

SPECULATIONS ON THE “GOD MATRIX”, ON THE THIRD FORM OF REALITY (GIMMEL), ON THE REFUTATION OF MATERIALISM, AND ON GLUONS

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KEY IDEAS: THE THIRD SUBSTANCE, GIMMEL AND THE GOD MATRIX. PART 1.

Our current “Standard Model of Particle Physics” (SMP) can explain a great deal. However, there are rare contradictions and unsolved problems that can be resolved only by applying concepts beyond our usual three physical dimensions of space in a moment in time (3S-1t). The most obvious part of our reality involves only our *overt experiential* 3S-1t finite reality. Yet, we argue that most of our *existing* reality is *covert*—hidden from us—and requires applying *multidimensional* models.^{3;4}

However, most of these extra-dimensional models, such as the various String Theories⁵⁻⁸, involve only complex *theoretical* concepts, yet empirically and mathematically, they're unproven. The exception is the “*Close-Neppe 9-dimensional finite spin model (9-D)*”, which has been mathematically derived and additionally replicated in several different ways. It is quite different as it does not involve the folding, or curling in Strings, but spinning. And that spinning involves vortical rotation through only 9 dimensions, not 10 or 11 or 26 or 5 or 8 or 4.⁹ Moreover, the 9 dimensions contain 3S-1t.¹ This means that the 9-D does not contradict the current 3S-1t SMP, but data obtained are additive.¹⁰ Moreover, this 9-D finding confirmed a predicted hypothesis: 9-D spin was the postulated consequence of the finite components of the prior carefully developed Dimensional Biopsychophysical model of the “*Neppe-Close Triadic Dimensional Distinction Vortical Paradigm*” (TDVP)

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^b This version 4 is a slight revision of Version 3: Amplified are Table 2c, and the introduction to atomic materialism in Part 3.

^{11; 12}, which, even prior to the concept of 9-D spin being developed ¹³, still reflected an extensive, functioning coherent model of reality. ¹⁴

We have applied the empirical findings of chemistry and physics using mathematical equations. These include new derivations to extend quantum-to-molecular level analyses in this 9-D model. Our calculations have been derived from the quantized level of atoms and elements. Specifically, we apply Diophantine mathematics dealing with integers, because our finite reality is quantized. This means it is integral dealing with whole numbers, not fractions, and, additionally, our reality is volumetric not just points.

A key application of this Diophantine quantization involves the “Close Conveyance Equation” applied specifically to a 9-D reality, using related mathematical techniques, including Close’s Calculus of Dimensional Distinctions and Dimensional Extrapolation. These derivations are easily replicable mathematically, and derived from already well-known calculations about the Periodic Table of the Elements and their subatomic components, particularly their electrons, protons, neutrons, quarks and valence.

Based on these Diophantine calculations and derivations, we can demonstrate the empirical necessity for what we’re calling “gimmel”. Gimmel refers to a third mass-less, energy-less substance or process or matrix. Gimmel is not measurable using the usual physical techniques of solely applying mass and energy. Instead, gimmel must be measured using special quantum techniques that apply integers. In effect, gimmel plus mass-energy summed together calculate into “Triadic Rotational Units of Equivalence” (TRUE units). The detailed empirical data on gimmel are discussed elsewhere. ¹⁵

Mathematically and geometrically, reality is quantized at every level: electrons, and quarks, plus atoms, compounds and molecules. We demonstrate that the concept of the atom consisting solely of protons, neutrons and electrons with the requisite quarks, but without any third substance (a mass-less, energy-less one, called “gimmel”) is mathematically impossible. This refutes materialism at the atomic level. We show that no *subatomic* particles can exist as stable permanent entities without gimmel: Gimmel is necessarily tethered to all particles containing mass and /or energy.

Additionally, we postulate that this third content (gimmel) exists at every level from the subatomic, through to water, DNA and RNA. Gimmel is necessarily ubiquitous throughout nature, even cosmologically, including in dark matter and dark energy. *Gimmel is the key to maintaining all of our existence. Without it, substances could not maintain stability and symmetry* in our physical existence and would, instead be ephemeral and transitory as reflected by collider data. ^c

We speculate:

- that gluons could represent the particle equivalent of gimmel and demonstrate several similarities;
- that gimmel, at least, partly, reflects meaningful consciousness;
- that gimmel might have always existed, and might have origins from the infinite, and
- that gimmel might be a content matrix conceptualized as the “God Matrix”. This *metaphor* would be far more than the Higgs Boson, an ephemeral particle, previously regarded as the “God particle”. ^{16 d e f}

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^d The material in all the sections of these articles have been peer-reviewed.

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INTRODUCTORY PERSPECTIVE TO THE GOD MATRIX (PART 2) §

The concepts of “gimmel” and “TRUE units” presented in this paper appear to be of great importance because of their groundbreaking implications.^{17 18} In this section, we begin with what we’re metaphorically referring to as the “God Matrix”. This accentuates the broader idea of how a mass-less, energy-less third substance, gimmel, might impact as an extended consciousness, and influence all our very existence and everything in the cosmos, from the tiniest subatomic particle to the largest cosmological gradation. But these broader creative ideas originate from carefully analyzed mathematical physics.

The information and derivations below are summarized in this introductory perspective. Importantly, the demonstration of gimmel is an extension of the “Triadic Dimensional-Distinction Vortical Paradigm” (TDVP)^{11; 12; 19-21} model, as well as part of the nine dimensional triadic concept.¹⁸ However, the results appear to be startling, and, with respect, like TDVP itself, reflect their own paradigm shift.¹ Moreover, this work is an exploration of the fundamental Nature of Reality allowing our searches for scientific and spiritual knowledge to be merged into one serious, combined effort. This work is an illustration of the missing link. It is based on a hundred page single-spaced article and two shorter ones.^{15 17 18} Effectively, these publications can be perceived as detailed empirical discussions of several different pertinent areas.

This paper is a summary of the principles and highlights of our findings. It is written for non-specialized scientists and mathematicians. There are conceptual jumps in the ways the actual data figures appear, and this is why we reference these other papers, because readers can justifiably wonder where the data comes from. This section, Part 2, can be regarded as a further, abstracted summary of the whole paper. This will give readers a prioritization of the highlights of our findings.

We emphasize particularly that there are three levels of discussion:

- Empirical mathematical derivations that can easily be replicated using the appropriate methodology: Given that the data is based on sound particle physics and credible cosmological studies, we can argue with strong certainty that even if the data appears new and, for some scientists, ground-breaking, it is correct.
- Speculative concepts and creative ideas: Some of these involve potentially testable hypotheses such as the role of silicon as a life element; and the links of gluons and gimmel. We try to discuss these as feasible assumptions based on the best available data. But, they are not, at this point, easily testable hypotheses.
- At another level of feasibility, we look at what could best be regarded as metaphysical ideas, as they involve theoretical presumptions, or conjectures. An example is the concept of infinite vortical flow as part of gimmel.

We carefully try to differentiate these three gradations so the reader can differentiate proof from speculation.

BACKGROUND:

Quantization and TRUE

In TDVP, we apply quantized phenomena existing in a multi-dimensional domain.²² This consists of space and time, embedded in one or more additional dimensional domains. But, in conventional mathematics, there is a fiction: the fiction of dimensionless objects.¹⁷ This had been simply a convenient expedient, applied as a mathematical label, prior to discovering that all physical phenomena are necessarily quantized. But this label is no longer appropriate.

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If the substance of reality is quantized, the quantum necessarily occupies a finite 3-dimensional volume, not a point. This quantum volume defines the lower limit in size, and by setting it equal to 1, we establish a standard of measurement so that all substances are measurable in integer multiples of this unit. This allows us to proceed with our new form of mathematical analysis, the ‘calculus of dimensional distinctions’ (CoDD) ²³, and treat all phenomena as finite, non-zero distinctions. Replacing the dimensionless points of the Newtonian calculus of conventional mathematical physics with distinctions of finite unitary volume, the *elementary particles of the physical universe must be integer multiples of these unitary volumes*. We can then relate the integers of quantum reality to the integers of number theory, and explore the deep relationship between mathematics and reality.

Equivalence unit derivations

This model requires the definition of a new, truly basic unit for describing elementary particles. This is because in a quantized reality, all particles must be integral multiples of the smallest possible, most basic quantum unit. We call these units TRUE units (“Triadic Rotational Units of Equivalence”). TRUE units cannot be derived from our usual 3S-1t perspective (3 dimensions of space in one moment [the present] in time), because theoretical nomenclature like the conventional “half-spin” in fermions does not lead to integral solutions. One cannot have, e.g. half a quantum unit, or half an atom. Mathematically, measurements of all fundamental particles (electrons, quarks, atoms) and the third substance of reality (which we call “gimmel”) have to involve integers.

Analyses of these data in the framework of the mathematics and geometry of TDVP in 3S-1t provide us with a way to find the true *quantum unit* of measurement. The empirically measured and statistically determined inertial masses of the three most basic elementary entities believed to make up what we perceive in 3S-1t as matter, i.e. electrons, up-quarks and down-quarks, are approximately 0.51, 2.0 and 4.8 MeV/c², respectively. The values for up and down quarks are derived statistically from millions of terabytes of data obtained from high-energy particle collisions engineered in specially built colliders.

When we analyzed the elements, importantly, we have found the equations of mass and energy of the *stable fermion particles* (electrons and quarks) (e.g. neutrinos are not stable) to be incomplete without a third component. We have called that component “gimmel”, the third letter of the Hebrew alphabet written ג: It is a necessary new term. ¹⁷ We hypothesize that mass-energy, and what we assume this gimmel to be, namely, some aspect of ‘consciousness’ or ‘meaning’ are unitary major components for the stability of atoms, elements, molecules, and, indeed, all of our stable world and our cosmos. Gimmel is necessarily linked together to form a whole. In fact, it is part of that whole: We argue that we cannot have mass without energy because they are interconvertible, so much so that in our TRUE scoring they are together scored as a single measure. But we cannot have mass-energy without gimmel. Using this concept, nothing can exist without this third component: Like a hand without a shoulder, they are more than linked; they’re entirely tethered together. Without gimmel, mathematically, the elements of the Periodic Table, including those that are crucial to life, are unstable. ^h The requirement of a third form (gimmel) allows for stability.

To portray this, we apply the concept of “minimal equivalence units”. These are defined by applying basic relativity and quantum principles to multi-dimensional spinning elementary particles. We call these “*Triadic Rotational Units of Equivalence*”, or TRUE units.

^h We’re limited in English terminology: We could refer to the life sustaining elements as “stable” but that is *relative* only to the ephemeral unstable elements or isotopes of Hadron Collider particles. Clearly, these elements can be demonstrated by applying 3S-1t (our usual experience of 3 spatial dimensions at the present moment in time) measures, but we postulate it’s only because of gimmel, as well. Perhaps we should call all including TRUE units “super-stable”.

To represent the elementary particles as multiples of the minimum mass/energy/volume units, we convert the collider data into integers, a process called “normalization”. We can then apply the “Conveyance Equation”, a specific mathematics of integers, in this instance directed towards nine dimensions. The Conveyance Equation can be applied not only for atoms, but also for the whole Periodic Table of the Elements. We can extend such research to molecules, to the fundamental elements and molecules of life,¹⁷ and potentially to DNA and RNA.

The mathematical and particle physics context

The normalization of up-quarks and down-quarks to multiples of this minimum equivalence unit, based on the electron, is consistent with Planck’s discovery that mass and energy only occur in multiples of a basic quantum unit^{24; 25}, and Einstein’s discovery that mass and energy are two forms of the same thing, interchangeable by the mathematical relationship $E = mc^2$. This means that all physical objects are made up of combinations of these minimum units and can therefore be represented mathematically and geometrically by combinations of integer multiples of them^{26; 27}.

Mathematical features:

In order to properly describe a quantized reality, we must apply the mathematics of Diophantine equations. Diophantine equations simply refer to the mathematics that requires whole number solutions —integers, not fractions. In current theoretical physics, Planck’s quantum of action is the smallest integral measure and is substantial in terms of both mass/energy and angular momentum. But that approach results in fractional results not found in nature.

In our model, we incorporate unitary volume in TRUE units and consequently, all TRUE analysis equivalence calculations result in cubed integers. We apply three specific Diophantine calculation procedures to define *gimmel*, the third form of the substance of reality.

1. The first applies the mechanism of Close’s dimensional extrapolation²⁸ (DE) to define the rotation and orthogonal projection from one dimensional domain into another, in the plane of the projection. This means that DE involves integers squared as in extending the *Pythagorean Theorem*²⁹ allowing extrapolations through *9 dimensions*.¹
2. The second technique involves the addition of integers cubed, representing the combination of elementary quanta. Based on *Fermat’s Last Theorem* for $m=3$, $X^3 + Y^3 \neq Z^3$, there cannot be any cubic volumetric combination with two components that are stable.³⁰⁻³² Mathematically, this means that a nucleus comprised of protons and neutrons with orbiting electrons simply cannot produce stable atoms. The quantum entities must combine in quantum equivalence units (TRUE) to be integral and symmetric.¹⁷
3. We have shown that, while based on Fermat’s Last Theorem, involving $X^3 + Y^3 = Z^3$, there can be no integer solutions for the Diophantine equations in TRUE units, describing the combination of two quantum particles, there *are* integer solutions for the equation describing the combination of three quantum particles¹⁷. In addition, we show that enduring stability cannot be achieved without three components, namely mass, energy and something else—the third substance (which we call) “gimmel”¹⁷. This fact is discovered when applying the appropriate equation derived from the generalized Diophantine equation for combining quantum particles: $\sum_{i=1}^n (X_n)^m = Z^m$ called “*Close’s Conveyance equation*”, $(X_1)^3 + (X_2)^3 + (X_3)^3 = Z^3$ for triplets.¹⁷ Moreover, these Diophantine calculations only work mathematically and geometrically when applied to the 3S-1t observable portion of a 9-dimensional reality model and are therefore easily replicable.
1; 11; 21

The 9-dimensional requirement is not surprising because elsewhere the authors have demonstrated mathematically that our finite reality has to consist specifically of 9 dimensions—not 8 or 5 or 4 or 10 or 11 or 26.⁹ Moreover, these dimensions must be spinning. The ‘strings’ in the various String Theories generally involve the ‘curling’ or ‘folding’ into extra dimensions, and therefore do not work mathematically.^{5-8; 33}. We

have shown the relevance of the nine-dimensional spin model by applying several pertinent mathematical derivations, including: the derivation of a Cabibbo spinning mixing angle ³⁴⁻³⁶, the derivation of intrinsic electron spin and angular momentum, and of the shape of the electron which in 3S-1t is symmetrical but non-spherical, of the disappearing electron cloud, and deriving a 9-D mathematical thought experiment, plus with weak universality ^{11; 22; 36-39}.

These derivations are particularly important because they are mathematically replicable and we have published the data derivations in some detail for those who want to perform such studies. ^{11; 22; 36-39; 13; 39; 40}

This validation of the 9-dimensional finite spin model was specifically proposed as a key aspect of our metaparadigmatic model called the Nepe-Clouse Triadic Dimensional Distinction Vortical Paradigm (TDVP). ^{11; 13; 40; 41}. This means that the result was expected as a detailed several hundred page non-mathematical model preceded it and that paradigm appeared to have profound support even without the mathematical justifications.

Specific Equivalence units derivations:

In order to investigate the *something* that we appear to be immersed in, we measure the substances that something is made of—mass measured in energy-equivalent Mega electron volts divided by the speed of light squared (MeV/c²). We then look for consistent structures and patterns in this substance that can be described mathematically. ¹⁷

Using this approach, we demonstrate the actual gimmel allocations to specific particles based on empirical conveyance equation solutions for electrons, and the different quarks making up protons and neutrons. This approach has been time-consuming but needed in order to demonstrate every available option was examined in order to achieve the lowest valid level figures. For example, the key “lowest figure” is 108 cubed or 1,259,712.

HYPOTHESES

Hypotheses to be tested:

The following hypotheses are tested in this paper:

1. Gimmel and TRUE units, applied subatomically, should reveal mathematical patterns reflecting the fundamental nature of reality, with specific predictable mathematical patterns.
2. The usual life-sustaining elements known to be vital for organic life are hydrogen, oxygen, carbon and nitrogen particularly, as well as sulfur, calcium and magnesium. These should necessarily exhibit higher proportions of gimmel, the quantum-organizing factor.
3. Stability, symmetry and reactivity of elements and compounds are based not only on gimmel proportions, and on the equality or not of protons, electrons and neutrons, but also on their quantum shells, and numbers of electrons in the outer shells making up a model for valence that is predictable.
4. The noble, inert, cosmologically very abundant gases, Helium and Neon, should also exhibit high amounts of gimmel to TRUE, yet their complete outside electron shells should differentiate them and explain their abundance.
5. Based on its uniqueness, water should contain higher amounts of gimmel to TRUE than any other stable, symmetrical molecule. Specifically, it should, contain higher gimmel proportions than hydrogen sulfide.

Hypothetical areas and speculations not specifically covered in this paper.

The following are hypotheses that are mentioned but not tested in this paper:

6. The patterns of gimmel should be from the quantum level all the way through to the cosmological ⁴². It should include DNA and RNA ¹⁷. These hypotheses are important, but discussed elsewhere.
7. Gimmel might turn out in the particle form to be gluons or equivalent to gluons. ¹⁷
8. Gimmel might be conceptualized best as a “matrix” of content. If so, because of the *meaningful*

consciousness proposed, and its hypothesized origin from the infinite, it might be better portrayed in layperson terms as the “God Matrix”. This is far more justified than the demonstration of an ephemeral Higgs Boson particle, which a journalist labeled as the “*God Particle*”.

RESULTS:

Perspective: In summary, we briefly show in this paper, the outlines of the results of hypotheses 1 to 5 above. These were examined, and the postulated data supported. These analyses are *overviewed* below with the results shown in detail in other publications ^{15; 22}. These derivations were based on careful and repeated empirical mathematical physics calculations to establish which results could be feasibly applied, and the source data is available. ¹⁵

Key Units: The usual measures are mass-energy in units of MeV/c². This has been converted to units of “Mass/Volume (Normalized Average)”, where electrons become =1, up-quarks = 4 and down-quarks = 9. Protons have 2 up-quarks u1, u2 and 1 down-quark d1 (Table 2A). Neutrons have 1 up-quark u3, and 2 down-quarks d2 and d3. Ultimately, these are combined with their differing gimmel amounts applying Mass/energy equivalents to obtain the total in TRUE units (triadic rotational equivalence units) and volumetrically, we’ve called the consequent cube MREV (“minimal rotational equivalent volumes”). (Tables 2A and 2B).

Some specific derivations: In Tables 2A and 2B, we show some empirically derived scores first for elementary particles in the atom, namely the different kinds of quarks and the electron (Table 2A); and for the broader components of atoms (Table 2B). The derivation figures of the gimmel and TRUE unit scores were carefully empirically derived figures and are published elsewhere. ¹⁵

Table 2A: Tabulation of elementary particles including their gimmel and TRUE scores

| Elementary Particle | Particle | Mass/Energy | λ Gimmel | Total TRUE Units | Combined Particle |
|---------------------|----------|-------------|------------------|------------------|-------------------|
| e | electron | 1 | 105 | 106 | Electron =106 |
| u1 | proton | 4 | 2 | 6 | |
| u2 | proton | 4 | 4 | 8 | |
| d1 | proton | 9 | 1 | 10 | Proton= 24 |
| u3 | neutron | 4 | 5 | 9 | |
| d2 | neutron | 9 | 3 | 12 | |
| d3 | neutron | 9 | 8 | 17 | Neutron =38 |

In Table 2B, we translate these results into protons, neutrons and electrons and show the end point MREV derivation at 108 cubed. This reflects a volumetric result of TRUE units.

Table 2B Tabulation of neptonⁱ subatomic particles including charge, gimmel, TRUE and MREV scores

| Particle | Charge | Mass/Energy | λ Gimmel | Total TRUE Units | MREV |
|---------------------------------|----------|-------------|------------------|------------------|--------------------------|
| Electrons (e) | - 3 | 1 | 105 | 106 | 1,191,016 |
| Protons (P⁺) | + 3 | 17 | 7 | 24 | 13,824 |
| Neutrons (N⁰) | 0 | 22 | 16 | 38 | 54,872 |
| Totals | 0 | 40 | 128 | 168 | (108)³ |

108 cubed

While filling the gaps in the sequence of (n•108)³ symmetric structures in the Periodic Table, we find that there

ⁱ Neptons: Composite term for Neutrons, Electrons and Protons, as components of the atom. ¹⁷

may be two or more compounds with the exact TRUE volume to fill the gaps, increasing in number as n increases. We also discover that, after n = 9, there are symmetric compounds equal in TRUE volume to some elements. H₂O, for example, has a TRUE volume of (10•108)³, the same TRUE volume as the inert gas Neon. Hydrogen 1 (protium, H1)^j, our common form of hydrogen, is unique as it has no neutron: we've hypothesized instead, what may be more gimmel in place of the neutron. But is this the same kind of gimmel? Maybe but in case, we've called it "daled" \daleth , the fourth letter of the Hebrew alphabet. Combining \daleth and γ gives hydrogen, the highest proportionate gimmel/daled of all elements and all compounds. H1 is also the most abundant chemical.

**TABLE 2C: SUMMARY OF THE TRUE UNIT ANALYSES OF THE ELEMENTS
ADDING IN THE GAPS¹⁷**

| Compound | \daleth Units | Total TRUE | Valence | % \daleth ^k Units | TRUE Volume | Comments and Abundance rank # ^l |
|--|--------------------|---------------|-----------------|-----------------------------------|---------------------------|---|
| Hydrogen | 150 | 168 | -2+1=-1 | 89.3% | (1x108) ³ | Critical Element #1^m |
| Deuterium | 128 | 168 | -1 | 76% | 108 ³ | Isotope; rare |
| Tritium | 144 | 206 | -1 | 70% | (118. 02) ³ | Isotope; very rare |
| Helium | 256 | 336 | -2+2=0 | 76.2% | (2x108) ³ | Inert Elementⁿ #2 |
| GAP COMPOUND | | | | | (3x108) ³ | Gap^o |
| Helium Hydride He₂H | 384 | 504 | +1 | 76.2% | (3x108) ³ | Super acid Not Natural |
| Lithium | 384 | 526 | +1 | 73.0% | (327.2...) ³ | <i>Asymmetric #44</i> |
| Beryllium | 528 | 710 | -2+4=2 | 74.4% | (437. 89...) ³ | <i>Asymmetric #44</i> |
| (He)₂H. Gap | 640 | 826 | +3 | 76.2% | (5x108) ³ | Gap In Nuclear Fusion |
| Boron | 656 | 878 | -2+5=3 | 74.7% | (545.64...) ³ | <i>Asymmetric #61</i> |
| Carbon | 768 | 1008 | -2+6=4 | 76.2% | (6x108) ³ | Organic element #4 |
| Nitrogen | 896 | 1176 | -2+7=5 | 76.2% | (7x108) ³ | Life element #7 |
| Oxygen | 1024 | 1344 | -2+8=6 | 76.2% | (8x108) ³ | Life element #3 |
| Fluorine | 1,168 | 1,550 | +1 | 75. 4% | (977. 22) ³ | <i>Asymmetric #23</i> |
| HO or OH; H₂N; or CH₃. Gap Radicals | 1,174 | 1,512 | -1 _p | 77.6% | (9x108) ³ | Building Blocks of Amino Acids. Gap |
| Neon | 1280 | 1680 | 2-8+10=0 | 76.2% | (10x108) ³ | Inert element #5 |
| H₂O WATER | 1,324 | 1,680 | 0 | 78.8% | (10x108) ³ | Water |
| H₄N | 1,496 | 1,848 | +1 | 80.9% | (11x108) ³ | Ammonium Ion. Gap |
| Sodium | 1,424 | 1,886 | +1 | 75. 5% | (1,193.12) ³ | <i>Asymmetric #13</i> |
| Magnesium | 1536 | 2016 | -10+12=2 | 76.2% | (12 x108) ³ | Life element #9 |
| Aluminium | 1,680 | 2,222 | +3 | 75. 6% | (1,409. 06) ³ | <i>Asymmetric #12</i> |
| C₂H (Gap Compound) | 1,686 | 2,184 | +3 | 77.2% | (13x108) ³ | Gap Component of Cysteine Amino Acid. |

^j Hydrogen is unique: no neutron and therefore with 'daled' vertically \daleth has much more gimmel: 38 for daled (0 MEUs) (in purple). 150/168 = 89.2%. Volumetrically 108³ = 1,259,712. Hydrogen has the highest "gimmel" proportion; thereafter come the life elements.

^k This is the ratio of the gimmel to the TRUE units. We have applied some color codes here to clarify differences. B

^l 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. ⁴³

^m 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.

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

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

^p 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.

| Compound | Σ Units | Total TRUE | Valence | % Σ^k Units | TRUE Volume | Comments and Abundance rank # ¹ |
|------------|-------------------|---------------|--------------|-----------------------|----------------------------|---|
| Silicon | 1792 | 2352 | -10 +14 = +4 | 76.2% | (14x108) ³ | Postulated Life? #8 |
| Phosphorus | 1,936 | 2,558 | +5 | 75.7% | (1625.008) ³ | Asymmetric #16 |
| Sulfur | 2,048 | 2,688 | +6 | 76.2% | (16x108) ³ | Life element #10 ^q |
| Chlorine | 2,192 | 2,894 | +7 | 75.6% | (1840.97) ³ | Asymmetric #23 |
| Potassium | 2448 | 3,230 | +1 | 75.8% | (2056.944...) ³ | Asymmetric #22 |
| Calcium | 2560 | 3360 | +2 | 76.2% | (20 x108) ³ | Life element #12 |
| Iron | 3,392 | 4,520 | +2 | 75.0% | (6096.39) ³ | Asymmetric #6 |

Because it contains 2 Hydrogens in its structure, and a low atomic number life element, the gimmel score of water is the highest of any molecule at 79%. This is not surprising, as water is fundamental to life. ^r Ammonium ion is higher at 80% but is only a stable molecule in combination and then the gimmel figure is lower. Still the ammonium finding is surprising and remarkable.

In order to calculate molecular equivalents of the TRUE totals, we have applied a mathematical cubic number, and we find that the total TRUE unit scores for these elements and for the molecules of life and even DNA and RNA are all multiples of the integer 108³ (Table 2C). ¹⁷ This is an example of the extraordinary detail required here in applying effectively the empirical mathematical physics of our elements and other compounds. Additionally, it turns out that all the life sustaining elements have the same number of protons, neutrons and electrons.

This derived figure of (108)³ turns out to be very important because all the fundamental life providing elements, are multiples of (108)³. Additionally, it reflects the most abundant elements in Helium and Neon. Hydrogen 1 (Protium), our most abundant element by far, of course, is fundamental to life and cosmology.

The finding of 108³ is very likely not a random finding. These remarkable 108³ figures in Table 2C may reflect the most fundamental minimum math equivalence once calculations of cube roots are done: There are very few Diophantine triplet equation solutions like $(X_1)^3 + (X_2)^3 + (X_3)^3 = Z^3$ involving 3 cubic additions that produce a summation where the resulting cube root still remains an integer. The most basic example is $3^3 + 4^3 + 5^3 = 6^3$, but a far higher level of Diophantine triplet was required empirically to work out (hence 108 cubed). ¹⁷

The key properties of life?

The elements of life

Based on our empirical knowledge of the stable elements known to support life, namely carbon, oxygen, nitrogen, sulfur, calcium and magnesium, we find these elements all uniquely and very strongly exhibit two properties: First, the *same* high ratio proportion of gimmel to the total TRUE unit analysis, namely 0.762.^s This gimmel ratio is higher than any of the other less essential elements for life. ¹⁷ And second, these life stable elements can easily react with other elements forming compounds: They are not inert as their valence is not zero. (Table 2C).

Inert abundant gases

We also show in Table 2C that the inert noble gases helium and neon show the same stable properties as

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

^r Gimmel is likely an important aspect, but not the only property that gives rise to the uniqueness of any compound.

^s Interestingly, two inert elements that have completed outer electron shells, helium and neon, also yield this figure of 0.762. However, we analyze valence as well in our calculations so that these would not be “elements of life.”

the life supporting elements, however, their valence makes them non-reactive and thus they are not involved in biological processes supporting organic life.

Additionally, we found that silicon has the properties of these elements of life because it, too, shows as a multiple of 108 cubed with equal Protons, Neutrons and Electrons. This is later discussed as a further testable hypothesis. Moreover, certain atomic radicals and molecules are demonstrated to fill the gaps in missing multiples of $(108)^3$.

Stability based on TRUE units:

The simple terms 'stable or unstable' are insufficient to portray differences in the molecules, atoms and subatomic particles that make up our cosmos. We name and describe several decreasing hierarchies of stability: The stable elements based on the empirically derived examples are:

- *Hydrostable* (for Hydrogen): Hydrogen-1 is unique because of its absence of a neutron, though having a proton and electron. Hydrogen-1 shows an MREV score of 108 cubed. It requires a replacement for the absence of a neutron, namely "daled" γ . Daled may turn out to be synonymous with "gimmel" but we cannot prove it, though for convenience here, will include daled in the gimmel calculations.
- *Superstable* elements involve the basic life elements, like carbon, oxygen, nitrogen, calcium, sulfur and magnesium. These elements exhibit stable and symmetrical qualities. Ultimately their MREV scores are multiples of 108 cubed with equal protons, neutrons and electron numbers elements. It is surprising that silicon is also superstable, allowing for the testable hypothesis of locating silicon related life-forms.
- *Hyperstable* refers specifically to the inert gases Helium and Neon. This is a particularly interesting group involving completely filled electron shells, MREVs that are one or two times 108 cubed, and equal numbers of protons, neutrons and electrons. They are not reactive, as their valence is 0, and multiplying by the 0 produces 0 and therefore not life elements. However, the inert gases Ar, Kr, Xe and Ra, do not have more Neutrons than Protons.
- *Dynamically Stable or Life Permostable* elements refer to chemicals such as sodium, chlorine and phosphorus. These are all stable elements but they are not symmetrical. Ultimately, their MREV scores are not multiples of 108 cubed, and they have unequal numbers of protons and neutrons. We hypothesize that these life permostable elements and compounds might exhibit properties that are *linked with their energetic functions*: They allow for the energy packets as these molecules must be asymmetric to function as the sources of biochemical energy packets and exothermic reactions. Some would have expected phosphorus to have been superstable because of its necessity for life, but we propose that it is permostable because phosphate is physiologically possibly the single greatest source of energy.
- *Protostable*. These include elements that exist naturally, such as trace elements like copper and zinc, and medically relevant ones, like lithium. Protostable elements also include relatively rare elements, like beryllium. Protostable compounds generally include metallic elements, and more commonly metallic compounds that have some levels of stability. Protostable elements, like the permostable elements are not symmetrical, though still stable enough to exist permanently. Their MREV scores are not multiples of 108 cubed. Provisionally, as they have not been exhaustively analyzed, the gimmel scores of protostable elements might *as a group* be lower than the permostable elements. Yet, we have found that this hypothesis cannot be applied individually, as the permostable sodium has a gimmel/TRUE ratio of 75.5%, but the protostable aluminum is at 75.6%.

Iron fits into this protostable group: Some would have predicted that given its fundamental life related contributions, iron might have been superstable, but it is not, though containing the most gimmel of any of the most abundant elements. The iron in hemoglobin acts particularly as a carrier of the superstable Oxygen. Other protostable elements, such as zinc and copper, act as co-enzymes and catalysts. *We propose that the protostable elements and compounds allow for carriage and functioning of the superstable molecules.*

- Those that are unstable can be:
 - *Naturally unstable* (such as certain isotopes like deuterium) and/or

- *Artificially unstable* (such as those elements and particles produced in atomic colliders, but which cannot naturally occur).

We know that the unstable elements and compounds are neither symmetric nor stable. But we don't yet understand what makes them unstable based on their gimmel scores. The elements high in the Periodic Table with atomic numbers (for example, in the nineties and higher) fit this group. This suggests that the instability might, in part, have something to do with their electron shells. We know, too, that isotopes almost always fit this artificially unstable group. Similarly, the particles produced in colliders also are unstable: Perhaps they do not have the requisite gimmel, but that is pure speculation.

In summary, gimmel is a complex concept that is very relevant to stability and symmetry. Superstable elements and compounds, and the hydrostable hydrogen contain a great deal of the third substance, gimmel. We speculate that gimmel may be linked with life, order and infinite.

When elements or compounds are permutable, such as phosphorus, they may be important as reflecting energy packets. When elements or compounds are protostable, such as iron and zinc, they may be important as reflecting carriage and functioning of superstable compounds.

ATOMIC MATERIALISM, THE PERIODIC TABLE AND GENERALIZING COSMOLOGICALLY (PART 3) [†]

Atomic Materialism

The following summarizes the key consequences of examining atomic reality within the fabric of gimmel and TRUE units (Triadic Rotational Units of Equivalence). Effectively, this refutes the viability of the concept of "materialism" in the atom. This means that atomic materialism has to be incorrect because without an extra third substance, the atom would simply be unstable. It could not exist in reality whether reflecting the life elements or the asymmetrical elements. Mathematically, atoms simply cannot exist in our real world, however this is approached, whether looking simply volumetrically as numbers of protons, neutrons and electrons, or in terms of mass and energy, or in regard to mass-energy equivalents. In all instances, the resultant atom calculation is not an integer which is impossible. But atoms, protons, electrons and neutrons, or for that matter, quarks or gluons, have to be quantized and that implies cubes as they are volumetric. Therefore, the summation, the atom, must be an integer which it is not: This is a remarkable discovery because the basis of materialistic monistic philosophy is mathematically refuted. Effectively, there has to be something else to provide a balance: This is the hypothesized third substance and because it does not show up with mass and energy, it is mass-less and energy-less although with volume. We call this third substance, gimmel, and that extra amount of gimmel (which may controversially reflect some aspect of "consciousness" at least in part) provides stability and symmetry for the life-elements and noble gases, He and Ne^u. This allows our atomic structures not to fly away.

Materialism as conceptualized atomically involved the atom consisting *only* of protons, electrons and neutrons while also containing elementary particles, like quarks. The concept of mass and energy alone is refuted because protons plus neutrons plus electrons alone, or quarks plus electrons alone cannot form the stable integral combinations that we call atoms and molecules.

[†] Edward R Close PhD and Vernon M Neppe MD, PhD, FRSSAf (Part 3)

^u Helium and Neon are inert elements with complete (full) outer energy shells but they also have equal protons, neutrons and electrons. These are common elements in the cosmos, but because of their valence 0, they are non-reactive. A simplistic explanation would be that anything multiplied by zero equals zero. They not regarded as elements of life.

There has to be a third substance.¹⁷ Without the extra TRUE units of “gimmel”, atoms, volumetrically, cannot exist as stable combinations of integer multiples of TRUE units. Effectively, this means that our current perception of any atom or element without gimmel, the mass-less, energy-less third substance, most likely linked with consciousness, will not provide an atom that can exist for any length of time, which is why the pure Standard Model of reductionist materialist Physics has to be incorrect.¹⁷ Moreover, even before we apply calculations pertaining to gimmel, the mathematical derivation cannot result in stable atoms even when simply applied either volumetrically or based on mass calculations.¹⁷ This is why the quantal concept of the atom existing in a universe of pure materialism is simply incorrect, because without a third substance it cannot be an integer. In chemistry, we apply atomic numbers, based on the numbers of protons and electrons in elements; but we also recognize mass so we should calculate mass; we also can convert to equivalents of mass and energy.

The life sustaining and most stable elements:

We already know that gimmel can allow the extra integers in the TRUE calculations to consistently provide the unique Diophantine solutions relating to multiples of 108^3 for the life elements (Table 2C). *But why do we even need gimmel?* Surely, the remarkable fact that we have found here that the key life elements, plus He, Ne and Si all have equal numbers of electrons, protons and neutrons, is quite sufficient? The answer is extraordinarily important: No, it is not sufficient! We can demonstrate this by three easy mathematical proofs: The first relates simply to the number of particles; the second relates to measuring integer mass equivalents of electrons, protons and neutrons, after equating the electron as equivalent to 1 because quanta are necessarily integer multiples of the smallest unit; and the third relates to calculations of mass-energy applying TRUE units, and therefore, includes the stable fermions (quarks in protons and neutrons, plus the electrons).¹⁷ All three “proofs” adopt the classical perspective of chemistry of the atom only being made up of certain stable particles namely electrons, protons and neutrons: Essentially, the sums of the *quantized TRUE volumes* of electrons, protons and neutrons form Diophantine equations, which, because mass and energy are quantized, must have integer solutions. In Table 2C, we examined the cubes representing the *total volumes*, not just the number of particles^v. The lack of integer solutions in these calculations demonstrates a basic asymmetry of the resulting atomic structures that leads to insufficient stability to sustain organic structure and life.¹⁷

The first demonstration: the numbers of particles together don't make an atom.

In the first “proof” just working on atomic numbers, the “life” elements (non-isotopic, non-ionic) empirically, have chemically equal numbers of electrons, protons and neutrons. The first approach would be calculating the cubes of these combined particles based on the numbers alone of protons, electrons and neutrons: For the life elements, where these are equal, the solution would equal $a^3+a^3+a^3=3a^3$ if one was just approaching these particles based on their numbers in each element, effectively in atomic number equivalents. Based on volumetric calculations, the cube root of $3a^3$ is 1.442a. That, therefore, is not an integer. But if this atomic materialism were true, an integer would be required for our quantized reality. Therefore, when applying atomic numbers, such a result would refute the hypothesis that our reality is purely materialistic and there is no third substance. Now what about non-life elements? Here the proton number= electron number.

Therefore this time with all stable elements we're dealing with $a^3+a^3+b^3=2a^3+b^3$ with “a” reflecting Protons and Electron numbers and b = neutrons. The cube root of $(2a^3+n^3)$ involves (1.26a with the n). The 1.26 component is not an integer.

The second demonstration applies mass and mass energy of particles alone.

This also does not produce an integer. We apply this because some might argue that it is not clear that the sum of the cubes of the number of the electrons, protons and neutrons making up the atom of an element, should necessarily add up to an integer cubed. Instead, the alternative approach is that we should be adding *atomic mass equivalents*. For this alternative, applying the mass of these particles, we calculate volumetric equivalence units, applying 1 for the electron and comparing the mass data equivalence of protons and neutrons,

^v For example, their atomic numbers for protons and electrons as they're equivalent in the Periodic Table; and the mass numbers [and atomic weights, which also include isotopes of those elements] approximating to neutrons less these protons).

deriving our figures by converting to electron =1 from the Jefferson Lab ⁴⁴. Under those circumstances, then a single neutron represents 1839, and a single proton represents 1836. Dividing out the ‘a’ (atomic number) we have $1+p^3 + n^3 = (X/a)^3$, where X/a represents the mass of the atom. The resultant cube root is 2315.13843... so it is not an integer and cannot be a solution of the Diophantine equation representing elements with equal numbers of electrons, protons and neutrons, not being an integer (the only Diophantine equation with a solution where 1 is involved is the original conveyance equation ($1^3 + 6^3 + 8^3 = 9^3$)). ^w These comments actually involve two different calculations reflecting the mass alone in kilograms (kg) and the mega electron volt (MeV) as a measure of mass energy. ⁴⁴ However, the figures turn out almost identical. We can further justify this approach because to make the equations work, it must involve the missing link, the third substance, ‘gimmel’. But this time, based on our data, we must include TRUE units here, because we can show how essential gimmel and the consequent calculations are for the existing atomic stability, even of just hydrogen alone. This allows for both stability and symmetry and it is the derivation of the TRUE unit figures that allows us to apply diophantine equations that work (that require the cubed multiples of 108 cubed for all the life elements). Our calculations therefore incorporate TRUE units because we now know from our theoretical model and the resulting empirical research results that they are necessary. Therefore the solutions are derived from our real experience of physicochemical data.

The third demonstration: Particles need to be multiples of TRUE units.

In this third demonstration, we note that electrons, protons and neutrons are rapidly spinning elementary particles, which, because of quantum and relativistic limitations, have to be multiples of TRUE units. When elementary particles combine to form a new particle, the TRUE ‘volumetric equivalence’ of the new particle will be equal to the sum of the TRUE volumes of the elementary particles (quarks and electrons). But for the new particle to be symmetrically stable, it must have a diameter equal to a whole-number multiple of the diameter of a TRUE unit. This relationship allows us to form a Diophantine equation, which is only valid for integer solutions. ^x

Normalizing the *mass/energy of up-quarks and down-quarks to the mass* of the electron, and calculating mass/energy volumetric equivalence ^{vv} for the proton and neutron shows that the proton is 17 times the electron and the neutron is 22 times the electron (without applying gimmel).^y For an atom to be symmetric and stable, the *volumetric equivalents* of the particles must add up to a cube. Without gimmel, the Diophantine equation would then be of the form $(n*1)^3 + (n*17)^3 + (n*22)^3 = Z^3$. But Z is a non-integer because $Z^3 = 15,562n^3$ and 15,562 is not a cube^z. This demonstrates that no atom with equal numbers of electrons, protons and neutrons can

^w Neutron = $1.6749286*10^{-27}$ kg; ^{SEP}Proton = $1.6726231*10^{-27}$ kg; ^{SEP}Electron = $9.1093897*10^{-31}$ kg. Neutrons are 1838.9113 or 1839 and cubed 6219352719; and Proton = $0.99862349*10^{-27}$ so 1836.3799 or 1836 cubed is 6188965056 with electrons being 1: The total for the atom is 12408831776 so cube root is 2315.138438418182. The figures are similar for EV measures: Electron = 0.51099906 MeV so when quantized to electrons = 1, then neutron = 939.56563 MeV so when Electron =1, then neutron= 1838.6838 or 1839 again so cubed 6219352719; similarly, Proton = 938.27231 MeV^{SEP} or 1836.1529 or 1836 again so cubed 6188965056 and = then the total for the atom of Helium for example is 12408831776 so cube root is 2315.138438418182. If these have the same numbers of protons and electrons, we can add 2315.138438418182n. If not we can use the same Diophantine formula applications, and because it is $e^3 = 1$; so the answer is the cube root of $[1 + (p1836)^3 + (n1839)^3]$ is \neq integer: Theoretically, because of the 1, the Diophantine triplet is ostensibly very imbalanced and not an integer.

^x Volumetric equivalence (Close and Neppe) describes the minimal volume occupied by the most elementary of particles. This reflects the finite quantum distinction replacing the infinitesimal of Newton/Leibniz calculus. Volumetric equivalence provides the logical volumetric equivalence unit upon which to base all measurements of the substance of reality. ^{76; 116} Applying calculus of distinctions concepts, the minimal *volume* is the ‘unitary volume of extent’, and its *content* is the ‘unitary quantity of mass and energy’.

^y The derivation of these figures is explained in greater detail in two of our forthcoming books ^{45; 46}. 17 and 22 reflect normalizing statistical data because of quantization of the triad of up and down quarks respectively in protons and neutrons with electrons equaling one in volumetric equivalence. This is an entirely different calculation from the total mass or mass-energy derivations of being 1836 and 1839 times more than the electron in the second calculation as it relates to the 9-dimensional model and the third form, gimmel. The derivation specifically includes the demonstrable fermion half-spin variants—the up-quarks and the down-quarks—but does not include the entire particle ‘soup’ in the neutrons and protons.

^z The cube root of 15,562 is 24.966.... The closest integral cube root solution would be 25 from 15,625.

be stable: *Without gimmel, all of the elements necessary for organic life would be very unstable.* Since Hydrogen is the most abundant element in the universe, and organic compounds are, in fact, very stable, proof of the existence and effectiveness of gimmel is all around us.

Importantly, it could be argued that third substance need not be gimmel. After all gluons are proposed to fill the volume of protons and neutrons and act as a particle glue. The problem is, even if this were so, the Diophantine triplet that results volumetrically for the atom cannot be an integer. This is so because our Diophantine calculations require a balance for the atom, and that would require the third substance to also exist linked with the electron. So gimmel works with the TRUE unit analysis, but gluons fall short!

*These three scenarios that demonstrate the pure materialistic atomic model must be incorrect.*¹⁷

We have shown the three scenarios, based on atomic number cubed, atomic mass energy cubed (and ultimately the same figures for mass-energy cubed), and applying volumetric equivalents using TRUE units. Essentially, applying the Diophantine solutions *we know that without gimmel there are no solutions for the totality of protons, neutrons and electrons being in the Periodic Table producing an integral atom.*

These three results are consistent and have applied all three hypothesized scenarios to make the atom “whole”. This consistency amplifies the point that however one attempts to apply the mathematical derivations, *an atom still cannot be derived simply of protons, neutrons and electrons together.*^{aa}

These major stable subatomic particles in combination simply cannot allow the necessary requirement for the atom to exist as an integral whole. But clearly the atom needs to be a whole. *Therefore, these obvious empirically based mathematical solutions ostensibly refute the hypothesis of pure materialism: There simply must be something else besides the stable mass-energy particles of protons and neutrons and electrons, as there must be an integral volumetric solution as quanta are, by definition, integral and volumetric.* This can only be achieved by adding a third substance.¹⁷ That fills a necessary void to make these atoms symmetrical.

Generalizing across the Periodic Table

What about the rest of the Periodic Table of the Elements that do not have equal protons and neutrons? Applying the known empirical data for all of the approximately 80 stable elements, even when combining unequal but numerically different numbers of protons (*with balanced electrons*) and neutrons in any atom, no other elements *can* produce the requisite cubic Diophantine solution because the cube root of the consequent atom cannot equal an integer. As indicated, where a and b are integers, with a representing both protons and electrons and b representing neutrons then in $a^3+a^3+b^3=2a^3+b^3=c^3$, c as the cube root of $c^3 \neq$ an integer. However, for stability it must be an integer so this algebraically demonstrates that without gimmel, stability is not possible. A special case for this is Hydrogen, the element that contains the most gimmel or daled because of the absence of a neutron. With Hydrogen, $c=0$, so $a^3+a^3=2a^3$ and the cube root is not an integer, in this case 1.26a. Similarly the relative mass kg figures and the relative mass energy EV figures make atoms not equivalent to integrals.¹⁷ In like vein, applying the mass TRUE equivalence calculations as above, the calculation is the same as above, $(n)^3 + (n*17)^3 + (n*22)^3 = Z^3$ implies Z is a non-integer. Effectively, there are very few Diophantine triplet equations, and none can work in the Periodic Table to create an integral cube root solution, unless gimmel is accounted for.

The calculus of distinctions

Close's Calculus of Distinctions (CoD) is critical, not the traditional Newtonian-Leibnizian infinitesimal calculus, for our calculations. This is because empirically, we should be applying CoD as everything is quantal is integral. We do not just tend towards zero. In the finite reality, we stop at the quantized minimum, not at zero.

^{aa} The major components of the atom are neutrons, electrons and protons. There is no consistent term for the three though sometimes they're included in 'composite elementary particles' or 'composite fermions'. While composite these terms are not exclusive and may be incorrect. For example, there is more than just 'fermions'; and 'composite elementary particles' do not fully reflect this, because components of elementary particles exist such as quarks and a whole "particle zoo" though often ephemeral and unstable within the proton and neutron. Based on the names of the three particles, it's logical for the new name to end in 'trons'. The first letters could then contain each of the three—neutrons, electrons and protons. Neppé and Close have suggested 'neptrons'¹⁷.

This infinitesimal calculus is simply a traditional convenience in mathematics but the approximation of infinitesimals is incorrect in quantized reality. Given the Planckian quantum units, which are integral, it is integers that are critical in measuring finite reality as everything is quantized: This is why we converted *mass-energy* to unitary equivalents. And this is why we apply Diophantine equations, with three terms on the left side because three symmetric cubes can combine symmetrically and may be very stable if the cube root of the result on the right is an integer. This specifically involves using Close's Conveyance Equation in a 9-dimensional Diophantine model.

Nine dimensions are specifically indicated by dimensional extrapolation, pure number theory and, importantly, a part of CoD, the Calculus of Dimensional Distinctions (CoDD).²³ The CoDD defines all mathematical operations in terms of distinctions that are integral, to accommodate the finite components of quantized reality. The concept of integral equivalents is unique and linked with expanding our experiential 3S-1t to an existing finite 9D spin reality.

Valence:

Pertinently, valence incorporates *both* the number of open spaces *and* electrons in the outer shell of an atom, and the figure applied depends on which is the smaller.

- Both the number of spaces available and electrons in the outer shell together give indications of reactivity and will affect the abundance or lack thereof of elements and their reactivity properties. Geometrically, we propose that the shells in atoms reflect volume and correspond to energy levels. With this approach to re-analysis of shells and electrons, and particularly the outer shells, new concepts of Valence are applied.
- When these Valence concepts are added to Gimmel and TRUE calculations, the Periodic Classification of the Elements can be understood possibly better than before.
- It appears that one can apply mathematical Diophantine Conveyance equation calculations to establish the properties of a chemical and the less the ratio of gimmel to TRUE, the less the reactivity, symmetry and stability.

PRELIMINARY IDEAS ON GIMMEL THAT NEED CONFIRMATION (PART 4) ^{bb}

Cosmological justifications of gimmel ⁴²

A separate but extraordinarily important issue arises. This is also directly linked with TRUE units and gimmel, but this time cosmologically. 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. ¹⁸

In summary, when one calculates 3 dimensionally, we are applying a triad applying volumetric components. We need to apply that to dark matter. 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) ⁴⁷⁻⁵⁰ as the proportion of Gimmel to TRUE units. Correlations are not linked causally but could it be that Gimmel is a mass-less, energy-less component of dark matter/ dark energy, just as it and TRUE plays a role in elements? ⁴²

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. ⁴²

Supporting a remarkable hypothesis

This mathematical result is still preliminary based on our best available figures, but the equivalence, which likely has an error we guesstimate of 1-2%, is very striking. We hypothesized this correlation would work out and it does. Our hypothesis was based on the postulation that if indeed TRUE units are appropriate at the atomic level, they should be at the element level, at the molecular level and indeed all the way through to the cosmological levels. This, indeed, might provide the beginnings of a solution to the challenge of what dark matter and dark energy are. It is one that has been regarded as unsolvable. ⁴²

The cosmic proportions

Very briefly and preliminarily, the calculation is complex and involves some assumptions of ratios in the cosmos. Effectively, ‘dark matter’ and ‘dark energy’ account for most of the matter and energy in the entire universe. The ‘dark’ components cannot be seen directly with telescopes as apparently it does not emit or absorb light or other electromagnetic radiation. Its existence and properties can only be inferred, and the Planck Probe mission team, applying the standard model of cosmology, calculated the total mass–energy of the known universe as containing 4.9% ordinary matter, 26.8% dark matter and 68.3% dark energy. Applying mass-energy equivalence together, the ‘dark’ components constitute 95.1% of the total content of the universe. ⁴⁷⁻⁵⁰. Importantly, the Planck probe data reflecting 95.1% is a linear proportion and should be calculated *volumetrically* as TRUE unit analysis already has cubes as the values. The cube of the 95.1% is 86.1%, which we would use to compare with the gimmel/ TRUE proportion. As an aside, it is irrelevant that Dark Matter and Dark Energy may be differently located and distributed. The hypothesized correlation still can be tested. ⁴²

The cosmos is thought to be made up of about 75.6% hydrogen and 24.5% other substances mainly helium (but all these other substances have a similar gimmel to TRUE ratio of 0.762). ⁴²

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

^{bb} Edward R Close PhD and Vernon M Nepe MD, PhD, FRSSAf: (Part 4)

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 Daled.^{cc} Daled may or may not be the same as gimmel, and we’re referring to both as ‘gimmel’ here. ⁴²

Gimmel and TRUE cosmologically

The figures on Mass-energy and Gimmel in the TRUE unit calculations are already based on volumetric (cubic) units. By applying volumetric equivalents of 75.6% hydrogen abundance in the cosmos with a 0.892 ratio of Gimmel to TRUE, we calculate the hydrogen contribution to be 67.5%. ⁴²

Similarly, applying the 24.5% of helium (0.762 ratio) and any other life element (also = 0.762) that may be very small in the cosmos, the same figure TRUE unit ratio exists producing 18.6% as the ratio of Gimmel to TRUE. The total volumetric proportion then is $67.5\% + 18.6\% = 86.1\%$.

The similarity of figures (86.1% of volumetric dark matter plus dark energy compared with the proportion of gimmel to TRUE in the cosmos at 86.1% here) is striking and exactly equivalent. However, these figures despite being based on best available current statistics, are, as indicated, still speculative. The range ‘guesstimation’ for gimmel/ TRUE ratio might have an error of say 2% or even more, based on the proportions of estimated hydrogen and helium / other life sustaining elements in the cosmos. ⁴²

Nevertheless, particularly, given that it was hypothesized to be so, the correspondences are remarkable based on current ratio figures (gimmel/ TRUE :: volumetric dark matter and energy together/ proportion of the cosmos). So very preliminarily, it appears that we could postulate that gimmel/ daled exists as a third substance besides mass and energy at every level, ranging from the quantal to the cosmological. ⁴² The ratio of Gimmel to TRUE units being the same as the volumetric measures of dark matter with dark energy to the proportion of the cosmos is a truly remarkable finding given it was postulated. ⁴² Or is this purely a coincidence?

TDVP provides a “mechanism” explaining why there is something rather than nothing. In TDVP, the form and structure of reality is determined by the intrinsic logic of nine-dimensional reality, without requiring any transfer of mass or energy. ^{11; 12; 19-21} And TRUE units and gimmel is a critical extension of this research, allowing us to validate hypotheses and explain some unexplained and poorly understood observations and data.

These results strongly suggest that, in a nine-dimensional spin reality, stable structures are apparently purposefully formed for use as vehicles through which the extent of a structured substrate, likely associated with consciousness, may require continuously tethered linkage with space-time reality. ⁴² Moreover, gimmel, as the third substance can be described as a “content” just like mass and energy are contents. We postulate that this third substance, gimmel, is cosmologically linked ⁴² as well as being contained in fundamental structures like the elements ¹⁷.

^{cc} 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’. Gimmel therefore applies 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 indivension translated through intersections of vortices, scalar, vector and tensor components. ^{1; 51; 52} 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. ³ 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.

Finally, TRUE analysis reveals the mathematical patterns underlying reality. This has apparently never been performed before because we've normalized the basis of descriptive measurement to integer multiples of the smallest possible unitary equivalence unit. Logical patterns in the primary structure of reality are exposed, rather than remaining hidden behind multiple arbitrary, non-commensurate mathematical procedures as they have been in the current paradigm. The fundamental unitary equivalence unit, i.e. the triadic rotational unit of equivalence (TRUE) that we have derived, consistently describes the combination of gimmel with the mass-energy quarks to form protons and neutrons, and the combination of electrons, protons and neutrons plus gimmel to form atoms and all stable compound objects in the universe, from molecules to galaxies.⁴²

. Importantly, this research extends to the new discipline of Dimensional Biopsychophysics, and emphasizes:

- The 9-dimensional finite spinning model;
- A re-evaluation of the atomic structure: the application of triads of 2 quarks (up and down) plus electrons as the most fundamental active parts of atomic structure. This applies the proton with 2 up-quarks and a down-quark, and the neutron with 2 down and one up, and utilizes the third stable fermion component, the electron. Together, these with the necessary gimmel, make up the atom.¹⁷
- molecules are likely not just the sum of atoms. The combined equivalence of atoms in molecules can be calculated based on gimmel, mass-energy equivalences and TRUE. For example, using just the presence of the atoms and taking into account the covalent bonding of water and hydrogen sulfide, they could superficially have the same activity and similar applications. But empirically we know this not to be so. This is demonstrated by the more appropriate calculation of Hydrogen-hydroxide (H-OH) (=water) compared with H-H=S (H₂S) (=hydrogen sulfide): H₂S calculates out at a lower gimmel /TRUE ratio and is not a cube root, indicating that it is asymmetric.
- These concepts are not limited to just elements and apply at every level to compound entities.

SPECULATIONS ABOUT GIMMEL: OF MEANING AND GLUONS (PART 5) ^{dd}

The idea of Gimmel is new. ^{15; 42; 53; 54 17} There are still many questions to be answered: Consequently, we now provide our perspective of the current status of gimmel. This section (Part 5) is headed “speculations about gimmel” because there are supporting, possibly creative ideas: Some of these ideas are feasible, yet cannot be falsified. ⁵⁵⁻⁵⁷. At times, these concepts can still fit the Neppe-Close concept of interpreting science in a broader way, where we can interpret science through feasibility and replicability: This way we can extend the scientific method by applying “Lower Dimensional Feasibility, Absent Falsification” (LFAF) ^{58; 59}.

On the nature of gimmel.

Our fundamental particles contain mass and energy. The third substance (which we’ve defined as ‘gimmel’) *must* be mass-less and energy-less, because otherwise it should be an overt, measurable fundamental particle that is stable and logically, like all the other particles always existed. We could then locate gimmel by its mass and energy. Yet, we cannot.

We have empirically shown how this gimmel addition allows for stability because the elements now demonstrate integral solutions, even at the atomic level. These elements exist and are not ephemeral. Particles in our real world must reflect stability, not exist only for this transient fraction of a millisecond. The difference is that those particles that exist in a stable and symmetrical way contain the correct amount of gimmel. Indeed, some of these particles make up life-sustaining elements such as oxygen, nitrogen, carbon, sulfur, calcium and magnesium plus the hydrogen: these all have a higher proportion of gimmel than any other elements. In summary, *all* the elements in the Periodic Table that naturally occur *necessarily* need a third substance (gimmel) with a specific measure, besides their mass and energy, to provide the needed stability and symmetry for these elements to exist over extended time. Those elements that do not occur naturally, such as the elements with high atomic numbers above 90, for example, are unstable, and do not permanently exist.

Yet, this gimmel third substance must be mass-less and energy-less, as otherwise it would revert to the mass or energy of our fundamental particles. If that were the case, gimmel could easily be demonstrated because the result would make the mass and energy of the atom greater than it is; yet the mass and energy of these atoms do not change with gimmel calculations. ¹⁷

Moreover, could gimmel *always have been present* in some way, even in the very most basic quantum structure of finite reality? We can likely answer this question because it appears that, unless there had been an extraordinarily unlikely fundamental change in the nature of reality sometime in the past, gimmel had to exist from the beginning of the event horizon or big bang or some such initial finite happening.

Gluons and gimmel

We know that some “stable” particles always exist: Electrons and the up and down quarks in protons and neutrons, are examples. Also, photons are stable, and of course, contain gimmel at a similar level to electrons, based on our calculations. But these particles require the “third substance” that we have called “gimmel”. Gimmel occupies volumetric equivalents to make these particles stable because it allows for symmetry and stability of atoms, elements and compounds that would not otherwise exist.

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Could this gimmel already have been discovered?

Let's explore the many other particles that appear to be unstable and are located as part of the ephemeral "particle soup" that we can locate only through Hadron Colliders or their equivalents.⁶⁰ Is there maybe a particle in that particle soup that could actually be gimmel or reflect some kind of mirror image of gimmel?

To narrow down the question, could it be that "gimmel" has already been discovered as part of another subatomic structure in this particle soup?

We postulate that there is a possible candidate: We suggest the particle called "gluons". This is currently a tenuous idea, but may provide for an area worth exploring, particularly as there are some dramatic parallels between gluons and gimmel. In this scenario, some gluons would manifest in our stable elements and compounds, and yet be in the particle soup because they would have been difficult to explain because of their lack of mass and energy.

Gluons were originally described by Murray Gell-Mann in 1962.⁶¹ They technically fit into the particle classification of "bosons", with strong interactions electromagnetically within the nucleus. They are supposedly the "glue" between the quarks,⁶² the way quarks are held together. This property is despite gluons having no energy themselves¹⁷. This way the atomic nucleus of protons and neutrons stays together and does not fall apart. Gluons have been hypothesized to act via these strong electromagnetic forces, despite being regarded as mass-less and energy-less particles.⁶⁰

Let's speculate further and amplify the idea a little that gluons might actually be the same as the gimmel that is reflected in quarks because both gimmel and gluons, by definition, are similar in that they both are mass-less and energy-less. Even this basic commonality could be putative because gluons are known to occupy no mass, and mass and energy being interconvertible implies they exhibit no energy, as well.

But the gluons *could* be regarded as responsible for explaining a significant part of the volume in the protons and neutrons, just as the gimmel contributes to rotational units of equivalence by their tethering or linkage to quarks. In effect, like gimmel, gluons could occupy volume, just as gimmel does in the TRUE unit tables. Consequently, gluons could potentially replace the "gimmel" in the protons and the neutrons headers in the Tables 2A, 2B and 2C above, because they could be linked with quarks there.

The usual current interpretation of gluons is that they act as the "glue" in the nucleus. This glue is the proposed classical explanation for the mechanism of how gluons are responsible for the strong electromagnetic forces in the nucleus (protons, and neutrons). But, if gluons are like gimmel, gluons need not be functioning as like glue in the nucleus. Instead, if gluons were "gimmel-like", they would be working differently, just as gimmel does. The parallel is particularly striking because gimmel also links with quarks. Applying gimmel and TRUE, would provide a different explanation for these "strong electromagnetic" gluon linked forces inside the nucleus that keep the quarks together.

Gluons have been proposed to exhibit two properties in their strong interaction with quarks, namely *participating with*, in addition to *mediating* the quarks.^{61; 63; 64} These proposed dual properties have made the interpretations of the exact properties of gluons more difficult to understand. This is so, as the "functions" of gluons are regarded as involving interactions that reflect more active mediation roles^{61; 63; 64}, and hence, particle physicists recognize there has been some mystery to what exactly gluons are. This is one reason why the different kinds of gluons have been conceptualized into a special classification system in particle physics, so-called "quantum chromodynamics". This allows trying to differentiate the different kind of gluons.

There is another parallel: Applying our analyses, gimmel also mediates with the quarks by being tethered to the quarks. This makes the atom stable. This creates a more logical explanation than “just a glue” of gluons that interacts and mediates, and yet may have difficulty separating. However, there is a major problem for gluons: Gluons are described only linked with ensuring the increased volume of protons and neutrons (“nucleons”) and therefore used to heuristically explain the much larger volume of these nucleons than simply the relatively tiny mass of the up and down quarks. The function of gluons, moreover, has been to hold together the components inside (quark and possibly other) the nucleons. This effectively explains why gluons were discovered. That, however, does not explain that even then, using volumetric equivalent calculations, atoms would still be unstable because their cube roots would not be integers. *The only way to show the atomic stability is to add a third substance that truly works, not only for protons and neutrons, but electrons, and remarkably that is gimmel.* Moreover, there is more gimmel linked with electrons (105 gimmel per single electron) than any nucleons (only 7 with protons, P; 16 with neutrons, N) (Table 2B). Effectively, whatever diophantine equation with cubes we apply, the lack of a third substance in the electrons, E, using the gluon model cannot produce (unless by accident) a solution of a stable atom, A. This is so because currently the equation requires total volumetric equivalents of $P^3 + N^3 + E^3 = A^3$. But using gluons volumetrically only in P and N not in E, the same volumetric figures would be in protons and neutrons but insufficient in electrons, so that the atom would not be integral, and the elements would be unstable. It requires that extra third substance be it gluons or gimmel in electrons too for the math to work. But there are no gluons attached to electrons in current theorizing. There is gimmel, and TRUE analysis is also a far better explanation, particularly as gimmel seamlessly can be applied to a 9-dimensional model! And this is irrespective of whether consciousness is invoked as part of gimmel.

Carrying this parallel further, gluons would be synonymous with the important rotational mass-less, energy-less volumes of the third substance, gimmel. We speculate this rotational property could provide a quantal level consciousness and stability because of their rotations through to the ninth dimension.⁶⁵ Interestingly, we know there are nine finite dimensions in the TDVP model^{22; 37} and there is spinning through from dimension number 1 to dimension number 9: This makes 8 components of vortical spinning.^{1; 20} Is it likely purely coincidence that there are 8 main gluons currently described? Interestingly, gluons have already also been represented as helical structures,⁶⁴ and so could be conceptualized as rotating moving vortices. Vortices are fundamental to the TDVP^{1; 11; 66} model, so much so that “Vortical Paradigm” is part of the TDVP name, and therefore the 9-D finite spin model fits.^{1; 51; 52}

Could it be that gimmel and gluons are one and the same? Could it be that gluons and the family of gluons are not always particles, but part of an infinite spinning flow that is not detectable, except when applying calculations of stability? Could it be that when gluons express themselves as participating, mediating particles, these are their dynamic manifestations in the finite subatomic reality? Could it be that this is where particle physics and that third substance, gimmel, more easily meet, because gimmel is functioning more effectively in the same context?

Effectively, we’re arguing that gluons may not need to be portrayed just as the sticky 3S-1t strong glued electromagnetic force. Instead, gluons might be the same as gimmel, or function like gimmel, and act in 9 dimensions, spinning dynamically, being tethered to the quarks, and play an active role in influencing, impacting and mediating the quarks. We’re further arguing that if, indeed, gimmel and gluons are the same, these gimmel-like gluons would also be tethered to electrons and other particles like photons, and that their rotations suggest 9 dimensional functioning. That, in turn, may reflect links with a continuous infinite reality vortical matrix flow.

Flowing through 9-dimensions or being glued together?

The concept of gluons providing the subatomic glue could conceptually provide for a limited stability in

elements. This is because they might not easily separate. However, the alternative to gluons—the gimmel properties—might much more easily reflect a stable, symmetrical 9-dimensional third substance rotating through eight 360-degree cycles from dimension number 1 to number 9. As an aside, this also explains the concept of half-spin in fermions like quarks and electrons: 8 cycles produce integer rotations. We need not have “half-spin” in a quantized reality of integers.

We propose that this flow of gimmel would create an active way for us to make the atoms in elements and compounds containing quarks and electrons stable. But gimmel works with electrons, as well, however, gluons do not apparently—or they not been discovered to do so.

We know that for gluons to do the same job in the nucleus as gimmel, they too must link with quarks. They do, but there is no direct correspondence with the numbers of quarks: Conventional wisdom conceptualizes two *stable* kinds of quark, namely up-quarks and down-quarks. But based on our data, this requires not just two quarks (one up and one down), but two *triads* of three quarks each making six different kinds of stable quark. This is exemplified in Table 2A, where we observe that there are two up-quarks, and one down-quark for protons, and one down-quark and two up-quarks for neutrons. These must be fundamentally dissimilar because each of the six quarks necessarily have empirically derived different gimmel scores.

Matching gluons with links with quarks

It would be simplistic to draw a parallel that there are six kinds of stable gluons in the nucleus, and that these correspond with the gimmel linked with these six different stable quarks. A major reason is that current thinking argues that there are possibly eight different types of gluons⁶⁵. Gluons are difficult to locate and are regarded as part of the subatomic soup. But could some of these eight, such as six of them, be explaining some of the volume in the nucleus? Could those six gluons in the nucleus be linked with the six quarks that we have described? It is complicated certainly because there might be a mix of ephemeral and stable gluons, just as there is with quarks: We know that there are at least four other kinds of ostensibly ephemeral unstable quarks in the particle soup, namely strange-quarks, charm-quarks, top-quarks and bottom-quarks.⁶⁷⁻⁷² So, applying a similar hypothesis, there might potentially be ephemeral and stable gluons and these may make up gimmel-like substances in the nucleus. An unlikely speculation would be that under some circumstances these six gluons might match the numbers of stable quarks that may be relevant.

If needed, that gluon alternative mechanism is reflected in gimmel. But, conceptually, there may be more: Those gluons could even flow like a *matrix*. This gimmel would then manifest not only sub atomically as a particle in 3S-1t, but also, speculatively, as a “matrix” at the higher dimensional or infinite levels. This would then make gluons much more versatile, and easier to comprehend than the gluon “glue” concept. This is so as given a 9-dimensional finite spin model: the gluons must then still rotate through eight dimensions in that 9-D finite spin. Yet, the “glued” gluons, with the strong electromagnetic forces, might be entrapped in the nucleus, and therefore not have the facility of being able to separate from the quarks. By contrast, a rotating gimmel would always be present, and more easily interact with quarks.

So the jury is certainly open. Gimmel and gluons are likely different. But maybe, just maybe, at some time in the future, the eight gluons versus the six active stable gimmel units in the nucleus will be demonstrated to be the same, or the further two gluons will have some relationship with another elementary particle like electrons or possibly photons. An advantage of gimmel over gluons is that we can calculate the exact number of TRUE units of gimmel that has to be associated with specific particles and also explain them within the framework of TDVP theory. In contrast, gluons as “glue” are more like ad hoc fill-ins to explain the strong force.

Gimmel, Consciousness and meaning.

We postulate that gimmel is strongly linked with meaning: This is logical because the third “substance”, by definition, is mass-less and energy-less, and there are simply no other obvious alternatives beside reflecting, at least in part, a broader informational meaning or “meaningful consciousness” that is tethered with the mass/energy in the 9-dimensional domain. Consciousness is a strong gimmel candidate because there appears none other. If this is so, this means that we can demonstrate how consciousness is describable in the equations of quantum physics and relativity. The consciousness, in this context, manifests as a content, and with mass and energy, forms a tethered triad.

Gimmel might provides an order to an existence that may otherwise be disordered. If this is so, one likely origin for gimmel is the infinite consciousness. If Gimmel involves meaning, we could argue that everything is unique from the tiniest structure through to the cosmos. Everything is unified. ¹⁷

The “God Matrix” or the “God Particle”?

We now move to a further level of LFAF. We examine speculations that are unproven, and that reflect a level of feasibility that may allow for conjecture but not scientific proof, per se. This is because even though these ideas may be feasible, they may never be falsifiable. ^{58; 59} This may be because we may be approaching the infinite or higher quality dimensional domain (?) concepts such as love and beauty. We may have to relegate such ideas to the artistic canvas of metaphysics and not science even to the broadest LFAF science level. Still let’s proceed.

Should we just conceptualize “gimmel” simply as a particle in the subatomic context that has no special relevance? Is it just as irrelevant or meaningless as the accidental order that reflects our reality, our existence and our finite experiences? Are these electrons, quarks, neutrons and atoms all simply coincidental evolutionary quirks? Essentially, is gimmel something meaningless or is it something meaningful? Was Einstein just incorrect when arguing that “God does not play dice” ⁷³?

Ordropy, life and meaning

Instead, is there something else, something relevant to all these remarkable patterns of life, and something meaningful about the abundance of certain elements and of water? Is there a pertinence to the stability and symmetry that allows for life, and, is there, indeed, a relevant beauty that we conceptualize as a psychological gestalt? Does our existence have a multidimensional order, which might even derive from the infinite, a term that is implied by our using “ordropy” ¹. Ordropy is more than just negative entropy, because that order exists everywhere and is multidimensional. Yet ordropy cannot exist from finite reality as it would contradict the second law of thermodynamics. The tendency towards disorder—entropy—implies a finite closed system. In ordropy, we have postulated a potential continuous flow of gimmel from the infinite, a state of order that allows for life and meaning, and does not approach everything purely stochastically.

Certainly, a mathematical approach might conceptualize gimmel simply as a discrete quantized cluster of particles, where the mathematics just happens to work out. The math would then be there just for calculation purposes. We argue that it should possibly be reflecting a hidden grander component that is reflected in our existence, and this is possibly why we have remarkably accurate constants to many significant figures and these might exist because part of math is a reflection of an internal ordered existence, allowing our world and our reality to function not by accident, but by design ^{74; 75}. A tiny deviation would destroy our cosmos but our cosmos continues to be sustained. ^{76 77 78 14; 51; 52; 79}

This creates a dilemma for us: We are aware that conventionally scientists should be “neutral” in all information. But the reality, we argue, is that we scientists should be allowed to apply common-sense and be prepared to look at what is feasible and not falsified, even if we cannot prove something ever. ^{58; 59}. Science is not neutral and scientific methodology requires amplification. ^{58; 80}

Gimmel certainly represents a distinction of content, just as mass and energy are containers of content. This is contrasted with the concept of Space, Time and Consciousness extent. These are represented in TDVP and in the calculus of distinctions as “dimensional substrates”^{1 23}.

But this content may be more than just a particle context, which is why we referred to “gimmel” as the third substance. We propose that gimmel is also the “matrix” for that something that is necessarily linked or part of everything that exists, including subatomic particles. Now here comes the metaphor. Gimmel then could imply a flow for that matrix. That would mean arrays of always dynamically in motion spinning (vortices) quantities or expressions reflecting a single entity obeying laws of order (ordropy). We call this the “God Matrix”. The God Matrix would reflect a logical, coherent organizational structure flowing from the infinite at the subatomic level through to our living physical existence through to the cosmological level.

The God Matrix and the Gluon Matrix

We could then conceptualize gimmel metaphorically as more than just a particle, but as a matrix, with possible origins as an infinite vortical flow to the finite—hence, the lay term “God Matrix”. As an aside, the matrix idea could make the Gluon-Gimmel hypothesis even more interesting^{61; 63; 64}. This is so because Nobel Physicist Murray Gell-Mann also described a matrix that he called the “gluon matrix”^{61; 69}.

We regard that third substance, gimmel, as reflecting, at least, in part, a meaningful consciousness. This is because, by default, there is little else that would be mass-less and energy-less. What else besides an “extended kind of consciousness” or “meaning” could gimmel be? Surely, this could not be amazingly coincidental at every elemental level? That would defy any Bayesian priors^{81 3}. Furthermore, would it be logical to postulate that gimmel might always have existed, might have had origins from the infinite, and might be a matrix made up of a gimmel content that can manifest as mass-less, energy-less particles with a volume? And could that gimmel be logically tethered to energized subatomic particles? Could it be fair to argue there is a non-stochastic relevance to this, and therefore that gimmel should be conceptualized, in layperson terms, as the “God Matrix”. This metaphor may be far more apposite than the layperson naming of the so-called Higgs Boson, an ephemeral particle, as the “God particle”.¹⁶

As we are speculating here, we are not literally implying that “gimmel” is a “God Matrix”. However, such a matrix metaphorically connotes a potential mystical base for an extended and ubiquitous consciousness. Moreover, gimmel appears to convey a meaningful structure for supporting life. That base might impact and influence meaning at every level. It may involve reciprocal dynamic feedback. It has implications for motivation, for action, for choice and for guidance. In reality, we don’t know if this meaning or mystical flow is even appropriate because explorations into the infinite continuity are unknown, but the metaphors of meaning, and in an optimistic reality, possibly positivity, love, creativity and goodness, allow for creative active though metaphysical messages. This superimposition of a meaningful consciousness, possibly in every subatomic particle is entirely speculation, but the metaphor should in no way discredit the carefully built mathematical base or our data, because that reflects excellent open-minded science and any metaphysical speculation is the cherry on the top.^{53; 82; 83}

The infinite and spinning interpretations

We provide another speculation: Could it be that we don’t need to worry about whether or not there is or is not collapse of the quantum receptor *vis-à-vis* the various related quantum Copenhagen related^{14; 16-18; 26} interpretations?^{22; 84 85} Perhaps, if gimmel from the infinite is all-pervasive, and has always been present, the so-called observer does not need a source of interaction. He is already part of that reality experiment!⁶⁶. This

might provide a solution to a fundamental quantal question and this has been discussed in some detail by applying a complex mechanism of flow that we call “vortical indivension” across multiple dimensions.^{86; 87}

Revisiting relativity in 9-D

We provide a further speculation. Einstein’s speed of light, c ,⁸⁸ might involve a different constant in each dimensional domain beyond our conventional experiential 3S-1t (the three dimensions of space in the present moment in time. This could be so because light speed squared is proportional to the ratio of energy to mass. But we have mathematically proven that there are 9 finite spinning dimensions^{18; 37; 89} so we have to take this into account. We do not yet know the exact nature of these dimensions, but have postulated there may be multidimensional time⁹⁰ and consciousness.^{18; 37; 89} This necessitates further possibilities.

- If there were more than one dimension of time, the speed of light would be variable relative to dimensional domains involving those time dimensions.
- Moreover, ultimately given there is a third substance, gimmel, a new theory of everything needs to include gimmel as well. This is where we propose consciousness is put into the equations of physics.
- Importantly, space-time related constants, like the speed of light, as well as the extent and content of consciousness, might involve different relative concepts depending on the frameworks of the specific dimensions (“dimensional domains”) involved.

Other comments

1. The whole is more than sum of the parts because gimmel contributes to stability, yet cannot be directly observed or measured.
2. This new way of analyzing particles suggests that all compound structures, however complex, and whatever their size, are quantum systems. Historically, John Von Neumann demonstrated in his seminal 1932 work “Mathematical Foundations of Quantum Mechanics”⁹¹, including with his Dirac–von Neumann axioms, that there is a rigid mathematical framework for quantum mechanics and that this can extend to the macro-world⁹¹.

Concluding Perspective

This paper is meant to provide a very basic perspective on the new concept of “gimmel”. We carefully differentiate the easily replicable empirical mathematical physics derivations from the speculative. We recognize that gimmel, TRUE units and the layperson perception of such phenomena as the God Matrix provides an entirely new way of understanding reality.

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