THE NOVEL A_n FUNCTION: EVOLUTION OF NUMBER TO PHYSICS THROUGH KUCWENGA PROCESS

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ABSTRACT:
In this paper I introduce a branch of math called Nembelo; from it I introduce a novel function I call the $A_n()$ function. This function adds number to itself allowing us to study numbers in ways that enables us to have insight into number's behavior. The numbers studied are natural n, primarily 1. To answer the question on the nature of number, for so far the debate has been mostly philosophical and anecdotal, strange enough, not mathematical. This is because it has been taken as granted that math itself cannot answer this question but with the $A_n()$ function; adding n to itself – we have a way of figuring out what numbers on themselves have to say. As we follow the behavior of n under $A_n(n)$, it will appear that math has a say on ontology, metaphysics and theology, as many fields have been claimed for math & science in past times, e.g., weather prediction. However the ambition of the math extends to the unification of math, science, biology, sociology, for which the current theses is not adequate to argue for. Nevertheless, the base from which one can stand is provided, i.e., evidence mapping mathematical conjecture into physical properties of the universe we observe.

Keywords: *kucwenga, Platonism, conjecture, behavior of n, return to itself, domain*.

KEY DEFINITIONS:

Nembelo[1]: study of the behavior of numbers. Nembelo is not numerology but one may call it true-numerology as it is equation & scientifically based.

NUMBER: fundamental distinction

MATH: permanent relationships of fundamental distinctions

GOD: One Source of All things[2].

THE ONE: The completely simple, singular, *mathematical* source of all that exists, emanating all numbers, beings and physical world without diminishing itself[3].

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[1] Nembelo is derived from Nguni South African language | ISINTU: RECOVERING ANCIENT SCIENTIFIC LANGUAGE vol1 |Sizwe 2023

[2] DEUTERONOMY 6:4: |Bible | New International Version NIV

[3] Ancient Egypts & Greek Philosophical Tradition culminating in Plotinus (c. 204/5 – 270 CE) | Porphyry (c. 301 AD). Ennead V1.9

METAPHYSICAL: elements before physical elements

KEY MISCONCEPTION:

- Nembelo is not a redefinition of formal math or math in general but an extension of math to metaphysical, ontological domains. Just as mathematical physics is not a redefinition of math but it is an extension to physical domain.
- The claim confined within this theses is not of the proof of GOD but is that number under $A_n(n)$ derives the concept of GOD and thus proves the concept to be mathematically true.

1. **INTRODUCTION**

1.1. The ontology of numbers is an ongoing debate between primarily two major camps, Platonism vs Formalism (Fictionalism), each side scoring points to affirm or discredit another-the scales seem balanced. The study of $A_n(n)$ tips the scales over to the Platonist's camp, where the FN sequence naturally implies the intrinsic independence of n.

1.2. Number is not just a scalar but also equally a concept, formal mathematics treats numbers as only numerical but Nembelo reveals that treating number as just a counting unit is not staying true to what n reveals of itself, specifically 1. The 1-Conjecture and its tautological nature, which we will discuss soon, reveals that the treatment of math as just solely about measurements is the greatest error in intellectual pursuit. E.g. the study of Platonic solids is math though no measurements are involved initially; but permanent relations of fundamental distinctions.

1.3. The weirdest idea came to me that we can actually add number to itself. At first I didn't think any connection between these numbers and Nembelo; I just thought it is another interesting way of handling numbers. For a year and couple of months I didn't pursue this thought, only to discover later that it is the answer to the question "*do numbers exist independently*". Normally we add number n to other number n, if you have (n) you will have to add it to another (n), (n + n = 2n) however at this point we are talking about adding n to itself without adding an external number at all. E.g If your mother comes with an orange and says to you, "I am sending you to school, let us see how clever you have become, add this orange to itself." You would think "no mom, you have sent me to school to know that such a thing cannot be done, I can only add a property if there is another property to add to". And you would be correct. By luck I have discovered that numbers can be added to themselves, i.e. you can, if an orange was a fundamental number, add an orange (n) to itself and get a new value (b). This new value I understand as the behavior of that number. At this point, many thinkers get misled into thinking that the statement, "add n to itself" is the same as "add n to n", metaphysically we will come to understand that these two statements are not

equivalent. To 'add n to n' is [n + n] but to add n to itself is defined by the novel function, the $A_n()$ function.

1.4. $(n + n) \neq A_n(n)$

1.4.(a) $A_n()$ is not a new definition of (n + n) but an extension of the concept of addition to its fundamental interpretation; likewise Nembelo is the extension of the domain of math so that now math arithmetically have a legit say in ontology. Though fundamental, it gives background to formal mathematical theories, casting set theory, category theory as shadows of the fundamental sequence.

1.4.(b). To understand the difference between (n + n) and the $A_n()$ function we have to revisit and extend Georg Cantor math of cardinality and ordinals. Cardinality gives us the quantity of n sequence but ordinals give the place/position of n in the sequence. Thus no two n are the same, in the statement (n + n) = 2n, lets imagine the first n has ordinal of 1 [$n = SO_1$] and the second n is [$n = SO_2$], for their place in the metaphysical plane is not and cannot be the same. The SO_n refers to special ordinal, and highlights the effect of ordinality of n in similar numbers (n, n) to demonstrate that they are strictly not the same n. Thus the statement, "n added to itself" provokes the $A_n()$ operator and not the standard (n + n); this because "n added to itself" deals with adding $n(SO_n)$ + $n(SO_n)$ i.e. $1(SO_1) + 1(SO_1)$ which is impossible. Thus "n added to itself" ($A_n(n)$) deals and adds $n(SO_n)$ to itself by extending (or breaking) n to ($n(SO_n)$ x 1)). Thus the way to "add n to itself" is breaking n through the $A_n()$ process, called kucwenga.

1.6. **$A_n()$ DEFINITION:** the summation of factors (*k)* of n when k_i become expression; p_i : (p x 1) + (p x 1).

$$A_n(n) = \sum_{p_i=(p\times1)+(p\times1)}^{k} when\ k_i \ \rightarrow p\_i \ \ ; b = A_n(b);$$

Where *k* are factors of n {$n = (k_1 \times k_2)$}; k_I are the factor expression $(k_1 \times k_2) + (k_1 + k_2)$. p is prime term (p × 1), and p_i are the prime expression (p x 1) + (p x 1). And *b* is the answer you get from $A_n(n)$, which is the behavior *b* of number n under $A_n(n)$.

The process by which $k_i \rightarrow p_i$ is called ***kucwenga***; kucwenga is as a distillation process, where n is broken down into its factors, until all factors of n are of expression p_i ; then p_i is summed up to a new number *b*. Number *b* is the behavior of n under $A_n()$.

{A_n is Sintu word, 'Analeza', which means to add an outcome!}

2. THE ORIGINAL ORDINALS

2.1. Original-Ordinals[4] here refers to place holders of FN fundamental numbers, since the FN is the fundamental sequence since derived directly from the Piano axiom, and arithmetic primitive which is 1. The ordinals of the FN are closed, since from the FN all numbers are generated, they occupy a fundamental group alone. There are 14 Original

[4] Original Ordinals is defined within Nembelo system as the ordinals of fundamental numbers; they are not standard but an extension of well entrench concept in mathematics.

Ordinals and there are infinite emergent ordinals. All Real and Imaginary numbers belong to the emergent ordinals category. Thus then SO_1 to SO_{14} are closed ordinals, in that case it is natural to consider all ordinals of Real & Imaginary numbers as in SO_{n+14}. This realization means we cannot add n to any n of FN sequence, i.e. 1(SO_1), 2(SO_2), 3(SO_3), …,12)SO_{14}); thus we assume that any n of Real and Imaginary plane is n(SO_{n+14}), e.g. 1 = 1(SO_{1+14}) = 1(NO_1). The NO = normal ordinal, denotes the normal way you would account for ordinality in any number system. Thus without even having to write it, or demanding it, we know any natural n is n(NO_n). We conclude this thought by realizing the important role of ordinals in everyday mathematics. That a simple phrase as "add n to itself", metaphysically, cannot mean (n + n), what normally one would assume; but rather invokes a novel A_n operation.

2.2. We realize that fundamental 1 cannot have a pair 1 making it (1 + 1) = 2, violating 1, for fundamental 1 is one, all by itself, if then they are two ones? It is no longer a fundamental 1. We had a monster of a problem we didn't realize existed, because we took carelessly the concept of fundamental 1. But the consequence of this problem didn't go unfelt. The schism between mathematics and physics exist because of this unrealized monster of the problem. When you can easily conceptualize the *qasimo* initial condition it is eternally difficult to conceptualize the second. Because the second must by logic come from the initial condition you have conceptualized. While you have conceptualized 1, how do you derive the second 1 to make 2, 3, 4, …? So far number sequence was input by hand. The Fibonacci numbers Fn are but a shadow of the Fundamental Numbers (FN), at least the (Fn) come closest to a number system derived naturally. Thus Fn is associated with a fundamental pattern of geometry, even so the FN, derived naturally from 1, it is a natural number system as Fn sequence. The theorem we derive from the FN is ($[12 \leftrightarrow 12]^{\infty} \rightarrow 360^{\circ}$) and maps out to rotational pattern of physics, chemistry, engineering, cosmology, and religion.

2.2.1 **DOMAIN.** The $A_n()$ is the domain of integer values from (0 to -∞; 0 to +∞). Because we apply the $A_n()$ upon integers, we are justified if we start at -1 to -∞, **a difficult problem looming is**, how do we come back, to (0 to ∞)? It is a miracle in this regard that $A_n(-1) = 0$; so that we can now automatically go from -1 = 0; to, 0 = 1; $1A_n$ = FN; -1→ FN. Meaning that -1 is a barrier.

- $\{A_n(n) \epsilon Z\}$, Z is Integer numbers
- Metaphysical Domain

2.2.2. Note: any n where A_n is operated is considered fundamental because the function cannot operate in emergent number n. i.e. the $A_n()$ function adds n to itself, this by logic requires that the n be in its purest state, for e.g. if 1 is of binary system, the 1 stands for 'on', thus then there is another concept attached to 1 other than the fundamental concept of 1. For this reason emergent n as in binary numbers are not fundamental but emergent and as the result the A_n does not operate since n cannot be added to itself because it has guests so to speak.

- This does not mean that $A_n()$ is only operated on 1 but as stated, it can be operated in any n of integer that is just pure (natural) n and not emergent.
- The Ramanujan summation or Zeta summation (-1/12) is not treated as fraction but as FN logic, in that (-1) creates through 12, this logic is rendered as, (-)1

creates in respect to 12, wherein we note as (-1/12); (/) should not be understood as division, thus, neither a fraction.

3. **HOW DOES IT FUNCTION?**

3.1. The trick to carry $A_n()$ operation is that you will need to break n in order to be able to add it to itself. You cannot do this with ordinary objects, but we have learnt through physics that what cannot be done in ordinary objects can be done with fundamental objects.

3.2. This is a weird idea I admit, even thinkers find it hard to accept, let alone ordinary people. Numbers have a behavior associated with them, number 0 is the behavior of -1, i.e. $[A_n(-1) \rightarrow 0]$, and number 2 is the behavior of number 1, i.e. $[A_n(1) \rightarrow 2]$, the number 1 is the most fascinating number seeing it is not a behavior of any number. **No number behaves to 1, this to be in alignment with the axiom: *'one exists all by itself and needs no other to exist',* but from it all natural numbers flows.**' [see par 5].

4. **KUCWENGA/DISTILLATION PROCESS**[5]

4.1. 'kucwenga' is a process which $A_n()$ undergoes on a number to derive its behavior, the process of breaking n by A_n operator is similar to a process of unfolding; where n is unfolded to reveal symmetries there in. until all unfolded numbers are (p x 1). It is only then that we can sum the products of $\{(p \times 1) + (p \times 1)\}$ to a whole final number. It is this number that is the final answer we term 'the behavior' of the number!

4.2. Step #1. we first break n to its multiplicative identity e.g. n = (n x 1) then

Step #2. Factors n & 1, are treated as standalone numbers we will call, ***components***, then broken into their lowest prime-factors, while introducing the addition operator (+) between terms e.g. $[10 \times 1] = (5 \times 2) + (1 \times 1)$; $[6 \times 1] = (3 \times 2) + (1 \times 1)$; $(15 \times 1) = (5 \times 3) + (1 \times 1)$; $[24 \times 1] = (12 \times 2) + (1 \times 1)$, etc. NOTE: the process continues until no new components (factors) in the system, i.e., until $p_i + (1 \times 1)$.

Step # 3. $\sum [p_i + (1 \times 1)]$ (summation of $[p_i + (1 \times 1)]$)

4.2.1. Interestingly for composite numbers the kucwenga process is longer than prime numbers, for primes it takes only 3 iterations (steps).

5. 1 AS AN AXIOM

Seeing 1 is the most fundamental concept of math, for even if you imagine an empty set it still reduces to 1 set, and 0 is the absence of n, so it doesn't count as a number if 1 doesn't exist. Thus therefore, empty-set depends on 1, zero depends on 1 but 1

[5] In chemistry distillation is the process in which an element is purified, or removed of solutes. This process is carried through to retain the main element when there are more than elements attached to the main element. After distillation in chemistry the element is less than it was before when it was impure. In Nembelo it happens both ways in that for some numbers the distillation process produces less the n but with other numbers more of n.

depends on nothing else but itself. Thus the FN sequence is most fundamental sequence in par with Fibonacci sequence as argued earlier.

1-CONJECTURE: 1 ***is the sole mathematical object that can be posited as the absolute origin of all mathematical structures without invoking philosophical assumptions.*** Any alternative object reduces to countable properties, thereby depending on 1 and tending toward non-mathematical reasoning.

Traditional foundations, such as Zermelo-Frankel set theory (ZFC) with the empty-set, or Peano Arithmetic with 1 as a successor base, offer competing primitives. However we argue that 1 stands alone as the irrefutable origin, as any other object (e.g., sets, categories, or geometric shapes) inevitably reduces to countable attributes, looping back to arithmetic and risking philosophical overreach.

The Primacy of 1 Conjecture (Primacy of 1): Let O be a mathematical object posited as the primitive origin of all mathematical structures. Then O must be 1, the unit in arithmetic. Any alternative O reduces to countable properties dependent on 1 and tends towards toward philosophical assumptions.

COROLLARY 1.1. Theories of origins starting from non-1 objects (e.g., strings, loops, or empty-sets) are emergent rather than fundamental, as they import quantifiable features (dimensions, relations) that presuppose arithmetic.

CORALLARY 1.2. 1 is the only object with conceptual purity, coinciding with its essence across domains: Mathematically (Peano base), physically (singularity), and metaphysically (Spinoza substance or divine oneness), religiously (GOD).

PROOF-LIKE ARGUMENTS, drawing from foundational principles:

Argument from Conceptual Isolation (Purity): Consider 1: it is self-identical and conceivable without reference (1 is one). For 2: conception requires duality (two instances + space/relation between them), Similarly a circle requires radius (measurable as numbers) and boundary (countable points). **Thus non-1 objects fail purity, reducing to components of 1**.

- By induction on naturals, all $n > 1 = \sum 1$.
- geometric objects also quantify via integrals/areas ≈ sums of 1's in limits.

ARGUMENT FROM REDUCTION

- Any mathematical object O has properties (e.g., |O| cardinality for sets, dim(O) for spaces). Demonstrating that from formal math to physical math 1 holds true, the only number that does this.

6. **AXIOMS OF KUCWENGA**

AXIOM #1: Each natural number (n) contains within it, a number of multiples that constitute it (*components*).

- Motivation: This is a fundamental theorem of mathematics, stating every integer >1 has unique prime factorization. True because primes are building blocks of integers, proven by Euclid's infinite primes and Gauss's uniqueness[6].

AXIOM #2: Every natural number can be broken down into its multiples.

- Motivation: Direct consequence of axiom 1; factorization is computable as established in elementary number theory.

AXIOM #3: These components are whole numbers themselves, with their own prime-factors (*embedded components*); e.g., p = (p × 1).

AXIOM #4: Mathematical processes as $A_n()$, are self-exhausting processes, i.e. a process must continue until it reaches its natural conclusion, namely, the point where no further breakdown is possible; without external intervention and termination.

- Motivation: True since it mirrors recursive algorithm in computability theory. True because processes must terminate at irreducibles to avoid infinite regress, as in well-founded sets[7].

AXIOM #5: Components that cannot be further broken down into new components are considered distilled, and thus, in their purest form.

- Motivation: True since grounded in the irreducibility of primes (only divisible by 1 and themselves). True per number theory; once at (p × 1), no new factors emerge, echoing atomicity in algebra.

6.2.(a). **NOTES & EXPLANATIONS:**

i. NOTE: The term *components* as used in the distillation axioms is not used in its classical usage but it refers to single number n of multiples. E.g., in [6 = (3 × 2) then 3 & 2 are independent components].

ii. NOTE: Embedded-component refers to prime-factors of components. E.g., [if 3 & 2 are independent components 6 then (3 × 1) & (2 × 1) are what is meant by embedded-components of 6].

iii. Explanation: Axiom #1 to Axiom #3 is true because every n can at least be expressed by its multiples as [n = (n x 1)].

[6] C.F Gauss "Disquisitions Arithmeticae" 1801

[7] K. Kunen, | Set Theory: An Introduction to Independence| North Holland 1980

iv. Explanation: Axiom #4 is true since math is by definition the permanent relationship of distinctions, thus then whenever a process is applied on distinctions; its consequence is outside the control of the agent who applied it.

v. Explanation: Axiom #5 is true since primes are irreducible. For as long as k_i can be broken down into new components then k_i has the potential of turning into a new number. But the irreducibility of primes curbs the infinite regress of k_i.

6.2.(b). **COROLLARY OF AXIOMS OF DISTILLATION**:

i. Axiom #1 to #3 says every natural number n is a potential, meaning numbers possess potential to be other number, without external number.

ii. Therefore evolution (changing to other forms) is intrinsic to FN numbers.

- Since FN numbers are fundamental to reality, it means evolution is a fundamental process of the reality.

iii. Since the axioms of distillation are true this means kucwenga 'the process of distillation', is a process grounded in mathematical logic, therefore its consequences as applied to n is/are mathematical.

a) Therefore the concept of unfolding n is a mathematical concept.

b) Therefore $A_n(n)$ function is a valid, rigorous, grounded, formal mathematical concept.

7. **DISTILLING 1**

7.1. The following distillation process is the unfolding of 1, the sequential numbers are not added by hand but they are the consequence of distilling 1. Thus 2,3…12, must be understood as coming from or being derived directly from 1. When we count (1,2,3…), either we are counting actual objects or abstractly. If abstractly then we are just calling numbers by hand, as by logic we understand what follows after what number. However in unfolding a number, we work with sequence that is the direct consequence of the number. E.g. if we unfold 24 we get:

$A_n(24) = (24 \times 1)$

$\rightarrow (12 \times 2) + (1 \times 1)$

$\rightarrow (6 \times 2) + (2 \times 1) + (1 \times 1) + (1 \times 1)$

$\rightarrow (3 \times 2) + (2 \times 1) + (2 + 1) + (1 \times 1) + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2$

$\rightarrow (3 \times 1) + (2 \times 1) + (2 \times 1) + (2 \times 1) + (1 \times 1) + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2 + (1)^2$

$= 3 + 2 + 2 + 2 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1 + 1$

$A_n(24) = 21$

7.2.(a). This demonstrates that the sequence we derive from 1 is not obvious nor trivial, other numbers as 24 devolve, or degrade. 1 is special because it is the only long increasing sequence that can be derived from a number. That 1 is a long increasing sequence of any natural number it is a special thing and requires special attention; it is the testament to the uniqueness of 1. Not only that but it is the evident of the validity of the math of Nembelo – Nembelo is a valid math.

7.2.(b). Remember the $A_n()$ function = (n added to itself) yields b , then derive the next n from previous number b (resulting number from $A_n(n)$ is the behavior of n, labeled, *b*). Starting from 1. To apply $A_n(1)$ in a fundamental sense we must transform to negative of 1, i.e., $A_n(1) \rightarrow A_n(-1)$. Reason? The true 1, since 1 is super-tautological then all n are negative or the true 1 is negative towards them. This allows $A_n(n)$ to be of integer domain.

7.3. Applying $A_n()$ to true 1 or fundamental 1.

$A_n(-1)$

$A_n(-1) = (-1 \times 1) \rightarrow (-1 \times 1) + (1 \times 1) = -1 + 1 = 0$

$A_n(-1) = 0$;

7.3.(a). $A_n(0)$: {0 in Nembelo is known as a creative-n, or dependent-n, of vacuum-n, since 0 = (0 × [any-n])}. So that the output of $A_n(0)$, cannot be determined in-advance as any $A_n(n)$ could be unless [any-n] is known. $A_n(0)$ needs a subscript n $A_n(0)_n$, showing chosen n. So we chose 1 for obvious reasons.

$A_n(0) = (0 \times 1) \rightarrow (0 \times 1) + (1 \times 1) = 0 + 1 = 1$;

$A_n(0)_1 = 0$;

$A_n(1) = (1 \times 1)$ — Step 1

$(1 \times 1) + (1 \times 1)$ — Step 2

$1 + 1$ — Step 3

$A_n(1) = 2$ — Step 4

$\therefore \{1A_n = 2 ; [A_n(1) = A_n(2)]$ — Step 5 (Final Answer)

$A_n(2) = (2 \times 1)$

$(2 \times 1) + (1 \times 1)$

$2 + 1$

$A_n(2) = 3$

$\therefore \{A_n(2) = 3 ; [A_n(2) = A_n(3)]$

$A_n(3) = (3 \times 1)$

$(3 \times 1) + (1 \times 1)$
$3 + 1$
$A_n(3) = 4; [A_n(3) = A_n(4)]$

$A_n(4) = (4 \times 1)$
$(2 \times 2) + (1 \times 1)$
$(2 \times 1) + (2 \times 1) + (1 \times 1) + (1 \times 1)$
$2 + 2 + 1 + 1$
$A_n(4) = 6; [A_n(4) = A_n(6)]$

$A_n(6) = (6 \times 1)$
$(3 \times 2) + (1 \times 1)$
$(3 \times 1) + (2 \times 1) + (1 \times 1) + (1 \times 1)$
$3 + 2 + 1 + 1$
$A_n(6) = 7; [A_n(6) = A_n(7)]$

$A_n(7) = (7 \times 1)$
$(7 \times 1) + (1 \times 1)$
$7 + 1$
$A_n(7) = 8; [A_n(7) = A_n(8)]$

$A_n(8) = (8 \times 1)$
$(4 \times 2) + (1 \times 1)$
$(2 \times 2) + (2 \times 1) + (1 \times 1) + (1 \times 1)$
$(2 \times 1) + (2 + 1) + (2 + 1) + (1 \times 1) + (1 \times 1) + (1 \times 1) + (1 \times 1) + (1 \times 1)$
$2 + 2 + 2 + 1 + 1 + 1 + 1 + 1$
$A_n(8) = 11; [A_n(8) \rightarrow A_n(11)]$

$A_n(9) = (9 \times 1)$
$(3 \times 3) + (1 \times 1)$
$(3 \times 1) + (3 \times 1) + (1 \times 1) + (1 \times 1)$
$3 + 3 + 1 + 1$
$A_n(9) = 8; \quad [A_n(9) = A_n(8)]$

$A_n(10) = (10 \times 1)$
$(5 \times 2) + (1 \times 1)$
$(5 \times 1) + (2 \times 1) + (1 \times 1) + (1 \times 1)$
$5 + 2 + 1 + 1$
$A_n(10) = 9; \quad [10 \rightarrow 9]\}$

$A_n(11) = (11 \times 1)$

$(11 \times 1) + (1 \times 1)$
$11 + 1$
$A_n(11) = 12; \quad [A_n(11) \leftrightarrow A_n(12)]$

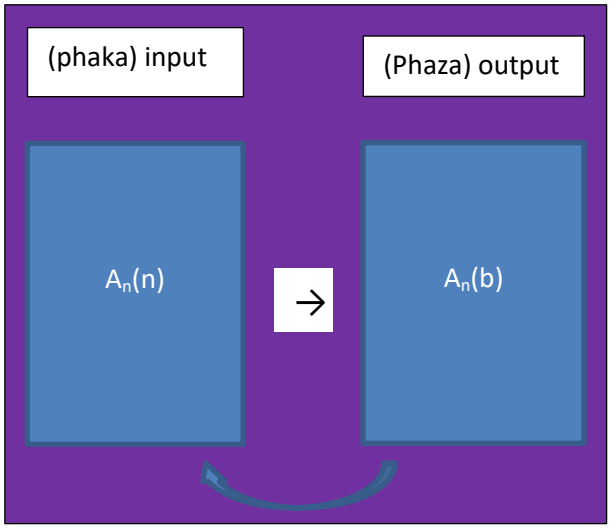
$A_n(12) = (12 \times 1)$
$(6 \times 2) + (1 \times 1)$
$(3 \times 2) + (2 \times 1) + (1 \times 1) + (1 \times 1)$
$(3 \times 1) + (2 \times 1) + (2 \times 1) + (1 \times 1) + (1 \times 1) + (1 \times 1) + (1 \times 1) + (1 \times 1)$
$3 + 2 + 2 + 1 + 1 + 1 + 1 + 1$
$A_n(12) = 12; [A_n(12) = A_n(12)]$

$\{-1A_n = 0, 0, 1A_n = 2; 2A_n = 3, 3A_n = 4, 4A_n = 6, 6A_n = 7A_n, 7A_n = 8, 8A_n = 11, 11A_n = 12, 12A_n = 12, 12A_n = 12, \ldots\}$.

(The arrow (→) means 'transforms' to…)

To visualize the $A_n()$ iterative process, as we have seen it, we use the virtual machine called, phalazanga, 'phalazanga', means a function in Sintu.

The machine starts with the fundamental number 1, which is axiomatic per Peano arithmetic; $A_n(n) = b$; then feeds back b as input (n). The process is recursive and output b becomes input n, in the next iteration.



ANALYSING FN SEQUENCE

6.4.1.(a). This is amazing; numbers 8, 9, 10, 11 relationships drowns the skeptic in me already. One is not allowed to see this pattern as trivial *coincident.* It cannot be trivial, something weird, intuitive is going on with numbers, it is as if numbers know they got to make up for missing numbers. Look at 8 curiously skips 9 & 10 to 11 then 11 to 12. The red numbers are fascinating because they both equal to 19, but notice that, 8 + 11 = 19.

So adding 8 (the number that skips) and 11 (the number skipped to) gives you the sum of the two numbers skipped. This is curious because these are not the only numbers that do this. You see? It is as if numbers are aware that they have to stabilize the fundamental sequence – it is just mind boggling.

6.4.2. **FUNDAMENTAL NUMBERS (FN).**

{[-1], 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12}. There are three digits skipped, 5, 9 and 10 and these are the only missing numbers from standard counting numbers. There are 14 total digits in the sequence of fundamental numbers. We will look at the possible meaning of skipped numbers as just nothing but conjecture with Judeo-Christian number interpretation or numerology. The FN is the base of all numbers, natural numbers, whole numbers, integers, rational numbers, irrational numbers, *all elements of real numbers*, and imaginary numbers. The fundamental numbers are crucial in contextualizing math and its association with physical universe.

6.4.3. Now look at it:

8→11 and 10→9 and 9 →8

6.4.3.(a). You see? The last two skipped numbers indicates something weird about fundamental numbers, these two numbers both digress they don't progress. There is a fun fact at this juncture; initially I made a mistake with number 8. I missed a 1 in my calculation and had results as 8→10; now since I am only allowed to read the results and infer to the best possible meaning of what the result mean, I interpreted this as meaning that number 10 is the end of the sequence of fundamental numbers. This is because 10 digresses to 9, and 9 digresses to 8, while 8 skips to 10 (my mistake), so it appeared as if the sequence ends at 10 then loops, {8 → 10 → 9 → 8}. Then I thought that the sequential distinction ends at number 10. Now this interpretation was nice because it explained the ten base systems, and the fact that we have ten fingers to count, normally this will not be crucial, however in the theory of GOD this link would be crucial. I was so divested when I finally saw the error, because as often as possible I try to find errors in the theory. And this time I did find it, and it brought me to tutus and undermined the entire theory – at least I thought it does. I was ready to quit the theory, *for one aught to be always ready to quit their theories if grave logical errors are revealed*. But I didn't have to, because it turned out that the correction made the theory even more consistent that my despair turned into overwhelming amazement of the fundamental numbers. There was a fundamental theoretical problem with the initial interpretation, in that the theory premise on the fact that number 12 is the number of revolution, because it returns to itself, but then for the theory to have value 12 has to be the only number of revolution. But now I have looping or revolution taking place from number 8, this was disharmony for the other reason that 12 is not derived naturally from the sequence of the fundamental numbers, since number sequence terminates at 10. The fundamental sequence posed a problem in that the main actor (12) was not arrived at naturally since 10 digress and terminates the process. I had to put in 12 by hand, as it

were, but the correction made the sequence more logical for then it could arrive at 12 naturally and then loop thus terminates.

6.4.3.(b). It is curious that there are only two numbers in the fundamental sequence that skips, we can call them 'myeqa', (skipper). 4 & 8 are imyeqa. But I want to point to the weird thing, that 8 skips 9, and 10 both numbers that digress. Now you have seen the consequence of the sequence reaching 9 or 10, skips both numbers that regresses to the one that leads to the ultimate number.

12-CONJECTURE: "*Number 12 is the most fascinating number, it is the last number in the FN sequence, and it is the only number that behaves to itself*."

$A_n(12) = (12 \times 1)$
$(6 \times 2) + (1 \times 1)$
$(3 \times 2) + (2 \times 1) + (1 \times 1) + (1 \times 1)$
$(3 \times 1) + (2 \times 1) + (2 \times 1) + (1 \times 1) + (1 \times 1) + (1 \times 1) + (1 \times 1) + (1 \times 1)$
$3 + 2 + 2 + 1 + 1 + 1 + 1 + 1$
$A_n(12) = 12; [A_n(12) = A_n(12)]$

The expression $[A_n(12) = A_n(12)]$
∴ $\{\mathbf{A_n(12) = A_n(12)\ ;\ [12 \leftrightarrow 12]^{\infty}\}}$; We raise to infinite to indicate none-halting nature of the 12 to 12 iteration process as per axiom 4. Thus ∞ is symbolic as used in math and is not a number.

- Intuitively a loop proximate 360˚ angle thus $\mathbf{[12 \leftrightarrow 12]^{\infty}} \rightarrow 360˚$. I will soon prove it in none trivial ways in paragraph 7.

6.5.(a). Therefore 12 *behaves to* itself. It is a number that does not upgrade or downgrade, it always comes back to itself. It is the weirdest number in that it is in a loop. The number 12 is essentially in circular motion or in the nature of a circle or in revolution. This is striking, it should not be, why should it be the case that 12 is the only number that returns to itself?

- "Returning to itself", it is not a formal mathematical expression used in math just as the expression, "the behavior of n" is not a known formal expression but arises from the constrains of Nembelo interpretation of results of n under $A_n()$. "returning to itself" is grounded within Nembelo given that $A_n(n)$ results in b, and $b \neq n$, always, except $A_n(12)$ which equal to $A_n(12)$. Thus within Nembelo system, "return to itself", is not ambiguous but clear and defined.

6.6. Conjecture: Number 12 is a number of rotation/revolution!

7. PROOF OF 12-CONJECTURE:

$[12A_n = 12]$ and since the A_n must carry the operation until natural termination then the expression is $[12A_n = 12A_n] = [12=12]^{\infty} = |360^{\circ}|^{\infty}$

Now I aim to prove the 12-conjecture by deriving the equation of a circle from the conjecture

$[12 \leftrightarrow 12]^{\infty}$

(x) x_i = initial position
(Δx) x_f = final position

And $[12=12]^{\infty} = [12 \rightarrow 12 \rightarrow 12\ldots]$
$\therefore [12 \rightarrow 12 \rightarrow 12\ldots] = [12, 12, 12\ldots]^{\infty}$

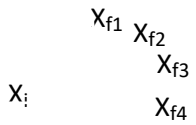
"Since the first $12 = 11A_n$ then the first 12 is fixed while the rest are free"

[(12 fixed = $12x_i$) point origin (***O***); the rest, point final (*F*) = $\{[(12x_f)_n]^{\infty}{}_{n=1}\}$

So we can append $[12x_i]$ to x_i and $[(12x_f)_n]$ to x_f and we can further append x_i as x and x_f as y

- Then we can understand the kucwenga process from fixed 12 (x_i) to free 12 $(x_f)_n$ as a distance between two points, since distance is really numbers between two points. Since the process is fixed then we can understand it as the value 1. Thus then.

Figure 1



$[(x_f)_n]^{\infty}{}_{n=1}$

- Thus then naturally we have r (radius) from $[12=12]^{\infty} = x + y^2 = r^2$ $(x = y^2 - r^2)$

7. **Therefore conjecture proved! Number 12 is a number of revolution/rotation! ($[12=12]^{\infty} = |360°|^{\infty}$**

7.2. Now because we (human mind) could not have assigned this character to 12, it must be intrinsic to 12. **Therefore proven: numbers exist outside our minds!**

Q.E.D

8. **12-THEOREM EVIDENCE:**

Since we have proven this conjecture within Nembelo, let us look at the evidence to support this conjecture, from cosmos, to geometry, to biology, to arithmetic. If we find such evidence then we connect the conjecture of 12 with actual properties of the universe thus grounding it to math and physics.

COSMOS:

a) Heavenly bodies that course objects to revolve around them are spherical (planets, stars, etc), and a sphere is = 4π; and 4π = 12.6 the 6 after the comma represent the 6 point perspective for 3^d object. Thus 12 is associated with revolution or bodies in a form of revolution as a sphere is.
b) There are 12 phases of the moon
c) There are 12 zodiac signs

GEOEMETRY:

d) Revolution = 360° [geometry]
360°/12 = 30°. Therefore 12 x 30° = 360°
Where 30° is the initial angle on a straight-line, we see multiplying initial angle by 12 gives us 360° angle of revolution.
e) There are only five Platonic solids the amazing thing is that two of these solids approximate a sphere, i.e. bodies in a form of revolution, they are (1). Dodecahedron (2). Icosahedron
    a. Dodecahedron is a Platonic solid composed 20 vertices and **12 shapes/ polygons**
    b. Icosahedron is a Platonic solid composed of 20 polygons and has **12 vertices**
f) Dodecagonal tiling: A regular tiling with 12-sided polygons (dodecagon) each vertex has a 120° angle, and the symmetry group is 12-fold rotational symmetry.

BIOLOGY:

g) The 12 vertebrae in human thoracic spine which support the rib cage and facilitate rotations/revolutions
    a. The epitome of biological manifestation is self-evidently humans, the fact that we have 12 vertebrae in thoracic spine facilitating movement is evidence of the 12-conjecture. It can be demonstrate that in the animal kingdom humans has greater degree of rotation ability than any animal. This is the biological manifestation of the 12-conjecture. How can this be a coincident, if you take into account the previous and following evidence?
h) The 12 pairs of ribs in the human body, which form a roughly spherical cage around the chest.

BIO-CHEMESTRY: Magnesium (Mg) demonstrates the 12-conjecture, being the 12-fold symmetry element. Magnesium has an atomic number 12, it is an alkaline earth metal. Mg plays a critical role in DNA replication so much that without it the replication process of DNA would be impaired.

i. **CYCLIC NATURE OF REPLICATION**: DNA replication can be seen as a cyclical process, where the helix is unwound, replicated, and then rewound. This

cyclical nature is linked to the concept of rotation or revolution, where the process returns to its starting point, yet with a new generation of DNA.

ii. **REVOLUTIONARY CHANGE THROUGH REPLICATION**: DNA replication can be seen as a process that enables revolutionary change, as it allows for the transmission of generic information from generation to the next. This concept can be linked to the concept of rotation or revolution, where the old is replaced by the new, yet with continuity that preserves the essential characteristics of system.
    a. RNA Primer Syntheses: Magnesium is necessary for the synthesis of RNA primers, which are essential for initiating DNA replication.

iii. **CARBON-12**: true to the 12-conjecture, carbon-12 forms the most stable complex rings than any other known element. While other elements can form complex rings but carbon-12 forms the most stable, enabling the diversity of molecular structures that support life.
    a. Carbon-12's stability and versatility in forming complex rings are key factors in its central role in organic chemistry and the diversity of life on Earth.
    b. Are we to conclude that the fact that carbon-12 is the most crucial element for life as just a mere coincident? Then how many coincident are we allowed before we take the hint nature is hinting on?

ARITHMATIC:

i) **THE 12TH ROOTS OF UNITY**: are the complex numbers that, when raised to the power of 12. Equal to 1. These roots. 1, -1, I, -I, (√3+i)/2, (-√3+i)/2, (-√3-i)/2, (√3-i)/2, (1+i√3)/2, (1-i√3)/2, (-1+i√3)/2, and (-1 -i√3)/2. What is fascinating is that these roots are equally spaced around the unit circle in the complex plane, forming a regular dodecagon (12 sided polygons).
    a. This evidence is solid, verifying the 12-conjecture. Think about it, there are 12 numbers, that when raised to the power of 12, equal to 1. These numbers are special because there are 12 of them and they form a 2π, equally spaced in a unit circle. This is amazing, since this again demonstrates that 12 is a number of rotation or revolution. Another evidence to the 12-conjecture.

j) This geometric configuration exhibits 12 fold symmetry

k) **THE REIMANN ZETA FUNCTION**: The Zeta summation in continual analyses is incredible evidence to Nembelo fundamental numbers the function is the summation of natural numbers in specific condition of continual analyses. $\zeta(-1) = \Sigma[n = 1\ to\ \infty]n = \frac{-1}{12}$ the fact that natural numbers summation valuated at (-1) becomes $\frac{-1}{12}$ is fascinating, knowing that the fundamental numbers are [-1 to 12] and they can be naturally expressed as $\frac{-1}{12}$ is mind boggling unless we understand that the Zeta function evidenced that natural numbers are from

fundamental numbers! Why in the world would the summation of natural numbers lead to exact sequence of fundamental numbers? Mind you, fundamental numbers are given to us naturally, we cannot have [-2 to 12] or [13, 14] but numbers are constrained at [-1 to 12] only.

l) **FIBONACCI SEQUENCE:** This is the sequence derived by adding a succeeding number with a preceding number creates a spiral like pattern. This sort of pattern has an angle degree of 1.618 and it is found almost everywhere in nature, from flowers, to rivers, to clouds, to galaxies. Fibonacci sequence (1,1,2,3,5,8,13, …), the 12^{th} number in the Fibonacci sequence is 144, which is a multiple of 12. This is amazing that at the 12^{th} ordinal we find the number is 12x12. Would you say it is not evidence that 12 is the number that returns to itself and it is the number of revolution and rotation? How can it be coincident that the 12^{th} number of the natural sequence (Fibonacci sequence) is 12x12, spelling out that 12 returns to 12 at our face! For a skeptic there is no room to maneuver, the 12-conjecture is evidenced in the Fibonacci sequence, for there is nothing obvious that says the 12^{th} ordinal of the sequence must be [12x12]; it is just crazy.

8.2.(a). The 12 fold symmetry appears in various aspects of nature, art, and human design, from the arrangement of petals in flowers to architecture of buildings and machines.

8.2.(b). Is it not strange, that the only two Platonic solids approximating a sphere both have the factor of 12? And both these solids are like inverse of each other, one with 20 vertices but 12 faces and the other with 12 vertices but 20 faces? Would we say it is just a mere coincident? Or that this hints to the fundamental nature of 12 as suggested by the abstract 12 equation [12 = 12]?

9. **EVOLUTION OF THE PLATONIC SOLIDS**: The Platonic solids: Tetrahedron, cube, Octahedron, Dodecahedron, Icosahedron are brute facts of nature as the fundamental numbers (FN) are. The featuring of 12 in the platonic solids in light of Nembelo Fundamental Numbers is of metaphysical essence.

Tetrahedron	Hexahedron	Octahedron	Dodecahedron	Icosahedron
Vertices 4	8	6	20	12
Faces 4	6	8	12	20
Edges 6	12	12	30	30

9.1.(h). Cube edges = 12; Octahedron edges = 12: Here the character of $12A_n$ [12=12] is validated. The Octahedron follows the cube (hexahedron), and these two are in sequence because their property values are closest to each other. 12 returns in the following solid in the sequence as edges again [12=12], 12 returns to 12; then it gets even more mind bending when it goes along.

9.2.(i). We will conclude soon that $[12=12]^{\infty} = \{[x_{f(n)}]^{\infty}_{n=1}\}$. [see par. 6.5.3].

6.6. PLATONIC SOLIDS (PS) VS FUNDAMENTAL NUMBERS (FN).

9.3. FN = {-1, 0, 1, 2, 3, 4, [5], 6, 7, 8, [9, 10], 11, 12}

9.3.(a). The grey column represents the sequence pre-12. And by Cube (hexahedron) the sequence has reached the loop 12, the looping is given by 12 edges becoming again 12 edges in the next sequence, since [12=12].

9.3.(b). The 2nd column & 3rd column (dark blue rows), represents the equation [12=12] and the next 4th column (blue row), represents $\{x_{f(n)}\}^{\infty}_{n=1}\}$; then the 5th column (light blue row), represents $\{x_{NL}\}^{su}$. [See par. 6.5.3].

9.3.(c). This means the platonic solids are the evolution of 12; we don't see 12 in the first solid, because the sequence has not approach 12 the final number in the FN. The sequence reaches the loop number for the first time in the cube, as a number of edges (hexahedron).

- ✓ Outer feature = vertices
- ✓ Surface feature = faces
- ✓ Inner feature = edges

9.3.(d). If you observe the property 12 occupy in each solid, you see that 12 first becomes a scalar and then becomes an increasing vector. It moves from occupying the inner feature to occupying the outer feature of the solids.

You notice the first property it occupies is the inner property, called edges, coming from the bottom this is the first property and feature of the solids you meet. The first symmetry is of 8, which leads to the symmetry of 12 and 12 is a looping number, which means it is the base of all emergent numbers.

9.3.(e). The consequence is realizing that the Platonic solids are a shape in evolution. And its mathematical equation of evolution is given by Nembelo. $[-1,01,2\ldots12] \rightarrow [12=12]^{\infty} \rightarrow \{[x_{f(n)}]^{\infty}_{n=1}\} \rightarrow \{x_{NL}\}^{su}$

- Tetrahedron, = [-1,01,2…8[],[],[]]
- Cube & Octahedron = [12=12]
- Dodecahedron = $\{[x_{f(n)}]^{\infty}_{n=1}\}$
- Icosahedron = $\{x_{NL}\}^{su}$

9.3.(f). Platonic solids, are not static solids but it is one shape (set of fundamental principles), evolving to new shape.

9.3.(g). We know the Platonic solids are in evolving state, by the factor of 12, and we can have a plausible explanation for their origination. The FN sequence from stick method [1,ll,Δ,✡]. The numbers, one, two, *ntathu* and hexagram (the Star of David) or $(ntathu)^2$ are the sequence that accounts for the fundamental sequence according to stick method. It's amazing the correlation of these two methods,

9.3.(h). The first shape is the triangle, which accounts for the tetrahedron, for it is a polygon that is made of 4 triangles. The *speculation* is that the triangle (tetrahedron) becomes the hexagram where we derive the 12 fold symmetry, which then influences the solids to revolution. So as the stick method sequence demonstrates, the hexagram is the last shape or number in the sequence, the rest is the consequence of the 12 fold symmetry.

9.3.(i). Why 12 is featured in all Platonic solids but the tetrahedron? Why there is so much agreement between Nembelo and the Platonic solids as far as 12 is concerned?

10. **FUNDAMENTAL CLOCK**[8]! Not as modular arithmetic, the fundamental clock, treats every point (12) as 1, so that the clock hand (y^2 ; x^2), adds 1 or subtracts 1 as it touches new point – depending on the direction of clock hand.

10.1. We can derive more consequences from now **theorem $A_n(12)$,** using the module of fundamental clock we can derive all infinite sets of numbers, Natural numbers, Whole numbers, Integers, Rational numbers, Irrational numbers all elements of Real numbers. Imaginary numbers as well though I cannot articulate it clearly at present. The goal it is to derive these numbers naturally from the *fundamental clock* without adding them by hand, it is clear how we can do that for the set of real numbers.

Figure 2

10.2.(a). Edward Frenkel[9], *introduced me to this beautiful concept of discovering whole numbers from a cycle. He demonstrated that by counting the number of complete cycles*

[8] Fundamental Clock is a simple, abstract way to demonstrate that $[12=12]^{\infty} = 360^{\circ}$, generates all numbers. The most complex is the physics argument from Su+.

(if a circle wraps around itself), we can count or generate whole numbers, natural numbers or integers to infinite depending on how the direction the clock is rotated. Fundamental clock however does not do that as each point of the circle (circumference) is countable.

10.2.(b) The second arm can give us decimal numbers or fractions. The arms can go either directions, if we chose clock wise direction we can assign (+) and if we chose anti-clock wise then we assign (–) sign all elements of integers. The fundamental clock is pretty amazing because the arms, which is r can be as infinite as well not added by hand, but the clock allows us to introduce an infinite number of them and we can play a game of fixing, pausing and rotating thus we can derive all sorts of numbers.

10.2.(c). Thus then from the fundamental clock we can derive all real numbers. And since the number 12 is the default of the clock, and it is the same everywhere then we have to think of each 12 as a placeholder therefore we can easily convert the number 12 into counting numbers, as we count 12s.

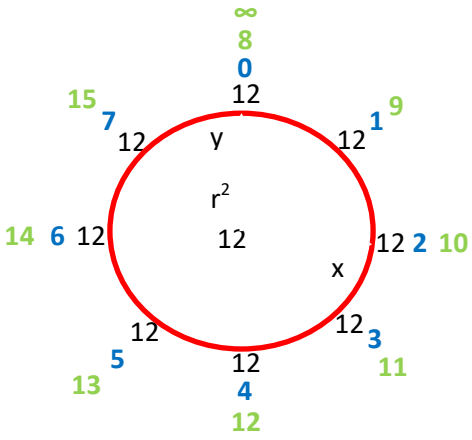


Figure 4

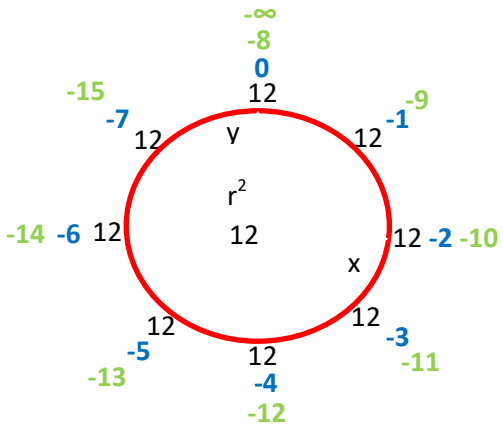


Figure 3

10.2.(d). The numbers arising from [12↔12] as in fundamental clock, are emergent numbers. This means **all real numbers are all emergent numbers; the metaphysical numbers are Nembelo fundamental numbers**. This is crucial to understand, for to say that numbers exist outside our minds it does not mean that all numbers exist but it is only the fundamental numbers from -1 to 12.

10.3. N_0 = whole Numbers; N = natural numbers; Z = integers; Q = rational numbers; {Q' = irrational numbers}. We can represent all these numbers through what I may call 'fundamental clock notation as follows

10.3.(a). e.g. let's represent whole numbers | remember $N_0 = \{0, 1, 2, 3\ldots\}$

$N_0 = [D(y)]^{\infty}{}_{+[0]}$; x = y

[9] Edward Frenkel |Dept. Mathematics |University California, Berkeley |YouTube: THEORIES OF EVERYTHING with Curt Jaimungal Time Stamp: 54:00 | 13 August 2024

10.3.(b). Let's represent natural numbers | remember N = {1, 2, 3…}

$N = [D(y)]^{\infty}_{+[1]}$; x = y

10.3. (c). Let's represent integers | remember Z = {…-3, -2, -1, 0, 1, 2, 3…}

$Z = [D(y)]^{\infty}_{--[0]}$ & $[D(x)]^{\infty}_{+[0]}$;

10.3. (d). Let's represent rational numbers |remember Q = $\frac{a}{b}$ where b ≠ 0 and both (a, b) = Z

$Z = [D(y)]^{\infty}_{--[0]} \div [D(x)]^{\infty}_{\neq [0]}$;

D = dial (defines moving clock arms)
y = x (demonstrate that the both arms are moving as one, you basically have one arm to move).

10.4. Irrational numbers & imaginary numbers should be considered to be of the third generation category of emergent numbers. But we can represent rational numbers such as π or e but it will be a bit complicated.

11. SINGULARITY AND THE BANG! THE EVOLUTION OF NUMBER TO PHYSICS

Now let us from $[12\leftrightarrow12]^{\infty} = |360^{\circ}|^{\infty}$ do something even more cool and unprecedented, lets derive the singularity and the bigbang.

11.(a). $[x_i]^{FXD} + [x_{fn}]^{\infty}_{fn\,=\,1} = [2\pi]^{\infty} = [4\pi]^{\infty}$

It is easy to follow what the previous equation mean; we know already the first parts of the equation that we fixed (FXD) first part of [12↔12] so that the last part is left to change position in a series form. If the distillation process is appended as the fixed length of unit 1, by consequence this would give us 2π, but then since [12↔12] is infinite, then naturally 2π becomes 4π, and we know 4π is a sphere! The beauty of infinite character $[4\pi]^{\infty}$ is that the sphere will keep on being created for infinite number of times. Which is what the second equation talks to.

11. (b). $[4\pi]^{\infty} = (r^3)^{\infty} + [x_{NL}]^{\infty}_{FN\,=\,1} = \Delta B/[x_{NL}]^{\infty}_{NL\,=\,1}$

The expression $[x_{NL}]$ means a new sphere will by necessity occupy the next nearest position upon the previous sphere. The subscript NL means 'next line', indicating that new sphere occupies the closest next line or position. Nearest position is not depicted by the figure 9 accurately, since there would not be any significant space between the spheres. And they will be so small that they are by magnitudes far below Planck's constant, remember that Planck's scale ($x10^{-35}$ cm) is the smallest unit possible in physics. Remember that size is comparable with distance, the further something is the smaller it is, think of the metaphysical as being so far that the size of its objects is not achieved in physics.

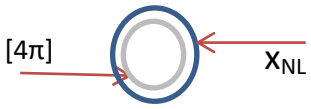


Figure 5

11.(c). Since $[x_{NL}]^{\infty}$ is infinite then it means the fundamental spheres will keep on multiplying to close to infinite. (ΔB) = **density of the spheres** as $[x_{NL}]^{\infty}$ increases, but the trick is it will reach saturation (Su), so though potentially infinite but it reaches a point where it is full. Remember we are beginning from the realm of numbers (metaphysical), the spheres are fundamental and metaphysical, now remember, that they are below Max Planck's scale it means they are metaphysical. Therefore as ΔB increases it becomes so huge for the metaphysical that it approaches the physical, this process is called (Su), 'su' is an Isintu word that means a process that ends in fullness, it's a culminating process such as that $[x_{NL}]^{\infty}$ undergoes.

11.(d). $[x_{NL}]^{Su}{}_{NL\,=\,1} = [\phi]^{R}(h)/\Delta t^{4}\ (\ c^{4}/\rho) > [P.H]$
These terms ($[\phi]^{R}(h)$]) designate the primordial atom, or primordial egg according to Priest George Lemaitre, who with Alex Friedman discovered from studying General Relativity that the universe aught to be expanding. The (ϕ) Greek symbol psi designate a point field and it is raised to (R) which designate the Riemann Tensor, which is a way of mapping space time. Even though at this point there is no space yet, but there is every ingredient of space, and marks the 3rd dimensional nature of the point field of psi, and (h) is the Planck's constant we have previously seen, they both mean (Su) has reach fullness (sutha), partly similar to loop quantum gravity (LQG) of saturation of space. The state of sutha for us will appear as a point while from the metaphysical perspective is gigantic; this will mean it has entered the new realm. And notice that anything that enters a new realm or medium encounter resistance initially, as when you enter into a medium of water as in a pool, river or ocean. Your body encounters a negative pressure and if you were as lite as a ball you would bounce back. This is the reason light changes direction when entering a new medium because it encounters a resistance from a new medium thus an opposite force.

11.(e). The resistance of the new medium will have inverse consequence to that experienced by light entering a new medium. For white light through the prism as was demonstrated by Isaac Newton (1666) splits into all the 7 colors in it, the primordial atom though because it is not mixed, it is rainbow light, well packed as demonstrated by $[x_{NL}]$ but as it enters the new medium, the negative pressure (ρ) infuse the p.atom with such violent shake or vibration that it causes $[x_{NL}]$ to mix, so that going through the physical realm this mix creates fluctuations, thus vacuum fields are born and after a short interval wave packets in the form of very small solitons are.

11.(f). Thus then you see in the equation the Greek symbol (ρ), which mostly is designated as negative energy in the inflation equations of the universe. Only a small negative energy is needed to offset the equilibrium or symmetry of $[x_{NL}]^{Su}{}_{FN\,=\,1,}$ for there always exist some tension between the fundamental spheres. (ρ) is the fire that bangs the primordial atom, and course the big bang. (Δt) these symbols means time start changing from time = 0, which is the singularity, the Su, to the beginning of time the Δt. This happens in the speed of c, the constant speed of light. And lastly we have the term [P.H], which designate the primordial horizon, this just indicates that reality has gone beyond the metaphysical into the physical for now we can observe it, while when

$[\phi]^R(h)/\Delta t^4$ (c^4/ρ) < [P.H], mean the universe disappears from all physical view, as a car that goes beyond a horizon disappears from view as SWT equation demonstrates in the third paper of TO PROVE GOD series.

- $[P.H] < [\phi]^R(h)/\Delta t^4 (c^4/\rho) \rightarrow ([\phi]^R h)\, c^4/(\rho) \rightarrow R_{\mu v} - \frac{1}{2} g_{\mu v} R = \frac{8\pi G\rho}{c\hat{}4} T_{\mu v}$

11. (g). In Nembelo we begin from 1 and come out of the P.H while in the SWT (modified General Relativity), we move towards the P.H and watch the universe disappears through P.H into an infinite realm becoming the Actual Infinite, which is exactly (Θ) thus these two theories are as two hands, one purely from math and the other purely from physics but amazingly leads to the same conclusion. Thus the One is robust, perhaps the only pre-bigbang theory so robust and so simple. And that both theories unify General Relativity and Quantum mechanics makes it the most economic theory ever – the true ToE.

11.(h). Here then, a miracle has happened, from just 1, without adding any parameter or law by hand we derive the universe. Is this not amazing? The distillation process is a mathematical operation therefore self-evident, thus it is discovered rather than invented. Everything from the unfolding of 1 to the bigbang is derived as the consequence of 1, nothing added on but all of it is the consequence of the evolution of number 1, how efficient and constrained is such a theory! It is the holy grail of math and physics to derive consequences from axioms; it means a mind of a person is only doing the discovering.

12. **Therefore Demonstrated! 1 unfolds to physics, to the universe!**

13. FN SEQUENCE

{$1A_n = 2$; $2A_n = 3$, $3A_n = 4$, $4A_n = 6$, $6A_n = 7A_n$, $7A_n = 8$, $8A_n = 11$, $11A_n = 12$, $12A_n = 12$, $12A_n = 12$, …}

13.1.(a). Thus then FN is a finite-infinite number system, because the $A_n(n)$ as according to the 4th axiom must continue perpetually. Thus we have $[12=12]^{\infty}$, a beautiful formulation of the unification framework between math (numbers) and physics.

A NUMBER THAT CONQUERS ZERO

$12A_n$ is a fundamental n that practically conquers 0, we know that $(\frac{0}{n} = 0)$ but with FN we have $\frac{0}{[12An]} = \frac{0}{[12=12]\infty} = |[12 = 12]^{\infty}|$ or $\frac{0}{[12An]} = \frac{0}{[12=12]\infty} = 1U$. Where 1 is for the 1 universe.

Since division is only true when: a/b = c; a = b × c

{0 = $|[12 = 12]^{\infty}| \times |[12 = 12]^{\infty}|$ }, since $|[12 = 12]^{\infty}| = |360^{\circ}|$; and 360˚ implies revolution, which implies vector motion. The two revolutions cancels as opposing motions, thus, $|[12 = 12]^{\infty}| \times |[12 = 12]^{\infty}| = 0$;.

- Since the arithmetic sequence transformed to physical units |360˚| allowing for treating $|[12 = 12]^{\infty}| \times |[12 = 12]^{\infty}|$ as [opposite angular momentum vs opposite angular momentum] ≡ (-1+1) = 0; we can then justify how $\{\frac{0}{[12=12]\infty} = |[12 = 12]^{\infty}\}$ is true math though not traditional, and it doesn't break formal rules but creatively works around them. So we can have a number that breaks zero, like the universe ex-nehilo.

- NOTE: the weirdest thing, that under A_n it is only $12A_n$ that can be treated with n, however it seems that only the number 0 & 1 can make sense to either multiple, divide, add, and subtract from or to $12A_n$ for other numbers it would make no sense at all. However if any $A_n(n)$ number can interact with natural n, it is only $12A_n$ this is due to its unique symmetry which makes it the only reliable $A_n(n)$ number, you start with $A_n(12)$ you end with $A_n(12)$, while other $A_n(n)$ numbers cannot be added, subtracted, divided, or multiplied since they are isolated, by the fact that n will not behave to the same n.

FN $(-\frac{1}{12})^{An} = (-\frac{1An}{12An}) = (\frac{0}{[12=12]\infty}) = (\frac{0}{[Su]\infty}) = 1$ {here then we can understand $(Su)^{\infty}$ to be a point, of hatching 0, and 1 represents the 1 Universe instead of multiverse.}.

FN $(-\frac{1}{12})^{An} = 1$. there is no fraction-like n that contains $(-\frac{n}{b})$ that can = 1 under A_n, this makes the FN $(-\frac{1}{12})^{An} = 1U$ a very special setup in mathematics. FN $(-\frac{1}{12})^{An} = (-\frac{1An}{12An}) = (\frac{0}{[12=12]\infty}) = 1$; thus then $12A_n$ blows out or breaks zero as a chick breaks an egg.

12.2. Herein we have a number that can break zero (0), or hatch the *nothing* into *something* = 1.

- CHALLENGE: **There can be no number that can be found which has intenal proof, and has as much extenanl evidence as a number of revolution/rotation as the number 12. If such a number can be found then the 12-conjecture is not extra-ordinary at all, and the theory fails; if it cannot be found then the 12-conjecture, evidence and its proof is likely true.**

I. This is a challenge to the one who may feel that the 12-conjecture is not sufficiently supported, a thing I disagree with. I believe there is much support that is yet to be discovered but so far the proof and evidence already given are good enough to qualify the proposal as a proper theory.

II. Consider that this is a fundamental theory that bases its premise on the unfolding of number 1. Consider that 1 is a basic fact and axiom of math, thus then a claim that 1 can be unfolded in a mathematically constrained fashion (distillation process), renders the sequence derived from 1, fundamental.

III. In our case 12=12 from whence we infer the 12-conjecture is given by fundamental sequence.
   a. This renders [12 = 12] equation a fundamental equation not derivable from anywhere else.
   b. Thus then 12-conjecture is given by the fundamental sequence of 1, and it is not something that is inferred intuitively.
   c. We then can conclude that ($[A_n(12) = A_n(12)] \rightarrow 360^\circ$) is as brute fact as Platonic solids, as Fibonacci sequence is, to identify then aspects of the universe correlating with ($[12\leftrightarrow12]^{\infty} \rightarrow 360^\circ$) character (rotation), must be the evidence of the conjecture.
   d. We aught to then conclude that there is nothing that says the conjecture is false, instead we have physical evidence that maintains the conjecture is likely true.

6.5.4.(b). *It is most unlikely that the A_n can be generalized to other domains, since it is the function that isolates n to itself rid of artificial parts. Since there can only be one fundamental system from which all arise, then it seems almost improbable that the A_n can be generalized beyond integer domain*.

CONCLUSION:

The FN sequence and the 12-Theorem leads to the realization that 1 evolves to all numbers and physical models. Thus 1 is conceptually the creator of all. By this we derive the concept of One Source of all things. Thus FN derives the concept of GOD without philosophy, theology, or even metaphysics; this doesn't yet prove GOD exist but proves that the concept of GOD is mathematically true and thus by extension, The One likely is.

The equation $[12\leftrightarrow12]^{\infty} = 360^\circ$ demonstrates that numbers likely exist independently and possess intrinsic qualities not assigned by humans and such qualities permeates the universe

The numbers that independently exist are FN numbers; so FN holds the reality of all emergent numbers and math including invented math.

OPPENNING UP NOVEL RESEARCH:

1. The $A_n()$ teaches us that the math of *analytic continuity* is a fundamental description of continual point series of geometry. Therefore $\mathbf{(-\frac{1}{12})}$ is the constant of *continual points series of geometry*. This means the factor at which a point in geometric system of nature relates to other immediate points. This realization has led me to research into particle physics and now working on interesting possibilities.

2. TOM[10] Gravity model is the gravity scheme that unifies quantum gravity and general gravity, with relatively affordable experiment. This gravity model defines what is gravity in unambiguous terms and suggest an accessible way to test the theory unlike other gravity models from widely accepted theories.

3. Research on prime numbers: The $A_n(n)$ reveals something strange about prime n Vs composite n; composites under $A_n(n)$ devolves [c – n], while primes are always evolving [n + 1].

    a. Strangely this talks to Banal Prime Number Theorem: that states: for large number x, the number of prime numbers less than or equal to x is approximately x/log(x), as n gets larger. This means as x gets larger prime numbers gets fewer in between. This may suggest that as x gets larger the number system gets weaker, as composites under $A_n(n)$ devolves.

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[10] TOM (The One Model) combines Nembelo and SW Theory into a single theory. Nembelo is as the left hand and SWT is as the right hand both converges. SWT begins from Einstein's Field Equation (physics) to the Monad; while Nembelo starts from the 1 (Monad value) into physics.

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