Medicine (DNM); Author of over 300 published articles and seventeen books, who has examined the Close-Neppe work in detail including the mathematics:

“TDVP is of enormous paradigmatic importance because it reflects a new and all-encompassing perspective on reality. TDVP is different from any other “theory of everything” (TOE) because it is mathematically demonstrable, and impacts not only physics and chemistry, but also biology, psychology, metaphysics, parapsychology, and the consciousness sciences. Other TOEs really don't include "Everything," as Neppe and Close have done with TDVP. Without including consciousness, and its ramifications, any paradigm claiming to be a TOE, really isn't. So far as I know, Close and Neppe are the first to develop a theory of the universe of all creation that includes consciousness in a form that can be expressed mathematically.

In their book, Reality Begins With Consciousness, I wrote the following:

‘This is the book of books. Close and Neppe have succeeded in articulating a unified theory that explains everything known through human experience and observation, including, not only the data obtained by the five senses, but also the data that comes through mind and feeling. Former scientific thought has considered the material universe to be the total universe with consciousness to be the result of matter. Neppe and Close have shown the reverse. Matter is inseparably linked with consciousness. They have succeeded in the ultra-complex task of including everything we know through the material laws of Classical Physics, Quantum Physics, and Relativity, with the non-material observations gained through psychology, parapsychology, and spiritual vision, into a unified metaparadigm with consciousness as the foundation of all creation, including the origin of creation, itself.’

The application of TDVP, TRUE units, and Gimmel, provide a mathematical basis for derivation of the entire Periodic Table. For the first time, there is a scientific explanation of why there are the exact number of natural elements there are and no more; an explanation of the Pauli Exclusion Principle; and why the configurations and dimensions of the electron shells, defining each element, are as they are. It also explains why certain elements are essential for life, while others are not. It explains why Hydrogen and Oxygen combine to make water, an abundant and ubiquitous compound, with unique properties that forms the foundational substance that supports virtually all forms of terrestrial life.

Their work has found solutions and explanations for the many unanswered "Why's and How's" of the universe--questions that have baffled the even most precocious of minds, and
even avoided, by many of the most brilliant minds of history.

In summary, I rank Dr. Edward R. Close and Dr. Vernon M. Neppe as peers of the major authors of modern physics and mathematics. I equate them with greats, such as Planck, Einstein, Heisenberg, Schrödinger, Bohr, Dirac, Born, Pauli, Bell, De Broglie, their predecessors such as Newton, Maxwell, Leibnitz, Kelvin, and many others. Their work, which is built upon the works of these extraordinarily brilliant and innovating pioneers, has clarified, and extended the science and mathematics that these geniuses originated over a century ago.

The work of Close and Neppe has laid a foundation for all future science to develop. The world of scientific understanding, in all fields, has been permanently changed, and set in a new direction, by the work of Close and Neppe. The future of all mankind is forever brighter because of what they have done. And they aren't finished, yet. ... I foresee the day when they will both be awarded other honors, such as a Nobel Prize in Physics and (equivalent in) Mathematics.”

Dr Adrian Klein, MDD, PhD, PhD, Israel. Dimensional Biopsychophysicist and Consciousness Researcher, who has studied almost every publication on these topics by Drs Neppe and Close, developed his own model and interacted in detail with these scientists. Dr. Adrian Klein is an Expert on Theories of Everything, pioneer of the Subquantal Integration Approach; he was the major analyst of TDVP and “Reality Begins With Consciousness”.

I've just completed the perusal of your impressive work. I feel very excited to have sensed myself, the enthusiasm of discovering so many overlapping fields in our views!

...A work that will change mankind's future.

...For the first time in mankind's history, its real nature is scientifically disclosed at the highest charismatic academic level!

...Reading your masterpiece, ....... be aware of my deepest reverence for your monumental work!

...A seismic shift in understanding the understanding process itself!

...The beginning of the ultimate disclosure about the nature of an all-encompassing reality.

...A monumental work forcing obsolete preconceptions to crumble.

...The 21st Century's revolutionary paradigm shift.

And later:

Understanding their ground-shaking contribution for the whole History of Science, their courage to assess new guidelines for future investigation programs of Nature and Reality in an unbiased frame of mind, and their enthusiastic readiness to disclose such unprecedented conceptual trends for the benefit of Science and Mankind as a whole. (They) persuasively reverse misleading ontological tendencies originating in disqualified metaphysical backgrounds by asserting an upside-down epistemological approach for the primary determinism that Information structures have upon their physical counterparts.

The new horizons opened with (their) ... is so amazing, that they hardly may find peers in this Neppe V, Close E. Nutshell on TDVP. IQNJ 8:3, 7-79 September 2016. V10.36
cutting edge, post-materialistic, scientific domain. The only conceivable motivating force behind their courage of expression in the mostly unfriendly academic tenure-controlled environment they dare to confront, is in their exclusive commitment to the Truth and Reality. The observing of these - and only these—criteria for mapping their breakthrough orientation—always was and is their conceptual imperative. However, this contradicts the widely accepted norms and obsolete rules imposed by mainstream canonical materialistic thinking ...has the unique moral strength to confront destabilizing adversities ceaselessly ready to fight from every corner their well-documented but novel convictions, at any price.

Demolishing by these proofs the last crutches of materialistic tenets, they bring a massive contribution to the advancement of Real Science, supplying a most efficient tool for the modeling and setup of the New Paradigm, the one of the future.

They don't fear to bring infinity (under its various aspects and degrees of applicability) into the range and equations of human logic, thus making possible an unprecedented expansion of this logic itself. This is—in my opinion—their paramount constructive contribution to mankind's ability to grasp its own nature and world-line, in a hitherto undreamed-of complexity, made transparent by their not less than genial paradigmatic shift.

Each detail has been carefully polished along successive editorial variants, each sound in this magnificent orchestration of expanded awareness and understanding has been meticulously and patiently tuned into the overall music of Nature, where they also originate. Seeing the unprecedented brilliance and potentially limitless scientific and philosophical outreach of this work, I am unable to conceive of any other contemporary scholars displaying (such) a tremendous contribution to the interdisciplinary integration of Psi-related phenomena comparable to this one. This is so as it yields a fresh and accurate understanding of various investigation fields of Nature, and opening such a groundbreaking development perspectives for Sciences (emphatically plural!).

and Dr Alan Hugenot DSc, Physicist and Engineer:
“Your thoroughness in testing and proving your contribution is singularly remarkable, and extremely rare in today’s scientific community. Many scientists wait for others to prove or disprove their hypothesis, but you have diligently examined each possible obstacle yourself, this is admirable and indicative of your careful intellects. Further, your comparison of TDVP against all the other “TOE’s” is also laudable.

I will re-iterate (in paraphrase) your own discovery, "TDVP is the only paradigm that is universally applicable, can demonstrate both the physical reality and survival, works in practice, and is complete within itself, while at the same time not relying on, as yet undiscovered factors". Currently, TDVP provides the only cohesive scientific framework within which any meaningful research can be undertaken. Most of the other TOE’s entirely lack useable mathematical tools, and with the exception of Laszlo, Bohm and Wilbur, in my opinion the other TOE’s philosophically amount to no more than speculations. Finally, TDVP not only “allows” consciousness survival it ‘requires’ it.

Frankly, the two of you should be nominated for a Nobel Prize merely for your achievement in Neppe V, Close E. Nutshell on TDVP. IQNJ 8:3, 7-79 September 2016. V10.36
mathematically deriving the Cabibbo Angle (which no one else has yet done) and this is not to
mention the remainder of the monumental edifice you have constructed from whole cloth in the
TDVP. When taken altogether, the entire work is worthy of several separate Nobel Prizes.”

And finally a collective contribution: SCERS:

The Seattle Consciousness Education and Research Society (SCERS), is a group that has been
meeting periodically since 2001. There are eight signatories below. Dr Neppe is chairperson of
SCERS and sometimes with Dr Close, the eight of us participate in their mentoring and
interchange with our own ideas. We have also all had the privilege to read at least a few of their
papers. Some of us have read many of them, and in one instance, all the recent papers. The
contributions of Drs. Close and Neppe are so versatile, and impact so many disciplines that
none of us can be expert in all their areas.

Joyce Hawkes PhD Biophysicist and Fellow, American Association for the Advancement of
Sciences; Dale Sobotka MD, Psychiatrist; Jason Schneier MD, Gastroenterologist: Bill
Pendergrass, PhD Biochemist academic: Suzan Wilson, Jungian Psychoanalyst; Peter
Davenport, Director National UFO Reporting Center; Charna Klein, Anthropologist; Margaret
Bartley, Computer Information Systems Expert.

“There are some who are describing Neppe and Close as the new Einsteins. Yet, ironically,
many don’t read what they’ve done. They are twenty or thirty years ahead of their time, and
many don’t even realize the significance of what they’re doing. Certainly, the
parapsychological community has been apathetic, possibly because they don’t understand what
Neppe and Close are doing. Yet, their work revolutionizes parapsychology because it allows an
explanation for psi phenomena\(^1\) and refutes materialism based on the atomic structure\(^2\) yet
still allows a Unified Monism\(^3\).

Even by early 2014, the Neppe-Close work was classified as one of two most important
contributions to mathematical physics of 2013\(^4\). And the appendix, with some quotes from
scientists about the First and Second Editions of Reality Begins with Consciousness\(^5\)\(^6\), show
the esteem scientists from several disciplines hold them in. And yet, following this, we have seen
the Neppe and Close golden year period from late 2014 through to the end of 2015.

These achievements are a coherent whole, with each amplifying the other. The unitary thread in
and of itself amplifies and synergizes with every other component. Here, the whole is even more
than the part, because it makes perfect sense.

The Neppe-Close linkage of gluons with gimmel is an example which amplifies and, indeed,
enhances and modifies the work of a famous physics Nobel Laureate.
And their remarkable demonstration of the error in Atomic Materialism dispels a fundamental
and known truth, but very convincingly because it applies replicable mathematical proof.
Their proof that finite reality contains 9 rotating dimensions, and not just 3S-1t is huge,
because it changes our perspective from the experience of reality, to the existence of reality.
Moreover, the actuality of gimmel, and its links to the life elements and, because we are limited
in cosmology, the tentative links of gimmel/TRUE to dark matter-dark energy/cosmological existence, impact on the sheer fundamentals of science.
And the first model to link very adequately, psi and relative non-locality with our physical reality, is of itself dramatic. This is besides the elegant awareness of applying a quantized reality.
The Neppe-Close contribution to philosophy is also enormous: Unified Monism as the first philosophical model derived from science, and applicable to both Consciousness and physicality and yet not requiring any Cartesian or modified dualism.
Moreover, we logically propose that the concept of LFAF will become a far more reasonable way to approach science than rigid scientific falsifiability. Even what were conjectures are now strongly based because there is mathematical support behind every single model above.

The Neppe and Close contribution has been their remarkable ability to be able to recognize that what was sometimes regarded as correct, is incorrect or needs modification. They are unafraid to pioneer new areas. This is repetitively demonstrated by their history, and this occurred even before they came together. They are simply great thinkers who have been prepared to lead, even when the more usual academic scientists are threatened by new paradigmatic thought.

With great respect, any one of these areas (31 listed), let alone the combination would be a very substantial reason for Drs Neppe and Close to be recipients of major prizes:
Drs Neppe and Close deserve both, and jointly as they are equal co-researchers. And so does the world deserve to recognize them because this may accelerate their further progress. Thus far, they have not had a penny of funding. But they regard this work as the song they have come to sing. The rapidity of their contributions is unbelievable, and (an) accolade may greatly speed their contributions to science.”
The following are comments from RBC 5 and from several previous versions, in most instances. So these preceded the major works from mid-2014 to the present.

Appendix B; Comments By Other Prominent Scientists:
One scientist has been chosen to represent each specific discipline.

Multidisciplinary Sciences
Most physical TOEs (theories of everything) fail because they don't explain where the TOE comes from in the first place -- a creative act of consciousness. Most psychological TOEs fail because they don't appreciate the very real physical context in which the psyche struggles to explain itself. Reality Begins with Consciousness (RBC) avoids these mistakes by taking a TOE's promise of "everything" seriously. This puts RBC in a radical multidisciplinary class by itself, and as a result, understanding it is nontrivial. This should not be surprising, for unadorned Reality as-it-is is vast and hyper-complex, and any TOE that hopes to model that Reality must be equally vast and complex. But for readers who are up to the challenge and are able to stretch their minds in many directions, tackling RBC is well worth it.

Dean Radin, PhD, Senior Scientist, Institute of Noetic Sciences, Petaluma CA. Extensively published author, cognitive psychologist, electrical engineer, (possibly the world’s leading)
Vernon M. Neppe and Edward R. Close have written what is destined to become a classic in the literature on shifting paradigms and worldviews. Drawing from a dozen different disciplines, they have adroitly pointed out the limitations of the Western world's currently accepted model of reality, have spelled out the unfortunate consequences of this model's hegemony, have proposed a paradigm that is not only multidimensional but metadimensional, and have supported it with logic, mathematics, research data, and common sense. The implications that this book has for the betterment of humanity makes for worthwhile, illuminating and enlightening reading which is practical and transformative.

Stanley Krippner, PhD, San Francisco, CA, USA. Pioneer, Humanistic Psychology and Consciousness; Saybrook University; extensively published Author and Scientist

What an astonishing and prodigious accomplishment! The way the authors communicate their profound insights both from our usual "bottom-up" experience as well as from the "top-down" higher realities facilitates engaging readers in this unique and groundbreaking scientific model: We're able to swim longer in the vast subtle and not-so-subtle cosmic pond—and the references provide handholds to keep us afloat. I kept flashing on a museum installation that would allow people to have a "walking around in" experience of climbing through dimensional rifts (in music: ostinati) and connect all around with vortical interactions. I guess this comes from years of my interpreting to people the leaps in transformation I see continually emerging in Neurofeedback work: The Neppe-Close paradigm now provides for a much more coherent way to understand reality. Once introduced, the actualities of these unifying concepts begin to live. It is quite stunning to observe people speaking from an "already having changed" perspective...a thrilling journey!

Alan Bachers, PhD, Northampton, MA. Neuroscientist; Director, Neurofeedback Foundation

Scientific revolutions require both empirical evidence and related coherent explanatory frameworks. The encyclopedic book "Reality Begins with Consciousness" leads in providing the sought after broader scientific unification linking the neurosciences, consciousness, biological, psychological and the physical sciences with math-based logical philosophy and spirituality. Drs Neppe and Close provide a missing broad exploratory paradigm for new scientific ideas that can continue to be researched for many years to come. Whether or not this multidisciplinary model is ultimately viable, the cogent supportive data should encourage scientists to explore seriously the underlying ideas; the models presented go further than other volumes.

John Poynton, PhD, London, UK. Consciousness Researcher; Biologist; Author; Past President, SPR.

Prof. Vernon Neppe and Dr. Edward Close have prepared a much-needed volume that...
aims to integrate our scientific knowledge into a comprehensive natural-law paradigm. Their work leaves no stone unturned in the quest to re-configure our understanding of science, including those more remote or fringe areas of science such as parapsychology that only a few of our highly respected and honored scientists are brave enough to endorse. This new book by Neppe and Close is a paradigm shift that hails in, if not, beckons for, a kind of scientific overhaul and shift in thinking that Thomas Kuhn spoke of in his major work "The Structure of Scientific Revolutions."

Lance Storm PhD, Adelaide, Australia. Consciousness researcher, Author, Journal Editor, Psychologist, Parapsychologist and Philosopher of Science

**Philosophy**

This authoritative work in consciousness studies will shape philosophical discourse about mentality and mind. It is a serious and lucid exploration of a most complex topic, suitable for philosophers and cognitive scientists who seek explanatory models that allow one to reach beyond methodological boundaries while at the same time adhering to scholarly rigor. Recognizing consciousness without boundaries and as formative action leads to unexpected conclusions outside any normative space, while at the same time providing a profound value to the future of humankind. Neppe and Close have masterfully demonstrated that hope is inside and outside Pandora's box.

Helmut Wautischer, PhD, San Rafael, USA. Philosopher, Consciousness Researcher and Author. Sonoma State University.

**Medical Sciences and Mathematical Physics**

... your book is impressive. It seems astonishing that you could combine deep scientific notions with mysticism. I never knew that such work was possible.

Dr. Frank Luger, International (Private) Research Professor, Retired Physician, Mathematical Physicist, Poet, Author, Psychologist, and Chess Grandmaster.
## Appendix C: Index Of Key Tables Referred To Above.

### Table 1 A Comparison of Five Key Modern Philosophical Models Pertinent To Unified Monism (Neppe and Close, ©)

<table>
<thead>
<tr>
<th>Philosophy</th>
<th>1 Panpsychism</th>
<th>2 Realistic Materialism</th>
<th>3 Dualism</th>
<th>4 Pantheism</th>
<th>5 Unified Monism</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Origin</strong></td>
<td>Thales, Plato, William James</td>
<td>Galen Strawson</td>
<td>Rene Descartes</td>
<td>Benedict (Baruch) Spinoza</td>
<td>Vernon Neppe and Edward Close</td>
</tr>
<tr>
<td><strong>Fundamental</strong></td>
<td>Mental aspect in all matter; unified experience</td>
<td>Matter variant explains meaning</td>
<td>Mind-matter separate</td>
<td>God is in everything; God is unity of all substance</td>
<td>Continuous infinite contains discrete finite; Triad: Space, Time and Consciousness tethered</td>
</tr>
<tr>
<td><strong>Principles</strong></td>
<td>Consciousness = universal, primordial feature of everything, Self= minds in a world of minds</td>
<td>Realistic physicalism entails panpsychism; our nature is capable of mental activity; not ultimately responsible for oneself so free will is impossible</td>
<td>Allows for “consciousness and matter but they are separate but interact.”</td>
<td>All-encompassing existence/reality/universe identical with immanent/manifest Divinity</td>
<td>Triadic: “Consciousness” content always exists in all but so does matter and energy (MEC); extent of space, time, consciousness (STC) all tethered.</td>
</tr>
<tr>
<td><strong>Incorporating other models</strong></td>
<td>No physicalistic models or dualism; so excludes 2, 3, 4 and 5</td>
<td>No mind models or dualisms; so excludes 1, 3, 4 and 5</td>
<td>No monistic models so excludes 1, 2, 4 and 5</td>
<td>No non-theistic models so excludes 1, 2, 3 and 5</td>
<td>Incorporates all with modifications: #1 In infinite reality= panpsychism; #2 in 3S-1t realistic materialism but that is in 9D so free will relative; #3 finite embedded in infinite—interacts but not dualistically; #4 God can impact but so can all else.</td>
</tr>
<tr>
<td><strong>Basic origin</strong></td>
<td>Idealism monism</td>
<td>Materialism monism</td>
<td>Separate mind-body dualism</td>
<td>Realistic Theistic monism</td>
<td>STC unified monism</td>
</tr>
<tr>
<td><strong>Key problem</strong></td>
<td>Virtual non-physical reality</td>
<td>Survival after death; mind without matter</td>
<td>Mechanism of interaction</td>
<td>Beyond one’s existence</td>
<td>None: Explains STC; MEC; allows impact (C^1 + M^1 + E^2) *</td>
</tr>
<tr>
<td><strong>Awareness</strong></td>
<td>Fundamental is mind</td>
<td>Fundamental potential to matter</td>
<td>Fundamental is both mind and matter</td>
<td>One being</td>
<td>Yes independence; fundamental is all of STC tethering, infinite, multidimensionality</td>
</tr>
<tr>
<td><strong>Derivation and base scientific</strong></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes; Empiricism of TDVP necessary; result secondary is the UM philosophy</td>
</tr>
<tr>
<td><strong>Mathematical derivation</strong></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>PFDCIII ^ ; fundamental Mathematicologic; Yes</td>
</tr>
<tr>
<td><strong>Charge &amp; spin</strong></td>
<td>Not direct</td>
<td>Fundamental to matter</td>
<td>No.</td>
<td>No.</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Meaning</strong></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Life</strong></td>
<td>Yes idealism</td>
<td>No</td>
<td>Compatible</td>
<td>Yes idealism</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Micro to macro</strong></td>
<td>Yes</td>
<td>No</td>
<td>unlikely</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Inanimate aware</strong></td>
<td>Yes idealism</td>
<td>No</td>
<td>? variants</td>
<td>? variants</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Space-time independence</strong></td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes but tethered together and with “broader” consciousness</td>
</tr>
<tr>
<td><strong>Virtual reality</strong></td>
<td>Likely, yes</td>
<td>No</td>
<td>No</td>
<td>Possibly</td>
<td>No</td>
</tr>
<tr>
<td><strong>Fundamental Problems</strong></td>
<td>Do we really exist?</td>
<td>Survival and ? sentient beings unexplained.</td>
<td>Chalmers unsolved;</td>
<td>Extreme: Divinity</td>
<td>None</td>
</tr>
</tbody>
</table>

*Neppe V, Close E. Nutshell on TDVP. IQNJ 8:3, 7-79 September 2016. V10.36*
<table>
<thead>
<tr>
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<th>4 Pantheism</th>
<th>5 Unified Monism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical exists</td>
<td>Yes and No.</td>
<td>yes</td>
<td>Yes</td>
<td>yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Physical life</td>
<td>Variable models</td>
<td>Yes, key</td>
<td>yes</td>
<td>Not really</td>
<td>Yes</td>
</tr>
<tr>
<td>Psi</td>
<td>Yes</td>
<td>Not independent</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Precognition</td>
<td>Not relevant</td>
<td>No</td>
<td>No?</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>OBES; NDEs</td>
<td>compatible</td>
<td>? compatible</td>
<td>Logical</td>
<td>compatible</td>
<td>Logical natural consequence</td>
</tr>
<tr>
<td>Survival post mortem;</td>
<td>Yes</td>
<td>Unexplained, no</td>
<td>Compatible</td>
<td>One being= self</td>
<td>Logical and a natural consequence</td>
</tr>
<tr>
<td>Free will</td>
<td>Yes</td>
<td>Denied</td>
<td>Compatible</td>
<td>One being</td>
<td>Yes, but within constraints</td>
</tr>
<tr>
<td>Divinity</td>
<td>Compatible</td>
<td>Yes</td>
<td>Compatible</td>
<td>Required: One being</td>
<td>Compatible and very likely</td>
</tr>
<tr>
<td>Reincarnation</td>
<td>Variants yes; not pertinent</td>
<td>No</td>
<td>Compatible; unnecessary</td>
<td>No</td>
<td>Compatible but not necessary</td>
</tr>
<tr>
<td>Subjectivity</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Objectivity</td>
<td>No</td>
<td>Yes</td>
<td>Separated</td>
<td>Yes, potential</td>
<td>Yes, together</td>
</tr>
<tr>
<td>Consciousness</td>
<td>Yes</td>
<td>No</td>
<td>yes</td>
<td>yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Levels of consciousness</td>
<td>No</td>
<td>No</td>
<td>Possibly</td>
<td>No</td>
<td>Yes, fundamental</td>
</tr>
<tr>
<td>INDUCTS*</td>
<td>INDUCTS</td>
<td>INDUCTS</td>
<td>INDUCTS</td>
<td>INDUCTS</td>
<td>INDUCTS all *</td>
</tr>
<tr>
<td>FORMAL**</td>
<td>FORMAL</td>
<td>FORMAL</td>
<td>FORMAL</td>
<td>FORMAL</td>
<td>FORMAL **</td>
</tr>
<tr>
<td>Relative to</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes: allows great versatility</td>
</tr>
<tr>
<td>Range</td>
<td>Same</td>
<td>Maybe e.g. OBE</td>
<td>Same</td>
<td>Same</td>
<td>Higher levels different (also so in TM); relative; vortical indivension</td>
</tr>
<tr>
<td>Fits into it</td>
<td>Non-reductive physicalism; Spatiotemporal Emergentism;</td>
<td>Non-physicalism</td>
<td>Monistic Divinity Theology</td>
<td>Divinity plus others impact tethering; could sometimes contain panentheism; Chassidic Theism part of impact; Transcendent theism first cause primary;</td>
<td></td>
</tr>
<tr>
<td>Variants</td>
<td>Berkeleyian idealism; phenomenalism; mental monism; Vedanta Eastern</td>
<td>Peter Strawson: Realistic Monism of Non-reductive physicalism; epiphenomenalism; functional reductionism, Identity reductionism;</td>
<td>Substance Dualism (Descartes; Property Dualism (mind emerges); Promissory dualism</td>
<td>Panentheism; Theological monism; Chassidic theism; Transcendent Theism; Spinoza creator results in all infinite dimensions</td>
<td>Transcendental materialism (Zeno, Chryssipus, Betty) (discrete stuff not continuous infinite); Kabbalah (triadic STC untethered); Vortex N-dimensionalism/pluralism (earlier Neppe); Transcendental Physics (earlier Close)</td>
</tr>
<tr>
<td>Different from</td>
<td>Neutral monism; Promissory materialism</td>
<td>vs physicalistic monistic reductionist materialism; Panpsychism variant;</td>
<td>Monism</td>
<td>Dualism; reductionist materialism</td>
<td>Classical monism or dualism and all variants; none</td>
</tr>
</tbody>
</table>

- ** The Close –Neppe Calculus of Existential Distinctions** differentiates extent of Space, Time, Extent of Consciousness (C^t) substrates; content (Mass, Energy, Content of Consciousness (C^t) matrix; multidirectional influence: Mass influence (M^i), Energy influence (E^i), Consciousness influence (C) allowing limited free will. INDUCTS and FORMAL are mnemonics outlying the Neppe-Close TDVP paradigm and Unified Monism, its philosophical consequence. PFDCIII is not a mnemonic but reflects the various mathematical areas.
- **INDUCTS:** Infinity, Natural Law (demonstrable), Dimensions (of extent), Unification, Consciousness, Tethering, Subjective-Objective components.
- **FORMAL** Feasibility-without falsification, order - ordropy, relative reality, mathematics, all-encompassing array, life
- **PFDCIII** Mathematical Bases: Pythagoras Theorem modified (Close), Fermat’s Last Theorem, Dimensional Extrapolation (Close), Calculus of Distinctions (Close), Modification of Incompleteness of Gödel (Neppe), Impact Distinctions (Neppe), Infinite Continuous—Discrete Metafinite (Neppe, Close)
### Table 2: Theories of Everything (Paradigms for Reality) Compared When Applying the 39 Broader Criteria.

<table>
<thead>
<tr>
<th>Name of model</th>
<th>Author</th>
<th>General</th>
<th>Specific</th>
<th>Notable</th>
<th>First 27</th>
<th>Total</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triadic Dimensional Distinction Vortical Paradigm (TDVP)</td>
<td>Vernon M Neppe / Edward R. Close</td>
<td>16</td>
<td>11</td>
<td>12</td>
<td>27</td>
<td>39</td>
<td>2011</td>
</tr>
<tr>
<td>Vortex N-Dimensional Paradigm</td>
<td>Vernon M Neppe</td>
<td>15</td>
<td>7</td>
<td>5</td>
<td>22</td>
<td>27</td>
<td>1989, rev1996</td>
</tr>
<tr>
<td>Transcendental Physics</td>
<td>Edward R. Close</td>
<td>13</td>
<td>9</td>
<td>1</td>
<td>22</td>
<td>23</td>
<td>1985</td>
</tr>
<tr>
<td>Quantum Field theory subquantum integration approach</td>
<td>Adrian Klein / Neil Boyd</td>
<td>13</td>
<td>6</td>
<td>0</td>
<td>19</td>
<td>19</td>
<td>2010</td>
</tr>
<tr>
<td>Kabbalic mystical model</td>
<td>Ancient reflecting Judaic tradition</td>
<td>12</td>
<td>5</td>
<td>2</td>
<td>17</td>
<td>19</td>
<td>ancient</td>
</tr>
<tr>
<td>Implicate-Explicate Order</td>
<td>David Bohm</td>
<td>11</td>
<td>6</td>
<td>2</td>
<td>17</td>
<td>19</td>
<td>1980</td>
</tr>
<tr>
<td>The Akashic Field</td>
<td>Ervin Laszlo</td>
<td>10</td>
<td>5</td>
<td>3</td>
<td>15</td>
<td>18</td>
<td>2004</td>
</tr>
<tr>
<td>TES; Theory of Enformed Systems</td>
<td>Don Watson</td>
<td>11</td>
<td>5</td>
<td>1</td>
<td>16</td>
<td>17</td>
<td>1998</td>
</tr>
<tr>
<td>“My Big TOE” (MBT)</td>
<td>Thomas Campbell</td>
<td>12</td>
<td>5</td>
<td>0</td>
<td>17</td>
<td>17</td>
<td>2007</td>
</tr>
<tr>
<td>The theory of formative causation. (FC)</td>
<td>Rupert Sheldrake</td>
<td>11</td>
<td>5</td>
<td>0</td>
<td>16</td>
<td>16</td>
<td>1981</td>
</tr>
<tr>
<td>Transcendental Field Theory</td>
<td>Bernard Carr</td>
<td>10</td>
<td>3</td>
<td>3</td>
<td>13</td>
<td>16</td>
<td>2008</td>
</tr>
<tr>
<td>Vedic mystical model</td>
<td>Vedic</td>
<td>11</td>
<td>4</td>
<td>0</td>
<td>15</td>
<td>15</td>
<td>ancient</td>
</tr>
<tr>
<td>Biocentrism</td>
<td>Robert Lanza</td>
<td>9</td>
<td>5</td>
<td>0</td>
<td>14</td>
<td>14</td>
<td>2004</td>
</tr>
<tr>
<td>(Consciousness) Material Dualism. Modified</td>
<td>John Smythies</td>
<td>11</td>
<td>1</td>
<td>2</td>
<td>12</td>
<td>14</td>
<td>1956 to later</td>
</tr>
<tr>
<td>Standard Materialistic Reductionist Scientific Model</td>
<td>Standard various</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>12</td>
<td>13</td>
<td>-2016</td>
</tr>
<tr>
<td>CTMU Cognitive theoretic model of the universe.</td>
<td>Chris Langan</td>
<td>7</td>
<td>5</td>
<td>0</td>
<td>12</td>
<td>12</td>
<td>1998</td>
</tr>
<tr>
<td>Quantum Activism</td>
<td>Amit Goswami</td>
<td>10</td>
<td>0</td>
<td>1</td>
<td>10</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Kosmos</td>
<td>Ken Wilber</td>
<td>7</td>
<td>4</td>
<td>0</td>
<td>11</td>
<td>11</td>
<td>1995</td>
</tr>
<tr>
<td>Conscious Realism</td>
<td>Don Hoffmann</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>9</td>
<td>9</td>
<td>2006-8.</td>
</tr>
<tr>
<td>Consciousness and Hyperspace</td>
<td>Saul-Paul Sirag</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td>9</td>
<td>9</td>
<td>1993</td>
</tr>
<tr>
<td>Typology of Aether-Motion-Pattern</td>
<td>Alfred Evert</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>8</td>
<td>2010</td>
</tr>
<tr>
<td>Many World interpretation</td>
<td>Stephen Hawking</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>8</td>
<td>1996-</td>
</tr>
<tr>
<td>String Theory Including Superstrings and MTheory</td>
<td>Numerous Green and Schwarz, M theory many others</td>
<td>6</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>7</td>
<td>1984-1988.</td>
</tr>
<tr>
<td>Nonoverlapping Magisteria (NOMA)</td>
<td>Steven Jay Gould</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>2001</td>
</tr>
<tr>
<td>Total # TOEs included category</td>
<td></td>
<td>9-24</td>
<td>4-13</td>
<td>1-4</td>
<td>1+2</td>
<td></td>
<td></td>
</tr>
<tr>
<td># TOEs included in category</td>
<td></td>
<td>24</td>
<td>21</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># criteria per category</td>
<td></td>
<td>16</td>
<td>11</td>
<td>12</td>
<td>27</td>
<td>39</td>
<td></td>
</tr>
</tbody>
</table>

Neppe V, Close E. Nutshell on TDVP. IQNJ 8:3, 7-79 September 2016. V10.36
Table 2 criteria: Legend

The three groups of criteria, 16 General items, 11 Specific items, and 12 Notable / Special items listed in Table 2 are now clarified:

**General criteria (16 items)**

These are scored as a general subscore (G) reflecting the most usual criteria for TOEs. These may involve specific hypotheses but common across several TOEs (≥9 instances) so included in the broader TOE scoring. One exception was =8, psychological but was found, post hoc. (Δ = in 10 or more categories) “?” reflects insufficient classification to ensure it fulfills the required criteria, - is when it does not and √ when it does.

- e = Regarded as a theory of everything (generally by the author or by others)
- m = Mathematics is significantly a core part of the model, not just en passant.
- c = Content, e.g., vortices (V), subquantal (Q), non-quantum receptor (NQ), morphogenetic fields/formative causation (M), transcendental fields (T), phenomenal spaces (P), Akashic field (A) or (Af)
- I = Infinity (this involves either continuous or countable infinity as a principal concept)
- p = Process to communicate: ID = Indivension or equivalent (cross dimensions, biopsychosocial-cultural), FC Formative causation, phenomenal consciousness (PC).
- M = Consciousness/Mind/Information
- Q = Quantum level
- H = Human level
- S = Structure, e.g., Vortices, fields etc.
- π = thinking; philosophical translation defined to mind-body model
- R = Meaningful reality of some kind
- h = history of core mystical concept over millennia
- B = Life Sciences, biology (principal concept)
- D = Dimensions beyond 3S-1T
- + = 3 elements: Space/Time (or Mass-energy)/Consciousness (or Information)
- P = Psychology and social sciences (principal concept)

**Specific criteria** (reflects 11 items): Special qualities common to several TOEs including TDVP (and so excluded from the TOE broader scoring; second subscore (S2).

The following additional 11 criteria are special to some TOEs and were developed, in part, during referee feedback. This has been called “Specific Hypotheses” as they’re specific to many models. Nevertheless, they so pervade several TOEs, that they’re included in the broader TOE scoring. (6 items have ≥10 instances; and all items show at least 4 TOEs with that concept). Some could have been defined under general because ≥9 TOEs showed the criterion, but this differentiation was post hoc. The “Specific” header still reflects fundamental and broad criteria because so many theories still list this. (Δ = in 10 or more categories).

- O = Origin at source/beginning/Origin Event/around the big bang or before or infinite.
- ¶ = Evolution as an important part.
- © = Paradigm — more than a Theory of Everything, if accepted, this causes logical change in the models in that discipline.
T = multidimensional time
x = ordropy
q = uniqueness
L= Linguistic (the development of necessary new terms as a core part of the model)
$\$= Theorems/proofs (mathematical; demonstrable)
n new Generation of 100s of ideas/ postulates demonstrated
N = explanation of consciousness mechanisms within neurophysiology (principal concept)
d= distinctions (minimum: perceptual and actual or conceptual; not necessarily CoD)

Notable (or “Special”) criteria based on feedback (= 12 items)
These criteria reflect pertinent elements but which were not initially shared by more than three theories (with re-evaluation one criterion—infinity—was shared by a fourth. With the gradual development of TDVP, further coherent, consistent, feasible, and logical elements required comparison.
a = across dimensions (being able to communicate across multiple dimensions); this includes indivension, which is a specific case of communication and interfacing points or vortices across dimensions
f = fluctuating dimensions (states of consciousness; variation across individual-units)
F = feasibility measure
$\infty$ = Infinity-finite interaction
£ = Consciousness qualities (specifically taken into account in model as dimensions)
$\mu$ = Metaparadigm: overriding paradigm impacting the major disciplines of science: consciousness, life, physical, psychological sciences
3 == STC tethering (a fundamental and inseparable component of space-time-C-substrate being unified, and yet being able to extend separately in their own dimensional expression).
¢ = Continuous- discrete as fundamental part of model
† triadic patterning (specific e.g. tethering)
≠ =Interval and ordinal metric data (allowing CoD of consciousness)
C dimensions of consciousness
j dimensional jumps

These criteria are all demonstrable in Table 2. However, they reflect only the qualitative differences. Quantitatively, the difference may be far greater, for example, the fifty theorems and the several hundreds of ideas generated by the TDVP model. Effectively, this means that the difference is far vaster than just the presence or absence criterion for a particular criterion: Quantitative measures reveal even more profound differences.

Note that only the Neppe-Close, and the original Neppe and Close models scored >20/39. There were three TOE models that scored 19/39: Kabbalah (which reflects much of the philosophical, non-scientific aspects of TDVP and which also is scored with several ‘?s’ because it is so esoteric); the Klein-Boyd Subquantal model, which has some aspects similar to gimmel at the fermion level; and the Bohm Implicate-Explicate model, which again, has some vague similarities to TDVP.
Table 3a: Fermions of Neptrons converted to gimmel, TRUE unit and MREV scores

<table>
<thead>
<tr>
<th>Particle</th>
<th>Charge</th>
<th>Fermion</th>
<th>Spin</th>
<th>Raw in MeV/c^2</th>
<th>Normalized MeV/c^2</th>
<th>Fermion Massenergy</th>
<th>Gimmel</th>
<th>Total</th>
<th>Combined TRUE</th>
<th>MREV/^a^a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrons (e−)</td>
<td>-1</td>
<td>e−</td>
<td>1/2</td>
<td>0.511</td>
<td>1</td>
<td>E=1</td>
<td>105</td>
<td>105</td>
<td>e=105</td>
<td>1,191,016</td>
</tr>
<tr>
<td>Proton (P+)</td>
<td>+1</td>
<td>p+</td>
<td>1/2</td>
<td>938</td>
<td>938</td>
<td>P=+1</td>
<td>24</td>
<td>24</td>
<td>P=24</td>
<td>13,824</td>
</tr>
<tr>
<td>Up quark (uq1)</td>
<td>+2</td>
<td>uq1</td>
<td>3/2</td>
<td>190-1140</td>
<td>95</td>
<td>P=+3</td>
<td>6</td>
<td>6</td>
<td>P=6</td>
<td></td>
</tr>
<tr>
<td>Down quark (dq)</td>
<td>-1</td>
<td>dq1</td>
<td>1/2</td>
<td>1.87-2.15</td>
<td>1</td>
<td>dq1</td>
<td>4</td>
<td>4</td>
<td>dq1=4</td>
<td></td>
</tr>
<tr>
<td>Neutrons (N0)</td>
<td>0</td>
<td>n</td>
<td></td>
<td>938*</td>
<td>938</td>
<td>N=22</td>
<td>N=16</td>
<td>N=38</td>
<td>N=38</td>
<td>54,872= 38^e</td>
</tr>
</tbody>
</table>

^ MeV/c^2 = Massergy (referring to mass-energy equivalence) Volume/ square of the speed of light.
*^ TRUE = Triadic Rotational units of Equivalence; MREV = Minimum Relative Equivalence Volume (MREV.)

Table 3b. Cosmological “Dark” Data and Proportionate Gimmel analysis

1. **Research Hypothesis**: < 2%. However, the results confirm hypothesis: actually <0.001 difference. (p=0.0008)
2. **Volumetric (Dark Matter [26.8%]+ Dark Energy [68.3%]) ratio to cosmology 95.1% cubed = 86.01%** (Planck probe 2014 data).
3. **Gimmel to TRUE ratio** (already volumetric) of Abundant Elements Σ (volumetric) [Hydrogen 89.3% gimmelTRUE * 0.756 abundance=67.5%] + [Helium+less abundant life elements with the same gimmel score (O, C, Ne) = 76.2% * 24.4=18.59%]=86.09%.
4. **Results**: Difference between Dark proportions to the ratios of cosmological gimmel = 0.08%: Truly remarkable! Table 3C: Extends to the atom.
5. **Publication**: Neppe VM, Close ER: A data analysis preliminarily validating the new hypothesis that the ratio of dark matter and dark energy to gimmel and TRUE units (Triadic Rotational Units of Equivalence) is contained in the atom: Dark matter correlates with gimmel in the atomic nucleus and dark energy with gimmel in electrons. IQ Nexus Journal 7: 3; 81-97, 2016.

Table 3c. Atomic ratios of dark matter (DM) correlated to gimmel in nucleons and dark energy (DE)

* **Research Hypothesis**: <5%-10% given the Planck data proportions variation of DE and DM.
* **Volumetric (Dark Matter [26.8%³] = 19.25%) / (Dark Energy [68.3%³] = 31.86%)**.

- **Consequently this ‘dark matter/ dark energy ratio = 60.42%**.

- **Gimmel to TRUE ratio** (already volumetric) of (volumetric proportions) of Abundant Elements Σ [Hydrogen abundance=70.57%] + [Helium+less abundant life elements = 29.43%] in (nucleons [protons, neutrons, daled]=62.10%) / (electron gimmel =99.06%).

- **Consequently this ‘gimmel/TRUE’ ratio = 62.69%**.

**Results**: The difference between the proportions of (Dark Matter to Dark Energy) to the ratios of (nucleon gimmel[linked with quarks and daled] to electron gimmel) is remarkably close: 60.42% to 62.69%. The results not only confirm the research hypothesis but markedly so with only a 2.27% difference, far closer than even the research hypothesis limit.

**Proposals**: Dark matter and dark energy may be ‘contained’ in the atom. This can be explained only by applying a multidimensional model, like 9 dimensional spin, not our experiential reality of length, breadth, height in a moment in time (‘3S-1t’).

**Publication**: This paper Neppe VM, Close ER: A data analysis preliminarily validates the new hypothesis that the dark matter and dark energy is contained in the atom: Dark matter correlates with gimmel in the atomic nucleus and dark energy with gimmel in electrons. IQ Nexus Journal 7: 3; 80-100, 2016.

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^ Neptons refer to the composite term for the main components of the atom, namely neutrons, electrons and protons together. We developed this term in 2015 because there appears to be no composite term for the components of the atom.

^ The horizontal total of 168 may have no great significance. But it’s mentioned for completeness. Post hoc, we have found that 108 turns out to be a mystical number with several remarkable coincidences.


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Neppe V, Close E. Nutshell on TDVP. IQNJ 8:3, 7-79 September 2016. V10.36
Table 4: Some Elements And Compounds Including Gap In TRUE Unit Analysis.

<table>
<thead>
<tr>
<th>Compound</th>
<th>Units</th>
<th>TRUE</th>
<th>Valence</th>
<th>Units %</th>
<th>TRUE Volume</th>
<th>Comments and Abundance rank #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen j</td>
<td>150</td>
<td>168</td>
<td>-2+1=-1</td>
<td>89.3%</td>
<td>(1x108)</td>
<td>Critical Element #1</td>
</tr>
<tr>
<td>Deuterium</td>
<td>128</td>
<td>168</td>
<td>-1</td>
<td>76%</td>
<td>108</td>
<td>Isotope; rare</td>
</tr>
<tr>
<td>Tritium</td>
<td>144</td>
<td>206</td>
<td>-1</td>
<td>70%</td>
<td>(118. 02)</td>
<td>Isotope; very rare</td>
</tr>
<tr>
<td>Helium</td>
<td>256</td>
<td>336</td>
<td>-2+2=0</td>
<td>76.2%</td>
<td>(2x108)</td>
<td>Inert Element #2</td>
</tr>
<tr>
<td>GAP COMPOUND</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(3x108)</td>
<td></td>
</tr>
<tr>
<td>Helium Hydride He₂H</td>
<td>384</td>
<td>504</td>
<td>+1</td>
<td>76.2%</td>
<td>(3x108)</td>
<td>Super acid Not Natural</td>
</tr>
<tr>
<td>Lithium</td>
<td>384</td>
<td>526</td>
<td>+1</td>
<td>73.0%</td>
<td>(327.2…)</td>
<td>Asymmetric #44</td>
</tr>
<tr>
<td>Beryllium</td>
<td>528</td>
<td>710</td>
<td>-2+4=2</td>
<td>74.4%</td>
<td>(437. 89…)</td>
<td>Asymmetric #44</td>
</tr>
<tr>
<td>(He)₂H. Gap</td>
<td>640</td>
<td>826</td>
<td>+3</td>
<td>76.2%</td>
<td>(5x108)</td>
<td>Gap in Nuclear Fusion</td>
</tr>
<tr>
<td>Boron</td>
<td>656</td>
<td>878</td>
<td>-2+5=3</td>
<td>76.2%</td>
<td>(545.64…)</td>
<td>Asymmetric #61</td>
</tr>
<tr>
<td>Carbon</td>
<td>768</td>
<td>1008</td>
<td>-2+6=4</td>
<td>76.2%</td>
<td>(6x108)</td>
<td>Organic element #4</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>896</td>
<td>1176</td>
<td>-2+7=5</td>
<td>76.2%</td>
<td>(7x108)</td>
<td>Life element #7</td>
</tr>
<tr>
<td>Oxygen</td>
<td>1024</td>
<td>1344</td>
<td>-2+8=6</td>
<td>76.2%</td>
<td>(8x108)</td>
<td>Life element #3</td>
</tr>
<tr>
<td>Fluorine</td>
<td>1,168</td>
<td>1,550</td>
<td>+1</td>
<td>75.4%</td>
<td>(977.22)</td>
<td>Asymmetric #23</td>
</tr>
<tr>
<td>HO or OH; H₂N; or CH₃ Gap Radicals</td>
<td>1,174</td>
<td>1,512</td>
<td>+1</td>
<td>77.6%</td>
<td>(9x108)</td>
<td>Building Blocks of Amino Acids. Gap</td>
</tr>
<tr>
<td>Neon</td>
<td>1,280</td>
<td>1,680</td>
<td>-2+8=10</td>
<td>76.2%</td>
<td>(10x108)</td>
<td>Inert element #3</td>
</tr>
<tr>
<td>H₂O WATER</td>
<td>1,324</td>
<td>1,680</td>
<td>0</td>
<td>78.8%</td>
<td>(10x108)</td>
<td>Water</td>
</tr>
<tr>
<td>H₂N</td>
<td>1,496</td>
<td>1,848</td>
<td>+1</td>
<td>80.9%</td>
<td>(11x108)</td>
<td>Ammonium Ion. Gap</td>
</tr>
<tr>
<td>Sodium</td>
<td>1,424</td>
<td>1,886</td>
<td>+1</td>
<td>75.5%</td>
<td>(1,193.12)</td>
<td>Asymmetric #13</td>
</tr>
<tr>
<td>Magnesium</td>
<td>1,536</td>
<td>2,016</td>
<td>-10+12=2</td>
<td>76.2%</td>
<td>(12x108)</td>
<td>Life element #9</td>
</tr>
<tr>
<td>Aluminium</td>
<td>1,680</td>
<td>2,222</td>
<td>+3</td>
<td>75.6%</td>
<td>(1,409.06)</td>
<td>Asymmetric #12</td>
</tr>
<tr>
<td>C₂H₃ 1Gap Compound)</td>
<td>1,686</td>
<td>2,184</td>
<td>+3</td>
<td>77.2%</td>
<td>(13x108)</td>
<td>Gap Component of Cysteine Amino Acid.</td>
</tr>
<tr>
<td>Silicon</td>
<td>1,792</td>
<td>2,352</td>
<td>-10+14=4</td>
<td>76.2%</td>
<td>(14x108)</td>
<td>Postulated Life? #8</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>1,936</td>
<td>2,558</td>
<td>+5</td>
<td>75.7%</td>
<td>(1625.008)</td>
<td>Asymmetric #16</td>
</tr>
<tr>
<td>Sulfur</td>
<td>2,048</td>
<td>2,688</td>
<td>+6</td>
<td>76.2%</td>
<td>(16x108)</td>
<td>Life element #10</td>
</tr>
<tr>
<td>Chlorine</td>
<td>2,192</td>
<td>2,894</td>
<td>+7</td>
<td>75.6%</td>
<td>(1840.97)</td>
<td>Asymmetric #23</td>
</tr>
<tr>
<td>Potassium</td>
<td>2,448</td>
<td>3,230</td>
<td>+1</td>
<td>75.8%</td>
<td>(2056.944…)</td>
<td>Asymmetric #22</td>
</tr>
<tr>
<td>Calcium</td>
<td>2,560</td>
<td>3,360</td>
<td>+2</td>
<td>76.2%</td>
<td>(20 x108)</td>
<td>Life element #12</td>
</tr>
<tr>
<td>Iron</td>
<td>3,392</td>
<td>4,520</td>
<td>+2</td>
<td>75.0%</td>
<td>(6096.39)</td>
<td>Asymmetric # 6</td>
</tr>
</tbody>
</table>

---

1 Abundance rank statistics vary markedly depending on whether the cosmos or earth are measured. Therefore two figures existed. However, there is now a third applying the Wolfram statistics and we’ve used that one.  

2 Hydrogen 1 is unique at : 150/168 = 89.2% gimmel to TRUE ratio. Volumetrically 108 = 1,259,712. ‘Daled’ vertically τ produces much more gimmel: 38 for daled instead of a neutron (0 MEUs).

3 C, N, O, Mg, Si, S, Ca, and Mg are life elements (turquoise). The two inert elements that have the same profile are He and Ne (green). Hydrogen is profound in gimmel. We also list a few other common, pertinent elements like P with its energy implications and Fe as a transporter in gray highlight Also listed are Li, Be, Bo as they’re low in the periodic table and Na, Cl and Al for interest.

4 Gimmel: 105 for 1 electron (1 mass/energy unit MEU), 7 for 1 proton (17 MEUs), and neutrons are 16 for gimmel; 22 MEUs.

5 Gap implies that there are no elements with their characteristics. We have listed some compounds that do.

6 Hydroxyl / hydroxide is OH is major component of water and building block of amino acids. H₂N is common in amino acids; CH₃ is a common organic compound radical.

7 Some gap compounds are still undiscovered at both the lower (e.g. 4) and the higher 108 cubed levels e.g. 15, 17, 18 and 19). Some radicals or compounds like water fill the gaps (yellow highlight).

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Table 5 illustrations of The Elements and TRUE units.

All of these 4 are examples of stable abundant elements with gimmel: H2, He and O all have TRUE ratios of 76.19% (the life elements; and the inert noble gases); the ratio of H1 is 89.28%.

Table 5A: Typical Element example: Helium Atom
with P+ = 24 and N0 = 38 TRUE ratio of Helium, a noble gas element, is 76.2% (256/336).

<table>
<thead>
<tr>
<th>Particle</th>
<th>Charge</th>
<th>Mass/Energy</th>
<th>(\lambda)</th>
<th>Total TRUE</th>
<th>MREV*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2e</td>
<td>- 6</td>
<td>2</td>
<td>210</td>
<td>212</td>
<td>9,528,128</td>
</tr>
<tr>
<td>2P+</td>
<td>+ 6</td>
<td>34</td>
<td>14</td>
<td>48</td>
<td>110,592</td>
</tr>
<tr>
<td>2N0</td>
<td>0</td>
<td>44</td>
<td>32</td>
<td>76</td>
<td>438,976</td>
</tr>
<tr>
<td>Totals</td>
<td>0</td>
<td>80</td>
<td>256</td>
<td>336</td>
<td>10,077,696=2163</td>
</tr>
</tbody>
</table>

* MREV: Minimum rotational equivalent volume.

Table 5B: Hydrogen 2 (Deuterium; H2).
Valence = -2 + 1 = -1. H2 is equivalent to heavy hydrogen because it has a neutron.
H2 shows the ratio as helium 76.2%. All the life elements C, O, N, S, Mg, Ca have this same ratio (see Table 5D below). Si also has this property. Plus He and Ne (gaseous inert elements) but because their valence is zero, they are non-reactive in this context.

<table>
<thead>
<tr>
<th>Particle</th>
<th>Charge</th>
<th>Mass/Energy</th>
<th>(\lambda)</th>
<th>Total TRUE</th>
<th>MREV</th>
</tr>
</thead>
<tbody>
<tr>
<td>e</td>
<td>- 3</td>
<td>1</td>
<td>105</td>
<td>106</td>
<td>1,191,016</td>
</tr>
<tr>
<td>P+</td>
<td>+ 3</td>
<td>17</td>
<td>7</td>
<td>24</td>
<td>13,824</td>
</tr>
<tr>
<td>N0</td>
<td>0</td>
<td>22</td>
<td>16</td>
<td>38</td>
<td>54,872</td>
</tr>
<tr>
<td>Totals</td>
<td>0</td>
<td>40</td>
<td>128</td>
<td>168</td>
<td>(108)^3</td>
</tr>
</tbody>
</table>

Table 5C: TRUE-Unit Analysis for Hydrogen 1 (Protium).
Valence = -2 + 1 = -1. Hydrogen is the exception with no neutron and yet daled. Because of the “daled” units (gimmel?) replacing the absent Neutron: TRUE ratio of 89.28% in H1, far the highest figure for the H1, the most prevalent element in the cosmos.

<table>
<thead>
<tr>
<th>Particle</th>
<th>Charge</th>
<th>Mass/Energy</th>
<th>(\lambda)</th>
<th>Total TRUE</th>
<th>MREV</th>
</tr>
</thead>
<tbody>
<tr>
<td>e</td>
<td>- 3</td>
<td>1</td>
<td>105</td>
<td>106</td>
<td>1,191,016</td>
</tr>
<tr>
<td>P+</td>
<td>+ 3</td>
<td>17</td>
<td>7</td>
<td>24</td>
<td>13,824</td>
</tr>
<tr>
<td>N0</td>
<td>0</td>
<td>0</td>
<td>38</td>
<td>38</td>
<td>54,872</td>
</tr>
<tr>
<td>Totals</td>
<td>0</td>
<td>18</td>
<td>150</td>
<td>168</td>
<td>1,259,712=108^3</td>
</tr>
</tbody>
</table>

Table 5D: TRUE-Unit Analysis for Oxygen.
Valence = 10 - 8 = 2. Ratio of gimmel to TRUE is 76.19%.

<table>
<thead>
<tr>
<th>Particle</th>
<th>Charge</th>
<th>Mass/Energy</th>
<th>(\lambda)</th>
<th>Total TRUE</th>
<th>MREV</th>
</tr>
</thead>
<tbody>
<tr>
<td>8e</td>
<td>- 24</td>
<td>8</td>
<td>840</td>
<td>848</td>
<td>609,800,192</td>
</tr>
<tr>
<td>8P+</td>
<td>+ 24</td>
<td>136</td>
<td>56</td>
<td>192</td>
<td>7,077,888</td>
</tr>
<tr>
<td>8N0</td>
<td>0</td>
<td>176</td>
<td>128</td>
<td>304</td>
<td>28,094,464</td>
</tr>
<tr>
<td>Totals</td>
<td>0</td>
<td>320</td>
<td>1,024</td>
<td>1,344</td>
<td>644,972,544 = (8x108)^3</td>
</tr>
</tbody>
</table>
Appendix D: Summary of the TDVP work for the intelligent layperson.

What does TDVP demonstrate? Here are some major examples:

1. A major demonstrable feature of TDVP is that we (Dr. Edward Close and Dr. Vernon Neppe) have proven mathematically that we exist in a 9-dimensional quantized finite spinning reality (9D spin). This has been replicated in several ways, most notably by the derivation of the Cabibbo mixing angle, itself replicated in a thought experiment.

2. This 9D contains our current overt physicalistic experiential reality in 3 dimensions of space in a moment (the present) in time (3S-1t). This means that the fundamental demonstrable findings of physics are not refuted, yet most of our dimensional existence remains hidden. 9D explains many other aspects of reality that 3S-1t alone cannot.

3. The next major finding is we have proven mathematically is that the atom (a) cannot exist as we think it does—it cannot just have the quantities of electrons (e), protons (p) and neutrons (n) for the elements listed in the Periodic Table of the Elements. Our finite reality is quantized and volumetric. Empirically, the correct allocations of the quantized volumetric calculations would be impossible without something else (a third substance): Effectively, the equation must be $e^3 + p^3 + n^3 \neq a^3$ but, when applying three different proofs, this cannot correspond to the atomic masses, volumes or volumetric equivalents of any elements in the Periodic Table. If the atoms were this simple, they would simply fly apart—there would be a dimensionometric imbalance not sustaining anything but ephemeral existence. Remarkably, this refutes materialism at the atomic level: Our whole basis of materialism is very simply refuted.

4. Our findings are extended, too, even beyond these New Thinking Allowed interviews where we barely deal with the newly discovered mathematically demonstrated "third substance" ("gimmel"). Gimmel is the receptacle (we propose) for a broader consciousness. Amazingly gimmel plays a role in everything:
   a. The elements of life are in union with more gimmel than any other elements (H; O, N, C, S, Mg, Ca). This also includes, based on our calculations:
      a.1. the element silicon—so Si has to be a "life element" and empirical studies should be able to eventually prove that is so;
      a.2. also water is linked with more gimmel than any other molecule. That is not surprising given its fundamental requirements for life.
   b. Remarkably we postulate strongly, with powerful structural support, that it's likely that what were called (and described) by Nobel Laureate Murray Gell-Mann as "gluons", appear to be insufficient to sustain atomic functioning. The gluon actually appears to be "gimmel", and in contrast to the original "glue" of gluons linking quarks (in neutrons and protons) together, for example, gimmel is also in union with electrons and is also quite different because it is directly involved with 9- D rotation.
   c. Amazingly, the proportion of volumetric Dark Matter plus Dark Energy to the cosmos is the same as the proportion of Gimmel to the combination of Mass, Energy and Gimmel in equivalent volumetric units (TRUE units) to the two most abundant elements Hydrogen and
Helium, supporting our postulated hypothesis. Moreover, it appears that Dark Energy correlates with gimmel in electrons, and dark matter with gimmel in nucleons. Dark substances may be in the atom, but will require a multidimensional (likely 9-dimensional) model to explain this. 

d. This apparently means that this third substance (gimmel—at some levels, likely pure consciousness) exists at every level from the subatomic to the cosmological. Every single thing in our reality has consciousness though everything has meaning and that might differ. No longer are there rules for quantum physics, for macrophysics and cosmological physics, but they're the same rules!

We find these findings astonishing, and there are now several others who are recognizing these as groundbreaking paradigm shifts. These findings are very recent, but have to this time largely been ignored by psi and Consciousness researchers. Yet, we have many peer-reviewed publications on these ideas: How we definitely know we have 9 spinning dimensions (9D), how 9D is further incorporated into infinity and how 9D embeds our current experiential physical reality and why materialism is mathematically refuted. And we show why there must necessarily be a third substance (called "gimmel"). We postulate gimmel is "consciousness" at least in part.

At times in the You-tube blurbs (below), our model, the Neppe-Close Triadic Dimensional-distinction Vortical Paradigm (more easily referred to simply as TDVP) is described as a "theory". However, the term "theory" is incorrect, because TDVP does not deal with a "theory" that has not been or cannot be proven. Our model is mathematically proven. This is the reason why scientists who have studied it in detail sometimes describe TDVP as a "groundbreaking paradigm shift".

Ironically, in another way TDVP is "theoretical" in the sense of "theoretical physics" (TP). TP often involves mathematical calculations applied to specialized physics, like particle physics, as opposed to empirically applied macrophysics in the Newtonian sense. But more correctly, TDVP should be incorporated within what we're now calling "theoretical dimensional biopsychophysics". This is because the TDVP model goes beyond just theoretical physics because it includes three key features namely consciousness and extra dimensions as well as infinity.

By contrast, "String Theory" is an example of a "theory" at the multidimensional level. The String Theories (and its many variants) are "theories" because they cannot yet be proven or disproven. They are postulated. The String Theories are very different from TDVP, because "Strings" usually involve e.g. foldings or curlings and extra "spaces", whereas TDVP involves rotating across dimensions allowing extrapolation mathematically as well as incorporating not only Space (likely three dimensional), but Time and Consciousness making up the 9 finite spinning dimensions. However, TDVP is not a theory because we have proven the most important features. Instead, TDVP involves several new "paradigm shifts" because it constitutes a new radical perspective of reality: It changes the very foundations of existing reality and our way of experiencing it.
Appendix E: Videos, Audios and YouTubes:
For those who are curious, here are six of the YouTubes that are pertinent portrayed with brief descriptions. We have kept the comments on each, but changed the order of the discussions.

This describes key data pertaining to the Neppe-Close Triadic Dimensional distinction Vortical Paradigm (TDVP) paradigm shift. It reflects possibly a key fundamental change in thinking. Space, Time and Consciousness are fundamental dimensional substrates, all with their own identity, but they're tethered to each other. No longer do we talk of Minkowski's 1908 'Space-Time' being inseparable, we now must talk of Neppe-Close's 2011 metaparadigm of ‘Space, Time and Consciousness’ as being inseparable. All of reality is changed with Consciousness, Dimensions, and Infinity being very important. (Neppe, <30 minutes)

2 Reality Begins with Consciousness https://youtu.be/0rVxzHk---0
Why consciousness is so fundamental to our existence even when we don't recognize it. We begin with consciousness. And everything—animate and inanimate— necessarily has consciousness. (Neppe, <30 minutes)

3. Theories of Everything https://youtu.be/3gZ7rVYt5vo
This give a perspectives on why the Neppe-Close TDVP model is so much better than any other so-called "Theory of Everything" (TOE) so far proposed. There are 24 main TOEs and these include String Theory to the Reductionist Standard Model of Physics to great theorists like Laszlo, Lanza and Wilbur, to even Kabbalic mysticism and Vedic thinking. The Neppe-Close model scores a perfect 39/39 using objective criteria. Yet none others, besides the original proposed models of Neppe at 27/39 and Close at 23/39, even score 20/39. Some would argue that if a fundamental model is a TOE, it should have endured a millennium or longer: Interestingly, in many ways, TDVP appears to be the scientific expression of the mystical Kabbalah." (Neppe, <30 minutes).

All of these three interviews (1, 2 and 3) are effectively major units, but they're incomplete without the other two.

4. The nature of psi https://youtu.be/f7uPGVFoEEA
What is more fundamental for Consciousness Researchers? This explains not only the 9 areas of psi that show frequentist statistics of 1 in a billion against chance. Many are ignorant about this work but it is key as this is part of our reality. Moreover, in this video, Dr Neppe alludes briefly to the Neppe-Close explanation of mechanisms of psi by applying concepts in TDVP. Therefore there is now a way to explain psi by a single mechanism. (Neppe, <30 minutes)

5. Philosophy, Mysticism, Spirituality and their links to Science.
https://youtu.be/Jt2m7gg4J_M
This relates to the Neppe-Close new philosophical model of *Unified Monism* (UM). UM apparently is the only philosophical model that derives directly from a scientific-mathematical model (TDVP). UM seamlessly connects with theories of our physical reality, as well as radical findings like survival after death, as well as allowing for psi. Dr Neppe compares Unified Monism with many philosophies. (Neppe, <30 minutes)

"Psychic" Experience and the Brain [https://youtu.be/LGMiIE1b2L8](https://youtu.be/LGMiIE1b2L8)
This is fundamental and needs educating even amongst Consciousness Researchers. The temporal lobe, the great integrator of information, may be the "window into the brain for extended consciousness and psi". (Neppe, <30 minutes).

There are numerous other YouTube on that same site *(see [www.VernonNeppe.org/presents.html](http://www.VernonNeppe.org/presents.html))* by Vernon Neppe but not specifically on TDVP. For example, From the Forever Family Foundation's "Signs of Life": *Consciousness in Practice, 9 Dimensions and Memory, Time, Altered States of Consciousness* Interview with Dr. Neppe for the Forever Family Foundation's "Signs of Life" radio show (2013).

However, there are also some more complex audios, on this topic.
- *9-Dimensional Spin, the Cabibbo angle and TDVP: Historical perspective* *(Dr. Neppe)* Please allocate 20 minutes. (Neppe)
- *Reality, 9 Dimensions, TDVP, Cabibbo, and Spin: A Perspective* *(Dr Neppe)* Please allocate 18 minutes (Neppe)
- *9D Spin Model and TDVP in relation to String Theory (Drs Neppe and Close)* Please allocate 22 minutes (Neppe)
  - *The Three Dimensions of Time; and can Backwards Time occur? Applying TDVP (Drs Neppe and Close)* (targeted for a general audience). Please allocate 22 minutes. (Neppe)
  - *The Cabibbo Mixing Angle and 9-Dimensional Spin: Some technical mathematical and physical data (Drs Close and Neppe)* (This is technical and general listeners may find it complex). Please allocate 13 minutes (Neppe)

We strongly suggest you use this in conjunction with the material in blue font beginning. More detail on the technical aspects of the Close and Neppe Cabibbo Angle findings: on [http://www.vernonneppe.org/RESEARCH.html](http://www.vernonneppe.org/RESEARCH.html) as well as, of course, the E-book *Reality Begins with Consciousness* where a special Chapter 9 is specifically devoted to this discussion.

In addition to the Mishlove New Thinking Allowed series involving Dr. Vernon Neppe, Dr. Edward Close’s Science and Spirituality TV You Tubes on TDVP are very educational. *(see again [www.VernonNeppe.org/presents.html](http://www.VernonNeppe.org/presents.html))*

**Science and Spirituality TV Welcome**
Introducing Science and Spirituality TV - Devoted to the pursuit of truth in the unbiased quest to unite science with spirituality in a comprehensive new scientific paradigm - a true theory of everything. For more information visit [www.ERCloseTPhysics.com](http://www.ERCloseTPhysics.com) (Close, 5 minutes)
A Real Theory of Everything
What does it take to make a theory a Theory of Everything? Combining matter, energy, space and time. Or is there something else that has to be included? (Close, 5 minutes)

What Is Unique About The Close-Neppe Theory of Everything
A Theory of Everything must not only be internally consistent, it must also provide new mathematics that can help us understand a larger part of the reality we experience. What makes the Close/Neppe Theory of Everything Unique? (Close, 5 minutes)

God's Love in Numbers - Mathematics Made Simple
Poetry, Art, Music, and Science are all attempts of the Human Spirit to understand ourselves, the world around us, and how the universe works. Mathematics is the language that we use to describe the physical laws that we find operating in the physical universe. Mathematics also relates to poetry, music and art. Why is that? Because mathematics is a simplified language. It is a reflection of the mind of God and His unconditional love is so great that when he created us he made certain we would be able to discover Him through the pursuit of truth. (Close, 3 minutes)

Putting Consciousness Into The Equations The Calculus of Distinctions
The Calculus of Distinctions is briefly described in this video. This Calculus of Distinctions developed by Edward R Close, PhD, precedes the Calculus of Newton and Leibnitz and allows the author to examine physical reality from a new perspective that incorporates Consciousness in the equations. Warning: Mathematics, Equations, something for real Scientists has been included in this video. (Close, 14 minutes)

Uniting Science and Spirituality
Why is there no currently accepted Theory of Everything? How can anyone possibly unite Science and Spirituality? What links these two disparate approaches to truth? (Close, 8 minutes)

The Most Important Question
Modern science has largely ignored the most important question, posed by one of the world's most respected scientists nearly 300 years ago. What is that Most Important Question and is an answer to that question possible? (Close, 6 minutes)

Symmetry And Stability
This explains why symmetry is necessary for stability in TDVP, the Close—Neppe Theory of Everything. (Close, 8 minutes)

The Electron, Relativity and TRUE Units (Close, 8 minutes)
Electrons, relativity and TRUE units are fundamentally linked.
Explaining the Unexplainable
Non-locality, the speed of light, and how we determine True Units! The weirdness of Quantum Physics, Relativity's guiding principle, and what the LHC tell us about True Units. Presented are necessary concepts for the non-mathematician or scientist. (Close, 16 minutes)

True Quantum Units, 3 Dimensions of Time and the Big Bang Myth
The Close-Neppe Theory of Everything unites relativity, quantum physics, and cosmology, explaining and providing new meaning for many of the mysteries of the current scientific paradigm. In this video you will learn about 2 current mysteries, how they are resolved, and what that means about the Big Bang.
1. Why is there something rather than nothing?
2. Why are Hydrogen atoms stable?
3. Why there was no Big Bang. (Close, 16 minutes)

The New Physics of Multidimensional Reality
Why is there a need for new physics beyond the discoveries of Planck, Einstein and Bohr? What is the difference between the TRUE unit and the electron? How do we know that Reality has more than 4 dimensions and does that change the way particle collider data should be interpreted? These questions are examined and answered in this video. No mathematical equations are utilized in this video. (Close, 7 minutes)

The New Science of TDVP Particles Spinning in 9 Dimensions
How do you visualize objects spinning in several dimensions? Why do elementary particles exhibit an intrinsic spin, called quantum spin number, that contributes to the angular momentum of the particle? No mathematical equations in this video. (Close, 10 minutes)

What is Mass?
If, as Max Planck said, there is no matter, then what is mass? In this video, we answer this question, and in the process answer several other questions that have puzzled physicists for decades. What are elementary particles when they are not being observed and measured? Particles? Waves? Both? Or neither? Can the answer to the questions "What is mass?" also explain non-local action-at-a-distance phenomena like gravity and quantum entanglement? (Close, 17 minutes)

What Are Dimensions?
Length, Width, Height, curled-up, space-like, time-like, separate, connected: What are Dimensions? Learn how the extra dimensions proposed in the Close/Neppe TDVP science of the future relate to familiar known dimensions, what they are, and even where they are located. This new understanding of the reality of extra dimensions opens the door to a science that includes consciousness and spirituality. (Close, 14 minutes)
T. Key Publications with Dr Neppe involving Dr Close

PUBLICATIONS BY DRS NEPPE AND CLOSE ON TDVP: *

- Books

- Consciousness
  - Neppe VM, Close ER: Explaining consciousness: an EPIC re-examination (Part 2): the how, the what, the why and the where *Journal of Psychology and Clinical Psychiatry* 1: 00036: 6; 4-8, 2014.

* This bibliography is not meant to be complete but gives an index of some key papers and publications.

Neppe V, Close E. Nutshell on TDVP. IQNJ 8:3, 7-79 September 2016. V10.36 59
### Conundrums and mysteries

- Neppe VM, Close ER: How some conundrums of reality can be solved by applying a finite 9-D spinning model. *IQNexus Journal* 7: 2; 7-88, 2015.

### Cosmology, Dark Matter and Dark Energy

- Neppe VM, Close ER: A data analysis preliminarily validates the new hypothesis that the atom 'contains' dark matter and dark energy: Dark matter correlates with gimmel in the atomic nucleus and dark energy with gimmel in electrons. *IQNexus Journal* 8: 3; 80-100, 2016.

### Gimmel

- Close ER, Neppe VM: Putting consciousness into the equations of science: the third form of reality (gimmel) and the “TRUE” units (Triadic Rotational Units of Equivalence) of quantum measurement *IQNexus Journal* 7: 4; 7-119, 20
- Close ER, Neppe VM: Introductory summary perspective on TRUE and gimmel (Part 1) in Putting consciousness into the equations of science: the third form of reality (gimmel) and the “TRUE” units (Triadic Rotational Units of Equivalence) of quantum measurement *IQNexus Journal* 7: 4; 8-15, 2015.


**Gluons**


**Infinite**


**LFAF**


Neppe VM, Close ER: The second conundrum: Falsifiability is insufficient; we need to apply feasibility as well Lower Dimensional Feasibility, Absent Falsification (LFAF) as a scientific method _IQNexus Journal_ 7: 2; 21-23, 2015.

• **Mathematics**


• **Nine dimensions**


• **Philosophy of science**

• Neppe VM, Close ER: The first conundrum: can the standard scientific model be applied to develop a complete theory of reality? IQNexus Journal 7: 2; 15-20, 2015.
• Neppe VM, Close ER: Re-examining the fundamental ideas of scientific change: Part 1 IQNexus Journal 7: 1; 8-11, 2016.
• Neppe VM, Close ER: Re-evaluating our assessments of science: The approach to discovery, applying LFAF to the philosophy of science IQNexus Journal 7: 1; 20-31, 2016.
• Neppe VM, Close ER: Key concepts to the classical scientific approach: How can we make our work better? Part 2 IQNexus Journal 7: 1; 22-25, 2016.
• Neppe VM, Close ER: Resolving the scientific approach by amplifying the Philosophy of Science: Part 3 _IQNexus Journal_ 7: 1; 25-31, 2016.

### Psi and TDVP

• Neppe VM, Close ER: Section 1: Psi and TDVP. _IQNexus Journal_ 7: 3; 11-51, 2015.
• Neppe VM, Close ER: Section 2: Relative non-locality and psi. _IQNexus Journal_ 7: 3; 52-97, 2015.

### Philosophy of Mind

• Neppe VM, Close ER. Where does unified monism fit into the triadic dimensional distinction vortical paradigm (TDVP) _Dynamic International Journal of Exceptional Creative Achievement_ 2012;1211:2428-2439
• Neppe VM, Close ER. The fifteenth conundrum: Applying the philosophical model of unified monism: Returning to general principles. _IQNexus Journal_. 2015;7:74-78

### Psychology

• Neppe VM, Close ER: Integrating psychology into the TDVP model. _IQNexus Journal_ 15: 2; 7-38, 2014.
Quantum physics and indivension

- Neppe VM, Close ER: Quantum probability wave collapse or superposition is explained by vortical indivension (Part 12C). *IQNexus Journal* 7: 3; 113, 2015.
- Close ER, Neppe VM: Specific challenges involving the Close and Neppe research: The fourth conundrum: applying the Triadic Dimensional Distinction Vortical Paradigm (TDVP) constructs in our dimensional calculations. *IQNexus Journal* 7: 2; 31-33, 2015.
- Neppe VM, Close ER: The seventeenth conundrum: other significant implications for the future of appreciating and understanding our reality based on the 9D spin findings. IQNexus Journal 7: 2; 81-83, 2015.

- **Relative non-locality**

- **Summary perspectives**

- **Survival, free will and time.**

### TDVP basics

• Neppe VM, Close ER: Applying consciousness, infinity and dimensionality creating a paradigm shift: introducing the triadic dimensional distinction vortical paradigm (TDVP). *Neuroquantology* 9: 3; 375-392, 2011.


• Neppe VM, Close ER: A Proposed Theory of Everything that works: How the Neppe-Close Triadic Dimensional Distinction Vortical Paradigm (TDVP) model provides a metaparadigm by applying nine-dimensional finite spin space, time and consciousness substrates and the transfinite embedded in the infinite producing a unified reality. *IQNexus Journal* 16: 3; 1-54, 2014.
A series for the curious non-scientists.
These titles are provisional. This series of books *Answers That Make Sense* are targeted for late 2016, but may be published during early 2017. These books will be short and published mainly through Amazon.


Upcoming books for scientists
These titles are provisional. This series of books *Exploring Reality Science Series* are targeted for late 2016, but may be published during early 2017. *Full-length scientific books: Each 150-225 pages.* It is anticipated these will be electronic books.

U. Addendum: The original press release on the Whiting Award.

2016 Dr. Vernon Neppe and Dr. Edward Close

Special Press Release: Dr. Vernon Neppe and Dr. Edward Close recognized with the prestigious ISPE international prize: The Whiting Memorial Award for 2016.

Dr. Edward Close and Dr. Vernon Neppe were awarded the coveted 2016 Whiting Memorial Award for “expanding the boundaries of scientific understanding”. The Whiting Memorial Fund is a philanthropic fund administered by the International Society for Philosophical Enquiry (‘ISPE’) (www.thethousand.com) to “reward individuals and groups, whose accomplishments and goals exemplify the ideals of ISPE”. The award was announced in August 2016, and this Press Release of September 2016 is the official press release.

This international award is open to anyone worldwide in any discipline, and is given to a person/persons or organization (outside or within ISPE) who typifies the ISPE ideal of “someone who strives to benefit society in general through advanced enquiry, original research and/or creative contributions, and who has demonstrated significant progress in these endeavors.” This sought after prize may be conferred yearly, but historically has seldom been awarded, because it is only conferred when the committee unanimously chooses a worthy nominee. ISPE’s only mission is “to attract the world’s most intellectually gifted individuals and hopefully direct their achievements for the betterment of all humankind.” ISPE advances no political, governmental, religious, race, gender, ethnic, activist or academic agenda. “This is what ISPE is all about: Making our world better by encouraging profound excellence”, emphasized Stephen Levin, the ISPE President. “This award should have happened a long time ago to Drs Neppe and Close. It’s well-deserved and too long coming."

What is unique is that the ISPE organization played a major role in this first joint award of the Whiting Prize: Vernon Neppe MD, PhD, Fellow Royal Society (SAF), and Edward Close PhD, PE, actually met through their ISPE membership. Moreover, these two scientists deliberately specifically joined ISPE in the hope of finding another ‘Thousander’ to collaborate with in developing a unified theoretical model for reality: “We had both already developed our own models but we regarded that as insufficient. We needed to combine any expertise and knowledge we had to progress with this task, which we regarded as, and still regard as, the ‘song we’re singing in this world’. Dr Neppe commented. “This work has gone beyond us and we realize that development of an entirely new model of reality is of groundbreaking importance,” Dr Close added.

The two scientists have subsequently worked together for eight years and probably spent 4000 hours each on their TDVP paradigm shifting work. Drs Close and Neppe have needed to apply the empirical and theoretical findings of quantum physics, mathematical logic, philosophy, biology, psychology, and consciousness research. But often it has been their creative jumps into the unknown that have been most important. Hundreds of scientists worldwide have examined aspects of the Neppe-Close work, which many have compared with an advanced multidisciplinary graduate degree which requires significant study and application. Therefore, there are only a few experts worldwide.

The Whiting Prize has not been awarded to an ISPE member since 2008. The ISPE is a worldwide 1 in 1000 intelligence organization, currently with about 500 members, that emphasizes progression through different levels of accomplishment. Drs Close and Neppe have both attained the highest public level of ‘Diplomate of the ISPE’ (where there are about 2 dozen worldwide).

This is not their first award for their research: In February 2013 in Puebla, Mexico, Dr Neppe and Dr Close received the well-respected ‘Gabino Barreda Award’ and medal involving an earlier version of their critically important metaparadigm ‘Triadic Dimensional Distinction Vortical Paradigm’ (TDVP).

By that stage, Close and Neppe had empirically shown how Space, Time, and Consciousness (STC) are all separate, and not just one being ‘a derivative of the other’ in our 3S-1t reality. Instead, STC is always in union. They further argued cogently that we have gone beyond Minkowski’s 1908 union of ‘Space-Time’, and as of 2011, they have their new proposed union of ‘Space-Time-Consciousness’ (STC). To Neppe, “no longer were we referring to ‘Space-Time alone’, but to the required union of the three. Consciousness has its own primacy, yet manifests differently: In our current reality experience we might barely notice it, yet at the infinite levels, it contains all of Space and Time.”

This Space-Time-Consciousness (STC) union is strongly substantiated in their massive 500 page, 50 chapter book ‘Reality Begins With Consciousness: A Paradigm Shift that Works’ (www.brainvoyage.com). This book is now in its 5th Edition, and they have further published hundreds of peer-reviewed publications. Neppe and Close contended there must be a ‘triad’: These three substrates of Space, Time and the Extent of Consciousness are, and have always been

Neppe V, Close E. Nutshell on TDVP. IQNJ 8:3, 7-79 September 2016. V10.36 68
inseparably tethered together in everything. ‘Consciousness’ in this context has its own dimensional ‘extent’ identity—this ‘extent’ of consciousness is necessarily inseparably tethered to Space and Time.

They also demonstrated that the Neppe-Close model of the ‘Triadic Dimensional-Distinction Vortical Paradigm’ (TDVP) is very versatile in explaining numerous facets of reality without contradiction: TDVP scores perfectly on criteria applied for a so-called ‘Theory of Everything’ (TOE). TDVP scores 39/39; other than their own previous models at 27 and 23/39 respectively; yet, none of the 21 others examined scored even 20/39.

Furthermore, they had also extended TDVP to philosophy, and proposed a mind-brain philosophical model that could justify, on the one hand, our regular three spatial dimensions in a moment of time experience of reality, as well as the infinite, survival after death, altered states of consciousness, and psi. They argued, too, that life and order have links with the infinite, and that there is still meaning in the inanimate. These concepts constitute the Neppe-Close philosophy of ‘Unified Monism’. This is a consequence of the Neppe-Close TDVP scientific and mathematical model and is well supported. It allows a different perspective from the other philosophically restricted options that argue that consciousness is derivative or an epiphenomenon of Space-Time or consequent of Mass-energy (a variant of materialism), or the converse, with Space-Time or Mass-Energy being derived from consciousness (as a variant of idealism). Moreover, Unified Monism does not require a variant of dualism because the finite is embedded within the infinite and higher dimensional domains contain lower ones producing a unification.

The 2013 Gabino Barreda Mexican prize awarded to Close and Neppe was the direct result of their findings, up to that time. But they preceded what might have developed into even more major contributions. This time, Neppe and Close could prove their work mathematically and extend that math in paradigm shifting ways. In a way, the 12 month period from late 2015 onto 2016 has been their ‘Golden Year’ with profound discoveries that are radical, groundbreaking and change the whole conception of reality. Remarkably, many of their findings are beyond speculations because they have been mathematically proven, applying techniques they’ve developed namely the Close Calculus of Distinctions and Dimensional Extrapolation. Furthermore, they have applied ‘Diophantine Equations’ in mathematical number theory to show the importance of cubic integral equations producing a ‘Conveyance Equation’ which can describe fundamental reality and consciousness in the process.

Firstly, these scientists were able to demonstrate mathematically that finite reality involves 9 spinning dimensions and our current experience is just a part of that. This they did by deriving the Cabibbo angle, something never before done despite 50 years of trying by physicists. This finding was then replicated, and several other components relating to intrinsic electron spin and the hidden electron cloud were solved.

Next, and dramatically, arguably their most important series of findings, Close and Neppe showed that all particles are in union with a property they had hypothesized called ‘gimmel’. This gimmel is the necessary third mass-less and energy-less substance. It is in union with all mass and energy. Gimmel is thought to be ‘consciousness’ at least in part. They, furthermore, have shown that every fermionic particle at the subatomic level has different gimmel properties, something that they hypothesize may be important because it might imply ‘meaning’.

Remarkably, they demonstrated several major related findings:

1. The materialistic model of the atom based on the Periodic Table of the Elements is untenable. This is demonstrated through calculating the volumes, and volumetric equivalents or mass equivalents of protons, neutrons, and electrons. In each instance this triad alone cannot produce whole atoms: "We cannot have a fraction of an atom," Dr Neppe points out. The only way the atoms can be stable is through there being something else (gimmel) to make them stable—otherwise the atoms would simply fly apart. The same rules applies even when adding in subatomic particles like quarks. "There needs to be that extra component for the atom to remain one," Edward Close added.

2. Gimmel appears to be Gluons. This amazing proposal changes a fundamental area of particle physics showing that a concept that won a Nobel Prize is incorrect (Laureate Murray Gell-Mann). Gluons are not linked with electrons; and gimmel is necessarily so linked: In fact, we have found there is more gimmel in union with electrons (105 for each electron), than any other finite subatomic substance. (Neppe and Close have been working on the amount of gimmel in photons. They have hypothesized that relative to our usual experience in three spatial dimensions in a moment of time, photons be may be associated with the same as linked with electrons based on the Einsteinian photo-electric effect, but relative to certain dimensional domains such as the infinite, photons have an infinite amount of gimmel).

3. There are special gimmel properties for all the elements of life. They have shown that the elements of life (H, O, N, C, S, Ca, Mg) and the inert gases (He, Ne) contain an atomic profile in TRUE units (‘Triadic Rotational Units of Equivalence’) that distinguish themselves from all others. These elements (and water) are also cubic multiples of 108 cubed. They also showed, by applying these mathematical means, that:
   • Silicon should be an element of life;
   • Water has more gimmel than any other compound;
   • Hydrogen, which lacks a neutron, has compensating 'gimmel' or 'daled';
The proportions of dark matter and dark energy to the cosmos correlate exactly with the ratio of gimmel to TRUE in the equivalent cosmological elements, namely predominantly Hydrogen and also Helium. Amazingly, the ratios correlate at the 1 in 1250 level. This means that gimmel must be in the cosmos and given that Close and Neppe propose that gimmel is consciousness in some way, it means there is consciousness even in Cosmology.

Even more remarkably, they further provide significant evidence that these dark substances to the atom: Just this month (September 2016), these two scientists have made another dramatic published peer reviewed discovery: It is likely that dark matter correlates with gimmel in the nucleons, dark energy with gimmel in the electrons, and that these dark substances are ‘contained’ in the atom. However, just as gimmel is conceptualized in a 9-dimensional finite spin model, so must dark matter and dark energy be. This remarkable discovery might explain the location of dark substances, and again suggests amplifying the a role for consciousness.

These dark matter and dark energy findings suggest that the same laws of nature apply for quantum, macroscopic and cosmological levels, something different from current thinking which talks about ‘quantum weirdness’ and separate rules. Moreover, this research further supports the fundamental understanding of physics by applying the Close-Neppe 9-dimensional spin model, applying the extended boundaries for our finite reality.

Indeed, Neppe and Close have pioneered the whole new interdisciplinary science of ‘Dimensional Biopsychophysics’ which goes beyond our length, breadth and height registered in a moment (the present) in time (‘3S-1t’). Dimensional Biopsychophysics integrates consciousness, ‘dimensionometry’ (multidimensional geometry), and the interface of the biological, psychological and physical. This specialty that was needed to fully cover their remarkably innovative multidisciplinary paradigm shift of the ‘Triadic Dimensional Distinction Vortical Paradigm’ (TDVP; also called TDDVP). Applying their 9-dimensional finite spin model and combining it with gimmel, even psi phenomena and entanglement become comprehensible and feasible. “This is even more so when we recognize that our whole reality is one, with a finite reality consisting of innumerable quantal, pixilated components embedded within a continuous, unbroken infinite existence that extends externally in time, is without end in space, and is a repository for consciousness that is forever,” added Dr Neppe.

Effectively, the Neppe-Close work goes a long way to showing that the two diverse areas of spirituality and science are linked together and that mathematics is part of the broader reality of our existence, not just a way of calculating.

Additionally, Vernon Neppe and Edward Close have introduced a new way of evaluating scientific data, namely ‘Lower Dimensional Feasibility, Absent Falsification’ (LFAF). Neppe explained: "Ever since Carl Popper, science has revolved around ‘falsifiability’. However, we recognize that sometimes we need more than that. We need to examine what is feasible and yet has not been falsified. We need to recognize that feasibility is, indeed, a critical part of science as well."

Close added: "Without LFAF we cannot regard most of the data on evolution as scientific, yet we do; and we are not able to 'prove' much of the practice of Medicine and also the Psychological Sciences. Much of cosmology looks at what is feasible but unproven, and of course, all the multidimensional proposals (including our own TDVP) often require proofs that recognize pieces of a jigsaw puzzle that are available to us in 3S-1t, and yet the data extend far beyond that. This is why this LFAF extension of the Philosophy of Science may be critically important to future scientists."

Neppe and Close emphasize that over this time period, neither the fundamental nor the demonstrably provable hypotheses of TDVP have been refuted. Even more so, with each passing year, sometimes every week, their model has become stronger. Some, such as Drs David Stewart and Adrian Klein, who know their work better than anyone else, regard TDVP as the single most important paradigm shift this century because it is groundbreaking, extending yet not denying the model of the current standard reductionist physical model:

- Dr David Stewart, PhD, DNM. Physicist, Mathematician: “I rank Dr. Edward R. Close and Dr. Vernon M. Neppe as peers of the major authors of modern physics and mathematics. I equate them with greats, such as Planck, Einstein, ... Newton.... Their work has clarified, and extended the science and mathematics that these geniuses originated ...I foresee the day when they will both be awarded other honors, such as a Nobel Prize in Physics and (equivalent in) Mathematics.”
- Dr Adrian Klein, MDD, PhD, PhD, Israeli Dimensional Biopsychophysicist and Consciousness Researcher: “The 21st Century’s revolutionary paradigm shift”
- Dr Alan Hugenot DSc, Physicist and Engineer and ‘Thousander’: “When taken altogether, the entire work is worthy of several separate Nobel Prizes”.
Dr. Close with Dr Neppe can be regarded as pioneers of the new interdisciplinary science of ‘Dimensional Biopsychophysics’, in which dimensionometry, consciousness and the interface of the biological, psychological and physical are integrated together. This specialty that was needed to fully cover their remarkably innovative multidisciplinary paradigm shift of the Triadic Dimensional Distinction Vortical Paradigm (TDVP; TDDVP). These scientists look forward to furthering their work and facilitating others to incorporate these concepts into their further research. They have never received any funding and hope this recognition may be an impetus for this to change.


Even without their common contributions, these scientists have made many very notable contributions to society. Dr Vernon Neppe:

Based on peer-reviewed publications, presentations, international honors and medicolegal consultations, Prof. Vernon Michael Neppe has achieved an international reputation in numerous and diverse disciplines: For example, these include five fundamental but related medical specialties, namely Neuropsychiatry, Behavioral Neurology, Psychopharmacology, Forensic Psychiatry and Neuropsychiatry, and Psychiatry where in all these, he has been listed under (the peer chosen) “America’s Top Doctors”—and he is one of the few to be listed in all sixteen issues of this peer-reviewed book (2001-2016) and is, apparently, the only physician ever listed under any five different subspecialties (Castle Connolly). He practices these disciplines as Director of the Pacific Neuropsychiatric Institute (PNI) in Seattle, WA, USA. The PNI is the first private Neuropsychiatric and Behavioral Neurological clinical, research and educational corporation. Dr Neppe founded the PNI in 1992, as the first private such institute targeted as a model for Neuropsychiatry and Behavioral Neurology in the USA and internationally.

Vernon’s other international peer-reviewed recognitions based on publications and also international conference lectures, are as an epileptologist, movement disorder specialist (in tardive syndromes), physician, consciousness researcher, neuroscientist, forensic expert, philosopher (mind-body; and philosopher of science), phenomenologist, creativity and exceptional intelligence specialist, research mythologist, systems theorist, psychologist, author, playwright, and educator. He has returned to the love of his early childhood when he was a documented ‘creative prodigy’ in mathematics. It was partly through this that Neppe and Close extended their work to the infinite, extending the works of the mathematicians Kurt Gödel and Georg Cantor. Neppe also developed the ‘Neppe-Close conjecture’ in Number Theory Math. Further, TDVP applications include applying his concepts of the transfinite and of mathematical ordinals.

Prof. Vernon M Neppe’s formal letter qualifications are: MD, PhD (Med), FRSSAf, DFAPA, BN&NP —Behavioral Neurology and Neuropsychiatry (UCNS), FFPsych (SA), MMed (Psych), Dip PsychM —Psychiatry And Neurology, MB, BCh, BA, Dipl Amer Board Psychiatry & Neurology —Psychiatry, Geriatric Psychiatry (-2011), Forensic Psychiatry (-2004), Amer Board of Forensic Examiners —DABFE, DABFM, DABPS (Psychopharmacology), FACFE, FAPA, FCPsych, MB, BCh, BA, FRCP-E (2011), LMACFE, FCPsych, MB, BCh, BA, DSPE, DPCP (ECAO). This makes him likely one of the most highly qualified individuals in the world based on postnominals alone.

Dr Neppe was elected a Fellow of the Royal Society of South Africa, apparently being the first physician living in the USA to be so honored. He was also elected a Distinguished Fellow of the American Psychiatric Association. He is also Executive Director and the only ‘Distinguished Creative Polymathic Professor’ of The Exceptional Creative Achievement Organization (www.ecao.us). This level is based on objective, verifiable, creative scoring accomplishments. He has also been appointed Director of the Human Performance Enhancement Division (HPED) of the World Institute of Scientific Exploration (WISE). He also received the ‘Marius Valkhoff Medal’ in 1982 in South Africa for “exceptional contributions to … research”, an international award given occasionally (eleven recipients in 30 years).

Prof Neppe has written eleven plus books and published about 700 papers worldwide. He has lectured in a dozen countries, and given ‘grand rounds’ to about 90% of medical school or affiliates in the United States on dozens of diverse topics. He led the first USA and International Delegation in Neuropsychiatry and Psychopharmacology. He chaired international symposia on four continents. His books, listed on www.brainvoyage.com include Cry the Beloved Mind: A Voyage of Hope (written for laypersons, colleagues, patients and their families), four on déjà vu, and two specialist books Innovative Psychopharmacotherapy and a monograph for attorneys relating to expert medical consultants, and two plays, plus 3 with Dr Close on TDVP. For many years, he also edited a journal listed by Psychinfo, was guest editor of the Journal of Clinical Psychiatry, and is on many editorial boards.

Dr Neppe became the first Director of a Division of Neuropsychiatry in a USA Medical School (University of Washington) (1986 to September 1992) having been recruited specifically from South Africa to establish such a division, after a national USA search failed. Subsequently, since 1992, he maintained his official academic linkages, this time as Adjunct Full Professor, St. Louis University (now the Department of Neurology and Psychiatry).

He is also a prominent internationally known forensic specialist. He was educated predominantly in South Africa at the University of the Witwatersrand, Johannesburg (MB, BCh, DPM, MMed, PhD), and also with the first Fellowship involving Neuropsychiatry, Psychopharmacology, Epileptology and Chronobiology at Cornell University in New York.

His contributions have been prodigious: He has developed 36 scientific copyrighted clinical and research instruments. These include published measures of higher brain function: BROCAS SCAN (Screening Cerebral Assessment of Neppe); Subtle Organic

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Brain Inventory of Neppe (SOBIN); The Inventory of Neppe of Symptoms of Epilepsy and the Temporal Lobe (INSET); a package of 9 neuropsychiatric follow-up screens (DS9); specialized tests like the Neppe Narcolepsy Questionnaire (NNQ), and the STRAW for movement disorders, and the SONAR, a daily symptom screen. These fifteen neuropsychiatric evaluations are used routinely at the PNI (when appropriate).

Dr Neppe was recognized in the disciplines of Psychopharmacology and Neuropharmacology by his autobiographical contributions being published by the leading Neuropharmacology group in the world, the CINP, as ‘one of the Leading Psychopharmacologists of the Twentieth Century’. Two aspects were particularly highlighted: Dr Neppe developed the most successful treatment for the previously incurable condition of tardive dyskinesia (high dose buspirone 1989, latest tardive dyskinesia work 2016). Moreover, along with two others, he pioneered the use of anticonvulsants in psychiatry (Carbamazepine): This has positively impacted the lives of millions of patients and their families.

He also has pioneered numerous pharmacological, clinical and classification areas. He also published classifications of Epilepsy and Psychiatry, and of Head Injuries. He, also, is the world’s leading expert on the déjà vu phenomenon, and has written four books in that area alone. He has described several new medical conditions including the various Paroxysmal Neurobehavioral Disorders, and developed tens of new medical, psychological and now dimensional biopsychophysics terms. He also invented two new literary forms: the literary genre of ‘sciction’ and the writing form called the ‘conversagraph’.


He has pioneered many aspects of Consciousness Research and Phenomenology. His websites are: Pacific Neuropsychiatric Institute, Seattle, WA, USA (www.pni.org); The Vernon Neppe Gateway (www.VernonNeppe.org); Vernon Neppe Research Site (VernonNeppe.com); Vernon Neppe’s books (www.brainvoyage.com).

Dr Edward Close

Dr Edward Roy Close, PhD, PE, DSPE, DCF (ECAO) is also extraordinarily accomplished in his own right. Based on his contributions, publications and books, and presentations, he is an internationally accomplished Physicist, Mathematician, Cosmologist, Environmental Engineer and Planner, and Consultant. As a charter member of the U.S.G.S. Systems Analysis Group, Close developed state-of-the-art mathematical optimization programs, hierarchical modeling techniques and fractal geometry models of coastal geomorphology, storm cell development and other environmental modeling applications. Pursuing an active research program in environmental remediation, Ed has made a series of breakthrough discoveries in using non-toxic compounds in mold research that have benefited millions. His book Nature’s Mold Rx is a classic. He was a Charter Member of the extant internationally known ‘Integrated Health-Care Professionals Council’. He also has significant expertise in the essential oils.

Besides his three books with Dr Neppe and several more in press, he has authored numerous technical papers and five books, including the groundbreaking ‘Transcendental Physics: Integrating the Search for Truth’. He has made some remarkable mathematical contributions: He pioneered and developed the ‘calculus of distinctions’ (later on with a small assist from Dr Neppe), an extraordinary accomplishment. And his earlier book, Infinte Continuity is a remarkable stepping-stone for the Neppe-Close TDVP.

In 1965, Close described the first (later) published proof (FLT65) for possibly the most famous math conjecture, ‘Fermat’s Last Theorem’ (FLT). The FLT solution befuddled thousands of mathematicians who tried to solve it over three and a half centuries. Dr Close’s solution has, through 2016, been examined by tens of professional mathematicians including intensively over the past three years, and yet has never been refuted. Some of these experts have made suggestions or queried areas, but in every instance, further analyses by mathematicians have demonstrated the ostensible criticisms to be irrelevant to the FLT proof, or incorrect. The Close solution (FLT65), was published initially as an Appendix to Close’s Book of Atma in 1977, but remarkably, is only several pages. That contrasts with Sir Andrew Wiles’s later accepted 1994 proof of over 150 pages.

Dr Close also developed a technique called ‘Dimensional Extrapolation’, allowing for movements across dimensions, something extremely important for TDVP’s 9-dimensional derivations. He has also developed several new theorems of consciousness, concentrating on Number Theory and contributed important engineering applications. It was he who first demonstrated that the little known Cabibbo Angle could be derived from 9 dimensions. There are now several demonstrations of the 9-dimensional proof of our finite reality. Edward Close is described by Vernon Neppe as “the most creative mathematician alive”

Dr. Close is Principal Engineer and Director of Research and Development at EJC Advantage, LLC. He is currently Science Editor of Telcom, the journal of the International Society for Philosophical Enquiry (ISPE) (www.thethousand.com) (a position previously occupied by Dr Neppe), and also a Distinguished Research Fellow of the Exceptional Creative Achievement Organization (5eca.com). His doctoral education included graduate work at several universities, including one year in residence at Johns Hopkins University. See www.erclosetphysics.com.

Immediate Future

Drs. Neppe and Close or Drs. Close and Neppe are currently working on (at this point) 9 full-length (150-250 page; First Edition, Seattle: Brainvoyage.Com, 2017) new books for colleagues. All titles begin ‘Beyond Our... Exploring Reality Science Series’: Each ‘beyond our’ continues with words beginning with P: 1 Perspective, 2 Physical, 3 Puzzles, 4 Paradigmatic Consciousness, 5 Psychological, 6 Psi Experiences and Infinity, 7 Philosophy, 8 Proofs, 9 Present Paradigms.

Drs. Close and Neppe are writing also for the layperson in another series of much shorter books: At this point, there are 5 such short books in process, all subtitled “Answers That Make Sense. First Edition. Seattle: Brainvoyage.com, 2017” namely: Solved! ; The God Matrix; Spirituality and science; Solutions to great mysteries; Turning science on its nose.

Neppe and Close summarized their work (Sept 2016) including a version of this press release in: A Nutshell Key Perspective on the Neppe-Close “Triadic Dimensional Distinction Vortical Paradigm” (TDVP). IQNJ 8:3 7-79, 2016.

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THE THEORY OF EVERYTHING HAS NINE DIMENSIONS

By Erin J Morgart

The Sparkling Diamond and the Quanta Jewel turn quantum physics and the nine-pronged world of consciousness—on its ear.

Quantum Physics has expanded rapidly in 2013 thanks to the discoveries of two sets of elite scientists, working separately. ¹, ²

Close and Neppe: The Sparkling Diamond:

In July 2013, Edward R. Close and Vernon M. Neppe announced their discovery that there are actually nine finite dimensions. ³ "Our day-to-day experience is one of experiencing our physical reality—the length, breadth and height of objects. These three dimensions of Space change with every new moment in Time. These features reflect the first four dimensions. The idea that there are nine spinning dimensions means that much of our actual reality is hidden.” explains Dr Neppe.

The Close-Neppe mathematical derivation allowed these scientists to demonstrate the solution to some of Physics’ most remarkable mysteries, including elucidating the Cabibbo angle and intrinsic spin. ¹, ³ The Cabibbo angle, a measure of the probability of a certain kind of particle decay, had been found to persist at a very strange angle (13.04 degrees). The reason why it was that specific size could not be explained by the Standard Model of Particle Physics, and consequently it had remained unsolved for 50 years since its discovery by Nicola Cabibbo in 1963: It could only be solved by applying the correct number of spinning dimensions

¹ USA Today Magazine January 2014 pages 66-68; The submitted text of the original article was only minimally modified in the USA Today Magazine version and remains substantively the same. We reproduce Erin Morgart’s submission to USA Today because it maintains the headers, underlining and italics, plus the biographical data and in-text citations (which have been updated). This has also gone through minor edits from Jacqueline Slade as of August 2016. We have maintained almost all the minor editorial changes in the Magazine, like adding another header, paragraphing, and changing verb tense. The USA Today publication was in 3 columns and had two pictures. The original Morgart submitted title and subtitles were: The Blazing Diamond and the Quantum Jewel: Two major discoveries in quick succession: The groundbreaking Close-Neppe 9D spin derivation is supported by the latest ‘Quantum Jewel’ finding. The Close-Neppe Discovery represents a major realignment of Standard Physics with the broader Reality of human experience. © Vernon Neppe and Edward Close and Erin Morgart and permission to republish. The published article in USA Today Magazine had significant graphics. Citation: Morgart E: The theory of everything has nine dimensions: The sparkling diamond and the quanta jewel turn quantum physics and the nine-pronged world of consciousness—on its ear.

USA Today Magazine: 1 (January); 66-68, 2014.
As Dr Close elaborates, “this 9-dimensional spin finding opens the door to demonstrating a radical new concept of reality: Our recent findings suggest we can now move beyond this seemingly strange and inexplicable angle of elementary particles to understand the interaction with the observer’s consciousness. That is why the 9-dimensional (9D for short) spin finding appears to be so significant.”

The 9D derivation required a logical basis: This is provided by the ‘Neppe-Close TDVP’ (technically TDdVP) model, a proposed so-called ‘theory of everything’ (TOE) describing:
- The ‘Triad’ of Space, Time, and Consciousness all being inseparably tied (‘tethered’) together;
- TDVP involves carefully defined ‘dimensions’ with extent and
- Distinctions and this includes a new mathematical technique, the Calculus of Distinctions.
- TDVP requires spinning movements (Vortices) (allowing communications).
- It reflects several major paradigm shifts that appear feasible mathematically, in the broader sciences (physics, consciousness, psychology, biology), and results in a philosophical model.

Even prior to their latest findings, Dr Adrian Klein, the contemporary Israeli Dimensional Biopsychophysicist and Consciousness Researcher, an expert on Theories of Everything, and the pioneer of the ‘Subquantal Integration Approach’, markedly endorsed the Neppe-Close model. “TDVP is a work that will change mankind’s future. It is a monumental work forcing obsolete preconceptions to crumble. This is a seismic shift in understanding the understanding process itself!”

The Close-Neppe 9-dimensional derivation was postulated by TDVP; conversely, the 9D discovery confirmed that component of the TDVP hypothesis. Pertinently, this 9D spin demonstration is quite different from String Theory. Close clarifies: “The ‘strings’ in the various String Theories generally involve the ‘curling’ or ‘folding’ into extra dimensions, and do not usually regard ‘spin’ as the major requirement for more dimensions. It’s an irony, too, that the String Theories apparently remain unproven mathematically: Some would say that’s why they are still ‘theories’. In addition, no String Theories I know of, have a total of 9 dimensions. But, perhaps most pertinent of all, String Theories do not involve any kind of consciousness, and do not generally specifically postulate Multidimensional Time, often speaking of poorly defined space-like or time-like ‘spaces’. By contrast, our TDVP model is based on sound logic, scientific evidence and mathematics. It produces strong empirical evidence for more than one dimension of time, and argues for the profound need for consciousness to be included in any equation describing reality.”

In summary, the 9 finite dimensions appear mathematically feasible, yet applying the math to any other number of dimensions, like the 10, 11 or 26 as in some String Theories, or the 4, as in our experience of our day-to-day reality, produces errors: TDVP scientifically and mathematically motivates multiple dimensions, and Close and Neppe show that there are likely 3 carefully defined dimensions each of Space, Time and Consciousness. For Close: “Mathematically, the spin is the key: These rotational movements—the ‘vortices’—allow a way to move through dimensions.” These scientists had to develop new mathematical techniques to derive their information: These include the ‘Calculus of Distinctions’ (the ‘Sparkling Diamond’) and ‘Dimensional Extrapolation’. They also, of course, relied on already well-
established conventional mathematical techniques to help in the exploration of the many ‘extra’ dimensions.

**The Quantum Jewel: Arkani-Hamed and Collaborators**

The second major 2013 event in Mathematical Physics occurred in September. Quanta Magazine published an article “A Jewel at the Heart of Quantum Physics”\(^2\). The author described how physicists, Nima Arkani-Hamed, Jaroslav Trnka at the Institute for Advanced Study, along with other collaborators, discovered a new technique for applying multidimensional mathematics and pointed to the relevance of spin by incorporating ‘twistors’\(^2\).

Arkani-Hamed and collaborators discovered that particle interactions may be based on a multi-faceted geometric shape, the ‘amplituhedron’. This looks like a metaphorical intricate, multifaceted ‘jewel’ in higher dimensions, so much so that these scientists could be referred to as the ‘Jewel Scientists’. Their findings significantly simplify multidimensional math, and change ideas about space and time locality and the so-called ‘unitary elements’.\(^2\) Their general finding indirectly motivates the feasibility of more easily deriving multidimensional quantal particle structures, and would therefore indirectly support the earlier-announced more specific Close-Neppe discoveries\(^1\).

Just as Close and Neppe had derived a 9-dimensional spin mathematical finding to explain elementary particles, the math of the Jewel scientists also negated the idea that all quantum physics could be conceptualized purely as properties of four-dimensional physicality: Both groups demonstrated mathematically that quantum physics simply cannot fit ‘locally’ into the geometric ‘unit’ that was previously regarded just as three dimensions of space and a moment in time. Instead, they supported the view that quantum realities can be simplified when conceptualizing new structures in higher dimensional realities, making calculations with the appropriate math much easier.

“Our 9-dimensional spin mathematics can be regarded as very simple”, Close explains. “Our new mathematical techniques for describing multidimensionality begin with the fundamental application of ‘distinctions’. We then recognize that observational perception is relative, and that what is regarded as ‘non-local’ may be non-local only relative to the particular dimensional domains being considered.” Neppe amplifies: “Indeed, our finite reality consists of discrete components—these are quanta: We could think of them like the ‘pixels’ on our TV, but these are much, much, much tinier fundamental units. But these ‘pixels’ are not just contained in the 3 dimensions of space and single moment in time we actively experience all the time: They’re actually in nine dimensions—it’s just we cannot directly experience most of them. But they’re still always happening in the background.”

We could predict that the two metaphoric findings of the ‘Jewel’ and the ‘Diamond’ may ultimately work synergistically with each other: Close and Neppe’s 9-dimensional spinning reality might be a specific applicable derivation of the mathematical applications of Arkani-Hamed and collaborators. But, even if that link were shown, in addition to the more obvious ostensible similarities such as the multidimensionality applying simplified math, there are some pivotal differences between these two momentous 2013 findings: It begins with a metaphorical ‘diamond’.
The Diamond in it all: The Calculus of Distinctions

The work of Neppe and Close could be regarded as including its own possible metaphoric jewel, a multifaceted diamond in stature, because of the fundamental quality and durability of the mathematical technique, called the Calculus of (Dimensional) Distinctions (CoD). CoD has many creative and unique facets:

• It reflects the most fundamental logical system to approach Reality.
• It allows applications across different dimensions, recognizing the distinctions between our different kinds of experiences, and how the mathematics can be applied at different dimensional levels.
• It allows conceptualizing conscious awareness, differentiating our experience at the most fundamental of levels, and ultimately realizing the relative nature of the hidden dimensional realities of existence.
• The CoD distinguishes 'variables of extent, content and impact'. These are applied to ensure that the dimensional, the substantial and the influences on events or objects are differentiated: consciousness is a critical common element in all of these.
• It recognizes the key experiential roles of subjective ‘perceptions’, ‘conceptions’ and ‘interpretations’: What to us is experience in everyday reality, may be quite different at, for example, the sixth and seventh dimensional domains.
• The CoD also allows for integrating the complex algebras and multidimensional geometries. This is possibly its most practical use.

We are driven to ask: “Is the Close-Neppe Calculus of Distinctions the metaphorical Diamond of Scientific Jewels?” Neppe answered carefully: “Yes, it seems to be a major new discovery, but the full implications are still tentative. Just as Einsteinian relativity required a ‘thought experiment’ for many to understand, we’ve applied the same here by replicating our original TDVP Cabibbo angle findings of a finite 9-dimensional spinning model.” Dr Close elaborates on this just completed derivation. “I began with a simple Rubik's Cube to be able to mimic simple rotations. I then extended this to the CoD to demonstrate with a thought experiment that there are indeed 9 finite dimensions in quantum reality, and that (as we had postulated before) 8 of them are spinning. We appear to have 3 dimensions of Space, 3 of Time and the rest are Consciousness dimensions.” Neppe extends the metaphor: “If the ‘Jewel’ is a new, easier mathematical way to represent millions of calculations, then the ‘Diamond’ is the new, fundamental and basic unification that is reflected in the Calculus of Distinctions. It certainly allows for the jigsaw puzzle pieces to fit, one step at a time.”

The missing link: Consciousness

Arkani-Hamed and their collaborators follow the giant footsteps of the remarkable pioneering early 20th century work of the great multidimensional theorists (Albert Einstein, Hermann Minkowski, Theodore Kaluza and Oskar Klein) and of the later String and Superstring theorists. But they, too, have not included something the ‘Diamond Scientists’ regard as fundamental. “The key missing element is the involvement of a very specifically defined broader form of ‘Consciousness’ beginning at the level of the most basic quantal particles, or just possibly even subquantally, and proceeding to include a deeper understanding of the entire cosmos.”
The role of Consciousness has largely been ignored, despite [John Stewart] Bell's Theorem and the follow up work of Aspect and others in communication at a distance, the delayed choice experiments and the split screen work, all strongly motivating this,³ “We realize that any term pertaining to ‘Consciousness’ evokes controversy. And many physicists interpret all this research as not involving any ‘consciousness’”, relates Neppe. “An independent ‘consciousness’ simply does not fit into a physicalistic four dimensional paradigm. But the nine dimensional spin mathematics works when we apply consciousness in the equations, and we believe that there is solid scientific support based on research.”³ In TDVP, we’ve motivated for Consciousness being its own substrate along with Space and Time. Applying it, allows its seamless application across not only the Physical, but also the Biological, Psychological and, indeed, the Consciousness Sciences. Without it, we return back to a situation where even esteemed scientists, like Einstein, could not solve the multidimensionality problem. Adding consciousness fills the void.” Neppe adds.

The consciousness question

Close carefully, but still excitedly, adds to Neppe’s comment: “This change of perspective including ‘consciousness’ makes sense of many unexplained physical observations. Previously intractable mathematics now yields to simplified calculations that work and markedly change our view of higher dimensional existence: In this new kind of Particle Physics, a key concept that I have just discovered (beginning October 2013) is what we’re calling the ‘Triadic Rotational Units of Equivalence’ (TRUE). This is allocated to elementary particles in the chemical elements of the Periodic Table, and by logical extension to molecules. We propose that this may offer a new understanding of the fundamentals of reality, and based on our preliminary findings, even, possibly, of life,” This new research is still in process, but is a logical continuation of the 9D thought experiment. These findings are still being checked; if shown to be correct, they are extraordinarily exciting in their implications for Space, Time and Consciousness.

The dollar in the mint: The demonstration of existence

Close and Neppe’s mathematical derivation of a previously incomprehensible, largely unheard of angle was new, yet this angle could be experimentally measured using complex particle colliders long before their discovery. To Neppe: “The Cabibbo angle itself may appear to be a minor, esoteric angle, but our perfect math derivation of it proves the existence of a 9-dimensional finite spin reality. This is not based on a guess or a mathematical generalization. Instead, it’s a real, now demonstrable mathematical derivation of finite reality. It demonstrates the presence of 9 dimensions, and, like a dollar demonstrates the mint, it confirms that a major hypothetical component of our TDVP ‘theory of everything’ model is supported. And now that our original finding has apparently been replicated by a thought experiment, we are more confident in applying new concepts like intrinsic spin and the TRUE. Indeed, it is our hope that applying a 9-dimensional spin model can open doors to many facets of Particle Physics, and, also, in understanding our perspective of the Cosmos and finite reality. That is what is so important.”

Neppe V, Close E. Nutshell on TDVP. IQNJ 8:3, 7-79 September 2016. V10.36
Natural imperfection: Symmetry or asymmetry in our cosmos?

The Close-Neppe partnership discovered two other remarkable theoretical findings on 9-dimensional spin. Neppe explains: “Firstly, we always think of our world as being largely symmetrical. This may be so in the world that we directly experience— the four dimensions that we’re so familiar with. But this symmetry doesn’t apply beyond that when we calculate the higher dimensions of reality. This lack of symmetry is a mathematical one. As an example, an elementary particle, like an electron, exhibits ‘intrinsic spin’—it rotates on its own axis, but this spin does not have a perfect symmetry.” Close adds: “And the second remarkable finding reflects a fascinating principle: Even though there are nine finite dimensions, these miniscule particles only appear to be rotating through eight, not all nine, planes. Why? Because the first dimension serves as a reference—the rest of the rotation is relative to that first dimension.”

The hidden reality: The practical direction

Whereas the Arkani-Hamed researchers may focus on more transient unstable state particles like gluons, and other Particle Physicists may concentrate on other particles which seldom exist, like the so-called ‘God particle’—the Higgs-Boson, these tiny particles may be limited to Particle Accelerators and Colliders. As Close puts it: “A far more practical approach, as we have done, is to focus on elementary fermion particles that are not transient, but fundamentally maintained in stable reality existence, like the quarks and electrons in the hydrogen atom. Such an approach becomes far more central to the limited structure of reality available to our physical senses.”

The Arkani-Hamed release seems to support the Close-Neppe 9D spin models because it emphasizes the role of the multidimensional in Particle Physics and appropriate ways to simplify mathematical concepts. But the two scientists, Vernon Neppe and Edward Close, have advanced Particle Physics, as well. They have, controversially for many, motivated Consciousness as a core component of both TDVP and 9D spin; and they have argued that Consciousness needs to be necessarily always linked to Space and Time. Their use of the CoD, Dimensional Extrapolation and other mathematical techniques, seem to have facilitated a further application of multidimensional geometry, algebra and physics; and the spinning of elementary particles apparently explains the lack of symmetry in the higher dimensions. “There are certainly hidden realities that exist outside of our confined, limited human experience of 3 dimensions of space embedded in a single moment in time.” Neppe concludes.

Erin J. Morgart is a writer, psychologist and world-ranked fitness model having won among others the United Nations USA Titles in 2012 and 2013.
The published USA Today Magazine article did not contain the submitted references and information supplied below:


4. Triadic Dimensional Distinction Vortical Paradigm (TDVP). See refs 1 and 3.


**About Edward Close PhD:** A skilled physicist, creative mathematician, deep-thinking cosmologist, acclaimed environmental engineer and Dimensional Biopsychophysicist. *Transcendental Physics* is one of Dr. Close's 8+ books. ([www.erclosetphysics.com](http://www.erclosetphysics.com))

**About Vernon Neppe MD, PhD, FRSSAf:** An internationally peer-recognized Behavioral Neurologist, Neuropsychiatrist, Neuroscientist, Psychopharmacologist, Forensic specialist, Psychiatrist, Phenomenologist, Neuroscientist, Epileptologist, Consciousness Researcher, Philosopher, Creativity expert, and Dimensional Biopsychophysicist. His CV includes 11+ books, 2 plays, 450+ publications, 1000+ invited lectures and media interactions worldwide [http://www.vernonneppe.org/about.php](http://www.vernonneppe.org/about.php)

**About TDVP:** The Neppe-Close TDVP 4-year collaboration utilizes the solid empirical scientific data, demonstrable mathematical logic and further conceptual innovations, as detailed in ‘Reality Begins with Consciousness: A Paradigm Shift That Works’ ([www.brainvoyage.com/RBC/perspective.php](http://www.brainvoyage.com/RBC/perspective.php)). The Cabibbo Angle derivation confirmed the hypothesis that a significant fundamental component of TDVP—the postulated 9 finite vortical dimensions—appears correct: See [www.VernonNeppe.org/media.php](http://www.VernonNeppe.org/media.php)

*Special thanks to Erin Morgart and to Shannon Rose for facilitating this paper being reproduced here.*
A data analysis preliminarily validates the new hypothesis that the ratio of dark matter and dark energy to gimmel and TRUE units (Triadic Rotational Units of Equivalence) is ‘contained’ in the atom: Dark matter correlates with gimmel in the atomic nucleus and dark energy with gimmel in electrons.

Vernon M Neppe MD, PhD, FRSSAf and Edward R Close PhD, PE

Citation: Neppe VM, Close ER: A data analysis preliminarily validates the new hypothesis that the atom 'contains' dark matter and dark energy: Dark matter correlates with gimmel in the atomic nucleus and dark energy with gimmel in electrons. IQ Nexus Journal 8: 3; 80-100, 2016.

Abstract:

Neppe and Close (2015) have previously demonstrated that the proportion of combined volumetric dark matter (DM) plus dark energy (DE) in the cosmos correlates almost exactly with the proportions of ‘gimmel’ to ‘TRUE units’ in the corresponding most abundant elements in the cosmos (0.0008 difference in ratio score). Gimmel is the so-called ‘third substance besides mass and energy’. Gimmel is mass-less and energy-less and without it, mathematically, all atoms would necessarily be unstable. Gimmel is calculated by applying Triadic Rotational Units of Equivalence (TRUE), a new method of quantitating atoms. This study is now extended to the atom by mathematically comparing the ratios of volumetric dark matter to dark energy with the ratios of gimmel in protons and neutrons (nucleons) compared with gimmel in electrons. Remarkably, our derivation shows that the two ratios are within 2.27% of each other. This strongly supports the research hypothesis because prior DM and DE data showed that certain other factors could be up to 3% different. This correlative result of DM and DE with gimmel in the atom may possibly imply that DM and DE exist in every atom. Specifically, these results support the hypothesis that the far more loosely bound electron may be linked with dark energy, yet dark matter may be linked with the tightly bound strong forces of the nucleon. Furthermore, DM and DE apparently do not fit volumetrically into the Standard Model of Physics, which utilizes only 3 dimensions of space in one moment in time. Instead, we propose DM and DE would fit into the finite 9-dimensional spin model (9D) previously definitively demonstrated by Close and Neppe (2014). Even more so, we’ve now shown DM and DE are correlated with gimmel in the atom, and gimmel is definitively conceptualized across 9D in the finite. Therefore, DM and DE should logically be fundamentally linked with 9D, too. This further supports that if DM and DE are ‘contained’ in the atom as this (2016) study supports, it would be relative to the 9D explanatory model: We need not look to bizarre locations in the cosmos, possibly just to the atom. And we might have located the missing 95.1% of DM and DE. The implications of these findings are huge.

Key words: 9 dimensions, 9D, Atom, Close, Cosmology, Cosmos, Cube, Daled, Dark energy, Dark matter, Electron, Gimmel, Mathematics, Neppe, Neutron, Nucleon, Proton, Ratios, Spin, Third substance, TDVP, TRUE units, Unit, Volume
Terminology:
The term ‘dark’ in cosmology refers to something for which there is definite evidence of its existence, but which is non-luminous and cannot be accessed by our usual methodologies. When we refer to ‘Dark Energy’, we describe a repulsive force that counteracts gravity and causes the universe to expand at an accelerating rate. The term ‘Dark Energy’ is used as a convenience and based on Planck Probe calculations is thought to make up about 69% of the cosmos. Similarly, ‘Dark Matter’ in cosmology is a second theoretical ‘dark’ non-luminous term, this time an attractive force that is hypothesized to be linked with gravity. ‘Dark Matter’ is regarded as causing the universe to remain coherent because it stays together and is thought to constitute about 27% of the universe. Because these ‘forces’ are so mysterious and as yet unexplained, they may constitute the most important conundrum in all of physics. 1-3

‘Gimmel’d has been conceptualized and described by Close and Neppe as the ‘third substance’ besides the mass and energy that make up protons, neutrons and electrons. 3-17 It is mass-less and energy-less and without gimmel, mathematically, all atoms would necessarily be unstable, because we cannot have half an atom, or quarter of an electron. Everything in our finite reality is integral, quantized and volumetric, and by applying the necessary cubic measures, gimmel is calculated using a new method of quantitating atoms, Triadic Rotational Units of Equivalence (TRUE). Only a small number of equations work out, and because of this, we can calculate exact numbers of the different gimmel quantities in union with fermion particles such as electrons, up-quarks and down-quarks.

In 2015, in our previous cosmological research on gimmel, Triadic Rotational Units of Equivalence (TRUE units) and the combination of dark energy and dark matter, we (Vernon Neppe and Edward Close) postulated that there is a relationship between gimmel — that third massless, energyless substance—and dark matter and dark energy in the cosmos. 3,6 We have demonstrated that gimmel is necessary for stability of the atom. 3, 5-16 Without it, the atom would be extremely asymmetric and fly apart.

The proportion of dark matter and dark energy to the whole cosmos, based on the Planck probe data, is generally reported as 95.1%. These figures have been well substantiated over many studies. 18 The 95.1% figure calculation is complex and involves some assumptions of ratios in the cosmos 3. Effectively, then, ‘dark matter’ and ‘dark energy’ account for far the most of the matter and energy in the entire universe.

The ‘dark’ components cannot be seen directly with telescopes as apparently they do not emit or absorb light or other electromagnetic radiation. Their existence and properties can only be inferred and this is what the Planck Probe mission team did, applying the standard model of cosmology. 19-22. The terms Dark Matter and Dark Energy are misnomers arising from the unwarranted theoretical choice of looking at reality from a narrow materialistic point of view. Also, it should be pointed out that the location and distribution of so-called Dark Matter and Dark Energy in the universe is likely determined by some very complex relationships not delineated in this paper.

To perform the appropriate calculations one needs to convert the data into volumetric equivalents because the 95.1% proportion is derived from linear units. This conversion yields the volumetric proportion for dark matter and dark energy of 86.01%. 3

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d Gimmel (also spelt ‘gimel’/) is the mystical third letter of the Hebrew alphabet, appositely meaning ‘bridge’.
We developed ‘Triadic Rotational Units of Equivalence’ or ‘TRUE’ units out of necessity. We demonstrated that in order to determine the TRUE unit values of up and down quarks as parts of neutrons and protons rotating in 9-D, the smallest subatomic particle, the electron, must be allocated the unitary value of 1. (The other quarks are unstable, ephemeral particles that do not enter into the evaluation of fermions.) The TRUE values of all other particles, elements and compounds can then be calculated accordingly.

Remarkably, when one calculates the proportion of gimmel to TRUE in the cosmos, taking into account the sum of the abundant elements that are already calculated volumetrically, and using the most appropriate available figures, the ratio of gimmel to TRUE units for the equivalent elements are almost identical. The percentage is calculated to be 86.09% for volumetric ratio cosmologically, and this difference is truly remarkable. It’s only a 0.08% or p = 0.0008 difference—one in 1250—when we had hypothesized that the alternative hypothesis would be acceptable if it were within 2%, a very stringent requirement. This result is 25 fold more stringent than our already very stringent requirement for acceptance of the hypothesis. (Table 1).

Table 1. Broader Cosmological “Dark” Data (combining dark matter with dark energy) and Proportionate Gimmel comparisons based on cosmological abundance of elements.

1. Hypothesized valid if within 2% of observed value.
2. Volumetric (Dark Matter [26.8%]+ Dark Energy [68.3%]) ratio to cosmology 95.1% cubed = 86.01% (Planck probe 2014 data).
3. Gimmel to TRUE ratio (already volumetric) of Abundant Elements Σ (volumetric) [Hydrogen 89.3% gimmel/TRUE * 0.756 abundance=67.5%] + [Helium+less abundant life elements with the same gimmel score = 76.2% * 24.4=18.59%] =86.09%.
4. Results: The results not only confirm hypothesis but markedly so with p <0.001 difference. The difference between proportions of Dark Matter and Dark Energy together to the ratios of cosmological gimmel = 0.08%. This result is truly remarkable!
5. Extensions: Articulated in this paper! Neppe VM, Close ER: A data analysis preliminarily validates the new hypothesis that the ratio of dark matter and dark energy to gimmel and TRUE units (Triadic Rotational Units of Equivalence) is ‘contained’ in the atom: Dark matter correlates with gimmel in the atomic nucleus and dark energy with gimmel in electrons. IQ Nexus Journal 8: 3; 80-100, 2016.

Effectively, we hypothesized that the ratios of gimmel to TRUE units and dark matter and energy taken together as a proportion of the cosmos should strongly correlate. Despite that 2% cutoff range to support this alternative hypothesis, we found this tiny 0.08% (or 8 in 10,000) in difference, based on the Planck probe figures. This tiny variation is almost certainly an artifact of measurement sampling error (the literature on the probe supports this). Such a profound result is unlikely to be pure speculation.

Key gimmel information:

The logic behind the elements is briefly that Hydrogen-1 (H1) constitutes 70.6% of the total mass abundance of all of the elements in the cosmos. The terminology is formidable in that the abundance of a chemical element is a measure of the occurrence of the element relative to all other elements in a given environment.

Abundance is measured in one of three ways: by the mass-fraction (the same as weight fraction); by the mole-fraction (fraction of atoms by numerical count, or sometimes fraction of molecules in gases); or by the volume-fraction. Volume-fraction is a common abundance measure.
in mixed gases such as planetary atmospheres, and is similar in value to molecular mole-fraction for gas mixtures at relatively low densities and pressures, and ideal gas mixtures. We are applying the most usual method of abundance values as mass-fractions.\textsuperscript{24}

H\textsubscript{1} is the lightest element: It actually constitutes about 91\% of all the cosmos based on numbers of atoms (the mole fraction). But given the calculations based on mass and energy for dark substances, we cannot justify calculations here based on “numbers of atoms”, and are using mass fractions instead) (Table 2).\textsuperscript{24,25} Combining the H\textsubscript{1} mass fraction proportion of 70.57\% with the gimmel to TRUE ratio of 89.28\%, calculates at 63.005\%.

### Table 2: Abundance of the Cosmological Elements Comparing Mass and Mole Fractions

<table>
<thead>
<tr>
<th>Regular Isotope</th>
<th>Gimmel %</th>
<th>Atomic number</th>
<th>Mass fraction in parts per million (MF)\textsuperscript{e}</th>
<th>Equivalence % of gimmel</th>
<th>Atom fraction in parts per million</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen-1</td>
<td>89.28%</td>
<td>1</td>
<td>705,700</td>
<td>63.0050</td>
<td>1</td>
</tr>
<tr>
<td>Helium-4</td>
<td>76.19%</td>
<td>4</td>
<td>275,200</td>
<td>2</td>
<td>88,714</td>
</tr>
<tr>
<td>Oxygen-16</td>
<td>16</td>
<td>5,920</td>
<td></td>
<td>3</td>
<td>477</td>
</tr>
<tr>
<td>Carbon-12</td>
<td>12</td>
<td>3,032</td>
<td></td>
<td>4</td>
<td>326</td>
</tr>
<tr>
<td>Neon-20</td>
<td>20</td>
<td>1,548</td>
<td></td>
<td>5</td>
<td>100</td>
</tr>
<tr>
<td>Nitrogen-14</td>
<td>14</td>
<td>1,105</td>
<td></td>
<td>7</td>
<td>102</td>
</tr>
<tr>
<td>All these are life (O, C, N) and noble elements (He, Ne)</td>
<td>76.19%</td>
<td></td>
<td>287971</td>
<td>2.19405</td>
<td></td>
</tr>
<tr>
<td>Iron-56</td>
<td>75.0%</td>
<td>56</td>
<td>1,169</td>
<td>0.000877</td>
<td>6</td>
</tr>
<tr>
<td>totals</td>
<td></td>
<td></td>
<td>65.20781 of all %</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The second to last column lists the abundance in the cosmos of elements. Iron and elements lower than #6 in abundance are clearly irrelevant here. Helium is the second most abundant element by a large distance (Table 2) but in any event several of the next but less abundant elements are all life elements: The top five have the same gimmel score ratio to TRUE units, at 76.19\% and make up the other 24.4\% of the atmosphere (because H\textsubscript{1} is 75.6\%). Whereas Hydrogen-1 and Helium are the most abundant elements in the cosmos by far 3, Oxygen, carbon, neon and nitrogen (which comes seventh) all have the same gimmel score in the cosmos which means that this calculation can be extended beyond helium. Technically, iron is minimally more abundant than nitrogen and has slightly less gimmel to TRUE ratio but the contribution after taking into account gimmel to TRUE is 0.00088 total and moreover a gimmel difference of about 1% less (75.0\% iron gimmel to 76.1\% life elements). This makes the difference 0.0000088 negligible beyond the number of significant figures being used). The same applies to the less abundant elements and therefore, in this instance, we do not need to consider all the elements in the Periodic Table (Table 2).

\textsuperscript{e} In parts per million divided by million and multiply the % figure to get to %.
More importantly, for hydrogen, we needed to introduce another form in the ‘horizontal axis’ besides gimmel, called ‘daled’ (which may or may not be the same as gimmel). The necessity for a horizontal axis calculation with hydrogen is because the hydrogen atom lacks a neutron. Without something to compensate, the atom based on the TRUE unit calculations would be symmetrically unstable. There needed to be a further flow of a gimmel type substance to compensate. While we assume it would be the same ‘gimmel’, we’re applying it uniquely and in a different context, hence we’ve used the term ‘daled’. Daled may or may not be equivalent to gimmel, and we refer to both collectively as ‘gimmel’ here. But daled is the key to the calculations below because it increases the amount of gimmel or equivalent daled effectively in the protons and neutrons potentially creating a balance of mass-energy with a much greater portion of the gimmel-like component. This is likely to be the most important part of the Hydrogen-1 element promoting stable structures in the universe.

Adding the proportionate gimmel/TRUE scores of these elements works out to be 18.59%. The combined figure with hydrogen therefore is 86.086%. This means that dark matter and dark energy in the cosmos correlate so closely with the figure of gimmel to TRUE units of the major elements of the cosmos, they could suggest that gimmel in some way is linked with the dark matter and the dark energy of the cosmos. These results are so powerful they’re unlikely to be coincidence. This supports the hypothesis of this third substance (gimmel) in the cosmos.

Is “Dark” in the atom?

The question comes up: Could it be that dark matter and dark energy are ‘contained’ within the atom itself? We use ‘contained’ here for convenience because English lacks an adequate term. But it is used differently from most uses. It does not mean that the atom in our conventional living experiential reality of 3 spatial dimensions must be volumetrically adequate to hold (or contain) all the dark matter and dark energy. The use of ‘contained’ is at a hierarchically different level of 9 spinning dimensions and if necessary extending forever to a 10th plus still discrete, quantized transfinite (also called tenth dimension).

The ‘container’ idea is not a strange hypothesis because the nucleus of the atom contains protons and neutrons, and they are kept close together by electrical forces, probably strong electrical forces; and yet there appears to be a lot of, so to say, ‘empty space’, and the electrons are circulating around. If the calculation could be that dark energy would be similar to the gimmel scores of the electrons, and the dark matter similar to the gimmel scores of the nucleons—the protons and the neutrons together—then it might be that dark matter and dark energy are ‘found’ in the atom itself, and this is the source of cosmological ‘dark’ substance.

Moreover, the near light-speed vortical spin of fermions and the effects of so-called dark matter and dark energy in the rotation of spiral galaxies\(^1\);\(^{26} 27; 28\) may imply that the remarkable atomic correlation of ‘gimmel’, which is derived through extrapolating across a 9-dimensional spin domain. is more than just coincidental but meaningful or causally linked.

We have also previously demonstrated that the atom as we know it with just protons, neutrons and electrons cannot exist: Atomic materialism is refuted.\(^29\) There has to be a further substance: we call this ‘gimmel’. Therefore, we know that gimmel, as a ‘mass-less, energy-less ‘substance’, exists in the atom.\(^29\)

\(^{f}\) Daled is also spelled ‘dalet’. It is the fourth letter of the Hebrew alphabet and refers to door or poor.
**HYPOTHESES:**

We propose that the proportions of Dark Matter correlate with gimmel in the atomic nucleus and Dark Energy with gimmel in electrons. This is an extraordinarily important issue directly linked with TRUE units and gimmel. However, in this instance, we extend our original cosmological findings, incorporating the atomic level because atoms make up our whole cosmos.3; 5-16

Two questions arise:
1. Can we separate the gimmel linked with dark matter from that of dark energy.
2. Can we link dark matter and dark energy with the fundamental atom?

- More specifically because dark matter is dense and involves a strong (hypothesized gravitational force) could it be linked with the gimmel in protons and neutrons (nucleons) where theoretically strong electromagnetic forces keep nucleons together.
- And could the gimmel in electrons be linked with dark energy? Again the logic is that dark energy is conceptualized almost as ‘anti-gravity’ with an expanding universe, and in the atomic context, parallel to how electrons rotate round the nucleons, with theoretically weak forces are involved. These concepts are based on our understanding of three dimensions of space in a moment in time without anything beyond: But 'dark matter' and 'dark energy' are misnomers, not because they are ‘dark’ in the sense of our usual ways of measuring them being inadequate, but because they are not truly ‘matter’ and ‘energy’ at all, because they cannot be measured as mass or force. Therefore, different rules have to be applied to dark matter and energy, than any other mass-energy.
- If so, we would expect the proportions of gimmel to electrons in proportion to the gimmel to the nucleons to be similar to the proportions of dark energy to dark matter.
- Based on the literature, it seems that there are papers where components of such calculations may vary up to 3% and we therefore proposed that if these results were within 10% the evidence would be very supportive, and if the variation was within 5% (p<0.05) the link would be regarded as strong and the alternative hypothesis, strongly supported.
- The data we discuss here is very much necessarily preliminary, but exciting given that it confirmed a hypothesis, and extends the ideas of gimmel, from the quantum level through to the cosmological. 30 We should then be able to apply this to the atom itself as well. This could mean Dark Matter and Dark Energy are contained in the atom.

**Pertinent dark (also called ‘cold’) data supporting our stipulated p<0.05 range.**

We portray first the key, well-summarized results of the Planck Probe data and the follow-ups.18 The data underlying these ranges are based on a replication of the Planck probe data18. These derive originally from some tests over some years19; 21; 22. In essence, the Planck satellite was launched by the European Space Agency and made observations of the cosmic microwave background (CMB) for a little over 4 years, from August, 2009 until October, 2013. Preliminary results based on the first year and a quarter of operation, and released in 2013, established high confidence in the canonical Lambda-Cold Dark Matter cosmological (ΛCDM) model. This model was dominated by dark energy (the Λ component), and had some cold dark matter (CDM). This is as opposed to ordinary matter, of which stars, planets and human beings are composed, and that ‘matter’ is the third most important component from a mass-energy standpoint but measured at
only 4.9% of the universe, though it is easily registered because it’s linked with light. We know
that dark energy (68.3%) is far more than the mass-energy equivalent (26.8%) of all matter
combined. Moreover, dark matter is many fold more than the ordinary matter component (only
that 4.9%). 28 papers released by the Planck Consortium detail results from the entire mission, and
more than three times as much data gathered.\footnote{The first paper provides an overview of these results (the Planck 2015 Results I). Papers XIII and XIV describe the cosmological
parameters measured and the findings on dark energy. Many additional papers examine potential departures from the canonical
cosmological model and constraints on inflationary models.\footnote{(Ωb = the baryon (basically ordinary matter) mass-energy fraction (fraction of total-mass energy in ordinary matter) and h =  H0/100. H0 is the Hubble constant which measures the expansion rate of the universe, and indirectly, its age. The best value for H0 is 67.8
kilometers/sec/Megaparsec (millions of parsecs, where 1 parsec = 3.26 light-years). H0 has an uncertainty of about 1.3% (two standard deviations). In this case h = 0.678 and the expression above becomes Ωb = .048, with uncertainty around 3% of its value. Thus, just under 5% of the mass-energy density in the universe is in ordinary matter.}}

In particular the technical ranges have been delineated.

- Ωb*h² =.02226 to within 1%.\footnote{Ωb = the baryon (basically ordinary matter) mass-energy fraction (fraction of total-mass energy in ordinary matter) and h =  H0/100. H0 is the Hubble constant which measures the expansion rate of the universe, and indirectly, its age. The best value for H0 is 67.8
kilometers/sec/Megaparsec (millions of parsecs, where 1 parsec = 3.26 light-years). H0 has an uncertainty of about 1.3% (two standard deviations). In this case h = 0.678 and the expression above becomes Ωb = .048, with uncertainty around 3% of its value. Thus, just under 5% of the mass-energy density in the universe is in ordinary matter.} 
- The cold matter density is measured to be Ωc*h² = 0.1186 with the uncertainty less than 2%;
- and with the h value substituted we have Ωc = .258 reflecting similar uncertainty.\footnote{Since the radiation density in the universe is known to be very low, the remainder of the mass-energy fraction is from dark energy, Ωe = 1 –.048 –.258 = 0.694.} \footnote{The Planck Consortium also find the universe is topologically flat to a very high degree, with an upper limit of 1/2 of 1% deviation from flatness at large scales.} 

Essentially, the Planck 2015 results replicate the previously thought balance of the universe based
on present-day values of the constituents. In the past, dark energy was less important, but will
dominate more and more as the universe continues to expand. The dark energy works as a
negative gravity and causes space to expand.\footnote{The Planck Consortium also find the universe is topologically flat to a very high degree, with an upper limit of 1/2 of 1% deviation from flatness at large scales.}

These figures appear to justify calculations based on alternative hypotheses of 5% or even
10%.

**METHODOLOGICAL APPROACHES:**

*What do we calculate?*

Considering potential technical problems, it should be clear that one has to take into account
volumetric mass and energy equivalence. We have these figures readily available for protons and
neutrons: We have already determined the exact number of TRUE units of gimmel associated with
the electrons, so we know where those fit.\footnote{The Planck Consortium also find the universe is topologically flat to a very high degree, with an upper limit of 1/2 of 1% deviation from flatness at large scales.} But there is a question of how much gimmel is there in
the protons and neutrons besides that which we have already calculated from empirical data in
connection with the quarks that make up fermions. Is there more gimmel than just that associated
with quarks? It appears that there could be, as for symmetric stability, gimmel should be present in
all particles and everything comprising physical reality. But how do we determine this when it
comes to protons and neutrons? This is relevant because protons and neutrons apparently contain
more than just up and down quarks. We know this because quarks make up only a tiny fraction of
the mass of these nucleons. Their far greater mass must be explained.

We have previously already strongly proposed a linkage of so-called gluons with quarks.\footnote{The Planck Consortium also find the universe is topologically flat to a very high degree, with an upper limit of 1/2 of 1% deviation from flatness at large scales.} \footnote{Effectively, we have postulated that the gimmel might actually be what the heuristically
derived gluons actually are.\footnote{Could that be true? The evidence appears to be substantial. And could
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cosmological model and constraints on inflationary models.\footnote{The Planck Consortium also find the universe is topologically flat to a very high degree, with an upper limit of 1/2 of 1% deviation from flatness at large scales.}
it be linked with other unstable particles that last only tiny fractions of a second? These are the so-called subatomic ephemeral particles, for example, the Higgs Boson. The Higgs Boson is regarded as, in some way, providing the mass, even though it’s effectively ephemeral, massless, and energyless, and therefore does not permanently exist. d Since gimmel is necessarily linked with all particles, not just fermions, it is likely that these extra components reflect just another aspect of the role of gimmel in the fabric of everything. This new conceptualization of the nature of gluons, and the hypothesis that dark matter might be equivalent to gimmel in or part of the atom, if demonstrated, would support this contention. Working from what is known, i.e. the amount of gimmel in the electrons and quarks, we can potentially calculate the differences in total mass, energy and gimmel, and find a way to account for 100% of the volumetric equivalence of the atom.

The hypothesis therefore is, the proportion of gimmel to electrons to the proportion of gimmel remaining, which is in the neutrons, would be the same as the proportion of dark energy to dark matter.

The problem that one has is how to calculate this, because dark energy/dark matter can be calculated basically on the basis of angular momentum (mass, and energy), and converting that into volumetric equivalents -- or number of TRUE in the universe is the problem. This is particularly so in calculations pertaining to the elements, and the most pertinent difference between proportion of mass and number of atoms, as indicated, is one of hydrogen because it is so light. Hydrogen-1 contains 91% of the atoms of the whole ordinary universe (the 4.9% ordinary matter) (Table 2). But when examining mass, H1 constitutes a far lower proportion, only about 63%, of the total equivalent mass. These figures would vary markedly in terms of different calculations, so we must decide what is appropriate. We could also apply Mass Energy Volumetric equivalents, which would make the H1 figure about 67%. 7 Logically, we must measure the mass of each of the elements because we’re dealing with concepts pertaining to mass, energy and gimmel, and not numbers of atoms. But our expectation would be that there is an error range in our comparative calculations.

Also, essentially, we cannot estimate the amount of dark matter/dark energy that would be in the neutron, or the amount of gimmel total besides the fermions. However, we can calculate it based on the remaining proportion: We know the exact figure for the electrons, so 100% minus the % gimmel score in union with electrons, which is 105 gimmel TRUE units per electron, allows us a close approximation.

But in this paper, we will first apply the known, and we have figures for gimmel in the fermions—the gimmel and daled linked with quarks in neutrons and protons, and the gimmel in electrons. 7 If we find that these figures are way off, we can then go to the next stage of examining 100% minus the electron gimmel for the nucleons, and postulating what can explain the difference. This is a particularly logical first choice as our original study examined the proportions of gimmel in TRUE units and was based on fermionic particles 7 6, and our Conveyance Equation for calculating such gimmel allocations was based on fermions, not bosons or any other stable or unstable particle. 7

These figures are therefore estimates, but the hypothesis and the preliminary results, as indicated below, should show a closeness of gimmel in the electrons proportionate to TRUE units based on cosmological atomic data. Even within 10% of what we would expect would be very good. The remainder, then, is the dark matter (less the 4.9% of matter that is ordinary matter).
RESULTS: The tables below indicate the key data.

Table 3A Oxygen or He or H2 or N or C Ratio of gimmel to TRUE is 76.19%.

<table>
<thead>
<tr>
<th>Particle</th>
<th>Mass/Energy</th>
<th>$\lambda$</th>
<th>Total TRUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>8e</td>
<td>8</td>
<td>840</td>
<td>848</td>
</tr>
<tr>
<td>8P$^+$</td>
<td>136</td>
<td>56</td>
<td>192</td>
</tr>
<tr>
<td>8N$^0$</td>
<td>176</td>
<td>128</td>
<td>304</td>
</tr>
<tr>
<td>Total nucleons</td>
<td></td>
<td>312</td>
<td>184</td>
</tr>
<tr>
<td>Totals</td>
<td>320</td>
<td>1,024</td>
<td>1,344</td>
</tr>
</tbody>
</table>

Oxygen 16 has 8 electrons, protons and neutrons. Fundamentally that ratio of 320/1024 is the 76.19% the same as for other life elements, here Carbon, Nitrogen and inert elements Helium and Neon and even Deuterium. Essentially important here is the gimmel ratio of the protons and electrons / total gimmel. 184 / 496 = 37.1%. We contrast this with the 840/848 of the electron, which is 99.06% gimmel and characteristic for all elements. The electron always has 105 times the units of gimmel to its mass. Oxygen is used as an example here, but effectively, we’re dealing with the same proportions. We will ultimately be able to unitize any life element like oxygen, carbon or nitrogen or inert noble gas like helium, by dividing by the number of protons or neutrons to get a basic unit like deuterium. This simplifies calculations.7

Daled and the special case of Hydrogen-1, the common hydrogen we know.
We now examine Hydrogen 1 (Protium; H1). H1 is the only element that does not have a neutron. Instead, when applying TRUE unit analysis, it appears to compensate by having an extra third substance which is massless and energyless. We could call this gimmel (or $\lambda$). In effect, we’ve applied the term ‘gimmel’ to describe the ‘third component equivalent’ that is mass-less and energy-less. But this ‘gimmel’ concept is not in union with electrons or with quarks. Instead, it replaces (and compensates in volumetric symmetry for) the missing completely absent neutron in a unique situation, the case of the Hydrogen 1 atom (H1). Is this still reflecting that same third substance, gimmel? In case it is something different, we’ve called it ‘daled’ $\tau$.

Daled may or may not turn out to be just a form of ‘gimmel’, but it contributes enormously to the proportion of that third substance in H1. Without applying the daled here, the TRUE unit score in H1, would be much lower. The well-known absence of a neutron in H1 has been ignored in conventional atomic physics. However, we regard it as of profound relevance: The relatively enormous amount of gimmel/ daled TRUE quantum units necessary to compensate has been carefully calculated. This is not performed without thought: It had to be done because without it H1 would have been volumetrically unstable. Without this ‘daled’, because of the consequent H1 instability and a profound asymmetry in the calculation of its volume, the H1 would then fly apart. In contrast, once the ‘daled units are added in TRUE analysis, to replace the absent neutron, H1 becomes stable and symmetrical again.

Moreover, the ‘gimmel- daled’: TRUE ratio in H1 becomes enormous at 89.28%. This is far the highest figure for any element, and empirically may be the reason for the major implication: H1 is likely the most prevalent element in the cosmos, and also the most important element in chemical reactions. For convenience, we’re still calling the gimmel-daled combination ‘gimmel’
in this paper, but we’re always referring to ‘gimmel-daled’ as soon as H1 is involved (each of the other isotopes of Hydrogen, such as H2, called Deuterium or ‘heavy hydrogen’ and the very rare H3, have a neutron).

Effectively, H1 contains more gimmel (which we postulate might be some form of consciousness) than anything else. Again, we non-prejudicially apply the term ‘gimmel’ in our calculations below, to include daled—if you want, we could call it G-D which strangely may be an acronym for a divinity, as well! We also apply the term ‘gimmel’, in this and all instances, to argue that we are not directly saying that gimmel is pure or part consciousness. However, we maintain the ‘consciousness’ concept at the quantal level and likely beyond, could be a useful, viable and possibly the only appropriate postulate (Table 3B).

Table 3B: TRUE-Unit Analysis for Hydrogen 1 (Protium).

<table>
<thead>
<tr>
<th>Particle</th>
<th>Mass/Energy</th>
<th>%</th>
<th>Total TRUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>e</td>
<td>1</td>
<td>105</td>
<td>106</td>
</tr>
<tr>
<td>P⁺</td>
<td>17</td>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td>Daled</td>
<td>0</td>
<td>38</td>
<td>38</td>
</tr>
<tr>
<td>Total nucleons</td>
<td>17</td>
<td>45</td>
<td>62</td>
</tr>
<tr>
<td>Totals</td>
<td>18</td>
<td>150</td>
<td>168</td>
</tr>
</tbody>
</table>

Calculation 1: H1 Daled 150 of gimmel to only 18 of mass energy in the H1 atom so the ratio is 89.28%. But we’re interested in separating the nucleons here, not the total because we’re looking at ratios. This result is particularly relevant given that Hydrogen is by far the most abundant element in the cosmos. In Table 2 we can see that 91% of all atoms in the cosmos are Hydrogen-1. But for the purposes we’re studying here, we deal with mass and energy not molar equivalents. This is so as this is the measure we’re calculating because we deal with dark ‘matter’ and dark ‘energy’. Instead of 76.19% in life elements and in H2 (heavy Hydrogen isotope, Deuterium) (Table 3C), H1 has 89.28% gimmel/ TRUE ratio, but this is a total, and again, we must separate the electrons from the nucleons in every element in our calculations.

Table 3C: Hydrogen 2 (Deuterium; H2).

H2 is equivalent to heavy hydrogen because it has a neutron.

<table>
<thead>
<tr>
<th>Particle</th>
<th>Mass/Energy</th>
<th>%</th>
<th>Total TRUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>E -</td>
<td>1</td>
<td>105</td>
<td>106</td>
</tr>
<tr>
<td>P⁺</td>
<td>17</td>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td>N 0</td>
<td>22</td>
<td>16</td>
<td>38</td>
</tr>
<tr>
<td>Total nucleons</td>
<td>39</td>
<td>23</td>
<td>62</td>
</tr>
<tr>
<td>Totals</td>
<td>40</td>
<td>128</td>
<td>168</td>
</tr>
</tbody>
</table>

More telling, instead of the 37.1% maximum for the life elements all of which contain neutrons, H1 because of its daled instead of a neutron has 45/ 62 = 72.6% even in the nucleons (protons in this case because there’s no neutron). And that extra quantity truly counts because H1 is so abundant.

We have shown that H2 (Hydrogen-2 or deuterium a relatively rare hydrogen isotope, just
because it reflects a life-element in all scores, but has one of each so calculating is easier.
Remarkably, H2 has the same gimmel to TRUE ratio of any of the life elements (O, C, N, S, Mg,
Ca and even Si) plus the two inert noble gases (helium and neon) is 76.2%. All the life elements
C, O, N, S, Mg, Ca have this same ratio. He and Ne are non-reactive in this context because of
their 0 valence. (Gimmel is abbreviated with the Hebrew letter, ג)

Let’s now calculate: First we briefly look at the number of atoms as opposed to the mass of
each element. So for example, in Table 2, looking at number of atoms per million for He, O, N, C,
Ne, then:

I. The incorrect approach as this is based on parts per million:
The electron score is the same: e =105 of 106 total TRUE.
Additionally, for the protons and neutrons of the abundant Helium, Oxygen, Carbon and Neon, the
amount is the 37.1% but, for example, with each neutron (16 TRUE gimmel units and proton (at 7
gimmel units)=so (7+16)= 23. In proportion to the Total TRUE of (24+38)=62 the gimmel
proportion is 37.1%.
This would be the same for the correct mass calculation below, but the difference is the molar
(number of atoms) quantity that it is only 9% based on the total (lower because H1 is 91% so 100-9%)
and so the molar number overall would be only 37.1% * 9% and so equals 3.34%.
But we don’t count atoms: this is flawed as we should not be using numbers of atoms, instead
mass-energy with dark matter and energy. So, the 90.99% molar component of atoms or parts per
million would be incorrectly applied (in this instance).

II. The necessary exclusion showing irrelevance of Fe using even mass fractions.
We must now examine whether any of the other non-life or non-noble elements play a role. Iron
(Fe) is sixth in abundance but its contribution turns out to be so negligible, it does not even fit
significant figure calculations. Fe has a gimmel to TRUE ratio is 3392/4520 = 0.7504 = 75.04% so
slightly lower. But this is all negligible in difference because of its infrequency (0.00169) of even
the mass total (Table 2) making up 0.00088 of the total contribution. *Again, this is a stark contrast
with the H1 —Hydrogen (Protium). Based on mass: H1 is 70.57 * 89.28% = 63.00% gimmel. This
means that H1 at 0.63 is about 700 fold more in TRUE score than Fe. Similarly, aluminum and
argon are tiny, and the rest of the elements in the top 20 are elements of life or isotopes and they
play no role.

III. The main molar calculations: The correct approach by applying mass
Mass fractions: We correctly apply here the mass-fraction of mass in parts per million into
account. H1 is then 70.57% (Table 2). The main remaining elements of relevance are mainly
Helium, but also O and C and Ne. These all show the same numbers of Protons =Neutrons
=Electrons with a combined mass fraction total of 29.43% mass-fraction score (as opposed to the
incorrect 9.01% molar H1 abundance score and 9% of the remaining key elements.
We do not here analyze total gimmel to TRUE as with hydrogen 1: 89.28%.7057= 63.00
Similarly 76.19% gimmel score of He (and O, C, Ne) * 29.43 = 21.66% overall gimmel of the
elements. Instead we still apply mass-fraction figures overall but then we must separately
analyze overall gimmel score of electrons and nucleons.
Hydrogen 1: H1 Daled 150 of gimmel to 18 so 89.28% total for nucleons and electrons but that total is for proportion cosmologically of H1 but not separating nucleons and electrons. This is combined with 70.57% of the mass fraction. The daled makes a big scoring difference. Note we refer to nucleons, but the actual contribution is the gimmel in fermions (quarks) plus the daled contribution from H1 not technically the whole protons plus neutrons.

Mass fraction of H1= 70.57% ............................................. 1A
Mass fraction of He and others =(100 –the 70.57 of H1) = 29.43% … 1B

Nucleon contributions: In this instance, the main nucleon calculation is H1 because of λ.
H1 ......45 λ / 62 total (Table 3B) =72.58% of 70.57 (1A) = 51.21%… 2A
He ...... 23 λ / 62 total (Table 3C) =37.1% of 29.43 (1B) = 10.92% … 2B
Total nucleon contributions: (2A+2B) = 62.13%.............................. 2C

Interestingly, the mass fraction versus the incorrectly applied molar fractions, increase this figure from 3.71% to 10.89% because hydrogen is so light.

Electron scores of gimmel:
H1 based on total electrons 105 gimmel to 1 of mass * 1A …70.57% ……………… 3A.
He+ based on total electrons 105 gimmel to 1 of mass. * 1B 29.43%……………… 3B.
Total 2A + 2B is 100% * 105/106= 99.06%.......................................................... 3C
(So for H1 and all else: 105 of 106 to electrons == 99.06%)

Proportion: Nucleon Gimmel / Electrons = (2C/3C)= 62.10/99.06= 62.69% …4A

Dark matter and dark energy ratios
Dark Matter [M= 26.8%] and Dark Energy [E= 68.3%]) figures in cosmology = 95.1% …5A
When cubed = 86.01% (Planck probe 2014 data), but individually cubing these results:
Dark matter cubed =M³ = 19.25%.................................................................5B
Dark energy cubed = E³ = 31.86% .................................................................5C
Total is 51.11% (irrelevant here; but important in cosmological calculations)
Ratio Dark matter / Dark energy = M³ / E³ = 19.25%/ 31.86% =60.42% ………..5D

The gimmel in union with nucleons correlates with Dark Matter; while gimmel in union with electrons correlates with Dark Energy. But our analysis, ultimately, involves the ratio of Dark Matter: Dark Energy :: Nucleon gimmel: Electron gimmel.

This dark matter/ dark energy ratio is 60.42% is compared when applying volumetric mass energy equivalents to Nucleons/ electron gimmel its 62.68%
Nucleons/ Electrons Gimmel less Difference (4A) Volumetric Dark matter/ Dark energy (5D) = 62.69% - 60.42% = 2.27% ………………………… 6A

Nucleons are hypothesized to reflect Dark Matter; and Electrons reflect Dark Energy. In this calculation based on proportions they accurately reflect what they’ve been proposed to reflect. Many ratios tend to have a strong central tendency, therefore a difference of under 10% would not be uncommon. Yet a difference of only 2.27%, when one of the original variations was 3%, is still remarkable, particularly given the one-tailed nature of the analysis here, and the expectation of a
10% range being acceptable. Nevertheless, as expected, the strength of this evidence, in contrast to the extremely small 0.0008 difference in cosmological proportions, is less powerful\textsuperscript{23} (Table 4).

Table 4. Summary of atomic ratios of dark matter (DM) related to gimmel in nucleons and dark energy (DE) linked with gimmel

- **Research Hypothesis**: $<$(5%-10%) given the Planck data proportions variation of DE and DM.
- **Volumetric (Dark) Matter** $[(26.8\%)^3 = 19.25\%]$ / (Dark Energy $[68.3\%]^3 = 31.86\%]$).
  
  o Consequently this ‘dark matter/ dark energy ratio’ = 60.42%

- **Gimmel to TRUE** ratio (already volumetric) of (volumetric proportions) of Abundant Elements
  
  (Σ [Hydrogen abundance=70.57%] + [Helium+less abundant life elements = 29.43%]) in
  
  (nucleons [protons, neutrons, daled]=62.10%) / (electron gimmel =99.06%).
  
  o Consequently this ‘gimmel/TRUE’ ratio = 62.69%.

- **Results**: The difference between the proportions of (Dark Matter to Dark Energy) to the ratios of (nucleon gimmel[linked with quarks and daled] to electron gimmel) is remarkably close: 60.42% to 62.69%. The results not only confirm the research hypothesis but markedly so with only a $2.27\%$ difference, far closer than even the research hypothesis limit.

- **Proposals**: Dark matter and dark energy may be ‘contained’ in the atom. This can be explained only by applying a multidimensional model, like 9 dimensional spin, not our experiential reality of length, breadth, height in a moment in time (‘3S-1t’).

- **Publication**: This paper Neppe VM, Close ER: A data analysis preliminarily validates the new hypothesis that the dark matter and dark energy is contained in the atom: Dark matter correlates with gimmel in the atomic nucleus and dark energy with gimmel in electrons. *IQ Nexus Journal* 7: 3; 80-100, 2016.

**DISCUSSION:**

**Perspective of the results and feasibility issues:**

*Ratio of nucleons to electrons:*

Whereas we have determined the exact amount of gimmel in electrons as the only option, the protons and neutrons have more than just the fermions, named quarks. We know there is more because the atomic mass of nucleons—the protons and neutrons—differs by orders of magnitude from the sum of the masses of just the quarks involved. One can speculate which other particles with mass and energy might exist in the nucleons and how they might explain the extra mass. But a better explanation may be that gimmel plays this role. In the standard model, gluons are believed to act as a ‘glue’ holding the quarks together,\textsuperscript{6,31-34} and in spite of the fact that they are massless when detected outside the atom in LHC collider data, they are thought to somehow contribute to the total mass when in the atom.\textsuperscript{35,36,37} Similarly, in the standard model, the ephemeral Higgs Boson is thought to be indirectly responsible for mass. In contrast, our analyses emphasize rotationally stable triads of up and down quarks in the protons and neutrons, and we propose that the role of the ephemeral top and bottom, charm and strange quarks and other members of the ‘particle zoo’, are not as pertinent because they don’t appear to participate in the structure of stable atoms and exist for tiny fractions of picoseconds.

*Why fermions only?*

Our approach applies quantum units (TRUE) of gimmel for fermions only (quarks and electrons in this instance as the stable forms) plus daled so that the comparisons are for dark matter with fermion gimmel scores. It does not appear to be necessary to use all of the theoretical particles of the standard model in the nucleons. That would be extraordinarily difficult to do because these other components, based on current particle physics, are these ephemeral, unstable particles. Our analysis is based on known stable atomic data.

*Other variations in the data:*

The numerical percentage ratios we’ve applied in this article, are not precisely correct because we have not included every form of mass and energy in the universe, e.g. ‘plasma’ is not included. Also, the percentages of relative abundances are only estimates. However, as indicated, by the time we get below the element ranked number 5 in abundance (neon), to the sixth, namely iron, the impact is so miniscule that not having included every known element is not significant. Nevertheless, we have shown a finding that is very close now at the cosmological level for all of dark components: cosmos to gimmel: TRUE. Now we demonstrate that ‘dark components’ might be in the atom. The search might have ended.

*Precision and accuracy of the resultant data:*

We’ve hypothesized that proton-neutron gimmel is equivalent to dark matter so that should be 60.42% if an exact match were obtained when compared to dark energy which is hypothesized to be equivalent to the third form (gimmel) in electrons. We know the results have some marginal error, but the very narrow ratio difference of <2.5% (!) here affirms the original alternative one-tailed hypotheses which allowed for 5% to 10% variation, given that some Planck probe figures contain measurement errors of 3%, 2% and 1% for different derivations.

The estimated relative abundances of elements based on Mass Fraction and Mole Fraction, are shown in Table 2. Fortunately, the exact figures for atomic mass, and atomic number and the numbers of protons, neutrons and electrons, are well known, eliminating one potential source of uncertainty in the results. However, there are even other ways of conceptualizing this data, for example, ultimately deriving Mass-Energy-Volumetric Equivalence—MEV. Consequently, such calculations, in turn, create more room for variations allowing for a further range, too. And there is a variation in the range of these derived figures.

We have at least been able to work, rather logically here with the mass fraction proportions. And we’re fortunate that the exact figures for atomic mass, and atomic number and the numbers of protons, neutrons and electrons, have already been derived. That takes away one source of variance.

*Predefining the target research before calculation:*

We decided on one method of calculation at the start and even then, before the calculations began, we realized the optimal way to calculate gimmel in the nucleons was from our direct derivations with gimmel in union with quarks, because the other method of subtracting from electron associated gimmel turns out to be problematic because of the huge contribution of daled in the most abundant H1. However, it may imply that our original work just involving gimmel scores linked with quarks is correct as those figures are based on quark gimmel scores and on daled, and these all pan out.
Moreover, because of the need for symmetry and stability to allow atomic particles to exist as opposed to just flying apart, there are very few options applying Diophantine mathematics: Everything must be integral, and consequently volumetric scores other than those linked with quarks and electrons might be impossible to derive. There is at this point only one reasonable mathematical solution based on the elements of life and noble gases (He and Ne) all exhibiting TRUE unit scores of cubic multiples of 108. Therefore, we must work with gimmel and try to understand how well gimmel fits our data—and we can see that it does. Therefore we must explore how feasible such comparisons of dark matter and dark energy are.

Optimally, we would like to have begun with definitive gimmel data on everything in the proton and neutron but that does not exist, and it might not, because it may only be a requirement of links to quarks. And in examining our methodology prior to our calculations, a simple subtraction of known data, namely the gimmel scores in union with electrons, might have been logical. But as discussed below, that is fraught with its own new difficulties, and speculations.

**Cosmology:**

We have already mathematically demonstrated the remarkable result that there is an almost exact correlation of the proportion of Dark Matter plus Dark Energy in the Cosmos (based on the latest Planck probe data)\(^{19-22}\) and the proportion of Gimmel to TRUE units—this is at the less than 1 in 1250 level! Is it possible that these correlations could be coincidental, that they may not be linked causally? Effectively, we have shown that in the cosmos, gimmel and TRUE unit scores in the elements when applied in the correct ratios of their abundance in the cosmos, correlate so strongly with dark matter and dark energy as a unit that it would be difficult attributing these results to coincidence.

Next, we ask: “Could gimmel (applying TRUE unit data) as a mass-less, energy-less component in the atom be correlated separately with
- dark matter as the gimmel content in the quarks of protons (and including the daled content in the absent neutron in H1)?
- dark energy as the gimmel component of electrons?

If so, this means that dark matter and the dark energy has been ‘under our noses all the time’ and is contained in every atom in the cosmos, despite the fact that our logic would say “how do they fit?” We endeavor to shed more light on these tough questions below.

**Tentative but pertinent:**

Our mathematical result is still preliminary based on our best available figures, but the equivalence, with a remarkably low difference of less than one in forty, is still very striking, particularly as some of the cosmological data has ranges of error even higher than that -- 0.025%! We applied a pre-defined one-tailed hypothesis where we expected dark energy to be logically positively linked with electrons, and dark matter positively with nucleons. This correlation should have worked out and it does.

**The profound mystery:**

Our hypothesis was based on the postulation that if indeed TRUE units are appropriate at the atomic level, they should be at the elemental level, as well, plus at the molecular level and indeed all the way through to the cosmological levels. Our results, indeed, might provide the beginnings of a solution to the challenge of what dark matter and dark energy are, and where they are located.
Interpretations:

These figures are far closer than we expected even with prior confidence that the results would support our hypothesis. The data, therefore, strongly suggests that the results obtained, are meaningful. The implications of these findings are critically important, both in terms of extensions and conceptualizations of findings in quantum physics. The information is also cogently relevant to the broader speculative ideas pertaining to the fundamental nature of reality: For example, our results likely mean that there are the same laws of nature at the quantal and cosmological level, and presumably therefore at the macroscopic level too. Previously there were different ideas for quantum physics (“quantum weirdness”), which seemed illogical and were unexplained even by Richard Feynman. 39; 40 Now there are the same laws of nature for everything in the finite reality.

Revisiting gimmel

We don’t know exactly what Gimmel is. We postulate that gimmel is linked with a unitary ‘broader consciousness’. We speculate that gimmel might exist as a continuous infinite vortical flow of more than just a ‘consciousness’ content: Embedded within this consciousness ‘container’ would be other infinite continuity properties equivalent to mass and energy content. We postulate that when presenting in the quantized finite reality, gimmel manifests differently for every chemical—atoms, molecules, or even components of the cosmos: Everything has its unique ‘cosmic fingerprint’. This is also based on our work with gimmel and up and down quarks where each of these six subatomic particles (2 up and 1 down in the proton; 2 down and 1 up in the neutron) has a different gimmel score. 6 7 We could speculate that gimmel, therefore, could possibly apply to meaningful specific information (a targeted consciousness) as opposed to the general components.

Communications occur across all the nine dimensions, as well as in the still quantized transfinite. Those interfaces are across, between and within dimensions, involving a mechanism called ‘indivension’ translated through intersections of vortices, scalar, vector and tensor components. 41-43 This implies different levels: Some regard these as ‘vibrational’, referring to the different frequencies of movements, but then those ‘vibrational resonances’ would be multidimensional and manifesting relative to a particular framework, like 3S-1t. 44 We speculate that gimmel and daled reflect the same property, but they might turn out to be different (hence, their different names). Further lengthy papers will discuss these complex concepts. They’re pertinent here because the nature of gimmel might say something on the nature of dark matter and energy or the union of gimmel with them.

Furthermore, the fact, that gimmel and TRUE units, necessarily are part of the 9-dimensional spin that makes up our finite reality, means that we could and possibly should apply the same principles of 9D spin to dark matter and dark energy in this analysis.

An important speculation: Is gimmel ‘dark’?

This leads to a key question: Is dark matter and dark energy, actually gimmel itself? The dilemma here is difficult, because gimmel, by definition, is a third mass-less, energy-less substance. And in the current scientific paradigm, dark matter and dark energy, correctly or incorrectly are regarded as some unknown kind of matter and energy respectively.
How could something non-energetic without matter—gimmel—be part of dark matter and dark energy as they are defined in terms of the angular momentum of galaxies, and thought to depend on mass and energy components? By contrast, gimmel by definition, in our experiential reality, is mass-less and energy-less. The two appear different surely? Additionally, we have proposed that gimmel may constitute, at least in part, some kind of ‘consciousness’. This ‘consciousness’ concept of gimmel could be applied as an argument by exclusion: What else could it be? Does that make it even further from the concepts of ‘dark matter or dark energy’?

However, there is another aspect: These concepts are defined in a different, possibly relative kind of way. The dark ‘energy’ effectively allows for an expansion of the cosmos, a drawing apart energetically; and the dark ‘matter’ for a contraction of the cosmos whereby everything is pulled together. The implication is two different forces—strong and weak?

Moreover, the definition of gimmel as mass-less and energy-less is relative to our usual physical reality of three dimensions of space and a moment in time. And the mass-energy equivalence of the physical, certainly has a relevance in consciousness at higher dimensions.

As one progresses in dimensional domain, these differences are not static, but dynamic. Furthermore, we have proposed that mass-energy is totally ‘contained’ within gimmel, per our hypotheses, in the infinite and transfinite. Effectively, at that highest of levels, mass and energy are inside that ‘container receptacle’ of gimmel. The three—mass and energy and likely a kind of consciousness—do not differ and are not independent of each other from the framework of that infinite level because mass and energy totally are contained in the consciousness.

Dark energy and dark matter and the atom:

Despite data showing that certain factors can be up to 3% different in dark matter and dark energy alone, our derivation shows that the two results are within 2.28% of each other. This correlative result may possibly imply that dark matter and dark energy exist in the atom, and that the far more loosely bound electron, may involve dark energy; yet dark matter may involve the tightly bound strong forces of the nucleon. The implications are huge including possibly definitively explaining and locating dark matter and dark energy. We do not need to look to the cosmos, possibly just to the atom. If so, we might have ‘located’ the missing 95.1% of dark substance.

Importantly then, 'dark matter' and 'dark energy' are not matter and energy at all, because they are not measurable as mass or force. Dark matter and dark energy appear to be misnomers that come from the materialistic assumption that matter and energy is all there is, and the discovery of the necessary existence of gimmel changes this forever.

Another complex conundrum: How does it fit?

We may ask: “How does all this Dark Matter and Dark Energy that supposedly make up 95.1% of the cosmos fit into atoms?” The atomic matter including baryonic and leptonic matter and composed of electrons, protons and neutrons constitute only 4.9% of the cosmos.

Because this appears to be a legitimate question, it is important that its origin and answer are clearly understood. The answer is that the question is based on a misnomer and a logical misconception. It involves both a category error, in which the dark matter and dark energy are presented as if they belong to the known categories of mass and energy, when they might not possibly have that property and a mathematical conceptual error: Gimmel, and, if we are correct, consequently, dark matter and dark energy are categorically different than the matter and energy.
we weigh and measure in 3S-1t. The mathematical conceptual error arises when one confuses the integer values derived from LHC collider data for the masses of the quarks with volume. These integer values are mathematically linear, so their sums must be cubed to obtain the volumes that result from the quark combinations that form the larger symmetric particles we call protons and neutrons. The confusion arises from not recognizing that there is a finite amount of mass and energy that can occupy the minimum relativistically restricted volume specifically relative to 3S-1t (“3 dimensions of space in a moment in time.”) The error is about “the amount of mass and energy fitting into a certain restricted size in 3 dimensions of space in a moment in time.”

The Close-Neppe ‘TRUE units’ were calculated and validated mathematically on the basis of applying relativistic and quantum mechanical principles to units of relative rotational equivalence through nine dimensions (9D). This is a logical extension of Einstein and Minkowski’s work in a paradigm of four dimensions. TRUE units apply mass-energy-equivalents-volume (MEV). TRUE does not just include matter and energy, but it necessitates ‘gimmel’ as a third substance, because otherwise there would be no stability for atoms composed of three quarks.

We recognize that the measurable mass of a proton is about 938 times, and the neutron about 940 times the unitary TRUE mass (which we determined by normalizing particle collider data and using the electron mass as the base unit by setting it equal to unity). However, this is not an issue in determining gimmel mass energy ratios because linear quantum units must be cubed to represent volumetric equivalents in 3 dimensions.

Moreover, the concepts of ‘dark matter’ and ‘dark energy’ are not truly matter and energy in the sense that we know them: Neither should be so named, or perhaps we could refer to them possibly as “matter and energy behaviors relative to the 3S-1t context only.” The ‘matter’ and ‘energy’ terms are misnomers, and the ‘dark’ indicates the stubborn difficulty of locating them in space. We propose here that this is possibly, because “dark matter and ‘dark energy’ are not just in space, but also in extended time, space and consciousness, as in the Neppe-Close TDVP model”.

‘Dark matter’ and ‘dark energy’ reflect somewhat contradictory concepts of substance and forces thought to reflect something linked with contraction and expansion, for example, of the universe. They’ve been proposed to be linked with gravitation. If they’re present in the atom, it might hypothetically have something to do with so-called ‘weak’ and ‘strong’ forces (possibly ‘electro’ strong and weak).

- The strong forces would be reflected in the proton and neutron staying together; and
- The weak force is proposed as the reason the electrons are bound more loosely to the atom. But in TDVP, we explain these ‘forces’ in terms of stable rotational symmetry created by the presence of gimmel and/or daled. Therefore, the question of “how the 95.1% of ‘dark matter’ and ‘dark energy’ fit into 4.9% of mass and energy that is measurable in the cosmos becomes one of demonstrating how the fundamental forces of the physical universe are explained in terms of relative motion in a 9-D reality. It is important to point out that, if TDVP is a valid paradigm, we are not dealing with just the portion of reality perceived through our physical senses, we’re dealing with a finite 9-dimensional spin reality and beyond, most of which is not directly detectable. And when we do detect it, it’s like putting pieces into a jigsaw puzzle to ensure its feasibility in our ‘3S-1t’ (length-breadth-height in a moment in time). Instead, it’s a case of “can the overwhelming contraction forces that do not get detected by conventional mass or energy techniques be assumed to have a location associated with the atom?”

Ironically, this is the same question we can ask with gimmel. Gimmel is neither mass, nor
energy, but it is a third content substance, and yet in one form, a necessary part of the atom. ‘Dark matter’ and ‘dark energy’ are not extents of measures, they too involve ‘distinctions of content’. Effectively, we can understand these distinctions by a new kind of mathematical logic developed by Close with a later Neppe assist, called the calculus of distinctions. We could possibly proceed similarly with the Higgs Boson. The Higgs Boson created great interest because it supposedly was an ephemeral mass-less, energy-less substance that was possibly controlling all mass and energy in atoms. Is the Higgs Boson also actually gimmel or daled? Does it fit into the atom of three dimensions of space? Likely not. But, like gimmel, it very significantly impacts our reality, possibly again across higher dimensions.

The implications of these findings are huge on another account, namely the need for a multidimensional model. We postulate that ‘dark matter’ and ‘dark energy’ would not fit into the Standard Model of Physics of 3 dimensions of space in a moment in time. Instead, they would fit into our 9 dimensional spin model. Additionally, as gimmel is conceptualized across 9D in the finite, and if gimmel is in union with ‘dark matter’ and ‘dark energy’, then these two, DM and DE, should also be applied relative to the 9D spin context. Gimmel, daled, dark matter, dark energy, ephemeral subatomic particles all require the scientific acceptance of the existence of a higher dimensional reality: They simply cannot fit into our experiential 3S-1t. We suggest that all that cannot be accommodated in the ‘extent dimensions of 3S-1t’, because this is only part of reality. We posit that we need to go to multidimensional measures of extent applying further dimensional domains — and we know mathematically that there are 9-dimensions (9D).

And moreover we must differentiate ‘content, such as mass and energy, which can be more directly measured by their extent in space and time. This is contrasted with the components of gimmel, daled, dark matter, and dark energy. They can be only be measured indirectly from secondary physical effects like angular momentum and variations in mass and energy density. These indirect effects can allow measures of extent of ‘space, time and consciousness’ to be applied more easily. Importantly, these extensions of relativistic multi-dimensional quantum analysis arise naturally from the fundamental principles of the calculus of distinctions.

In that context, we have proposed that what is an extent in space or time in our experiential living reality of the 3S-1t dimensional domains, becomes instantaneous in higher dimensions because of the relative non-locality. Some findings in physics and consciousness research simply do not fit into 3S-1t, and this is why we introduced relative non-locality. One tell-tale sign of non-locality is immediacy — availability immediately or instantaneously in space-time-consciousness higher dimensional domains. In essence, the misnomers ‘dark matter’ and ‘dark energy’ simply do not fit into the limited cubic ‘box’ of 3S-1t. They are outside the box. They should be limitless in a finite and transfinite reality. And with that, comes consciousness.

We postulate that ‘dark matter’ and ‘dark energy’ fit into 9D. In fact, gimmel is conceptualized across 9D in the finite. If gimmel is in union with ‘dark matter’ and ‘dark energy’ then these two should also be applied in the 9D spin context.

Even more so, if gimmel is synonymous with ‘dark matter’ and ‘dark energy’ then it must be that they are part of the 9 dimensional finite fabric. This leads to another big question: Are ‘dark matter’ and ‘dark energy’ in union with gimmel, or are they gimmel themselves? Therefore, this calculation derivation might be particularly important, and another paradigm shift, for this reason. It may explain not only a major conundrum of physics, namely the location of ‘dark matter’ and ‘dark energy’, but explains a proposal using relative concepts and applying a fundamental part of physics to 9D. Dark matter and dark energy are ‘located’ within 9D but not in...
Is gimmel in union in nucleons with more than just quarks?

Another implication of this kind of work is that there might be more to gimmel than just links with the fermions and quarks. This constitutes grounds for a separate study, but is unlikely to add significantly to the results of the analysis presented here, given the very close results and the fact that the 2.27% difference is lower for the dark matter to dark energy ratio than for the gimmel or daled calculations, which apparently reflect purely fermion related differences and do not ostensibly incorporate these other transient, ephemeral subatomic particles in the relative to 3S-1t.

If there were more gimmel in other subatomic particles, for example, in ‘gluons’ (if they were not gimmel which we’ve hypothesized 6) or other ephemeral particles, then the next step could be subtracting electron gimmel from the 100% total. This, superficially in any event, would appear logical. Nevertheless, the proportions in the nucleons might be more than just the quark figures of 3S-1t. Applying 9D spin, we could then explain the particle soup including the Higgs Boson: All of these could actually be types of gimmel which meaningfully impact mass and energy even though they reflect a hypothesized pure consciousness. This is a worthy speculation to explore. It is as yet unproven and could be studied separately.

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I was sitting at my desk when the call came through. It was the nice lady from dispatch. She sat on the 4th floor.

Are you sitting down? She asked, which I found rather ironic. My silence indicated the affirmative and then she said something that pulled the chair out from under me. Another murder? I cursed under my breath.

I stood up from the desk chair, got into the chair-on-wheels and sped to the crime scene. The scene was untouched. The corpse, a blonde, was tied to a chaise longue, and had been strangled. The murderer had left his signature; each victim wore blue lipstick.

After a while, various other chairs-on-wheels came to the scene carrying various crime-scene professionals, while the bed-on-wheels took the body to the morgue. I sat in the kitchen, wondering what the common link was to the previous murders.

In each case the victim, female, had been tied to a chair in the living room, then strangled. No pattern was evident. Each chair murder (as I came to know them) was different: An armchair, a Barcelona chair, a Chesterfield chair, and a club chair.

I returned to the chair-on-wheels and headed to my office chair via the chair at the pub, expecting the forensics boys to update me in a few days. I had time to sit back and think about the case.

* The next day saw me sitting in the latest victim’s lounge. It contained three dining-room chairs, a leather easy chair, and the chaise, each with a side table.
I sat in each chair, speaking to phantoms in the other chairs, getting a feel for where the killer, or killers, sat. The killer, or killers, may have sat here, or here, speaking to one another, their heads turning to face each other and the victim.

After a few rounds of musical chairs I called it a day and headed to a restaurant chair.

* The next morning I was summoned to my boss’ office, aka the big ass in the seat of power. Grab a chair, he instructed.
In attendance was the vice-chair of vice, and the head of forensics. On his desk was a newspaper, the headlines shouting out the murder, and the editorial accusing us of sitting on our hands. We weren’t going to take this sitting down.
It was my case, and I was in the hot seat. Fortunately, the forensics boys had come up with some leads, and it was my job to pursue these.
Fingerprints on tumblers found in the kitchen and on bottles in the drinks cabinet identified two suspects, Harold Ostium\(^1\) and Charles Fenestram.\(^{11}\) The process had begun.

Harold Ostium was a dentist, married. His day was spent sitting, looking into infected mouths. People would come to his office, sit and wait in the waiting-room chair then sit and wait in his torture chair, then wait again as the chair-on-wheels drove them home. Charles Fenestram, also married, and the victim, single, shared Ostium’s torture chair.

It was in this opportunity spent waiting for the torture chair that Fenestram met the victim. Fenestram was a pilot, and after his turn on the torture chair he took the chair-on-wheels to the airport, then the chair-on-wings back to his home town, comforted by the new friendship he had struck up with the victim. That night, from the chair alongside his phone, he called her chair, the one alongside her phone.

The three got on famously, and socialised at the victim’s apartment. Ostium seemed an open-and-shut enquiry, and Fenestram sufficiently transparent. Foul play was indeed the intent and modus operandi of the three, but it was not murder.

* *

Unable to sleep that night, disappointed with the leads, I reflected on what was known. The evidence, the leads, the patterns. I stacked everything I knew in different orders and relooked at it through a whisky tumbler. No progress. Worry is like a rocking chair, it gives you something to do but it doesn’t get you anywhere.\(^{iii}\)

* *

The next day I headed back to the crime-scene. I went to each room and stood, thinking. Then sat, thinking, for it is known that people who work sitting down get paid more than people who work standing up.\(^{iv}\)

The early morning light gave me my first clue: The thick carpet pile showed the chairs had been moved around. The leather easy chair had been pushed to be directly opposite the chaise – a confrontational arrangement. The chaise, untouched, had not been moved.

I sat in the leather easy chair, kicked off my shoes, loosened my tie, kicked out the footrest, and stared at the chaise, waiting for inspiration. They say there is something much better than sitting on an empty chair, and that is to watch it and to let it to inspire you to think deeply.\(^{v}\) After a while, I felt my right arm reaching out to my old friend solace-on-the-rocks, but there was no side-table. The carpet showed the marks where it had been. I looked on the left side of the chair, and there it was: Aha! The first real clue.

Suppose the murderer sat here, I mulled, looking at her directly; judging her, tied, in her witness chair. Suppose the chaise, as a functional item, was the murderer’s choice of seat. The chaise as a choice of furniture was odd – it is neither a conventional chair nor a couch. One neither sits nor lies on it, but rather maintains an askance pose. It looks comfortable, but this is not the truth, as one later finds out, given the choice of a truly comfortable chair. It does add culture to a setting, and it was the centre piece within the lounge, but nothing in the room complimented it. These four observations, if accurate, might provide the platform on which the motive rested.
I recalled the easy chairs from my youth. The first was covered in brown cloth, with a shift stick on the right side. One pulled the shift stick while leaning back and the footrest came out, and the back tilted, well, backwards. As kids, we would spend days opening and closing the footrest, and, if one was too boisterous, the entire chair would fall over backwards, so we competed to see who could up-end the chair.

This brown easy chair was replaced under warranty, upgraded to black leather. The salesman said it wasn’t new but that it was pre-owned, which to our young minds meant almost new, but definitely not second-hand.

It stood in the lounge like a monolith. It was heavier than the previous one, taller, more of a wingback style. This one had no shift stick, so one pressed on the arms, and kicked ones legs out, and arched into the back, all this to get the footrest out. Not to be outdone, we both sat on the chair and tried to open the footrest, violently. Once achieved, the next challenge was to up-end the chair.

Finally, up-end it did, with a crash! Then silence. We all stood still, dumbstruck: Mom, surprised we could up-end the monolith; me, wondering how Mom was going to blame him, and he, the curious sibling, staring at the treasure that came from under the dislodged cushion: a handful of coins, a gemclip, some buttons, and a gold pen.

*

I was flying by the seat of my pants, but I had a hunch. I asked the forensics boys to head back to the apartment, to which they agreed, but were hesitant to perform my specific request: You must be off your rocker!

Two days later, I headed to the boss’ office, and as I knocked, felt optimistic yet apprehensive. Pull up a pew, he instructed. He looked at me, waiting. I decided to play this out, keep him on the edge of his seat. Bring your chair closer, I invited. I explained that the coins in the seat did not belong to Ostium or Fenestram, but a fingerprint match identified a third suspect: Mr Hyacintho Sella, an upholsterer with a history of violence, who was left-handed. Authority is like a chair, it needs legs to stand up. Bring him in, he instructed. Let’s have a sit-down.

*

The court case came, and went, as did the headlines. It was late when the phone rang. My boss called from his chair next to a glass of whisky, to my chair, also next to a glass of whisky.

Sella. Where is he now? He enquired laconically. He’s in a special chair. It’s a short wait. I replied, simply. What kind of chair is that? One that runs on electricity, at midnight. It’s now 23h58 and counting ...

- end -
Ostium. Latin for door.
Fenestram. Latin for window.
Quote attributed to Van Wilder.
Quote attributed to Ogden Nash.
Quote attributed to Mehmet Murat Ildan.
Hyacintho Sella. Latin for blue chair.
Ambivalent face of Iran

Omehri-ye Eslami-ye Iran is the Persian name for Iran, which is the sixteenth largest state in the world, with a population approaching eighty million. The country has a history as long as humanity itself, but it has become one of the biggest ogres with which our peace-loving West has scared its panicky and easily manipulated citizens. To give a balanced view, it's also necessary to point out that the often profoundly inappropriate statements of Iran's conservative administration has contributed in no small measure to the negative image of their country.

The Instant Millionaire

It's early in the morning on 26.2.1394 in the Persian calendar (which translates as 16 May 2015 in our modern dating) when we first set foot on Iranian soil. Against all expectations, Tehran's Imam Khomeini Airport does not welcome newcomers at gunpoint and with a thorough inspection of body cavities. Instead, there are thousands of fluorescent lights, polished mirror walls and bunches of artificial flowers in the ubiquitous decorated vases. The routine customs and immigration “dances” happen briskly, then before we leave the airport we must obtain some local currency. At the exchange booth we ask to change our bundles of dollars into Iranian Rials. When the transaction clerk closes his banana box he uses to store the bank notes is virtually empty. In a few short minutes we have become millionaires. In Iran, a thousand US dollars becomes nearly thirty million Rials! Moments later we leave the airport, our pockets stuffed with money, as if we had just robbed the Iranian National Bank.

Qom and Kashane – a Pair of Respectable Cities

The city of Qom is an important holy place in the country. After Mashad, it is the second largest city of pilgrimage and is at the epicentre of Shiite theology. Many of the top clergy are concentrated here and it is said that it has the highest density of
Ayatollahs in Iran. Before his exile, Ruhollah Khomeini himself lived in Qom and, after his return, it was from there that he began in 1979 to spread the flames of revolution. The main attraction of the city is the tomb of Fatima, the sister of Imam Reza, who died here in the 9th century. The spirit of this place will also have inspired his strong conservatism. And of course there is the principal of hijab – strict adherence to modesty and appropriate clothing for men and women. Qom is in the middle of arid wasteland and the riverbed bisecting the city is completely dry for most of the year – and is inevitably used by Qom's citizens for parking. On arrival we find asylum in a flophouse in a side alley just a few steps from the religious complex. There is plenty of space in the room, but it lacks the mihrab, a distinctive mark showing the qibla, which is the direction in which Mecca lies. We buy the first of hundreds of kebabs eaten on our journey and while paying we learn as we go along the Persian digits in the Farsi language. Oddly enough, it's not too difficult, although sorting out the difference between Rials and Tuman challenge our brains every time we pay for food.

That Qom is a place of pilgrimage becomes clear to us as soon as we enter the sacred complex surrounding the local mosque. There is commotion; the activity of hundreds of people, the clamour and cries of the vendors selling textiles, carpets and spices. And all around us, every woman we could see was in the same black chador. But even in this most dignified place in the neighbourhood of Fatima's tomb, we found something comical. In the middle of the square, next to the entrance to the mosque there was an animated figure of Mickey Mouse with swaying hips, most probably an ad for a local fast-food chain.

Between Tehran and Kashan, there are concealed controversial nuclear installations, arousing strong emotions around the world. The only stop on the route is a desert gas station. A litre of petrol here costs the equivalent of a staggering six crowns (US 30 cents).
flickering shadows of the chadors, and the voices melting into a soft onomatopoeic tangle, all evoke a sense of mystery. Late at night, back in our room, we unpack our flat bread to find that Qom’s bakers have decorated them for us with a big heart.

The morning sun has not yet reached its full strength when we arrive in Haftdad Square, from which leads the most direct route from Qom to Kashan. According to the map, this time we can expect a 'magical' 111km journey, through mostly mountainous stretches of desert.

Somewhere here, between Tehran and Kashan, there are concealed controversial nuclear installations, arousing strong emotions around the world. The only stop on the route is a desert gas station. A litre of petrol here costs the equivalent of a staggering six crowns (US 30 cents). No wonder that taxis and coach travel in Iran cost a pittance.

The Kashan desert oasis is a small architectural gem. We find there a series of wind towers (bádgírs). This cooling system can be justly considered a masterpiece of organic utilisation of natural forces. The preserved homes of the wealthy burghers are reminiscent of the beautiful buildings in the tales of 'One Thousand and One Nights'. Every one of them has a courtyard with trees and a swimming pool. Some of the rooms have ornate ceilings, whose fine intricate geometric shapes remind one of the patterns in a child's kaleidoscope.

The Kashan Bazaar deserves a chapter of its own. Nobody rushes anywhere and business carries on, without shouting or stress, over a glass of tea. The streets are filled with bolts of silk and brocade, a diverse range of clothing, and particularly stands of elaborate filigree rings, earrings and pendants. Before we leave the labyrinth of arcades and covered streets, we embark on an unusual diversion. Guided by the teahouse owner, we climb the steps to the very large roof of the bazaar complex, where we enjoy amazing panoramic views of the Kashan skyline.

We also see a local phenomenon, Noosh Abad, supposedly the largest underground city in the world, discovered only a few years ago. At the time of the Mongol raids, it served the local residents as a perfect hideout. There is a labyrinth on three levels, and a tour of the accessible parts underground takes almost an hour and half. I have to say that the last time I felt the same level of uneasiness was when crawling through tunnels dug by the Vietnamese guerrillas in Cu Chi.

I have to say that the last time I felt the same level of uneasiness was when crawling through tunnels dug by the Vietnamese guerrillas in Cu Chi.

A Miracle named Abyaneh
We're heading to a place called Abyaneh where time seems to have stopped. Soon after we turn off the main road and the embedded massif of the Vulture Mountains, we pass several concealed air defence stations. It's probable that near here there are also the nuclear sites I mentioned above.

The firing positions look threatening in the middle of the pleasant countryside – incongruous. After about an hour driving through rising switchbacks and the red clay houses of the desert, we are welcomed by the mountain village of Abyaneh. Narrow streets on steep rocky slopes and steep staircases form a shady bizarre maze of passages similar to the Labyrinth. All the local women wear gorgeous folk costumes, consisting of a dark skirt, colourful apron and a great white scarf covered with colourful flowers. To us, it seems like a Harvest Festival feast in southern Moravia.

Esfahan – a City of Bridges and Smiles
Modern Esfahan, despite its poetic nature, is among the busiest of Iran's big cities. One of its dominant features, the Imam Khomeini Square, is literally stunning.

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The slender minarets are an integral part of most mosques; the whole complex often creates a fairy-tale background.
As soon as we arrive, we find the Oasis doctrine. Tens of thousands of followers of this years of Islamic domination there remain Dasht-e Kavir and Dasht-e Loot, and is a air conditioning and a small package of fare of a couple of coins our Volvo bus provides us with roomy seats, functioning particular entertainment. Fortunately, for a Crossing from Esfahan to Yazd provides no Jewel Set Between Two Deserts

Yazd is the centre of the traditional religion of Persia, Zoroastrianism. Despite 1400 years of Islamic domination there remain tens of thousands of followers of this doctrine. Except during the drought season, Esfahan has the river Zayandeh-Rood flowing through it. But with or without water, Esfahan boasts many beautiful bridges. The most beautiful is the Khaju, both for its construction on two levels and for the atmosphere in the central spaces. The bridge pillars and the spaces between the arches were designed as oases where people could rest or meet friends. Young and old still sit here in groups, talking and eating food they have brought with them. We had so many friendly chats, reciprocated smiles and looks from beautiful Iranian women – perhaps more than we experienced anywhere else in the country. There one can see girls in brightly coloured coats and tight jeans, with a scarf just casually draped over their hair, sometimes with a male escort, sometimes without. And all this without anyone displaying a hint of scandal.

Yazd – Jewel Set Between Two Deserts Crossing from Esfahan to Yazd provides no particular entertainment. Fortunately, for a fare of a couple of coins our Volvo bus provides us with roomy seats, functioning air conditioning and a small package of food and drink – enough to keep any passenger content. Yazd is located on the border between Iran's two largest deserts, Dasht-e Kavir and Dasht-e Loot, and is a renowned centre of the traditional Persian religion, Zoroastrianism. Despite 1400 years of Islamic domination there remain tens of thousands of followers of this doctrine. As soon as we arrive, we find the Oasis hostel, built in the style of the oriental roadside inns. The houses in Yazd are mostly 'plastered', in a classical technique using clay and straw. The city itself is a maze of narrow winding streets, where expansive buildings are dominated by high bâdgirs (the towers for cooling residential parts of buildings). The large number of these traditional air conditioning units makes Yazd unique amongst Iranian cities. Permanent water shortage during the summer months, so typical of all desert settlements, is solved in the Yazd community be means of so-called qanats – a multitude of deep shafts leading from the distant mountain springs into the local underground storage tanks. Our first destination in the city is the Amir Cakmak Square, dominated by a substantial three-storey building of the next to it are two fifty metre high minarets. In the evening, bathed in magical blue lights, the mosque takes on a fairy-tale appearance. At night, sitting on the roof of our hostel, I had a chance to enjoy this view many times, always with the same enjoyment. A dignified closure to our stay in Yazd is a visit to the Karim Khan Zand's residence, which was built in the mid-18th century. In fact, it is a picturesque garden with a pond, in the centre of which stands a pavilion decorated with mosaic windows. In one part of the area there is large tearoom with plenty of places to rest in the late afternoon over fragrant turnip, shisha, hookah, bourou, nargile – or if you wish, a great hookah.

At Home in Hobbiton To diversify our route, we planned a two day detour to the Pistachio Mountains. Here lies, until recently almost forgotten, a mountain village called Meymand. The most quirky inhabitants, the troglodytical Meymand, still live by the old ways of life, in cave houses carved in terraces, one above the other, in the side of the massive volcanic tuff at the foot of the ridge Kuh-e Masâhîm. The first impression is clear: we are now in residence in the Hafling nation, in the heart of Tolkein's Hobbiton. In fact, it is one of the oldest continually inhabited villages in the Middle East, estimated to have been inhabited for at least three thousand years. Even those who have visited Turkish Cappadocia will be amazed at the local rocky scenery. It is not a museum, but a living community, practicing their ancient customs and traditions. Our temporary home consists of a twenty meter long rock room with black smoked walls. On the ground lies a thick layer of carpets and circumferentially, in the dark cave, we can recognise four beds. We accept an invitation from the family to have tea at five, served in a tin straight from the fireplace, sitting in a dimly lit, elegant living room, carved into a rock, but overflowing with luxury. Using a lot of hand gestures, we have a great chat with all generations of women and girls present. We spend the night in the dark stone tabernacle and in the morning eat again – not a very tasty meal, but one prepared with love. After all that, we prepare to leave – back to the twenty-first century that still surprisingly exists beyond the village.

Short Stop in Kerman and Triple Seconds Kerman is to be just a short stop on the road to Bam. One night, therefore – more than enough – and the next day we’re off again to a roundabout where we can hire a taxi to the next sector. Just like anywhere else in the world, even here taxi drivers are often
Mutual love and affection have a place everywhere.

Diverse forms of desert - Rocky formations of Hamada, alternating with sand dunes.

Magical water cascades in the middle of the gardens Bagh-e Shahzad.

Even in Iran there are frequent ATM points (Esfahan).

tricksters and try all kinds of scams to fleece us. Patience finally brings us to what the poet Hafiz would have called one of the Iranian roses. We end up in the car of an elderly driver with whom we are able to do more than chat, since he speaks decent English. Mr Kayeh Bahr is his name and his main occupation is as a high school teacher. He has a son named Nimu, who is studying film directing in Germany. The first break we planned is at Mahan, a peaceful pilgrimage town with its magnificent tomb of the poet and sage Nematollah Vali. The rarest part of the complex of buildings is the original dome, adorned with contemporary mosaic, nesting amongst a tangle of ten-pointed stars. Four lantern minarets, with eight covered pillars that span above it are considered by experts to be the most beautiful in the whole of Iran. Mahan is today a recognised centre of Sufism, and therefore a place for frequent meetings of the dervishes. Barely five kilometres away is another in a series of wonderful gems. The Prince's Gardens are, in architectural terms, an unprecedented masterpiece. An area of 75 thousand square meters is kept as the image of earthly paradise, built by the prince Abdulhamid Mirza. The last stop, which we arrive at somewhat breathlessly in order to reach Bam by nightfall, is Rayen. Here there is a deserted, but still preserved, medieval fortress. The views from the roof of one of the ancient houses, and from the massive fortification walls, are truly worth the trip. All around there are mysterious corners and surprising spots – underfloor gardens, atriums, or mazes of corridors leading into what had been private residences. This clay world will stay in our memories for a long time.

Alive and Dead Bam

The first time I arrived here I was full of expectations. It was then a romantic and adventurous journey through the whole of the Balkans and Turkey, across western and central Iran and still further into the southeast, to Zahedan and on through Pakistan to the Indian subcontinent. Now, after almost fourteen years, I returned slightly embarrassed. It had already been almost twelve years since the devastating earthquake which happened in December 2003 in Bam and its neighbourhood, killing more than twenty-six thousand people. The consequences are still evident in the town today; at that time all of its buildings collapsed, including the local clay fort with its citadel. In 2004, UNESCO added Bam to its list of World Heritage Sites, and since then teams of archaeologists and construction labourers have been working on its restoration. It is a fortified oasis, formerly dominated by the castle Arg-é Bam, the largest fortress in the middle of the scorching desert Dasht-e Lut, in the province of Kerman. Travellers overwhelmed by fatigue can find the perfect refuge in the highest tower of the citadel, which conceals a small but charming tea room. From there, over tea and a hookah, you can watch the slow pulse of the town and surrounding infinite palm groves. When we arrive in Bam, our first stop is to meet Mr Akbar, an elderly hotelier with whom we stayed fourteen years ago. His hotel where we had stayed, like a huge number of Bam’s other buildings, had collapsed in the earthquake. Mr Akbar and his family survived the whole tragedy and built a new small hotel in another place. There is unconcealed joy in meeting after so many years, evident on both sides. Even more so when I bring out...
a flashcard on which the Bam of 2001 still shines out in all its original beauty. "I've got something. You'll see," he says, as he takes from a chipped cupboard a pile of old guest books with lots of travellers' notes. Some are from a time long before the fatal earthquake. These torn and dusty relics he dug with his bare hands from the rubble of the collapsed hotel, to be rescued and preserved as part of its own history.

Armed gangs use classic camel caravans as well as modern off-road vehicles to transport drugs. It is said that because of the small number of border guards, the gangs don't lose any sleep about border controls.

Turning Back …

Our return to Kerman begins with an unusual expedition. Kaveh Bahr, currently our personal cabbie, takes us, along with supplies of drinking water, to the epicentre of the Lut desert. It's not just any old place – the temperatures here reach those of a blast furnace – it's said to be as hot as the gateway to Hell. Shahdad is the last inhabited place in the area, consisting of a barracks, a police station and a few other disorganised buildings, and here we have to go through a thorough inspection of our documents because we are just a few kilometres from the beginning of a dangerous smuggling zone. Armed gangs use classic camel caravans as well as modern off-road vehicles to transport drugs. It is said that because of the small number of border guards, the gangs don't lose any sleep about border controls. The area is seemingly dead and dried to tinder, forming an irregular triangle between the cities of Kerman, Zahedan and Nehbandan, through the centre of which pass only one or two abandoned roads. Such is Dasht-e Lut.

Some spots, according to the contours on the map, are a mere two or three hundred metres in altitude which, compared to the three and a half kilometres mountains through which we have wound our way here in the morning, means a dip of more than three kilometres. We passed several resting places for caravans, and then finally came upon the promised surprise. We found ourselves in the centre of a locality called Sand Castles of Kaluts. The view – absolutely unforgettable – in all directions extended to a horizon of sand mountains. It was as if before us stretched a sea, full of islands casting their long shadows on the desert sea. Remarkable formations that only nature could create. A solitude and remoteness of infinite space and unnatural silence. Add to this the all-pervading heat that deceives your brain – and the overall picture is complete.

Nine years ago, the highest temperature recorded on earth was measured here at 70.7 degrees Celsius. Despite the unbearable heat of this beautiful location we would have liked to stay longer, but trusting the obvious nervousness of our guide who feared the risk of armed trafficking groups, we eventually decided to heed the voice of common sense, jumped into the hot taxi and set off to continue on our return journey. After only a few kilometres of frantic driving, we had to agree with him, when we were passed in the opposite direction by a tow truck carrying a passenger car completely devastated by bullet holes. You can never be too cautious here, because it's said that up to eighty-five percent of all drugs that end their journey in the West, will have passed through here, the border section of the Lut desert.
Teheran – Capital of Smog

The train trip from Kerman to Teheran takes us through a region of nearly a thousand kilometres. We’re woken from sleep in our train bunks by the people in the next compartment packing their belongings. After about ten minutes the train stops and everyone suddenly spills out onto the platform and we’re left in the train by ourselves. We’re not in any hurry – half past four in the morning, anywhere in the world, is the worst possible time to be looking for accommodation. Then through a speaker, at exactly quarter to five, we are greeted by the azan, calling for the first Morning Prayer.

On the way through the maze of corridors, we pass a truly enormous mural painting on which, from a hundred metres apart, staring into each other’s eyes are Messrs Khomeini and Khatami. And last but not least, an equally enormous gold-embossed Qur’an, open on a page of presumably great spaciousness, but also with the services available. There are perhaps a million sockets for charging mobile phones and plenty of comfortable seating. For those who suffer from insomnia, or just like movies, the Iranian Railways management has installed several large screens on which, for the interest of the predominantly female audience, are showing American westerns and adventure comics. Watching these rough shooting Hollywood productions, broken up by occasional transmissions from the Iranian Parliament—all seen through the veiled head chador or hijab—is an experience that must leave, in the memory of every foreigner, an indelible mark.

In the twentieth century, the Iranian capital witnessed rapid development, which is reflected in significant population growth: from 1,800,000 inhabitants in 1959 to perhaps 18,000,000 today. Huge complex neighbourhoods, consisting of hundreds and thousands of diverse buildings, boulevards and squares full of people, smog and noise, flashing of constantly changing traffic lights, screaming horns, endless traffic jams, full street chaos—that’s the first thing that overwhelms you as you cross this colossus of a city. As soon as we set off, we jump on the Metro, taking a trip to conquer the local Everest—the 3,964 metre high summit of Teheran’s Mount Tochal.

Scrambling up the gravel, interspersed with deep fluffy snow drifts, then reaching the top, we have made a significant personal achievement. In the space of just forty-eight hours, we have visited the Lut Desert and the highest point in Teheran (Tochal), almost four kilometres different in altitude—not to mention a temperature difference of roughly forty degrees Celsius. While visiting Teheran, you could not call yourself a traveller if you did not take at least a short look at the former US Embassy. We were no exception. More than thirty-six years have passed since, within the embassy in an underground bunker, the CIA conducted provocative anti-Iranian operations, or since several hundred students violently attacked the embassy, followed by an occupation of it that ended with the detention of US hostages for 444 days. Walls which surround the area are painted with ideological slogans and images that ostentatiously express the official position of Iran about the questionable international policies of the USA and Israel.

In Teheran’s palaces, which before the revolution served the profligate pleasures of the Pahlavi dynasty of despots, now we mostly find rich museum collections. The national Treasury occupies a unique position hidden inside the Central Bank. In the huge underground safes, visitors can see unique diamonds, the Crown jewels, jewellery and other treasure of the Persian shahs. Our last day was reserved to visit the huge Teheran bazaar, consisting of ten kilometres of covered corridors, constantly crowded with shoppers. It is two in the morning and our taxi is hurtling through unusually silent streets towards the Teheran International Airport, casting giant shadows on the walls of houses. The route from the city centre is at least fifty-five kilometres, but thanks to absolutely zero traffic traffic we reach our destination in less than three quarters of an hour. About halfway to the airport complex, on the left, we pass the sharply floodlit tomb of Imam Khomeini. From a distance of one kilometre, against a dark background, it looks as if a space ship had just landed from the night sky. The taxi lights swallow the remaining distance and the time reserved for our Iran trip is running out. So “Moteshakeram va xoda hafez” (Thank you and we are flapping our wings). Just by visiting Iran, one can quite easily claim the prestige of the great adventurer, but if you want to get from it the utmost pleasure, just lie on the carpets in a Persian teahouse, gazing, sucking on a lighted shisha and passing the time watching Iranians in the evening enriching their uranium. The only real adventure, during which your life is truly in danger, is when the need arises to cross a crowded Teheran boulevard, dodging the cars and motorcycles.
Nutritional help to ease Anxiety & Depression.

Edited from Fraser Health Authority publication (“Nutritional Protection Against Anxiety & Depression” by Lilija Valis, M.S.W)

The information in this publication is general information only and is not intended to replace individualized medical advice. The author of this booklet is not a physician. Any concerns you may have regarding your health should be presented to a trained medical professional for diagnosis and treatment.

Consult your physician before utilizing the information in this booklet. The author and publisher disclaim any liability arising directly or indirectly from the use of this publication.

Part IV

NATURAL ANTI-ANXIETY AGENTS
B-Complex Vitamins help to maintain healthy nerves, skin and liver, as well as muscle tone in the gastrointestinal tract. They are involved in energy production and protect against effects of stress.

1. **PANTOTHENIC ACID (B5)**
   Known as the anti-stress vitamin. May be helpful in treating anxiety and depression. It plays a role in the production of adrenal hormones and formation of antibodies.

   **FOOD SOURCES**
   
<table>
<thead>
<tr>
<th>Beans</th>
<th>Beef</th>
<th>Salt water fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eggs</td>
<td>Fresh vegetables</td>
<td>Whole wheat</td>
</tr>
</tbody>
</table>

2. **VITAMIN B6:**
   It is required by the nervous system and is needed for normal brain function. It helps produce prostaglandins, which relax smooth muscle tissue.

   **FOOD SOURCES**
   
<table>
<thead>
<tr>
<th>Brown rice</th>
<th>Bananas</th>
<th>Eggs, chicken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leafy green vegetables</td>
<td>Carrots</td>
<td>Peas</td>
</tr>
<tr>
<td>Sunflower seeds</td>
<td>Walnuts</td>
<td>Wheat germ</td>
</tr>
</tbody>
</table>

   Antidepressants, estrogen and oral contraceptives may increase the need for B6 in the body, according to James Balch, M.D. in his book, *Prescription For Nutritional Healing*.

3. **CHOLINE:**
   Needed for nerve transmission and liver function. Without choline, brain function and memory are impaired. It is beneficial for disorders of the nervous system.

   **FOOD SOURCES**
   
<table>
<thead>
<tr>
<th>Egg yolk</th>
<th>Legumes</th>
<th>Whole grains</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat</td>
<td>Milk</td>
<td>Broccoli</td>
</tr>
<tr>
<td>Asparagus</td>
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</tbody>
</table>

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Balch, James, M.D. and Phyllis Balch, C.N.C. *Prescription for Nutritional Healing*, New York, 1990
VITAMIN C: An antioxidant, vitamin C is required for adrenal gland function, tissue growth and repair and the production of interferon and anti-stress hormones. According to Dr. Balch, it works synergistically with Vitamin E and is needed for the metabolism of folic acid and some amino acids, e.g. L-Tyrosine, important in the treatment of anxiety and depression.

During times of emotional, chemical (e.g. cigarette smoke) or physical stress, the urinary excretion of vitamin C is increased. To keep the immune system working properly during times of stress, extra vitamin C is required.

FOOD SOURCES

- Berries
- Rose hips
- Citrus fruits
- Green vegetables, e.g. spinach, Swiss chard
- Red and green peppers
- Tomatoes
TWO MAJOR CALMING MINERALS

Two major minerals the body needs to protect itself from disabling anxiety symptoms are calcium and magnesium.

CALCIUM, the most abundant mineral in the body, is vital not only in the formation of strong bones and teeth but also in the maintenance of regular heartbeat and normal functioning of nerves and muscles.

Calcium deficiency can cause nervousness, muscle cramps, and numbness in arms and legs, heart palpitations and insomnia.

FOOD SOURCES

<table>
<thead>
<tr>
<th>Food Item</th>
<th>Serving Size</th>
<th>Calcium Content</th>
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<tbody>
<tr>
<td>Seaweed, kelp</td>
<td>3 ½ oz</td>
<td>1,093 mg</td>
</tr>
<tr>
<td>Yogurt, skim with nonfat milk solids</td>
<td>8 oz</td>
<td>432 mg</td>
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<tr>
<td>Turnip greens, cooked</td>
<td>1 Cup</td>
<td>450 mg</td>
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<tr>
<td>Sardines, with bones</td>
<td>3.5 oz</td>
<td>449 mg</td>
</tr>
<tr>
<td>Tofu, plain</td>
<td>1 Cup</td>
<td>400 mg</td>
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<tr>
<td>Bok choy, cooked</td>
<td>1 Cup</td>
<td>330 mg</td>
</tr>
<tr>
<td>Goat’s milk</td>
<td>1 Cup</td>
<td>330 mg</td>
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<tr>
<td>Parmesan cheese</td>
<td>1 Cup</td>
<td>330 mg</td>
</tr>
<tr>
<td>Bean sprouts</td>
<td>1 Cup</td>
<td>320 mg</td>
</tr>
<tr>
<td>Chestnuts</td>
<td>½ Cup</td>
<td>300 mg</td>
</tr>
<tr>
<td>Black beans</td>
<td>1 Cup</td>
<td>290 mg</td>
</tr>
<tr>
<td>Swiss cheese</td>
<td>1 oz</td>
<td>260 mg</td>
</tr>
<tr>
<td>Cabbage</td>
<td>1 Cup</td>
<td>252 mg</td>
</tr>
<tr>
<td>Spinach, cooked</td>
<td>1 Cup</td>
<td>250 mg</td>
</tr>
<tr>
<td>Milk</td>
<td>1 Cup</td>
<td>228 mg</td>
</tr>
<tr>
<td>Filberts</td>
<td>½ Cup</td>
<td>225 mg</td>
</tr>
<tr>
<td>Collard greens, cooked</td>
<td>½ Cup</td>
<td>152 mg</td>
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<tr>
<td>Figs, dried</td>
<td>5</td>
<td>126 mg</td>
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</table>

CALCIUM (continued)

To ensure calcium assimilation, iron, magnesium, manganese, phosphorous and vitamins A, C, D and F are required. Vitamins and minerals in foods are better absorbed by the body than those in pills and therefore lower amounts are needed. Food combining and variety can increase the nutritional benefits.

Calcium absorption can be interfered with the following ways:

- Eating too much of oxalic acid rich foods such as kale, spinach, almonds, chard and cocoa.
- Too much protein, fat or sugar in the diet. The acid ash of a high protein diet increases calcium loss.
- Strenuous exercise, which produces lactic acid.

Vitamins and minerals work synergistically. If they are taken in synthetic form in isolation, imbalances can occur.

If calcium is taken as a supplement, these factors need to be considered:

- Calcium and magnesium work together and should be taken at the same time in balance. A lack of magnesium can cause calcium deposits in muscles, heart and kidneys.
- Calcium and zinc should be taken separately as they decrease each other's absorption.
- Calcium taken with iron reduces the effect of both minerals.

It is important to include some calcium-rich foods regularly because the body eliminates this major mineral daily. It is excreted in digestive juices, sweat and urine. Stress, excitement, vigorous activity, as well as extended bed rest cause loss of calcium.

For those who decide to use calcium supplements, to increase their effectiveness. Dr. Balch, an urologist, radio broadcaster and newspaper columnist, together with his wife, Phyllis Balch, a certified nutritional consultant, recommend smaller doses spread throughout the day and before bedtime for sounder sleep. They suggest 1500 mg of calcium (in combination with other minerals, including magnesium, 750 mg), with the advice to "consult with your own physician" before using any supplements. This is particularly important if there are other medical conditions, e.g. kidney disease, and prescribed medications which may be adversely affected by particular supplements.

MAGNESIUM: Found in abundance in humans, it is needed for the production and transfer of energy, protein synthesis, enzyme activity and the transmission of nerve and muscle impulses. Magnesium helps to produce prostaglandins, which help control overproduction of lactic acid. Too much lactic acid exacerbates stress and has been shown to cause panic attacks in those people susceptible to them. Magnesium is vital to muscle contraction. It protects arterial lining from stress caused by sudden blood pressure changes.

A deficiency of magnesium impairs the transmission of nerve and muscle impulses, causing irritability, nervousness, depression, muscle tremors, occasionally seizures.

Magnesium has been found to help prevent depression, dizziness, insomnia, muscle weakness, twitching and heart problems. Cardiologists report that magnesium supplements can stop arrhythmia (irregular heart beat), and tachycardia (racing heartbeat).

**FOOD SOURCES**

- Dairy products
- Fish, e.g. salmon
- Meats
- Almonds
- Sesame seeds
- Apples
- Apricots
- Bananas
- Blackstrap molasses
- Brown rice and other whole grains
- Figs
- Garlic
- Millet
- Tofu
- Green leafy vegetables

Magnesium is lost in cooking and refining of grains. Oxalic acid (found in greens like Swiss chard and spinach, as well as chocolate) interferes in magnesium absorption. Phytic acid found in grains, ties up magnesium by forming salts the body cannot absorb.

Excess of magnesium can be toxic. Dr. Balch recommends 750 mg daily as a supplement.

Balch, James. M.C. Ibid.
Fine Arts

poetry, music, paint, print, photography, writing.
Music compositions by

Louis Sauter
http://imslp.org/wiki/Category:Sauter,_Louis

Kit O'Saoraidhe (Paul Freeman)
http://theprofman.wix.com/profcompositions

Jason Munn
http://www.jasemunn.net/
Air
by Louis Sauter

Air is a short piece for guitar I composed many years ago. It is in classical style, and its structure is quite simple: a melody is repeated, first in A minor and then in A major.

A recording by feliciadad58 is available on YouTube: https://youtu.be/au3EaD7Ssa0

It was also played on piano and accordion by Lorna Pollock: https://youtu.be/Gyq5UPttFeg
Air

pour guitare

Louis Sauter

Moderato \( \frac{\text{m}}{\text{s}} = 112 \)

\[ \text{mp} \]

\[ \text{mf} \]
Fugue on BEADED

By Kit O'Saoraidhe
Fugue on BEADED
Video and Musical Composition by Jason Munn

It takes a village to raise a child... Like a tree - its roots provide stability.

Watch and listen at: https://vimeo.com/177890958
POETRY

by

Lao-Tzu 500 BC
Late S. G. "Forg" Hadley
Anja Jaenicke
Express yourself completely, then keep quiet.

Be like the forces of nature: when it blows, there is only wind; when it rains, there is only rain; when the clouds pass, the sun shines through.

If you open yourself to the Tao, you are at one with the Tao and you can embody it completely.

If you open yourself to insight, you are at one with insight and you can use it completely.

If you open yourself to loss, you are at one with loss and you can accept it completely.

Open yourself to the Tao, then trust your natural responses; and everything will fall into place.
A Shakespearean Sonnet
All Awhirled, The Stage.

Our Bard once writ, (mayhaps he also Spake):
"The World's a Stage, and We just Players who
But strut and fret upon it." Gimme a break!
We Act as though it's Holy so to do.

We harken to Angelic-woven Dreams;
We wrestle, madly: Demons might possess!
It is, yet not, just what it slyly seems,
Or not, to Be. So, More's become just Less?

We write our Roles the Moment We Do Act.
Our Choice is Manifest in that we Choose.
Do We have Faith, or simply just react?
If We lose Self, there's nothing left to lose?

No- "Thing" pulls Strings; not genes, not some cul-ture.
A Dancing Soul, you are: and that's 'fer shure'.

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FIRE

Deep down on the ground of a well
So weightlessly into the brackish water I fell
The smell of the ordure from a million years
Of hopes and sorrows of love and fears
When violet tears ran uncontrolled and wet
Like a welcome salty spice some food for the rat
And that was the birth of a fresh naked morn
Above me the screaming eagle newly airborne
An aching thorn leaking blood and a wounded heart
Left in the misty breath of a past dying art
A part of myself so fain to move and soar
Into the vulnerable eye of the deep cosmic core
Much more I want of the weird streaming tunes
I wish to freely cycle all of Jupiter’s moons
When soon my bloodless corpse will arise
With a sword I will cut all shackles and ties
And praise the growing draconian flame
For too many aeons it has been calling my name
The very same I am renewed but still of old
Full of rage I throw my red cape through the cold
In bold fusion unforgiving and releasing
my true force of fire.

© Written by: Anja Jaenicke, June 14, 2016
LET'S TRY ANGULAR

In the dawn's most misty hour
There is a light up in the tower
Half awake like in a dream
I see a white rotating beam
Scattered waves tickle my chin
I hear the music on my skin
Mind in order creates sense
And matter reflects evidence
Of many forms ancient and new
Like drops of a chaotic dew
A million atoms in every inch
Life's salt delivered pinch by pinch
In this spinning dance I feel so nude
Abundant polarized amplitude
When archaic blood is on the fare
Orbital lines meet on this sphere
And when fractions of eye strike you
I'm sure you see the light beam too

Written by: Anja Jaenicke, 2016
Photograph by Marilyn Grimble
“Waiting for a train”
Photography
by Jase Munn

“Hay”
Photography by J M Cervenka
"Wind Horses"
Puzzles, Riddles & Brainteasers

Next three months calendar
Solution of killersudoku from IQN Journal Issue Vol 8 no 2
Rules
As in regular sudoku, every cell in each row, column, and nonet must contain a unique digit. In other words, each row, column, and nonet must contain all the digits from one to nine. The values of the cells a cage must sum up to the total for that cage. The values of the cells in a cage must be unique.

Published by permission of killersudokuonline.com (c) 20xx

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Solution to this puzzle will be published in the next issue of the IQ Nexus Journal.
<table>
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October

- Thanksgiving: 11th
- Halloween: 31st
# November

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- Boxing Day
- Christmas Day

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