SYMMETRY AND SYMMETRIES

FOUR SYMMETRIES

$-$ $+$ NEG

$\frac{1}{x}$ x INVERSE

THE SPECIES OF SYMMETRY.

$\sqrt{\ }$ $\wedge$ COUNTER

$\wedge$ log anti

FULCRUMS

$\alpha\mu \leftrightarrow S$

$\left(\frac{S}{\alpha m}\right)^3 \sim \frac{c^7}{G^2\hbar}$

$S = \alpha^{-23}\mu^{-3}$

MIRROR
THING GAP
EXISTENCE / ING NON-EXTENCE / ING SPACE / TIME
SOMETHING NOTHING ~ CONTINUITY — DISCRETE
$\sqrt{\ }$ DURATION / AGE INTERVAL
EXTENSION GAP

Inverse Time is Frequency
Inverse Length is Curvature
Inverse Velocity is Resistance

? Neg entropy is information Order

anti time $= \sqrt{T}$

REGRESSION
OM MANI PADME HUM

EXPONENTIALLY

$c \quad M^0 L^1 T^{-1} \qquad \Sigma = 0$

$\hbar \quad M^1 L^2 T^{-1} \qquad \Sigma = 2 \qquad \hbar$ fulcrum

$G \quad M^{-1} L^3 T^{-2} \qquad \Sigma = 0$

DIRAC

$c = 1$

$M \sim \frac{S}{\alpha\mu} \qquad \hbar \sim S^2 c \qquad S^2 \qquad c$ fulcrum

$L \sim \alpha\mu S \qquad c \sim c \qquad 1$

$T \sim \frac{\alpha\mu S}{c} \qquad G \sim (\alpha\mu)^2 c^2 \qquad (\alpha\mu)^2$

$ML \sim S^2 \sim \frac{h}{c}$

$\frac{M}{L} \sim (\alpha\mu)^{-2} \sim \frac{c^2}{G}$

$M^2 = \frac{ch}{G} = m_0^2$

$L^2 = \frac{G\hbar}{c^3} = l_0^2$

$\frac{G\hbar}{c^3} = l_0^2$

$\frac{ch}{G} = m_0^2$

$\frac{Gh}{c^5} = t_0^2$

EMMY NOETHER

SYMMETRY $\longleftrightarrow$ CONSERVATION LAW

SYMQUOTES3.WPD April 14, 2010 May 22, 2010

SYMMETRY AND ASYMMETRY

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Every law of physics, we think today, goes back in one way or another to some symmetry of nature

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Something must have asymmetry to be complex.

von Franz

There is a basic asymmetry between the elements connected by a feedback loop. One of the elements (e.g. prey) gives a surplus of energy, and the other (e.g. predator) uses a small part of such energy to maintain a more stable (internal) state.

ANON

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SIX NOT-SO-EASY PIECES
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1963
I-C-3
SYMMETRY ASPECTS OF M.C. ESCHER'S PERIODIC DRAWINGS
Caroline H. Macgillavry
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Gyorgy Kepes (ed.)
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Amstutz, Dr. G.C.; Kunz, F.L.; Charon, Jean E.
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Hermann Weyl
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Heinz Pagels
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CHAOS A VERY SHORT INTRODUCTION
LEONARD SMITH
2007
V-E-1
WHY BEAUTY IS TRUTH A HISTORY OF SYMMETRY
IAN STEWART
2007
V-E-1

ONTDICH1.WP6 January 29, 1995

ONTOLOGICAL DICHOTOMIES

There are two kinds of existence:

There is the Vairachona-Akshobya existence coming ex-nihilo from the Sunyata. This is sustained, serving all others, requiring no support. It is Sat.

There is derived existence, dependent on other, serving itself, requiring support.

There are two kinds of non-existence:

There is Dirac non-existence. When A and no-A are brought togher the join results in zero, in nothingness.

There is Eddington non-existence. When there is AAAAAA..., uniform sameness, there is no awareness.

There is Pythagorean non-existence. One does not exist because it is a special case of Eddington non-existence.

Thus both 0 and 1 are symbols of non-existence

When self is joined with no-self, there is a Diracean union resulting in nothingness. When self is joined with not-self there is an Aristotelean union resulting in a plenum, i.e. in 1, which is according to Pythagoras also non-existent

Dirac: A + no-A = 0 e.g. matter and anti-matter
Aristotle: A + not-A = 1 for 1 read everything.

When + and - are joined in one world the result is 0, in the second world the result is energy release.

There are two kinds of truth:

There is sat truth, stand alone truth. It is just so.
There is contingent truth, truth that must be renewed or repeated to survive, else it is eroded by the second law. cf the Persian adage.

There are two realms:

The realm of space and time, a competitive zero-sum realm, the realm of struggle, work and learning.
The realm of spirit, of Love and beauty, giving, diffusing,

non-zero-sum world. the world of grace, support and refuge.

Humans inhabit both worlds.

There are two times:

Chronos
Kairos

On Symmetry

All symmetries are forms of Dirac separation, i.e. ex-nihilo.

Joining a symmetry --->0, cancels the symmetric parameter.
Joining clones ---> sumation.

Thus joining either cancels or totals,
Separation either creates a symmetry (Dirac ex-nihilo) or truncates.

The world is made of symmetries and clones, unlikes and likes,
Mitosis is horizontal separation resulting in clones
Dirac separtation results in 2 bodies that are in some aspect symmetric.

Does the pain in separation result from separating likes or unlikes?

We are all a blend of like and unlike, clones and symmetries.
In separation, I still have the like with me, it is the unlike (the symmetric) whose removal in separation causes pain.

MORE ON EDDINGTON AND WHITEHEAD

THREE ONTOLOGICAL AXIOMS:

Pythagoras speaks of the necessity for there to be more than one in order for there to be existence.

Whitehead speaks of the necessity for recurrence in order for there to be recognition and perception.

Eddington speaks of the necessity for difference, for non-sameness in order for there to be detection and perception.

Building on Pythagoras:

For Pythagoras the cardinal number one did not exist. Only when cardinal number two came along did one and two both come into existence. (It is easier to see that ordinal number one could not exist by itself.) Similarly the notion of universe, meaning one totality, is meaningless. There can be no one universe, it is a misleading concept. There can, however, be many universes, but this negates the 'uni' in universe. Totality of everything cannot exist until it in some way divides itself into (at least) two parts, where there is both an element of similarity and an element of difference in the parts. i.e. there is some form of symmetry. For the concept of symmetry implies the existence of both a difference and a sameness in the parts. Thus symmetry is seen to be a foundation stone of existence.

The notion of 'degrees' of existence can be introduced as a measure of the number of symmetries that exist. Whenever two 'opposite' parts possessing a symmetry come together in such a way as to effect oneness by obliterating the symmetry, the lose one of their degrees of existence.

These pythagorean concepts are implicit in the creation story given in Genesis 1. The void, the nothingness, the emptiness, the sunyata does not exist. The separation of the emptiness into light and dark, into firmament and waters, ... brought the world into existence. Light and dark, firmament and waters, possess symmetry.
But there are also 'meta-symmetries' the symmetry between void and existence, and the symmetry between Creator and creation, that underlie all else. These meta-symmetries are symbolized in the Tibetan Book of the Dead by the symmetric Tathagatas, Vairachona and Akshobya who also demonstrate the necessity of self-reference for all existence.

We can only surmise that 'in the beginning' the nothingness or void resolved itself into four: Into the dyad of void and existence and into the dyad of Creator and creation. But the void was there both before and after creation. It is the symmetrical component to all existence which sustains and preserves existence. On the other hand, Creator and creation both are sub-components of existence. The Creator, God, came into existence only when creation came into existence. But the void remains, it is outside time. It is the external to all creators and creation from which innovation and change arises. Only from the void can come the new symmetries leading to further creators and creation, to new theophanies and metanoias, to new heavens and new earths.

Building on Whitehead:

Whitehead develops the similarity part of Pythagoras' ontological dyad.

code1 [ ] code2 [
code3 [
NUMLEVL2.WPD October 27, 1998 October 28, 1998

THE BASIC DESIGN INGREDIENTS OF THE COSMOS.

There is an interesting parallel between the discovery of the various kinds of numbers and the increase of human understanding both of the physical world of determinism and of the moral world of choice. This parallelism is not only an affirmation of the role of mathematics as a valid and extensive symbolism for the nature of the world, but also that mathematics can serve as a useful guide on a spiritual path. But Pythagoras understood this many centuries ago and organized communities dedicated to the mathematical path to knowledge and spiritual growth. Over time the fullness of the power of mathematics was ignored, as the doctrines of competing religious institutions prevailed over the philosophy of Pythagoras, relegating mathematics to a purely secular role. But in the present century the extensive implications of the role of mathematics in such realms as aesthetics and ethics are liberating it from its long confinement solely to matters of quantity. It is timely to reopen the qualitative aspects of number, not in the sense of the pseudo science of numerology, but in the sense of seeking deeper interpretations for what the numbers found in nature have to tell us. The grammar of mathematics, after all, underlies the grammars of music and art as well as of physics and biology. It is our best symbolism for representing the cosmos.

This approach to cosmic structure is based on levels of numerical symmetry.

Arithmetic Symmetry

In the first Pythagorean level, the structure's essence is symmetry and balance. The numbers involved are the positive and negative integers. The null or fulcrum of the first level is symbolized by the quantity ***zero***. [-x _0_+x] The conservation laws of physics such as conservation of charge, angular momentum, or energy all derive from some basic symmetry. [The relation between symmetry and conservation was pioneered by Emmy Noether]. Symmetry-balance appears in modern game theory in the, "tit for tat" strategy. In the fields of morality and ethics symmetry-balance takes the forms of justice, level playing field, middle way (Madyamika). Many religions have this first level ingredient in their teachings, as for example, in orthodox Judaism, the teaching, "an eye for an eye, a tooth for a tooth". The logic of this level is Aristotelean two value logic based on the law of the excluded middle. The operation involved is negation. This level is cyclic (repetitive) and reversible.

Geometric Symmetry

The second Pythagorean level is based on reciprocity or inversion. The numbers involved are the rational numbers. The null is symbolized by the quantity ***one***. [x^{-1}_1_x^{+1}] Inversion in the unit circle or unit sphere maps the exterior in a one to one manner onto the interior (and vice versa).

SYMQUOTES3.WPD April 14, 2010

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ANON

EMMY NOETHER
SYMMETRY $\approx$ CONSERVATION

MUTUALITY & SYMMETRY

GEOMETRIC MEANS and SYMMETRY

TIME TABLE: $T=T(G,M,L,\hbar,c)$

$[T] = 1$

M\L	0	0.5	+1	1.5	+2	+2.5	+3
+3	G^2M^3/hc^4		$\sqrt{G^3M^6L^2/h^3c^5}$		GM^3L^2/h^2c		$\sqrt{GM^6L^6c/h^5}$
+2.5		$\sqrt{G^3M^5L/h^2c^6}$		$\sqrt{G^2M^5L^3/h^3c^3}$		$\sqrt{GM^5L^5/h^4}$	
+2	$\sqrt{G^3M^4/hc^7}$		GM^2L/hc^2		$\sqrt{GM^4L^4/h^3c}$		M^2L^3c/h^2
+1.5		$\sqrt{G^2M^3L/hc^5}$		$\sqrt{GM^3L^3/h^2c^2}$		$\sqrt{M^3L^5c/h^3}$	
+1	GM/c^3		$\sqrt{GM^2L^2/hc^3}$		ML^2/h		$\sqrt{M^2L^6c^3/Gh^3}$
+1/2		$\sqrt{GML/c^4}$		$\sqrt{ML^3/hc}$		$\sqrt{ML^5c^2/Gh^2}$	
0	[redacted]		L/c		$\sqrt{L^4c/Gh}$		L^3c^2/Gh
-1/2		$\sqrt{Lh/Mc^3}$		$\sqrt{L^3/GM}$		$\sqrt{L^5c^3/G^2Mh}$	
-1	h/Mc^2		$\sqrt{L^2h/GM^2c}$		L^2c/GM		$\sqrt{L^6c^5/G^3M^2h}$
-3/2		$\sqrt{Lh^2/GM^3c^2}$		$\sqrt{L^3hc/G^2M^3}$		$\sqrt{L^5c^4/G^3M^3}$	
-2	$\sqrt{h^3/GM^4c^3}$		Lh/GM^2		$\sqrt{L^4hc^3/G^3M^4}$		L^3c^3/G^2M^2
-5/2		$\sqrt{Lh^3/G^2M^5c}$		$\sqrt{L^3h^2c^2/G^3M^5}$		$\sqrt{L^5hc^5/G^4M^5}$	
-3	h^2/GM^3c		$\sqrt{L^2h^3c/G^3M^6}$		L^2hc^2/G^2M^3		$\sqrt{L^6hc^7/G^5M^6}$

Notation: In the above table h is used for $\hbar$, the Planck constant / 2π.

$\sqrt{}$ is for entire expression

TIME TABLE: T=T(G,M,L,ħ,c)

[T] = 1

M\L	-3	-2.5	-2	-1.5	-1	-0.5	0
+3	$\sqrt{G^7M^6h/L^6c^{17}}$		G^3M^3/L^2c^7		$\sqrt{G^5M^6/L^2hc^{11}}$		G^2M^3/hc^4
+2.5		$\sqrt{G^6M^5h/L^5c^{15}}$		$\sqrt{G^5M^5/L^3c^{12}}$		$\sqrt{G^4M^5/Lhc^9}$	
+2	G^3M^2h/L^3c^8		$\sqrt{G^5M^4h/L^4c^{13}}$		G^2M^2/Lc^5		$\sqrt{G^3M^4/hc^7}$
+1.5		$\sqrt{G^5M^3h^2/L^5c^{14}}$		$\sqrt{G^4M^3h/L^3c^{11}}$		$\sqrt{G^3M^3/Lc^8}$	
+1	$\sqrt{G^5M^2h^3/L^6c^{15}}$		G^2Mh/L^2c^6		$\sqrt{G^3M^2h/L^2c^9}$		GM/c^3
+1/2		$\sqrt{G^4Mh^3/L^5c^{13}}$		$\sqrt{G^3Mh^2/L^3c^{10}}$		$\sqrt{G^2Mh/Lc^7}$	
0	G^2h^2/L^3c^7		$\sqrt{G^3h^3/L^4c^{11}}$		Gh/Lc^4		$\sqrt{Gh/c^5}$
-1/2		$\sqrt{G^3h^4/ML^5c^{12}}$		$\sqrt{G^2h^3/ML^3c^9}$		$\sqrt{Gh^2/MLc^6}$	
-1	$\sqrt{G^3h^5/M^2L^6c^{13}}$		Gh^2/ML^2c^5		$\sqrt{Gh^3/M^2L^2c^7}$		h/Mc^2
-3/2		$\sqrt{G^2h^5/M^3L^5c^{11}}$		$\sqrt{Gh^4/M^3L^3c^8}$		$\sqrt{h^3/M^3Lc^5}$	
-2	$Gh^3/M^2L^3c^6$		$\sqrt{Gh^5/M^4L^4c^9}$		h^2/M^2Lc^3		$\sqrt{h^3/GM^4c^3}$
-5/2		$\sqrt{Gh^6/M^5L^5c^{10}}$		$\sqrt{h^5/M^5L^3c^7}$		$\sqrt{h^4/GM^5Lc^4}$	
-3	$\sqrt{Gh^7/M^6L^6c^{11}}$		$h^3/M^3L^2c^4$		$\sqrt{h^5/GM^6L^2c^5}$		h^2/GM^3c

Notation: In the above table h is used for ħ, the Planck constant / 2π .

√ is for entire expression

TIME TABLE: $T=T(G,M,L,\hbar,c)$

$[T] = 1$

M\L	−1	−0.5	0	+0.5	+1	+1.5	+2
+3	$\sqrt{G^5M^6/L^2hc^{11}}$		G^2M^3/hc^4		$\sqrt{G^3M^6L^2/h^3c^5}$		GM^3L^2/h^2c
+2.5		$\sqrt{G^4M^5/Lhc^9}$		$\sqrt{G^3M^5L/h^2c^6}$		$\sqrt{G^2M^5L^3/h^3c^3}$	
+2	G^2M^2/Lc^5		$\sqrt{G^3M^4/hc^7}$		GM^2L/hc^2		$\sqrt{GM^4L^4/h^3c}$
+1.5		$\sqrt{G^3M^3/Lc^8}$		$\sqrt{G^2M^3L/hc^5}$		$\sqrt{GM^3L^3/h^2c^2}$	
+1	$\sqrt{G^3M^2h/L^2c^9}$		GM/c^3		$\sqrt{GM^2L^2/hc^3}$		ML^2/h
+0.5		$\sqrt{G^2Mh/Lc^7}$		$\sqrt{GML/c^4}$		$\sqrt{ML^3/hc}$	
0	Gh/Lc^4		$\sqrt{Gh/c^5}$		L/c		$\sqrt{L^4c/Gh}$
-0.5		$\sqrt{Gh^2/MLc^6}$		$\sqrt{Lh/Mc^3}$		$\sqrt{L^3/GM}$	
-1	$\sqrt{Gh^3/M^2L^2c^7}$		h/Mc^2		$\sqrt{L^2h/GM^2c}$		L^2c/GM
-1.5		$\sqrt{h^3/M^3Lc^5}$		$\sqrt{Lh^2/GM^3c^2}$		$\sqrt{L^3hc/G^2M^3}$	
-2	h^2/M^2Lc^3		$\sqrt{h^3/GM^4c^3}$		Lh/GM^2		$\sqrt{L^4hc^3/G^3M^4}$
-2.5		$\sqrt{h^4/GM^5Lc^4}$		$\sqrt{Lh^3/G^2M^5c}$		$\sqrt{L^3h^2c^2/G^3M^5}$	
-3	$\sqrt{h^5/GM^6L^2c^5}$		h^2/GM^3c		$\sqrt{L^2h^3c/G^3M^6}$		L^2hc^2/G^2M^3

TIMATRX6.WPD

TIME TABLE: T=T(G,M,L,$\hbar$,c)

[T] = 1

M\L	–3/2	–1	–1/2	0	1/2	1	3/2
+3		$\sqrt{G^5M^6/L^2hc^{11}}$		G^2M^3/hc^4		$\sqrt{G^3M^6L^2/h^3c^5}$	
2.5	$\sqrt{G^5M^5/L^3c^{12}}$		$\sqrt{G^4M^5/Lhc^9}$		$\sqrt{G^3M^5L/h^2c^6}$		$\sqrt{G^2M^5L^3/h^3c^3}$
+2		G^2M^2/Lc^5		$\sqrt{G^3M^4/hc^7}$		GM^2L/hc^2	
1.5	$\sqrt{G^4M^3h/L^3c^{11}}$		$\sqrt{G^3M^3/Lc^8}$		$\sqrt{G^2M^3L/hc^5}$		$\sqrt{GM^3L^3/h^2c^2}$
+1		$\sqrt{G^3M^2h/L^2c^9}$		GM/c^3		$\sqrt{GM^2L^2/hc^3}$	
+1/2	$\sqrt{G^3Mh^2/L^3c^{10}}$		$\sqrt{G^2Mh/Lc^7}$		$\sqrt{GML/c^4}$		$\sqrt{ML^3/hc}$
0		Gh/Lc^4		$\sqrt{Gh/c^5}$		L/c	
-1/2	$\sqrt{G^2h^3/ML^3c^9}$		$\sqrt{Gh^2/MLc^6}$		$\sqrt{Lh/Mc^3}$		$\sqrt{L^3/GM}$
-1		$\sqrt{Gh^3/M^2L^2c^7}$		h/Mc^2		$\sqrt{L^2h/GM^2c}$	
-3/2	$\sqrt{Gh^4/M^3L^3c^8}$		$\sqrt{h^3/M^3Lc^5}$		$\sqrt{Lh^2/GM^3c^2}$		$\sqrt{L^3hc/G^2M^3}$
-2		h^2/M^2Lc^3		$\sqrt{h^3/GM^4c^3}$		Lh/GM^2	
-5/2	$\sqrt{h^5/M^5L^3c^7}$		$\sqrt{h^4/GM^5Lc^4}$		$\sqrt{Lh^3/G^2M^5c}$		$\sqrt{L^3h^2c^2/G^3M^5}$
-3		$\sqrt{h^5/GM^6L^2c^5}$		h^2/GM^3c		$\sqrt{L^2h^3c/G^3M^6}$	

Notation: In the above table h is used for $\hbar$, the Planck constant / 2π .

√ is for entire expression

$(\alpha/M)^{3/2}$ $\longleftrightarrow$ $(\alpha M S)^{3/2}$

$S^{3/2}$ $\left(\frac{S}{\alpha/M}\right)^{3/2}$

UNIVERSE

TIMATRX0.WPD

TIME TABLE: T=T(G,M,L,ħ,c)

[T] = 1

M\L	–3/2	–1	–1/2	0	1/2	1	3/2
+3							
2.5	9.002200						
+2		10.692816					
1.5			12.383827				
+1				T 14.074438	44.435845	74.797252	
+1/2	? -105.682591				ψ 15.765045		
0		t -103.991979		-43.268162	-12.906253	t 17.455655	
-1/2			-102.301369				τ 19.146267
-1				K -100.610759			
-3/2							
-2							
-5/2							
-3							

$T \sim 3.761$ MY $(\times 10^6)$

$t \sim 9.047$ BY $\times 3/2 = 13.57$ BY $(\times 10^9)$

$\tau \sim 444$ BY (10^9)

TIMATRX0.WPD

TIME TABLE: T=T(G,M,L,ħ,c)

[T] = 1

$\frac{L}{c}$ w Table

M\L	–3/2	–1	–1/2	0	1/2	1	3/2
+3				$\frac{MR^2}{L\cancel{R}} = \frac{h}{c}$			
2.5	$\frac{M}{L} = \frac{c^2}{G}$						
+2		$\frac{R^2}{L^2} = t$				$M^2 = m_0^2$	
1.5			$\frac{M}{L} = \frac{c^2}{G}$				
+1		$\frac{L^2}{R^2} = \frac{t_0^2}{t^2}$		$\frac{M}{L} = \frac{c^2}{G}$ | $L = \frac{GM}{c^2} = R$		$M^2 = m_0^2$	
+1/2			$L^3 = l_0^3 \frac{\tau}{R} = t_0$		$\frac{M}{L} = \frac{c^2}{G}$		$ML = \frac{\hbar}{c}$
0		$L^2 = l_0^2$		$L^2 = l_0^2$		1	
-1/2			$ML^3 = m_0 l_0^3$		$ML = \frac{\hbar}{c}$		$\frac{M}{L} = \frac{c^2}{G}$
-1		$ML^4 = m_0 l_0^4$		$ML = \frac{\hbar}{c}$		$M^2 = m_0^2$	
-3/2			$ML = \frac{h}{c}$		$M^3L = \frac{\hbar^2}{G}$		
-2		$ML = \frac{\hbar}{c}$		* $\frac{\hbar^3}{Gc} = L^2M^4$		$M^2 = m_0^2$	
-5/2	$ML = \frac{\hbar}{c}$						
-3							

* $ML = \frac{h}{c}$
$M^3L = \frac{h^2}{c}$ multiply

FORCEMTRX0.WPD April 29, 2010

Conversion to $\frac{GM^2}{L^2}$

FORCE TABLE: F=F(G,M,L,ħ,c)

M\L	–1	–0.5	0	+0.5	+1	+1.5	+2
+3							
+2.5							
+2							
+1.5							
+1							
+0.5							
0							
-0.5							
-1							
-1.5							
-2							
-2.5							
-3							

FORCEVAL.WPD May 17, 2010

FORCE VALUES

$\dot{h} = 0$ FORCES

35.557694

Δ B−P	M, L	FORCE	BARYON	PLANCK	DARK	STELLAR	UNIVERSE	Δ B−D−S−U
S^4	−1.5, +2.5	G^3M^4/C^4L^4	−108.339816	49.082578	44.574284	40.065988	~~109.800842~~	$(\alpha\mu)^{-4}$
S^3	−1, +2	G^2M^3/C^2L^3	−68.983845	49.082578	45.701358	42.320136	38.938915	$(\alpha\mu)^{-3}$
S^2	−0.5, +1.5	GM^2/L^2	−29.628374	49.082578	46.828432	44.574284	42.320136	$(\alpha\mu)^{-2}$
S^1	0, +1	MC^2/L	9.727107	49.082578	47.955505	46.828431	45.701357	$(\alpha\mu)^{-1}$
S^0	+0.5, +0.5	C^4/G	49.082578	49.082578	49.082578	49.082578	49.082578	$(\alpha\mu)^0$
S^{-1}	+1, 0	C^6L/G^2M	88.438049	49.082578	50.209652	51.336726	52.463799	$(\alpha\mu)^1$
S^{-2}	+1.5, −0.5	C^8L^2/G^3M^2	127.793520	49.082578	51.336726	53.590874	55.845021	$(\alpha\mu)^2$
S^{-3}	+2, −1	$C^{10}L^3/G^4M^3$	167.148991	49.082578	52.463800	55.845022	59.226243	$(\alpha\mu)^3$
			S	O	$(\alpha\mu)$	$(\alpha\mu)^3$	$(\alpha\mu)^3$	

FORCE VALUES

G = 0 FORCES

Δ B-P	M , L	FORCE	BARYON	PLANCK	DARK	STELLAR	UNIVERSE	Δ BDSU
$S(\alpha\mu)^3$	+1.5, +2.5	$\hbar^3/M^2L^4c$	6.345 885	49.082 578	-70.110 911	-189.304 400	-308.497 889	$(\alpha\mu)^{-1}S^{-3}$
$S(\alpha\mu)^2$	+1, +2	$\hbar^2/ML^3$	7.472 959	49.082 578	-30.755 440	-110.593 458	-190.431 476	$(\alpha\mu)^{-1}S^{-2}$
$S(\alpha\mu)^1$	+0.5, +1.5	$\hbar c/L^2$	8.600 033	49.082 578	8.600 033	-31.882 513	-72.365 059	$(\alpha\mu S)^{-1}$
S	0, +1	Mc^2/L	9.727 107	49.082 578	47.955 505	46.828 431	45.701 357	$(\alpha\mu)^{-1}$
$S(\alpha\mu)^{-1}$	-0.5, +0.5	$M^2c^3/\hbar$	10.854 181	49.082 578	87.310 975	125.539 368	163.767 770	$(\alpha\mu)^{-1}S$
$S(\alpha\mu)^{-2}$	-1, 0	$M^3c^4L/\hbar^2$	11.981 255	49.082 578	126.666 446	204.250 310	281.834 183	$(\alpha\mu)^{-1}S^2$
$S(\alpha\mu)^{-3}$	-1.5, -0.5	$M^4c^5L^2/\hbar^3$	13.108 329	49.082 578	166.021 917	282.961 252	399.900 596	$(\alpha\mu)^{-1}S^3$
$S(\alpha\mu)^{-4}$	-2, -1	$M^5c^6L^3/\hbar^4$	14.235 403	49.082 578	205.377 388	361.672 194	517.967 009	$(\alpha\mu)^{-1}S^4$
	Δ		$\alpha\mu$	0	S	S^2	S^3	

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FORCE VALUES

C = 0 FORCES

$S^{-2}(\alpha\mu)^{-1}$

157.421888 S^{-4} Δ P ... U

B–P	M , L	FORCE	BARYON	PLANCK	DARK	STELLAR	UNIVERSE	
$(\alpha\mu)^4$	+2.5, +2.5	$\hbar^4/GM^4L^4$	44.574082	49.082578	−108.339312	−265.761200	−423.183088	−158.421888 $S^2(\alpha\mu)^{-1}$
$S(\alpha\mu)^2$	+1, +2	$\hbar^2/ML^3$	7.472959	49.082578	−30.755440	−110.593458	−190.431476	79.838018
S^2	−0.5, +1.5	GM^2/L^2	−29.628384	49.082578	46.828432	44.574284	42.320136	$(\alpha\mu)^{-2}$
$S^3(\alpha\mu)^{-2}$	−2, +1	$G^2M^5/L\hbar^2$	−66.729686	49.082578	124.412304	199.742028	275.071748 ~~354.909768~~	75.329726 $S^2(\alpha\mu)$
$S^4(\alpha\mu)^{-4}$	−3.5, +0.5	$G^3M^8/\hbar^4$	−103.831008	49.082578	201.996176	354.909768	507.823360	152.913598 $S^4(\alpha\mu)$
$\frac{S}{(\alpha\mu)^2}$ ←	Δ		37.101323	$\Delta = 0$	77.583872	155.167742	232.751612	77.583872
			$\frac{S}{(\alpha\mu)^2}$ ↓	0	$\frac{S^2}{(\alpha\mu)}$ ↑	$\frac{S^4}{(\alpha\mu)^2}$ ↑	$\frac{S^6}{(\alpha\mu)^3}$ ↑	$\frac{S^2}{(\alpha\mu)}$ →

275.071748

79.838018 = $S^2(\alpha\mu)$

Δ B–P	Δ P, D, ★, U
$S^0(\alpha\mu)^4$	$S^{-4}(\alpha\mu)^0$
$S(\alpha\mu)^3$	$S^{-2}(\alpha\mu)^{-1}$
$S^2(\alpha\mu)^0$	$S^0(\alpha\mu)^{-2}$
$S^3(\alpha\mu)^{-2}$	$S^2(\alpha\mu)^{-3}$
$S^4(\alpha\mu)^{-4}$	$S^4(\alpha\mu)^{-4}$

~~Δ B–P~~ ~~Δ P, D, ★, U~~
~~$(\alpha\mu)^4$ 2.5, 2.5~~ ~~S^{-4}~~
~~$S(\alpha\mu)^2$ 1, 2~~ ~~$S^{-2}(\alpha\mu)^{-1}$~~
~~S^2 $-\frac{1}{2}, 1\frac{1}{2}$~~ ~~$S^0(\alpha\mu)^{-2}$~~
~~$S^3(\alpha\mu)^{-2}$ −2, 1~~ ~~$S^2(\alpha\mu)^{-3}$~~
~~$S^4(\alpha\mu)^{-4}$ −3.5, +0.5~~ ~~$S^4(\alpha\mu)^{-4}$~~

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FORCE VALUES

M , L	FORCE	BARYON	PLANCK	DARK	STELLAR	UNIVERSE

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FORCE VALUES

M , L	FORCE	BARYON	PLANCK	DARK	STELLAR	UNIVERSE

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FORCE VALUES

M , L	FORCE	BARYON	PLANCK	DARK	STELLAR	UNIVERSE

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FORCE VALUES

M , L	FORCE	BARYON	PLANCK	DARK	STELLAR	UNIVERSE

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FORCE VALUES

INTERSECTS

	M , L	FORCE	BARYON	PLANCK	DARK	STELLAR	UNIVERSE	
$G, C = 0$	$+1, +2$	$\hbar^2/ML^3$	7.472959	49.082578	-30.755440	-110.593458	-190.431476	$(\alpha\mu)^{-1} S^{-2}$
$\hbar, C = 0$	$-\frac{1}{2}, +\frac{3}{2}$	GM^2/L^2	-29.628374	49.082578	46.828432	44.574284	42.320136	$(\alpha\mu)^{-2}$
$\hbar, G = 0$	$0, +1$	$\frac{M}{L} c^3$	9.727107	49.082578	47.955505	46.828431	45.701357	$(\alpha\mu)^{-1}$
$G = 0$	$\frac{1}{2}, \frac{3}{2}$	$\hbar c/L^2$	8.600033	49.082578	8.600033	-31.882513	-72.365059	$(\alpha\mu)^{-1} S^{-1}$

Δ P-B

$(\alpha\mu)^2 S$

S^2

S

$(\alpha\mu) S$

$\frac{m_0}{l_0} = \frac{c^2}{G}$

$m_0 l_0 = \frac{\hbar}{c}$

$m_0^3 l_0 = \frac{\hbar^2}{G}$

$\frac{G^2 M^6}{\hbar^2 L}$ $\quad$ $\frac{\hbar^2}{ML^3}$

FORCEMTRX0.WPD April 29, 2010

FORCE TABLE: F=F(G,M,L,ħ,c)

M\L	−1	−0.5	0	+0.5	+1	+1.5	+2
+3							
+2.5	$\frac{L^3}{R^3}\frac{c^4}{G}$						
+2		$\frac{c^4}{G}L^2/R^2$ "					
+1.5		L^2c^8/M^2G^3	$\frac{L}{R}$ " c^4/G				
+1			$\frac{L}{M}\frac{c^6}{G^2}$	$\frac{GM^2}{L^2}$ " $\frac{L^2}{R^2}$	$E \cdot \frac{ML}{m_0 l_0}$ "	electric	$\hbar^2/ML^3 = \frac{c^4}{G}$
+0.5				c^4/G	centrifugal	$E = \hbar c/L^2 = \frac{c^4}{G}$	$\frac{l_0^2}{L^2}$
0			$ML\frac{c^5}{G\hbar}$		$\frac{M}{L}c^2 = \frac{R}{L}\frac{c^4}{G}$		
-0.5				$M^2c^3/\hbar$	"$\frac{GM^2}{L^2}\frac{L}{R}$	$\frac{GM^2}{L^2}$	
-1			$M^3Lc^4/\hbar^2$	" $\frac{GM^2}{l_0^2} = J$	$\frac{c^4}{G}\frac{l_0}{L}$ " $\frac{M}{m_0}$	" $\frac{c^4}{G}\frac{R^2}{L^2}$	$\frac{G^2M^3}{c^2L^3} =$ "
-1.5		$M^4L^2c^5/\hbar^3$	$\frac{GM^2}{L^2}\cdot\frac{RL^3}{l_0^4}$ "	"			
-2				$\frac{c^4}{G}\frac{M^2}{m_0^2}$	$G^2M^5/\hbar^2L$		$\frac{c^4}{G}\frac{R^3}{L^3}$
-2.5							
-3							

$\frac{m_0}{M}\frac{l_0^3}{L^3}$

$\frac{GM^2}{L^2}\frac{R}{L}$

$\frac{M^2c^2}{m_0 l_0}$

$\frac{M}{L} > \frac{c^2}{G} \downarrow$

$\frac{M}{L} < \frac{c^2}{G} \uparrow$

$\frac{M}{L} \approx \frac{c^2}{G}$

$L = \frac{GM}{c^2} = R$

$\hbar = 0$ Force

$P\left(\frac{R}{L}\right)^n = N\left(\frac{R}{L}\right)^{n-2}$

$R^2 P = L^2 N$

$\frac{P}{N} = \frac{L^2}{R_2}$ $\quad$ $L > R \uparrow$ $\quad$ $L < R \downarrow$

when $P = \frac{c^4}{G}$ Planck Force

$N = \frac{GM^2}{L^2}$ Gravity

$R = \frac{GM}{c^2}$ Schwartsschild radius

$\frac{N}{P} = \frac{M^2}{m_0^2}$

$E = \frac{\hbar c}{L^2}$ = Electron Fo

$\frac{G}{\hbar^2}$ GM^3 $\frac{M^4}{L}$

$\frac{M^3}{m_0^3 l_0}$

$E \cdot J = \frac{GM^2}{L^2}\frac{c^4}{G}$

$$\frac{ML^2}{\hbar}$$

$$\frac{\hbar c}{L^2} = \frac{c^4}{G}\frac{l_0^2}{L^2}$$

$$\frac{ML}{M^2L^4}\hbar^2 = \frac{\hbar^2}{ML^3}$$

$$\frac{M^2c^3}{\hbar} \quad \frac{c}{G} \quad G$$

$$\frac{c^4}{G} \quad \frac{GM^2}{\hbar} \qquad \frac{c^4}{G} \quad \frac{GM^3}{\hbar}$$

$$\cancel{\frac{c^4}{G} L \frac{GM^3}{L^2}}$$

$$\frac{ML}{L\hbar} Mc^3 = \frac{M^2c^3}{\hbar} \qquad \frac{c}{\hbar} \quad \frac{1}{m_0 l_0}$$

$$\frac{M^2c^3G}{G\hbar} = \frac{GM^3}{l_0^2}$$

$$\frac{M^2 \, c^4 \, G}{\hbar \quad c \quad G}$$

$$\frac{M^2c^3}{G\hbar}G \qquad \frac{GM^2}{l_0^n}$$

LENGTH

L_m	$L_p = r_e$	$L_\odot$	L_D	$L_\star$	L_v	
						L_v
						$L_\star$

FORCEVAL.WPD

COMMON
FORCE Values
~~G=0~~ $\hbar=0$

M, L Force	FORCE	B	B	D	☆	U
1, 2	$\frac{\hbar^2}{ML^3}$				42.320	136 42.320136 also
$-\frac{1}{2}, \frac{3}{2}$		49.082		49.082576	49.082576	49.082576
−2, +1					55.845	55.845
$-\frac{7}{2}, +\frac{1}{2}$				52.463800		52.463799
				45.701358		45.701358
$\frac{5}{2}, \frac{5}{2}$	$\frac{\hbar^4}{GM^4L^4}$	c=0 44.574		44.574	44.574	
		c=0 46.828		46.828	46.828	

c=0

51.336 51.330

7 x 10

$\frac{Mc^3}{L}$ comma to $\hbar=0$ $G=0$

$\frac{GM^2}{L^2}$ Comm to $\hbar=0$ $c=0$

$\frac{\hbar^2}{ML^3}$ cm $G=0$ $c=0$

3 ☆U
3 DU
4. D☆

M, L

$0, 1$ $\qquad t = \frac{L}{c}$ no G, no ħ — ordinary time

$-1/2 \quad 3/2$ $\qquad \tau = \sqrt{\frac{L^3}{GM}}$ no c, no ħ — Kepler time

$1, 2$ $\qquad V = \frac{ML^2}{\hbar}$ no c, no G — Brahma's time

$L - M = 1$

4-24-10

$$t \cdot V = \frac{ML^3}{c\hbar} \qquad \tau^2 = \frac{L^3}{GM}$$

$$\frac{Grav}{e^2} = \frac{tV}{\tau^2} = \frac{GM^2}{c\hbar} = \frac{M^2}{M_0^2}, \qquad t \cdot V \cdot \tau^2 = \frac{L^6}{G\hbar c} = [T^4]$$

$G\hbar c = -23.675\,398\,846$

$$\frac{V}{t\tau^2} = \frac{GM^2}{L^2}\frac{c}{\hbar} = \frac{GM}{L^3}$$

Grav

$$\frac{t}{V\tau^2} = \frac{G\hbar}{c} \cdot \frac{1}{L^4}$$

$M_\oplus = 27.776243$

$L_\oplus = 8.804694$ $\quad \oplus_t = -1.672127$ $\qquad \oplus_T = \frac{GM}{c^3} = 10.829515$

$\oplus_\tau = 2.906567$ $\qquad$ Error $T\tau^2 \neq t^3$

$\oplus_V = +72.632555$

$$\frac{L_\oplus^6}{G\hbar c} = 75.903563 \quad \text{error}$$

$$\boxed{M_p \cdot M_\oplus = 3.999641 \Rightarrow 4 \quad [M^2]}$$

For COS CUR

U	U_V	
L	27.932478	
	2	
L^2	55.864956	
M	52.680194	
	108.545150	
ħ	-26.976924	
	135.522074	$= U_V$
	-43.268162	t_0
	178.790236	
	177.099620	$= S^{9/2}$
	1.690616	$= (\alpha_M)^{3/2}$

$U_\tau = 19.146267 = (\alpha_M)^{3/2} U_t$

$\frac{U_V}{U_t} =$

$$\frac{U_V}{U_t} = \frac{135.522074}{17.455657} = 118.066417 = S^3$$

$$\frac{U_V}{t_0} = S^{9/2}(\alpha_M)^{3/2} \checkmark$$

$$\frac{U_t}{U_T} = (\alpha_M)^3$$

$U_T = 14.074436$

$$\frac{U_V}{U_T} = 121.447638 = (\alpha_M S)^3$$

Fraisse, Yves Goussault, Pierre Kende, J. W. Lapierre, Michel Panoff, Henri Pequignot, Jean Marie Domenach, and Paul Thibaud. A third version served me and my deceased friend Greer Taylor as the basis for our participation in the Canadian Conference on the Law in January 1972 in Ottawa. Comments by David Weisstub, Nils Christie, Allen M. Linden, J. G. Castel, H. w. Arthurs, José Antonio Viera-Gallo, J. C. Smith, and Bonaventura de Sousa Santos, and other critical papers by jurists, will be published in mid-1973 in Toronto. During the summer of 1972, participants in my CIDOC seminar contributed very helpful papers. I'm especially grateful for the assistance of John Bradley, John Brewer, José Maria and Veronica Bulnes, Martin Cohen, Irene Curbelo de Diaz, Dennis Detzel, Joseph Fitzpatrick, Amnon Goldworth, Conrad Johnson, Hartmut von Hentig, John MacKnight, Michael Maccoby, Leslie Marcus, Francisco Mir6 Quesada, Marie-Noëlle Monteil, William Ophuls, Marta H. Reed, Everett Reimer, Francisco Varela, Etienne Verne, Jacques Vidal and German Zabala. Dennis Sullivan has patiently and critically assisted me in editing the final version. After I had delivered this manuscript to the publisher, I received valuable suggestions from J.P. Naik and his friends in India. These have seeped into the text to the extent this can happen in the correction of proofs. Second only to Valentina Borremans and Greer Taylor, Heinz von Foerster, Erich Fromm, Hermann Schwember and Abrahàn Diaz Gonzales have exerted the most decisive influence on the formulation of my ideas.

Introduction

ASYMMETRIES

AND

BROKEN

SYMMETRIES

THE ESCALATION OF ASYMMETRIES

MATTER ↑ | ANTIMATTER ↓

CHAOS THEORY

DARK MATTER | BARYONIC MATTER

INNOVATIONS e.g. MICROSOFT

POPPER'S VERIFICATION | FALSIFICATION

PROCESS ASYMMETRY → PRODUCT ASYMMETRY

ECONOMICS RICH ↑ | POOR ↓

CONTINUOUS | DISCRETE

cause of pseudo forces?

ASYMMETRY AS SOURCE OF DYNAMICS, CHANGE

ASYMMETRIC DIALECTICS [PROCESSES, STATES]

QUESTIONS | ANSWERS

DEPARTURE | RETURN

ISOLATION SOCIALIZING

BEING | DOING

The Being of Being

HIGGS

Published: May 20, 2010

Why is there something instead of nothing? That is a child's question, but it also haunts the imaginations of physicists and mathematicians. What they know is that the matter and antimatter created in the Big Bang should have canceled each other out, leaving nothing instead of the something we call the universe. Why that didn't happen may have been partially revealed in a recent experiment in the Tevatron — a particle accelerator — at Fermilab, in Batavia, Ill.

We proceed gingerly when interpreting the results of high-energy physics experiments. The way it has been explained is that it all comes down to a very slight bias, an asymmetry, in the behavior of a subatomic particle, the neutral B-meson. As it oscillates between its matter and antimatter states, it shows a slight predilection for matter, a result predicted by Andrei Sakharov.

That preference for one state over another — becoming matter more readily than it becomes antimatter — is small, about 1 percent. But that may be enough to explain the preponderance of matter. We expect more news on this front from the Tevatron and its larger European cousin, the Large Hadron Collider.

What these physicists are searching for is a model of the universe and its origins. We are, as we know, made of stardust, of elements formed in the Big Bang and in the subsequent creation and destruction of stars. The very existence of this universal stuff called matter may depend on a slight bias in the frenetic variation of a particle we can only momentarily detect, in the hottest kilns humanity has so far created.

=

The escalation of asymmetry: MATTER ↑ | ANTIMATTER ↓
(also in economics and finance)

INVERSIONS

AND

SYMMETRIES

KRASNIK 77[1]

Recently several important research physicists have said that to better understand the world our traditionsl foccus on finding new particles and sub-particles should be replaced with a search for new symmetries.

We know ssymmetries are important constituents of all structures and patterns. Many symmetries are obvious, as for example, those in a suspension bridge. But the majority of symmetries in physical, bio, social and other systems are not manifest until basic internal and contextual relations are explored. (Indeed, **internal–contextual** itself is the root of many fundamental symmetrues.)

[1] This is a special anniversary. From 1934 to 2011 is seventy seven years. Include the 23 of May 23 and we have 77 + 23 = 100.

SYMMETRY 5-24-11

So, If Symmetry is to be the new paradigm
What is symmetry?

Quotes
Lama Whyte CIT ORAL EXAM

SYMMETRY
SPECIFIC, ABSTRACT

The Ancient

Apollo, Dionysius — Yin Yang — Masculine Feminine

Plato Protagoras — Earth Sky Gods — Gods Mortals

Agriculture Hunting Nomadic

Democritus, Parmenides

Symmetry ~~=~~ Opposites?

Must have a Fulcrum?

Symmetry ~~to~~ DYADS, DIALECTICS

What is Antisymmetric

Species of SYMMETRY

Same Different

Exists Doesn't Exist

1 0

$- \quad 0 \quad +$ neg

$\frac{1}{x} \quad 1 \quad x$ inv

$\sqrt{x} \quad x \quad x^2$ anti

Commuter

$\ln x \quad e \quad e^x$

$+$

$\frac{ML^3}{T} \longleftrightarrow \frac{ML}{T^2}$

$h \qquad F$

Fulcrums

Past Present Future

TILINGS

MUSIC: PITCH - RHYTHM

Examples to ~~t~~ characterize

$d\mu, S$

EXPAND CONTRACT

DIVERSIFY HOMOGENIZE

CONVEX CONCAVE

DISCRETE CONTIGUOUS

GIVE RECEIVE

RIGHT LEFT

UP DOWN

$Me^{i\theta}$ RANGE DIRECTION

US THEM

ALIKE DIFFERENT [if all same → non existence]

oneness

SOURCE DESTINY

PAST FUTURE

+ CURVATURE FLAT - CURVATURE

CONVEX 0 CONCAVE

RICH POOR

$\times L^2/L^2 \qquad \times L/L$

$\frac{ML}{T^2} \quad w \quad \frac{ML^2}{T}$

$2 \nearrow$

$\hbar \qquad F$

$\frac{M}{LT^2} \quad \frac{M}{L^3}\frac{L^2}{T^2} \quad \frac{ML}{L^2T^2}$

$\frac{E}{V} \qquad \frac{F}{A}$

$\rho c^2 \qquad$ PRESSURE

SEARCH FOR SYMMETRIES

What is the unit used for atomic weight? $H = 1.01$

$$\frac{\hbar c}{G} = -9.324\,807\,608 = [M^2] = m_o^2$$

$$M_U^2 \left(\frac{\alpha\mu}{s}\right)^3 = \frac{\hbar c}{G}$$

$$m_p^3 \left(\frac{s}{\alpha\mu}\right) = \frac{\hbar c}{G}$$

$$m_o^2 \left(\frac{s}{\alpha\mu}\right)^0 = \frac{\hbar c}{G}$$

$$M_U = m_p\left(\frac{s}{\alpha\mu}\right)^2$$

$$m_p^2 \left(\frac{s}{\alpha\mu}\right)^1 = \frac{\hbar c}{G} = m_o^2$$

$$m_o^2 \left(\frac{s}{\alpha\mu}\right)^0 = \frac{\hbar c}{G}$$

$$M_o^2 \left(\frac{s}{\alpha\mu}\right)^{-1} = \frac{\hbar c}{G}$$

$$M^2 \left(\frac{s}{\alpha\mu}\right)^{-2} = \frac{\hbar c}{G}$$

$$M_U^2 \left(\frac{s}{\alpha\mu}\right)^{-3} = \frac{\hbar c}{G} =$$

Number of protons in U $= \frac{M_U}{m_p} = \frac{52.680}{-23.776} = 76\,456\,796 = \left[\frac{s}{\alpha\mu}\right]^2$

Space of size of proton $\frac{L_U}{r_e} = \frac{27.953}{-12.550} = 40.482\,546 = (\alpha\mu s)$

	SPACE $(\alpha\mu s)^3$	Protons taken	empty space left
3 DIM SPACE	121.447638	$76\left(\frac{s}{\alpha\mu}\right)^2$ 76.456 796	44.990842 $s(\alpha\mu)^3$
2 DIM SPACE	$(\alpha\mu s)^2$ 80.965092	76.456796 $\left(\frac{s}{\alpha\mu}\right)^2$	empty space left 4.508 296 $s^0(\alpha\mu)^4$
1 DIM SPACE	$\alpha\mu s$ 40.482 456	40.482 456 $(\alpha\mu s)$	protons rejected 35.974 250 $s^{-1}(\alpha\mu)^3$
0 DIM			$s^{-2}(\alpha\mu)^2$ i.e. all

The interesting value ~~here~~ is 2 dim

all protons are taken – with only a few spaces left open

i.e. Cosmic MASS-SPACE ~ 2 dim space

e.g. surface of sphere

empty $\frac{\alpha\mu}{s^3}$ $\frac{1.127}{121.448} = 0.009\,279\,692$ " empty

logs antilog 1.0215

log 4π 1.0992

Assume the strong force $= \frac{c^8 L^2}{G^3 M^2}$ which $= \left(\frac{c^4}{G}\right)^2 \frac{L^2}{GM^2}$ 8-23-10

$\Sigma \qquad P^2_{\text{Planck}} \quad \Gamma^{-1}_{\text{gravity}}$

$\underline{\Sigma \Gamma \equiv P^2}$

$\mathcal{E}$ = Electric force $\uparrow = \frac{\hbar c}{L^2}$ w $\Sigma \downarrow = \frac{c^8 L^2}{G^3 M^2}$

$\mathcal{E} = \Sigma \Rightarrow \frac{G^3 \hbar}{c^7} M^2 = L^4$ $\qquad M \propto L^2$

$\frac{G}{c^2} = -28.128\ 937\ 025$

$(\log_{10}\text{cgs})\ \frac{G^3 \hbar}{c^7} = -121.840\ 555\ 708 = \frac{G\hbar}{c^3}\left(\frac{G^2}{c^4}\right) = l_0^2 \left(\frac{G}{c^2}\right)^2$

$\left[\begin{array}{l} -56.257\ 874\ 050 = \left(\frac{G}{c^2}\right)^2 \\ -65.582\ 681\ 658 = l_0^2 \end{array}\right.$

Find L for proton mass

$\left[\begin{array}{l} G = -7.175\ 295\ 619 \\ c = 10.476\ 826\ 703 \\ \hbar = -26.976\ 923\ 930 \end{array}\right]$

$m_p = -23.776\ 602\ 304$

$m_0 = -4.662\ 403\ 798$

$r_e = -12.550\ 068\ 214$

$l_0 = -32.791\ 340\ 829$

$r_e l_0 = -45.341\ 409\ 043$

$\frac{G^3 \hbar}{c^7} m_p^2 = -169.393\ 760\ 316 = L_p^4$

$L_p = -42.348\ 440\ 079$

$L_p^2 = -84.696\ 880\ 158$

$\frac{r_e l_0}{L_p^2} = 39.355\ 471\ 115 = S$

$\frac{S}{l_0} = \frac{r_e}{L_p^2} = 72.146\ 811\ 944 = b$

$\frac{r_e}{S} = \frac{L_p^2}{l_0} = \frac{G m_p}{c^2} = -51.905\ 539 = a$

$a \cdot b = (\alpha \mu s)^{1/2} = 20.241\ 273 = \frac{r_e^2}{L_p^2}\frac{1}{S}$

$\Sigma = \left(\frac{G}{c^2}\right)^2 l_0^2 M^2 = L^4$

$\Sigma^{1/2} = \frac{G}{c^2} l_0 M = L^2 = -60\ 920\ 277\ 854\ M = L^2$

$4\pi L^2$

$\log_{10} 4\pi = 1.099\ 209\ 864$

$M \propto L^2$

$m_p \sim -42.348\ 440\ 079$

$m_0 \sim l_0^2 = -65.582\ 681\ 652$ $\qquad \Delta = -23.234\ 241\ 573$

14.451 796 $\qquad M_D \sim -46.468\ 482$ $\qquad \Delta\ 4.120\ 042 - M_D M_p$

52.680 194 $\qquad M_U \sim -8.240\ 084$ $\qquad \Delta\ M_D M_0 = 19.114\ 200$

i.e. $L_D^2 l_0^2$

m_n

m_e

$\cancel{M_D M_p}$

$L_D^2 - L_p^2 = 4.120\ 042$ $\qquad \boxed{\sqrt{L_U^*} = \frac{L_D^2}{L_p^2}}$ $\qquad \frac{L_0^2}{L_U^2} = \left(\frac{S}{\alpha\mu}\right)^{3/2}$

Deltas.wpd July 14, 2010

COSMIC MASSES

δ = 1.19463740625
16 δ = 19.114198500

universe	52.680191696	
meta cluster	51.48555428975	Down 1 δ
galaxy cluster	50.2909168835	2 δ
blue galaxy	47.901642071	4 δ
red galaxy	43.123092446	8 δ
star cluster	38.344542821	12 δ
star	33.565993196	16 δ
planet	24.008893946	24 δ
dark	14.451794696	32 δ
Planck	-4.662403804	48 δ
baryon	-23.776602304	64 δ

star	33.565993196	star cluster	38.344542821
	32.371355789		37.149905414
	31.176718383		35.955268008
	29.982080977		34.760630602
	28.787443571	star	33.565993196
	27.592806164		
	26.398168758		
	25.203531352		
planet	24.008893946		

FORCE ARRAY: $F=F(M,L,G,\hbar,c)$

$\hbar$

M\L	3	2	1	0	-1	-2	-3
-5							
-4							
-3	L^3c^{10}/G^4M^3		$Lc^7\hbar/G^3M^3$		$c^4\hbar^2/G^2M^3L$		$c\hbar^3/GM^3L^3$
-2		L^2c^8/G^3M^2 σ		$c^5\hbar/G^2M^2$		$c^2\hbar^2/GM^2L^2$	
-1	$L^3c^9/G^3M\hbar$		Lc^6/G^2M	$c^{9/2}\hbar^{1/2}/G^{3/2}M$	$c^3\hbar/GML$		$\hbar^2/ML^3$
0		$L^2c^7/G^2\hbar$		c^4/G P		$c\hbar/L^2$ ϵ	
1	$ML^3c^8/G^2\hbar^2$		$MLc^5/G\hbar$		Mc^2/L		$GM\hbar/L^3c$
2		$M^2L^2c^6/G\hbar^2$		$M^2c^3/\hbar$		GM^2/L^2 γ	
3	$M^3L^3c^7/G\hbar^3$		$M^3Lc^4/\hbar^2$		$GM^3c/L\hbar$		G^2M^3/L^3c^2
4		$M^4L^2c^5/\hbar^3$		$GM^4c^2/\hbar^2$		$G^2M^4/L^2c\hbar$	
5	$M^5L^3c^6/\hbar^4$		$GM^5Lc^3/\hbar^3$		$G^2M^5/L\hbar^2$		$G^3M^5/L^3c^3\hbar$
6							
7							

FORCE $c^{9/2}\hbar^{1/2}/G^{3/2}M = \frac{K}{M}$ $K = +44.420\ 174\ 627$

$F = \frac{K}{M}$ $\Delta = \left(\frac{s}{\alpha\mu}\right)^{1/2} = 19.114\ 198\ 500$

	M	F
$m_p = B$	$-23.776\ 602\ 304$	$+68.196\ 776\ 931$
$m_o = P$	$-4.662\ 403\ 798$	$+49.082\ 578\ 431$
$M_D = D$	$+14.451\ 794\ 696$	$+29.968\ 379\ 931$
$M_\pi = R$	$+33.565\ 993\ 196$	$+10.854\ 181\ 431$
$M_U\ U$	$+52.680\ 191\ 696$	$-8.260\ 017\ 069$
$M_1 = K$	$+44.420\ 174\ 627$	$+1$

red galaxy $-7d$ $44.317\ 729$

$M > K$ expansion

FORCE $\sigma\downarrow\ \epsilon\uparrow$ $\Delta = 9.557\ 099\ 250 = \left(\frac{s}{\alpha\mu}\right)^{1/4}$

$\frac{G}{c^2}l_o M = L^2\ (\lambda^2)$, $\boxed{-60.920\ 277\ 854\ M = L^2}$

m_p $L_B^2 = -84.696\ 880\ 158$ $L_B = -42.348\ 440\ 079$

m_o $L_P = l_o = -32.791\ 340\ 829$

M_D $R_U l_o = \frac{\Delta}{\lambda^3}$ L_D $-23.234\ 241\ 579$

L_R $-13.677\ 142\ 329$

L_U $-4.120\ 043\ 079$

~~L $-30.460\ 138\ 927$~~

$M = 1$ $M = -60.920\ 277\ 854$ $\Delta = -8.240\ 086\ 158$

$L = 1$ M_U $52.680\ 191\ 696$ $-4.120\ 043\ 079$

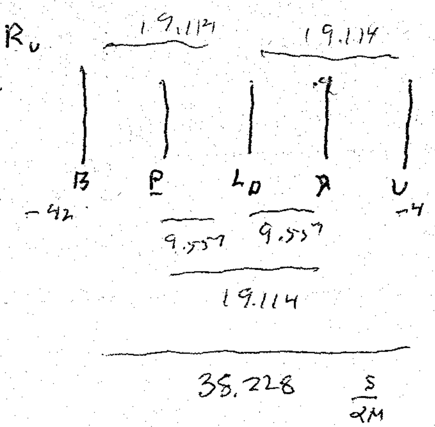
$\frac{M_U}{c^2} = 24.551254\ R_U$

$-32.791341\ l_o$

Sl_o' -8.240087

$= \Delta^3$

$L_U = 27.932478$



$\exists$ fulcrums at P and at D

$R_U(\alpha\mu)^3 = L_U$

$R_U l_o = \lambda_U^2$

$L_U l_o = \lambda_o^2(\alpha\mu)^3$

$\frac{c^4}{G} = 49.082\ 578\ 431$

TIME

$K = \frac{\hbar}{E} = \frac{\hbar}{Mc^2}$

$T = \frac{GM}{c^3}$

$t = \frac{L}{c}$

$\tau = \sqrt{\frac{L^3}{GM}}$

$\psi = \sqrt{\frac{GML}{c^4}}$

$E \cdot TIME > \hbar \quad = -26.976\ 923\ 930$

$\hbar = \hbar \qquad \hbar^2 = -53.953\ 847\ 860$

$\frac{GM^2}{c} > \hbar \qquad M > \sqrt{\frac{\hbar c}{G}} = m_o = -4.662\ 403\ 798$

$MLc > \hbar \qquad ML > \frac{\hbar}{c} = -37.453\ 744\ 633 = m_o l_o$

$c^2\sqrt{\frac{ML^3}{G}} > \hbar \qquad ML^3 > \frac{G\hbar^2}{c^4} = -103.036\ 426\ 291 = m_o l_o^3$

$\sqrt{GM^3L} > \hbar \qquad M^3L > \frac{\hbar^2}{G} = -46.778\ 552\ 241 = m_o^3 l_o$

$m_p > m_o$
flunks
T

$m_p \ -23.776\ 602\ 304$
$r_e \ -12.550\ 068\ 214$
$m_p r_e = -36.326\ 670\ 518 > \frac{\hbar}{c}$
t OK

$m_p = -23.776\ 602\ 304$
$r_e^3 = -37.650\ 204\ 642$
$m_p r_e^3 = -61.426\ 806\ 946 > \frac{G\hbar^2}{c^4}$
τ OK

$m_p^3 = -83.329\ 806\ 912$
$r_e = -12.550\ 068\ 214$
$m_p^3 r_e = 95.879\ 875\ 126$
$< \frac{\hbar^2}{G}$ flunk
ψ

$m_p r_e^3 = \cancel{S(\alpha m)^3} = m_o l_o^3 \cdot S(\alpha m)^2$

$\cancel{m_p\sqrt{\frac{S}{\alpha m}} = m_o}$

$\cancel{r_e} = l_o(\alpha m S)^{1/2}$

$m_e = -27.040\ 511\ 092$
$r_e = -12.550\ 068\ 214$
$-39.590\ 579\ 306$
$< \frac{\hbar}{c}$ flunks

$m_e \ -27.040\ 511\ 092$
$r_e^3 \ -37\ 650\ 204\ 642$
$-64.690\ 715\ 734 > \frac{G\hbar^2}{c^4}$ ✓ ok

proton passes 2 tests more stable.
electron 1 test

H atom $M = -23.776$
$L = -8.276$
$-32.052 > \frac{\hbar}{c}$ ✓

33.3
8.

$S\hbar^2$

what time $\Rightarrow$ $\frac{M}{L} \approx \frac{c^3}{G}$

$Time = \sqrt{G^3M^2\hbar/L^2c^9}$

$c^2M \cdot \sqrt{\ } = \frac{GM^2}{L}\sqrt{\frac{G\hbar}{c^5}}$

$= \frac{GM^2}{L} t_o > \hbar$

$Gt_o = -7.175\ 295\ 619$
$t_o \ -43.268\ 161\ 532$
$Gt_o = -50.443\ 457\ 151$
$-26.976\ 923\ 930$
$+23.466\ 533\ 221$

$\frac{M^2}{L} > \frac{\hbar}{Gt_o} = +23.466\ 533\ 221 = \frac{m_o^2}{l_o}$

G @ TEST

The August 12th lecture ~~of the~~ for physicist, Ransom Stephens, served to update many of our anachronistic world views. While the ancients held the world to consist of three domains, known as Heaven(abode of gods), Earth(abode of mortals), and Hell(abode of daemons); physicists now know that the three domains are properly designated: the Micro (abode of particle physcists), the Meso (abode of geophysicists), and the Macro (abode of astrophysicists). The particle physicists have created a STANDARD MODEL which allows them to explain not only everything in their ~~own~~ level but also what exists in the upper levels. [This is called reductionism]. However, as with ancient theologians, there is one name never to be spoken aloud. In the case of particle physicists: this name is GRAVITY.

Fuzzy facts

The "war" between science and religion did not arise over irreconcilable differences, but over irreconcilable similarities.

How many angels on the point of a needle?

	Proton	in a planck patch	
Masses	10^{-23}	10^{-5}	$= 10^{19}$
Size (Dim	10^{-12}	10^{-32}	10^{20}
2			10^{40}
3			10^{60}

$\equiv$ [illegible] 10^{54}

HEISENBERG's UNCERTAINTY PRINCIPLE as stability indicator

$\tau^2 = 20.953\,641\,406$

$E \cdot T > \hbar \Rightarrow$ stability $\mathbb{C}$ = fulcrum, $M = m_0$

$Mc^2 \cdot T > -26.976.923\,930$ $< \hbar$ unstable

If $M = m_0 = 4.662\,403\,798$
$T = t_0 = -43.268\,161\,532$

$-4.662\,403\,798$
$20.953\,641\,406$

$16.291\,237\,608$
$-43.268\,161\,532$

$-26.976\,923\,924$ not $> \hbar$
but $= \hbar$

~~i.e. $\mathbb{C}$ cannot exist~~

If $M = m_0$, $E \cdot T = \hbar$

If $M = m_p = -23.776\,602\,304$
$20.953\,641\,406$

$-2.822\,960\,898 = E_rB$
$\frac{c}{r_e}$ $+23.026\,888\,917 = \tau$

$-25.849\,849\,815 > \hbar$

m_p O.K. ✓

$M = m_e$ $-27.040\,511\,091$
$20.953\,641\,406$
$-6.086\,869\,685$
$-26.976\,923\,930$

$T = -20.890\,054\,245$
For $m_e c^2 T = \hbar$
$T > -20.890$ for $> \hbar$

$-6.086\,868\,685$
$-23.026\,888\,917$
$-29.113\,758\,602 < \hbar$

$\therefore$ e cannot exist alone

$\exists$ a half-life

$\boxed{\text{Use } T = \frac{GM}{c^3}}$

$Mc^2 \frac{GM}{c^3} = \frac{GM^2}{c}$

$\frac{G}{c} = -17.652\,116\,322$

$\frac{G}{c} M^2 = \hbar$

$M^2 = -26.976\,923\,930$
$+17.652\,116\,322$
$9.324\,807\,608$
$4.662\,403\,804$

i.e. $M = m_0$

$M > m_0 > \hbar$
whatever τ?

Object with Mass $< m_0$

m_p if $T = \frac{GM}{c^3}$

$\frac{G}{c} M^2 \sim \hbar$

$M^2 = \frac{c\hbar}{G} = m_0^2$

what about other choices of Time $\sim \tau$

$\frac{c}{r_e} = \tau$

$Mc^2 \frac{r_e}{c} = Mcr_e = \hbar$

$-12.650\,068$
$20.476\,821$

$7.826\,733 = cr_e$
$-26.976\,924$

M $-34.803\,657$

USE 3 TIMES

$\frac{GM}{c^3}$

$\sqrt{\frac{L^3}{GM}}$

L/c

$\frac{ML^2}{T} > \hbar$ stable

$\tau = \sqrt{\frac{L^3}{GM}}$

$Mc^2 \sqrt{\frac{L^3}{GM}} > \hbar$

$c^2 L \sqrt{\frac{ML}{G}} > \hbar$

$\frac{c^4}{G} ML^3 > \hbar^2$

$h^2 = -53.953\,848$
$\frac{G}{c^4} = -49.082\,578$
$-103.036\,426$

$\boxed{ML^3 > -103.036\,426}$

$m_p r^3 = -61.426\,806$ OK

$\boxed{8(M)^2 \cdot 61 = 103}$

The August 12th lecture by physicist, Ransom Stephens, served to update many of our anachronistic world views. While the ancients held the world to consist of three domains, known as Heaven(abode of gods), Earth(abode of mortals), and Hell(abode of daemons); physicists now know that the three domains are properly designated: the Micro (abode of particle physcists), the Meso (abode of geophysicists), and the Macro (abode of astrophysicists).

The particle physicists have created a STANDARD MODEL which allows them to explain not only everything in their own domain but also what exists in the upper domains. [This is called reductionism]. However, as with ancient theologians, there is one name never to be spoken aloud. In the case of particle physicists, this word is "gravity".

Further updating informed us that the apocalyptic number is no longer 666, but has become 137. In fact, a power series based on the reciprocal of this number, (the fine structure constant), converges to the number, +3. (This result gives confirmation to the basic structures of both theology and physics).

Lastly, the most revolutionary update involved the overthrow of both Aristotle's law of the excluded middle and Popper's principle of falsification: Heisenberg's Uncertainty Principle has rendered ~~all~~ measurements "murky". No hypothesis or concept is any longer true or false. Propositions can now only possess a less than one probability of being valid. This ~~has resulted in~~ calls for a new approach to what we have been calling reality, ~~and to a new definition of the dichotomy: real vs. virtual~~.

For further details: read Ransom Stephens' THE GOD PATENT

Facts have become fuzzy
Measurement murky and facts fuzzy

$RMc^2 = \hbar$

$\sqrt{GML}\, M = \hbar$

$\sqrt{M^3 L} = \frac{\hbar}{\sqrt{G}}$

The foundation stone of H.U.P.
⇒ a Reality of fuzzy facts
and Murky Measurements

$\frac{GM^2}{c} = \hbar$

$MLc > \hbar$

$\frac{Mc^2 L}{c}$

$E = \hbar\nu$

$\psi = \sqrt{\frac{GML}{c^4}}$

$Mc^2 L = \hbar$

$K = \frac{\hbar}{E} = \frac{\hbar}{mc^3}$

$Mc^2\sqrt{\frac{L^3}{GM}} = \hbar$

$T = \frac{GM}{c^3}$

$\frac{M^2 c^2 G}{c}$

$\frac{M^2 G}{c}$

$t = \frac{L}{c}$

$\tau = \sqrt{\frac{L^3}{GM}}$

GUP1.wpd **August 25, 1998**

The Second Law of Thermodynamics operates in two modes:

Mode I:
The Homogenization Mode.

Homogenization forces are those that tend to bring the range of values of a parameter to a single value. Gravity attempts to bring the positions of masses to a single point. The second law of thermodynamics attempts to bring temperature throughout the system to one value. Further, when a parameter contains only one value, then it ceases to be a parameter. Thus if homogenization succeeds in reducing all values to the same value it then effects the elimination of a parameter. If all parameters are eliminated, that is total sameness prevails, then extinctions results. Ultimate homogenization is the equivalent of non-existence, a principle recognized by both Pythagoras in saying that ONE does not exist, and by Eddington in saying that uniform sameness is the philosophical equivalent of non-existence..

Mode II:
The Fragmentation Mode:

Fragmentation forces are those that lead to decay and the destruction of complexity and order. The second law of thermodynamics holds that entropy or disorder must in the large always increase. Fragmentation (expansion in B-SPACE), scattering (expansion in P-SPACE), diversification (expansion in H-SPACE) all represent an increase in disorder. Diversification effects an increase in disorder through the increase in difficulty of communication as elements become more diverse, thus inhibiting the emergence of complexity.

It seems paradoxical that the destruction of order is achieved both through homogenization and through diversification. It is counter intuitive to think of uniformity as disorder. However, the second law in stating increase of entropy is simultaneously stating decrease of information. and the amount of information implicit in a uniform ordering may be less that in a more diverse ordering. On the other hand as diversification appears to involve more information, what is the second law up to? In this case the second law is operating in an inhibitory mode by reducing the likelihood of the building of complexity which would be a definite increase in information.

The ultimate definition of homogenization is the destruction of uniqueness. Thus both the increase of order and the increase of disorder can result in loss of uniqueness. We may think of there being Yin homogenization, scattering to one condition and Yang homogenization, focusing or gathering to one condition. Gravity is a Yang homogenization, decay is a Yin homogenization.

SYMMETRY

ADDED

NOTES

$S = \alpha\mu \frac{m_o^2}{m_p^2}$

$M_K = m_o \Delta^K = m_p \Delta^{K+1}$

M_{-1}

$M_K = M_{K-g}\Delta^g$

MASS

$\frac{m_o}{m_p} = \Delta = 19.114198 = \sqrt{\frac{S}{\alpha\mu}} \simeq \alpha^{-12}\mu^{-2}$

$\Delta^2 = 38.228396$

$\Delta^3 = 57.342594$

$\Delta^4 = 76.456792$

$\Delta^5 = 95.570990$

$K=-2$ M_{Ω}	M_B $K=-1$ m_p	$K=0$ m_o	$K=1$ M_O	$K=2$ $M_{\star}$	$K=3$ M_V	
						M_U
	-2				1 [illegible]	$M_{\star}$
	3			2	-1	M_D
-1	0	1	2	3 -1	4 1	m_o
-2	-1	0	-1	-2	-3 -1	M_B or m_p
	$m_o\Delta^{-1} = m_p\Delta^0$	$m_o\Delta^0 = m_p\Delta$	$m_o\Delta = m_p\Delta^2$	$m_o\Delta^2 = m_p\Delta^3$	$m_o\Delta^3 = m_p\Delta^4$	[illegible]
-42.890801	-23.776602	-4.662404	14.451796	33.565995	52.680194	
-85.781602	-47.553205	-9.324808	28.903592	67.131990	105.360388	
-128.672403	-71.329807	-13.987211	$\boxed{43.355388}$	100.697985	158.040582	
	-95.106409	-18.649615	57.807184	134.263980		
	-118.883010	-23.312019	72.258980	167.829975		
		-27.974423	86.710776			
		-32.636827	101.162572			

$\frac{M_D^3}{S} = 3.999917$

$\boxed{43.355388}$

$\frac{M_D^4}{\Delta^3} = 0.464590 = m_p^4 \Delta^5$

$\Rightarrow M_D = m_p \Delta^2$

The "Triangle Forces"

	$\frac{M}{L} c^2$	$\frac{\hbar c}{L^2}$	$\frac{\hbar^2}{ML^3}$	$\frac{GM^3}{L^2}$	$\frac{c^4}{G}$
$\frac{M}{L} c^2$	$\times$	$ML = \frac{\hbar}{c}$	$M^2L^2 = \frac{\hbar^2}{c^2}$	$\frac{M}{L} = \frac{c^2}{G}$	$\frac{M}{L} = \frac{c^2}{G}$
$\frac{\hbar c}{L^2}$		$\times$	$ML = \frac{\hbar}{c}$	$M^2 = \frac{\hbar c}{G}$	$L^2 = \frac{G\hbar}{c^3}$
$\frac{\hbar^2}{ML^3}$			$\times$	$M^3L = \frac{\hbar^2}{G}$	$ML^3 = \frac{G\hbar^2}{c^4}$
$\frac{GM^2}{L^2}$				$\times$	$\frac{M^2}{L^2} = \frac{c^4}{G^2}$
$\frac{c^4}{G}$					$\times$

Treatment of $\pm$

$$\begin{cases} ML = \frac{\hbar}{c} \\ \frac{M}{L} = \frac{c^2}{G} \end{cases} \Rightarrow M = m_0 \text{ or } L = l_0$$

all forces equated $\rightarrow$ $ML = \frac{\hbar}{c}$

or $\frac{M}{L} = \frac{c^2}{G}$

4 denoument

or $M = m_0$

or $L = l_0$

or their product

$$M^2 = M_1 \cdot M_2$$
$$L^2 = L_1 \cdot L_2$$

$$M^3 = M_1 M_2 M_3$$
$$M_1^2 M_2 \cdots$$

$$\odot \oplus ☽ \cdot L = \frac{\hbar^2}{G} = -47$$

33 27

$\pm .2$

$$M^4 L^3 = m_0 \frac{\hbar^3}{c^3} \qquad ML \frac{c}{\hbar} = \sqrt[3]{\frac{m_0}{M}}$$

FORCEMTRX0.WPD $\frac{C^4}{G}$ April 29, 2010

FORCE TABLE: F=F(G,M,L,ħ,c)

$m_0\,\hbar$ $m_0\,c$

M\L	–1	–0.5	0	+0.5	+1	+1.5	+2
+3							
+2.5							
+2	$C^4/G\; L^3/R^3$						
+1.5		$C^4/G\; L^2/R^2$					
+1			$C^4/G\; L/R$				$\hbar^2/ML^3 = C^4/G$
+0.5				C^4/G	$\frac{C^4}{G}\frac{M}{m_0}\frac{l_0}{L}$ $\Vert$	$\hbar c/L^2 = E =$	$C^4/G\; \frac{l_0^2}{L^2}$
0				$M^2C^3/\hbar$	$C^4/G\; R/L$		
-0.5				GM^2/l_0^2 $\Vert$		$C^4/G\; R^2/L^2$	
-1			$M^3LC^4/\hbar^3$ $\Vert$	$\frac{C^4}{G}\; M^2/m_0^2$			$C^4/G\; R^3/L^3$
-1.5			$\frac{C^4}{G}\frac{L}{l_0}\frac{M^3}{m_0^3}$				
-2							
-2.5							
-3							

$\frac{m_0}{M}\frac{l_0^3}{L^3}$

$m_0\,G$

$\hbar{:}0$ alternative: $\frac{GM^2}{L^2}\frac{L^5}{R^5}$ $\frac{GM^2}{L^2}\frac{L^4}{R^4}$ $\frac{GM^2}{L^2}\frac{L^3}{R^3}$ $\frac{GM^2}{L^2}\frac{L^2}{R^2}$ $\frac{GM^2}{L^2}\frac{L}{R}$ $\frac{GM^2}{L^2}$ $\frac{GM^2}{L^2}\frac{R}{L}$

Planck If $P = \frac{C^4}{G}$

Gravity $N = \frac{GM^2}{L^2}$ then $P\left(\frac{R}{L}\right)^n = N\left(\frac{R}{L}\right)^{n-2}$ $L > R \uparrow$ $L < R \downarrow$

Schwartzschild $R = \frac{GM}{c^2}$ $R^2P = L^2N$

$\frac{P}{N} = \left(\frac{L}{R}\right)^2$ $P \ne N$

$E = \frac{C^4}{G}\frac{l_0^2}{L^2}$

$N = \frac{C^4}{G}\frac{R^2}{L^2}$ $R^2E = l_0^2N$

$\frac{E}{N} = \frac{l_0^2}{R^2}$ $R_B \doteq -52$

FORCE TABLE: F=F(G,M,L,ħ,c)

M\L	−1	−0.5	0	+0.5	+1	+1.5	+2
+3							
+2.5							
+2	$\frac{L^3}{M^3}\frac{c^{10}}{G^4}$						
+1.5		$\frac{L^2}{M^2}\frac{c^8}{G^3}$		$\frac{1}{M^2}\frac{\hbar^{?}c^5}{G^3}$			
+1			$\frac{L}{M}\frac{c^6}{G^2}$		$\frac{1}{ML}\frac{\hbar c^3}{G}$		$\frac{\hbar^2}{ML^3}$
+0.5				c^4/G		$\frac{\hbar c}{L^2}$	
0			$MLc^5/G\hbar : \frac{c^4}{G}$		$\frac{M}{L}c^2$		$\frac{M}{L^3}\frac{G\hbar}{c}$
-0.5				$\frac{M^2c^3}{\hbar}$		$\frac{GM^2}{L^2}$	
-1			$\frac{M^3Lc^4}{\hbar^2}$		$\frac{M^3Gc}{L\hbar}$		$\frac{M^3}{L^3}\frac{G^2}{c^2}$
-1.5		$\frac{M^4L^2c^5}{\hbar^3}$				$\frac{M^4}{L^3}\frac{G^3}{\hbar c}$	
-2	$\frac{M^5L^3c^6}{\hbar^4}$				$\frac{M^5}{L}\frac{G^3}{\hbar^2}$		
-2.5							
-3							

$\hbar = 0$

$G = 0$

$\frac{\hbar^4}{GM^4L^4}$

$\frac{\hbar^3}{cM^2L^4}$

$\frac{M^4G^3}{L^4c^4}$

$\frac{M^8G^3}{\hbar^4}$

$c = 0$

TIMATRX3.WPD

November 30, 2009

$m_0/l_0 = c^2/G$

$m_0 l_0 = \hbar/c$

$m_0^3 l_0 = \hbar^2/G$

TIME TABLE: T=T(G,M,L,ħ,c)

[T] = 1

M\L	−1	−0.5	0	+0.5	+1	+1.5	+2
+3	$\sqrt{G^5M^6/L^2hc^{11}}$		G^2M^3/hc^4		$\sqrt{G^3M^6L^2/h^3c^5}$		GM^3L^2/h^2c
+2.5		$\sqrt{G^4M^5/Lhc^9}$		$\sqrt{G^3M^5L/h^2c^6}$		$\sqrt{G^2M^5L^3/h^3c^3}$	
+2	G^2M^2/Lc^5		$\sqrt{G^3M^4/hc^7}$		GM^2L/hc^2		$\sqrt{GM^4L^4/h^3c}$
+1.5		$\sqrt{G^3M^3/Lc^8}$		$\sqrt{G^2M^3L/hc^5}$		$\sqrt{GM^3L^3/h^2c^2}$	
+1	$\sqrt{G^3M^2h/L^2c^9}$		GM/c^3		$\sqrt{GM^2L^2/hc^3}$		ML^2/h
+0.5		$\sqrt{G^2Mh/Lc^7}$		$\sqrt{GML/c^4}$		$\sqrt{ML^3/hc}$	
0	Gh/Lc^4		$\sqrt{Gh/c^5}$		L/c		$\sqrt{L^4c/Gh}$
-0.5		$\sqrt{Gh^2/MLc^6}$		$\sqrt{Lh/Mc^3}$		$\sqrt{L^3/GM}$	
-1	$\sqrt{Gh^3/M^2L^2c^7}$		h/Mc^2		$\sqrt{L^2h/GM^2c}$		L^2c/GM
-1.5		$\sqrt{h^3/M^3Lc^5}$		$\sqrt{Lh^2/GM^3c^2}$		$\sqrt{L^3hc/G^2M^3}$	
-2	h^2/M^2Lc^3		$\sqrt{h^3/GM^4c^3}$		Lh/GM^2		$\sqrt{L^4hc^3/G^3M^4}$
-2.5		$\sqrt{h^4/GM^5Lc^4}$		$\sqrt{Lh^3/G^2M^5c}$		$\sqrt{L^3h^2c^2/G^3M^5}$	
-3	$\sqrt{h^5/GM^6L^2c^5}$		h^2/GM^3c		$\sqrt{L^2h^3c/G^3M^6}$		L^2hc^2/G^2M^3

No ħ

No G

No c

No ħ, No G are symmetric intersecting at common time $t = \frac{L}{c}$

no ħ and no c have symmetry intersecting at $\tau = \sqrt{\frac{L^3}{GM}}$ = Kepler time

no G and no c have symmetry intersecting at $\frac{ML^3}{\hbar}$ = ? time

- Cartesian - continuous - space

- Grids or eigen - spaces

exponents
- 3 unit
- 2 unit
- 1 unit Newton
- $\frac{1}{2}$ unit Maxwell

M, L, T exponents — Dimensionality grid $|D| = \sqrt{M^2+L^2+T^2}$

Vector Space — measurement direction (or dimensionality); scalar = Y

$G, c, \hbar$ exponents → Planck Particle

Matrices e.g. T or 21; Force — c, G, $\hbar$, M, L; "

Structures in eigen - spaces

Ratios → pure numbers α, μ, S

α, μ, S - $G, c, \hbar$ · Cosmic eigen - space
$m_0 l_0 t_0$

size — dimensionality

~ measurement

Gaps - intervals with discrete
are $f(, \alpha, \mu, S)$

sizes in gaps

two values
- measurement
- $|D|$

$|D| \rightarrow$ scalar

$Y \cdot |D|$

$\frac{Y}{|D|}$

$Y = |D|$

Mixed dimension: ~~sm~~ x, y continuous, z discrete etc.

examples of $|D|$

$G = m^{-1} L^3 T^{-2}$

$|G| = \sqrt{14}$

Y of G (cgs) = -7.175296

$c = m^0 L^1 T^{-1}$

$|c| = \sqrt{2}$

Y of c (cgs) = 10.476821

$\hbar = m^1 L^2 T^{-1}$

$|\hbar| = \sqrt{6}$ Y of $\hbar$ = -26.97[illegible]

$\hbar c = m^1 L^3 T^{-2}$

$|\hbar c| = \sqrt{14} = |G|$

$Y(\hbar c) = 16.500\,104$

$Y(G) = -7.175\,296$

$$\frac{Y(G)}{Y(\hbar c)} = -23.675\,400 \qquad m_p = -23.776\,602$$

$Y(G) \cdot Y(\hbar c) = -m_0^2 = 9.324\,808$

$-4.662\,404$

$Y(G)\, m_0 = -11.837\,700$

$Y(hc)\, m_0 = +11.837\,700$

$hc = M L^3 T^{-2}$

$G = M^{-1} L^3 T^{-2}$

$$\frac{\hbar c}{G} = M^2 = m_0^2 = -9.324\,808$$

$$\frac{G\hbar}{c} =$$

-26.976924
-7.175296
-34.152220
10.476821
44.629041

$$\frac{Gc}{\hbar} :$$

10.476821
-7.175296
3.301525
-26.976924
~~-22.276449~~

30.278449

$\Delta = 0.378\,563$

$\frac{\hbar}{e^2} = -47.930\,565$

$\Sigma = -47.452\,002$

$\Delta = 0.101\,202$

$400 \cdot \Delta = 40.4808$

$\alpha_{MS} = 40.482\,505$

Dimensionality Space — occupied by

is a portion of a unit grid : M $-1, 0, +1 +2$ (4)

L $3, 2, 1, 0, -1, -2, -3$ (7)

with unit $= 1, \frac{1}{2}$ — T $-3, -2, -1, 0$ (4)

Dimensionality Space is a sub-portion of an exponential grid

An exponential grid is a ~~n~~ integer vector space, all vectors having integer component

$|vector| = \sqrt{\Delta x^2 + \Delta y^2 + \Delta z^2}$ or $\sqrt{\Delta m^2 + \Delta L^2 + \Delta T^2}$

~~it~~ Scalar magnitude = E - a measurement

A ~~dimensionality~~ measured thus is a vector of magnitude E and direction given by exponents V_M, V_L, V_T

$E \cdot |V|$ or

Exponential grid ⊃ an origin $M=0, L=0, T=0$

Grid unit: 1 - Newtonian

$\frac{1}{2}$ - Maxwellian

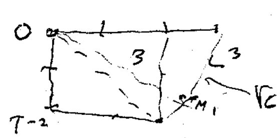
rotation?

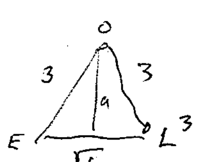
If Grid ~~unit~~ domain $= 3$ ∃ only 0 and Energy and L^3

$M^1 L^2 T^{-2}$

$\sqrt{9} = 3$

1 1 2 $\sqrt{6}$ $E - L^3$





$a = \sqrt{9 - \frac{6}{4}}$ $\sqrt{\frac{30}{4}}$ $= \frac{1}{2}\sqrt{30}$

$a = \sqrt{\frac{15}{2}}$

GRAVITATIONAL ENERGY

$\frac{GM^2}{L}$

$\frac{M^2}{L} \cdot \frac{l_0}{m_0^2}$

$$\frac{\frac{GM^2}{L}}{\frac{Gm_0^2}{l_0}} = \frac{M^2}{m_0^2} \cdot \frac{l_0}{L} = \frac{M^2}{L} \cdot \frac{l_0}{m_0^2}$$

$= \frac{M^2}{L}(-23.466\,534)$

$\frac{Gm_0^2}{l_0} = 16.291\,237$

B -27.827 840

Δ 44.119 078

~~-58.468 940~~

-58.468

C +16.291 238

$\Delta = 17.987$

17.

$\frac{S^3}{(\alpha\mu)^2}$

D 34.278 364

17.987 126

$(\alpha\mu)^{3/2}$

17.987127

☆ 52.265 4 90

$\boxed{35.974253} = D^2$ — $\frac{S}{(\alpha\mu)^3}$

17.987 123 $\frac{S^{1/2}}{(\alpha\mu)^{3/2}}$

U 70.252614

53.961 376

$17.987^3 = \frac{S^{3/2}}{(\alpha\mu)^{9/2}}$

☉ 48.581

32.290

⊕

A 17.987123 $= \sqrt{\frac{S}{(\alpha\mu)^3}}$

B $\boxed{77.583\,870 = \frac{S^3}{\alpha\mu} \text{ FROM } C=0 \text{ FORCES}}$

77.583 870 B
17.987126 A
58.596744

$\cancel{B}/\cancel{A}$

$\frac{A \cdot B}{\cancel{B}/\cancel{A}} = A^2$ ✓

95.57099 C
58.596744
$\boxed{35.974352} = A^2$

$$\frac{\frac{B}{A}}{A^3} = \frac{B}{A^4} = (\alpha\mu)^5$$

$$\frac{\frac{S^3}{\alpha\mu}}{\frac{S^2}{\alpha\mu^6}} = (\alpha\mu)^5$$

ENCYCLOPEDIA OF TIME
Samuel L. Macey (ed.)
1994
V-C-1

TIME'S ARROWS TODAY
Steven F. Savitt (ed.)
1995
V-C-1

TIME'S ARROW AND ARCHIMEDES' POINT
Huw Price
1996
V-C-1

THE END OF CERTAINTY
Ilya Prigogine
1997
V-C-2

DIMENSIONS OF TIME
WOLFGANG ACHTNER, STEFAN KUNZ, THOMAS WALTER
1998
V-E-1

EINSTEIN'S CLOCKS, POINCARE'S MAPS
PETER GALISON
2003
V-E-4

$T_v = \frac{\cancel{ML^2}}{\hbar}$ ~~(no c, no G)~~ 2 times = that do not contain c

$$M^3 L = \frac{\hbar^2}{G} = -46.778552$$

$\hbar = -26.976924$

$\hbar^2 \; -53.953848$

$G \; -7.175296$

$\frac{\hbar^2}{G} \; -46.778552$ ✓

1° ~~one~~ solution:

$M = \frac{\hbar}{\sqrt{G}} = -23.389276$

$L = -\frac{\hbar}{\sqrt{G}} = +23.389276$

2° Solution

$M = m_p = -23.776602$

$L = +24.551254 = \frac{L_U}{(\alpha\mu)^3} = R_U = \frac{GM_U}{c^2}$

$\frac{L_U}{L} = \frac{27.932478}{24.551254} = 3.381224 = (\alpha\mu)^3$

$M3L = \frac{\hbar^2}{G}$

INTERESTING SOLUTIONS

$M = m_0, \; L = l_0$

$M = m_p, \; L = R_U$

$L = L_U, \; M = \frac{m_p}{\alpha\mu}$

$R_U = \frac{L_U}{(\alpha\mu)^3}$

Times not containing c Resonances

			τ	V	
M, L	T	$L\hbar/GM^2$	$\sqrt{L^3/GM}$	$ML^2/\hbar$	$\sqrt{GM^5L^5/\hbar^4}$
−2, +1	$L\hbar/GM^2$	X			
τ $-\frac{1}{2}, +\frac{3}{2}$	$\sqrt{L^3/GM}$	$M^3L = \frac{\hbar^2}{G}$	X		
V +1, +2	$ML^2/\hbar$	$M^3L = \frac{\hbar^2}{G}$	$M^3L = \hbar^2/G$	$\cancel{M^3L = \hbar^2/G}$	
2.5, 2.5	$\sqrt{GM^5L^5/\hbar^4}$	$M^3L = \frac{\hbar^2}{G}$	$M^3L = \frac{\hbar^2}{G}$	$M^3L = \hbar^2/G$	X

The c-free clocks resonate at $M^3L = \frac{\hbar^2}{G}$

one M whose solutions is ⇒ If $M = m_p$, $L = R_U$

particles with the mass of a proton, but the size of the Schwarzschild Universe

3° another solution

$M = m_0$

$L = l_0$

4° $M = m_e$

$L = +34.342981$

4-25-2010

5° $L = -12.550068 = r_e$

$M = -11.409495$

6° $L = L_U = 27.932478$

$M = -24.903677 = \frac{m_p}{\alpha\mu}$

Artletter.wpd April 6, 2010

Glad you arrived safely in spite of winds, earthquakes, and California drivers doing their thing.
It rained most of Sunday and a bit on Monday, but by noon Monday the weather gods figured out that you were no longer in Sonoma County and the clouds, sky, and light put on a performance that lured hundreds of cameras out of their cases and the sound of their clickings replaced the sound of rain drippings.
I hope you found all well in both Bakersfield and Flagstaff. Please give everyone a hug for me.
love,
Dad

-----Original Message-----
From:
art@wilsonint.org
To: alw1871@aol.com
Sent: Mon, Apr 5, 2010 10:10 pm
Subject: Arrival

Hi Dad and all,

In spite of the high wind -- gusts above 50 mph -- I held the big black beast onto the road (trouble started at about the Colorado River) and made it safely home. A few minutes before I got to Flagstaff's intersection of I40 and I17, someone's trailer and pickup were flipped by the wind, and someone else piled into them -- we snaked by on one lane as the emergency folks swarmed over the scene. At about the same time, dust picked up between Flag and Winslow, there was a 43-car pileup, and I40 was closed. The gusts are to continue all night long; power has flickered on and off, of course. The rain in Sebastopol cleared up to a mist after I got over Altamont Pass -- and this morning, the rain had moved to Bakersfield! I got to drive in a snowstorm over Tehachapi Pass -- fine by me with my winter car, but I was more than a little concerned regarding the California drivers on the road. Even had rain off and on between Barstow and Needles! No doubt part of the Communist/Socialist conspiracy, along with the Mexicali quake.

Anyway, thanks again and I'll keep you all posted.

Equating any two values of T from on the T-Table 4-24-10

→ 1) $\frac{M}{L} = \frac{c^2}{G}$ frequency resonance

or 2) $ML = \frac{\hbar}{c}$

or 3) P

both times $\not\supset \hbar$ → $\frac{M}{L} = \frac{c^2}{G} = 28.128937$ stars > m_0^2 or l_0^2

both time $\supset \hbar$ → $ML = \frac{h}{c} = -37.453745$ 5 orgms

$\Delta = m_0^3$ $(m_0 l_0)^2$

Mixed → P

both times $\not\supset c$ → $M^3 L = \frac{\hbar^2}{G} = -46.778552$ ~~photons~~ Dark Matter?

if $M = m_0$, then $L = l_0$

$M = -25$

$L = +27$ L_0

$\frac{c^4}{G}$?

$\frac{M}{L} > \frac{c^2}{G} \Rightarrow$ contract or clock slowing or both

$\frac{M}{L} < \frac{c^2}{G} \Rightarrow$ expansion or clock ticking faster or both

$\frac{M}{L} = \frac{c^2}{G} \Rightarrow$ no change, stability, clock steady rate or 白 time

change does not occur with time, only when clock rate changes in

Change happens only with rate change

frequency change

---

both times $\not\supset G$ $ML = \frac{\hbar}{c}$

both time $\supset G$ $\frac{M}{L} = \frac{c^2}{G}$

$t = \frac{L}{c}$ the only time that does not contain either both $\hbar$ or G

$\sqrt{\frac{L^3}{GM}} = \tau$ does not contain c, or $\hbar$

T does not contain $\hbar$

$V = \frac{ML^2}{\hbar}$ does not contain c or G

do times $\not\supset \hbar$

time $\not\supset G$

time $\not\supset c$

4) 5/10
5) 10/1

Forces $\sqrt{\dfrac{GM^5L^5}{h^4}} \rightarrow \dfrac{\hbar^4}{GM^4L^4}$

No C $\dfrac{ML^2}{h} \leftrightarrow \dfrac{\hbar^3}{ML^3}$

$\sqrt{\dfrac{L^3}{GM}} \rightarrow \dfrac{GM^3}{L^2}$

$\dfrac{Lh}{GM^2} \rightarrow \dfrac{G^2M^5}{L\hbar^2}$

$\cancel{\sqrt{\dfrac{GM^5L^5}{h^4}}}$

Equivalence
No C prod

$\dfrac{ML\hbar^4}{GM^5L^5} = \dfrac{\hbar^4}{GM^4L^4}$

$\dfrac{ML\hbar^2}{M^2L^4} = \dfrac{\hbar^2}{ML^3}$

$\dfrac{MLGM}{L^3} = \dfrac{GM^3}{L^2}$

$\dfrac{ML}{L^2\hbar^2} G^2M^4 = \dfrac{M^5 G^2}{L\hbar^2}$

$\dfrac{\hbar^4}{GM^4L^4} = \dfrac{\hbar^2}{ML^3}$

$\dfrac{\hbar^2}{G} = \dfrac{M^4L^4}{ML^3} = M^3L$

$\dfrac{\hbar^4}{GM^4L^4} = \dfrac{GM^2}{L^2}$

$\dfrac{\hbar^4}{G^2} = M^6L^3$

$P \;\; w \;\; \dfrac{\hbar^2}{ML^3} = \dfrac{C^4}{G} \qquad ML^3 = \dfrac{G\hbar^2}{C^4} = \dfrac{G\hbar}{C^3}\dfrac{\hbar}{C}$

Now P

$\rightarrow \boxed{ML^3 = m_0 l_0^3} \qquad l_0^2 \cdot m_0 l_0$

$\dfrac{GM^3}{L^2} = \dfrac{C^4}{G} \qquad \boxed{\dfrac{M^3}{L^2} = \dfrac{C^4}{G^2}} \qquad \dfrac{\hbar^4}{GM^4L^4} = \dfrac{C^4}{G}$

$\boxed{\dfrac{m_0^5}{l_0}}$

$\dfrac{G^2M^5}{L\hbar^2} = \dfrac{C^4}{G} \qquad m_0^4 \;\; m_0/l_0 \qquad \boxed{M^4L^4 = \dfrac{\hbar^4}{C^4}}$

$\rightarrow \dfrac{M^5}{L} = \dfrac{C^4\hbar^2}{G^3} = \dfrac{C^2\hbar^2}{G^2} \cdot \dfrac{C^2}{G} \leftarrow$

Resonances:

$T_{M_1 L_1} = T_{M_2 L_2}$

No G $\quad T_{\bar{G}_1} \cdot T_{\bar{G}_R} \rightarrow M \cdot L = \frac{\hbar}{c} = -37.\cancel{963}\ 744\ 633 = Q_1$

No $\hbar$ $\quad T_{\bar{\hbar}_1} \cdot T_{\bar{\hbar}_2} \rightarrow \frac{M}{L} = \frac{c^3}{G} = +28.128\ 937\ 025 = Q_2$ $\qquad Q_1 \cdot Q_2 = \frac{c\hbar}{G} = m_0^2$

no c $\quad T_{\bar{c}_1} \cdot T_{\bar{c}_2} \rightarrow M^3 L = \frac{\hbar^2}{G} = -46.778\ 552\ 241 = Q_3$ $\qquad \frac{Q_3}{Q_2} = \frac{c\hbar}{G} = m_0^2$

$\qquad\qquad\qquad\qquad\qquad\qquad \overset{\shortparallel}{m_0^3 \ell_0}$

$m_0^2 = -9.324\ 807\ 578$

EQUILIBRIUM
FORCES

No c Forces also with $F_{\bar{c}_1}$ w $F_{\bar{c}_2}$ $\rightarrow M^3 L = \frac{\hbar^2}{G}$

as do No$_c$ Times in resonance

THE POWER OF SYMMETRIES

4 Transformations

Translation N-S, E-W
Rotation - clockwise - counter clockwise
Dialation Expansion - Contraction FRACTALS
Reflection - Chirality
Anti-Matter charge reflection
Dark Matter? to Baryonic Matter

---

5 LOGIC VALUE SYSTEMS

2 value: Aristotelean Logic T or F LXM
3,4 value HINDU T, F, T and F, neither T nor F scotts 3 not proven
1 DOGMA ∃ I T
0 TEA PARTY 2 conflicting both believed,

SEMIOTICS SA 5-20-10 10:00 AM

- Language Most truncating
- Ritual Ikons ~ MAPS Dancing
- Landscaping - Architecture
- Math-Music Least truncation

Deliver us from semiotic "middle men" and realities

---

9 Interrogative pronouns [cf 9 Muses, 9 Judges]

9

What
Who Where When HOW Why Whence Whither
Which

ONTICS SA

Our Realities ~ snap shots
A piece of space de-contisualed
A piece of time de-continuated from the current here and now
But still connected to the greater Here and DIACHRONIC NOW
i.e. REALITY

Reality Matrushkas
ONIONS

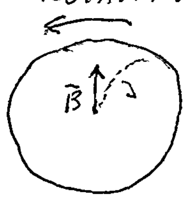
Centrifugal force
$2\omega r^2$

Conservation of angular momentum
$\omega^2 r$

Coriolis - Centrifugal symmetry

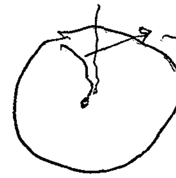
ROTATING

in rotating frame coriolis tries to restore inertial



coriolis effect $\uparrow \rightarrow ($

NON ROTATING



centrifugal force
→ to restore inertial path

centrifugal) → |
curved path

$\bar{B}$
fulcrum $\uparrow$ inertia

$$\left(\frac{d\bar{B}}{dt}\right)_{\text{non rotatn}} = \left(\frac{d\bar{B}}{dt}\right)_{\text{rotatn}} + \omega \times \bar{B}$$

RE M.U.D.

SYMMETRIES and INVARIANTS

IN DIRECTION
[DIMENSIONALITY]

IN SCALE

FIRST DYAD

THINGS - RELATIONS

MANIFEST UNMANIFEST

KANT'S DYAD

RESONANCES and ROTATIONS

MACH

Not context Free

what changes
are context free?

Orthogonality and liberation from context

Why are velocities
considered context free
but accelerations are not?
velocities can be released
to another velocity

ANGLES are unit free

Special relativity
Reference to ONE other
Not to a context
~ Ether of Newton's space

ORTHOGONALITY IS INDEPENDENCE

DIMENSIONALITIES LINK DIMENSIONS

DIMENSIONS ARE ORTHOGONAL

ABOUT FORCE [< WIDTH OF NOW]

MUTUALITY INVOLVES ROTATIONS

SPECIES of ~~FORCES~~ LINKS, CONNECTIONS

Usually, A force is a sub-species of links or connections
that ↑ or ↓ distance e.g. gravity

Morphic Forces: space ⇔ Mass

Totem Forces: Non-Locality

The more synchronic the force,
the more violent
in fact violence ≈ very narrow now

Self-Organization
If ∄ any limits [links] any thing goes
System self-organizes ~ a gravity acting
Set ↓ conformity ↑ The Miss Manners's Paradox

Forces and their efficacies
must be measured as Functions (width of now)

Also ∃ self-fragmentation, Eg. Jubilee
to remove obstructions to diversity
e.g. → Me, MINE

$$M = ac + ibG$$
$$L = pG + iqc$$

$$\frac{M}{L} = \frac{c^2}{G}$$

[I] $M = c + iG$ $\quad$ $L = G + ic$

$$\frac{M}{L} = \frac{(c+iG)(G-ic)}{(G+ic)(G-ic)} = \frac{cG + cG + i(G^2 - c^2)}{G^2 + c^2 + i(cG - cG)}$$

$$= \frac{2cG + i(G^2 - c^2)}{G^2 + c^2} = \frac{c^2}{G}$$

$$\therefore \quad 2cG^2 + iG(G^2 - c^2) = c^2G^2 + c^4$$

$$iG(G^2 - c^2) = 0 \qquad G^3 = c^2 G$$

$$c^4 + c^2G^2 - 2cG^2 = 0$$
$$c^3 + cG^2 - 2G^2 = 0$$
$$2G^2 - cG^2 - c^3 = 0$$
$$G = \frac{c \pm \sqrt{c^2 + 8c^3}}{4}$$

$$G^2(2-c) - c^3 = 0$$
$$G = \frac{c^3}{2-c}$$

[II] $M = ac + ibG = ipG - qc$

$$(a+q)c = i(p-b)G$$

$m_p = a^+ m_o$ $\quad$ $a = -19.114$ $\quad$ $m_p + i r_e$

$r_e = b^+ l_o$ $\quad$ $b = +20.241$ $\quad$ $m_o + i l_o$

$Ai(m_p + i r_e) = b^+ l_o + i a^+ m_o$ $\qquad$ $(a + ib)(m_o + i l_o) = m_p + i r_p$

$A\, i m_p = i a^+ m_o$ $\qquad$ $a m_o - b l_o + i(b m_o + a l_o) = m_p + i r_e$

$-A r_e = b^+ l_o$ $\qquad$ $m_p = a m_o + b l_o,$ $\quad$ $r_e = b m_o + a l_o$

$m_p = a m_o + b l_o$

$r_e + m_p = (a+b)(m_o + l_o)$ ✓

$$i(a+b)(m_o + i l_o)$$

SPECIES of SYMMETRY

w HARMONY / COHERENCE / CONSISTENCY — WELL PROPORTIONED / BALANCED
BEAUTY
CONCORDANCE OF PARTS

WIDTH OF SYMMETRY

resonance

GEOMETRIC
BILATERAL - REFLEXIVE
TRANSLATORY
ROTATIONAL
SCALAR

ORNAMENTAL
CRYSTALLOGRAPHIC

phyllotaxis

"INVARIANCE OF CONFIGURATION OF ELEMENTS UNDER A GROUP OF AUTOMORPHIC TRANSFORMATIONS"

Reflection in a plane is an automorphism

Harmony in Music
Pitch / Rhythm

A DIALECTIC 8-29-10
The (outer) symmetry that contains {asymmetries} e.g. OAK TREE
* Normal distribution
The elemental symmetries out of which {asymmetries} are built e.g. undulations

PARITY

*The Symmetry of the Normal Distribution

The S-A DIALECTIC

$m_p - M_\delta - M_o$

REF

Science and the Future 1995
p 242 ff
on matter and symmetry

TILINGS
POLYTOPES

SYMMETRY

2 Ancient Myths ~~contain~~ stories of the "lower world."
This region is often the abode of the dead, and in some traditions, the realm of punishment for those who were evil. And hell is a place of fire and avengement.

1 As we ~~learn to~~ graduate from our literal reading of myth, we often discover they ~~were~~ are about great truths that we have described in a different language. And possibly about great truths we have speculated about but not yet grasped. Myths about ~~of~~ creation, successive dynasties of gods, ancient visitors to earth ~~and many~~ others.

Putting the myths in juxtaposition with the findings of modern science there seem to be some similar concepts.

e.g. The lower world with black holes.
purgatories with intermediate states of matter like neutron stars

What we have read as spiritual in myth may also describe what we are discovering in the world of matter. And there is suspicion of not only description of realities but of a symmetries between the process of spirit and matter. Indeed, there is a suspicion of many symmetries

Let us juxtapose the ~~lower~~ underworlds hells purgatories of myth

with

The states of matter levels and
solid, liquid, gas, plasma
electron norm, neutron ... black hole.

where as death is the glass or wall of symmetry in myth
Tori
S-SPACE

H-SPACE
structure
form
the symmetry between S-space and P-space

some density or level perhaps the Planck level (particle) is the Tori door of symmetry in the physical world
P-SPACE

4 - 7 - 2010

And supporting all
N-SPACE
NUMBER

Dynasties of gods

Uranus — Elohim

Titans — Yaweh

Olympians — Adam

Humans

Dynasties of Force, Matter

Black Hole — dark matter

Neutron — ?

Atom — ?

Molecule

DAYS of Creation

Dark → Light

Big Bang — Planck density → neutron ρ

Dark Energy $\frac{c^4}{G}$ Λ

gravity $\propto$ Λ

Ahura Mazda - Ahriman

MYTH — MATH

METAPHOR

THOUGHT — ~~MACHINE~~ — MACHINE

LEVELS 2 dim — HIERARCHIES ~~1~~ 2 DIM — also 1 dim eigen values = disc

REGRESSIONS 3 DIM ~~x~~ cont, 3 cont, ~~y~~ disc

MATROSHKAS 4 DIM

3 cont, 4th disc

SPACE	SPECIES
P	Sensory "reality"
H	Form, structure
B	Links, bonds

3 Dimension Morphology

X cont, y cont, 3 cont } SPACE

x cont, y cont, 3 disc } ~~HELOBES~~ LEVELS ~~Regressions~~ slots

x disc, y disc, 3 cont } spikes, SPIRES—FOREST, ~~Roads~~ Forest

x disc, y disc, 3 disc } GRID

DIMENSIONALITY MORPHOLOGY

INVARIANTS

BRAHMANS: The ~~Parmenidean~~ and PARMENIDEAN

The ultimate unchanging base, foundation, ~~APR~~ structures

e.g.

- G, c, ħ (discrete) — Newtons constant; velocity of light; Plancks constant
- or God, Christ, holy spirit
- Minkowski's space-time — contiguous and continuous

INVARIANTS
SYMMETRIES
FRACTALS
HUMS
Geometric means

Loop Matroshkas

day — Bohr atom

year

galaxy

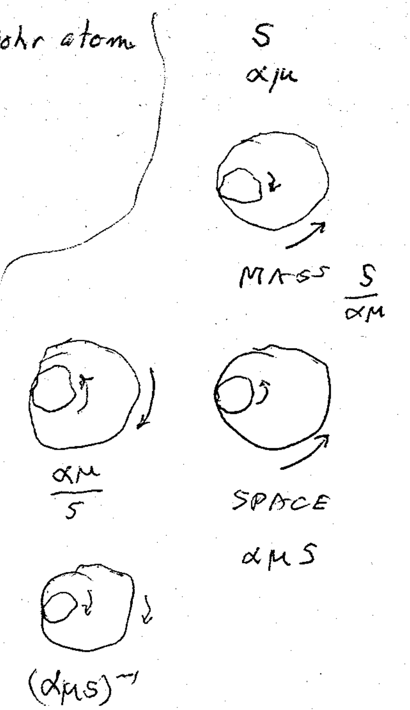
cosmos

of Kalpas

Yugas

Brahmas

Baktuns



$\supset G, c, \hbar$

$$\frac{\hbar c}{GM^2} = \left(\frac{m_0}{M}\right)^2 \sim [0] \; ; \quad \left(\frac{\hbar c}{GM^2}\right)^n \sim [0] \qquad \left(\frac{c^4 L^3 M}{G\hbar^2}\right)^n \sim [0]$$

$$\frac{G\hbar}{c^3 L^2} = \left(\frac{l_0}{L}\right)^2 \sim [0] \; ; \quad \left(\frac{G\hbar}{c^3 L^2}\right)^n \sim [0]$$

$$\frac{G\hbar}{c^5 T^2} = \left(\frac{t_0}{T}\right)^2 \sim [0] \; ; \quad \left(\frac{G\hbar}{c^5 T^2}\right)^n \sim [0]$$

More on cont - disc

Bound grids, Bound spaces

3 cont, 1 disc for caste, class

Nested Boxes, Matroshka ?

3 disc, 3 cont

$c = 0$ $\qquad \hbar = 0$ $\qquad G = 0$

$$\left(\frac{GM^3 L}{\hbar^2}\right)^n \sim [0] \qquad \left[\frac{GM}{c^2 L}\right]^n \sim [0] \qquad \left[\frac{MLc}{\hbar}\right]^n \sim [0]$$

$$\frac{c^4}{G}\,\frac{\hbar^4}{G^2 M^6 L^2} = \frac{c\hbar}{L^2}\cdot\left(\frac{m_0}{M}\right)^6 \qquad \frac{c^4}{G}\left(\frac{GM}{c^2 L}\right)^2 = \frac{GM^2}{L^2} \qquad \frac{c^4}{G}\left(\frac{MLc}{\hbar}\right) = \frac{ML}{t_0^3}$$

$\hbar = 0$

$$F(M,L)\cdot\left(\frac{GM}{c^2 L}\right)^n = \frac{GM^2}{L^2} \quad \text{where } n = M - L + 2$$

$$F(M,L)\cdot\left(\frac{GM}{c^2 L}\right)^k = \frac{c^4}{G} \quad \text{where } k = M - L$$

$$\left(-\tfrac{1}{2}, \tfrac{3}{2}\right) \frac{GM^2}{L^2}\left(\frac{GM}{c^2 L}\right)^{-2} = \frac{c^4}{G} \; \left(\tfrac{1}{2}, \tfrac{1}{2}\right)$$

$G = 0$

$$F(M,L)\cdot\left(\frac{MLc}{\hbar}\right)^w = \frac{\hbar c}{L^2}, \quad w = 3M - L$$

QUEST
SEARCH FOR SYMMETRIES

SPECIES of CLOCKS

Contain 2 — all in no $\hbar$ diagonal; all in no G diagonal; all in no c diagonal

- $\supset$ $G, c, \hbar$ most
- $\supset$ G, c $\not\ni \hbar$ $\rightarrow \frac{M}{L} = \frac{c^2}{G}$
- $\supset$ $G, \hbar$ $\not\ni c$ $\rightarrow M^3 L = \frac{\hbar^2}{G}$
- $\supset$ $c, \hbar$ $\not\ni G$ $\rightarrow ML = \frac{\hbar}{c}$
- $\supset$ only c — t
- $\supset$ only $\hbar$ — V
- $\supset$ only G — τ
- ~~$\supset$ none~~ none

$$M^3 L = \frac{\hbar^2}{G}$$

$$M^3 R_v = \frac{\hbar^2}{G}$$

$$m_p^3 \frac{G M_v}{c^2} = \frac{\hbar^2}{G}$$

$$m_p^2 M_v = \frac{c^2 \hbar^2}{G^2} = m_o^4$$

$$M_v = \frac{m_o^4}{m_p^2}$$

Resonance Destinations

$$\frac{m_o}{m_p} = \frac{M_v}{M_*}$$

$$\frac{\tau^{-2}}{G} = \frac{M}{L^3} \qquad M^3 L = \frac{\hbar^2}{G}$$

$$\frac{r_e}{l_o} = \frac{L_v}{L_*}$$

Relations between m_p and U

$$m_p^3 M_v = m_o^4 \; ; \quad m_p^3 R_v = \frac{\hbar^2}{G} \qquad R_v = \frac{G M_v}{c^2} \qquad R_p = \frac{G m_p}{c^2} = -51.905539$$

$$m_p^3 L_v = \frac{\hbar^2}{G}(\alpha\mu)^3$$

$$\left(\frac{S}{\alpha\mu}\right)^{3/2} m_o = M_v \qquad M_v = \left(\frac{S}{\alpha\mu}\right)^2 m_p \qquad R_v = \frac{L_v}{(\alpha\mu)^3} \qquad \frac{r_e}{R_p} = S$$

$$R_v = 24.551256$$

$$M_v = \left(\frac{S}{\alpha\mu}\right)^{3/2} m_o \qquad \frac{R_v}{R_p} = \left(\frac{S}{\alpha\mu}\right)^2 = \frac{M_v}{m_p}$$

$$M_* = \left(\frac{S}{\alpha\mu}\right) m_o \qquad \left(\frac{S}{\alpha\mu}\right)^{1/2} m_p = \cancel{\left(\frac{S}{\alpha\mu}\right)^{1/2}} m_o$$

$$\frac{L_v}{r_e} = \alpha\mu S$$

$$M_* m_o = m_p M_v \qquad \frac{m_p}{r_e} S = \frac{c^2}{G} \qquad \frac{m_p}{R_p} = \frac{c^2}{G}$$

$$\frac{h}{c} = -37.453745$$

$$\frac{M_v}{L_v}(\alpha\mu)^3 = \frac{c^2}{G} \qquad \frac{M_v}{R_v} = \frac{c^2}{G}$$

$$m_p r_e (\alpha\mu) = \frac{\hbar}{c} \qquad m_p R_p = \frac{h}{c} \frac{1}{\alpha\mu S} \; X$$ need an $(\alpha\mu)^2$

$$M_v L_v S^{-3} = \frac{\hbar}{c} \qquad M_v R_v = \frac{\hbar}{c}\left(\frac{S}{\alpha\mu}\right)^3$$

$$m_o \cdot l_o = \frac{h}{c}$$

RESONANCES

$+3$ ~~to~~ $-1 \Rightarrow M^3L = \frac{\hbar^2}{G}$ or $ML = \frac{h}{c}$

no c $\Rightarrow M^3L = \frac{h^2}{G}$

Destination m_0

l_0

5 destinations

m_0

l_0

$\frac{M}{L} = \frac{c^2}{G}$

$ML = \frac{\hbar}{c}$

$M^3L = \frac{h^2}{G}$

STRUCTURE FORMULAE

1) $M'_n = \dfrac{M_0^{n+1}}{M_{-1}^{n}}$ 2) $L'_n = \dfrac{L_{-1}^{n}}{L_0^{n-1}}$ $R'_n = \dfrac{G}{C^2}\dfrac{M_0^{n+1}}{M_{-1}^{n}}$

MASS SIZE

$n = -1, 0, 1, 2, 3$

$\dfrac{L'_n}{R'_n} = (\alpha\mu)^{\dagger n}$ for $n = 0, 1, 2, 3$
$= S$ for $n = -1$

Subscripts
$-1 = B$
$0 = P$
$1 = D$
$2 = ☆$
$3 = U$

superscript = exponent

$$\frac{M'_n}{L'_n} = \frac{C^2}{G}\left(\frac{M_0 L_0}{M_{-1} L_{-1}}\right)^n = \frac{C^2}{G}(\alpha\mu)^{-n}$$

$R = [L] = \dfrac{GM}{C^2}$

$$\frac{M'_m}{R'_m} = \frac{C^2}{G}$$

$$M'_m L'_m = \frac{\hbar}{c}\,S^{n}$$

for $n = 0, 1, 2, 3$

for $n = -1$, $\Sigma = \alpha\mu$

$$M'_N R'_N = \frac{G}{C^2}\, m_0^2 \left(\frac{S}{\alpha\mu}\right)^n = \frac{\hbar}{c}\left(\frac{S}{\alpha\mu}\right)^n$$

$n = -1, = 0, 1, 2, 3$

ZM(R) OK $-1, 0, 1, 2, 3$
M(L) OK $0, 1, 2, 3$ nev at -1

Source of 1) and 2)

and
$M^3 L \dfrac{C^4}{G}$ are forces

for Times not containing c

T at $L = 0, M = -1$ is $\dfrac{\hbar}{MC^2}$ also

$\Rightarrow F$ at $[0, -1] = \dfrac{M^3 L C^4}{\hbar^2}$

$$\frac{h^3}{G} = -46.778\,553\,241$$

$$m_0^3 l_0 \frac{C^4}{\hbar^2} = \frac{C^4}{G} \Rightarrow m_0^3 l_0 = \frac{\hbar^2}{G}$$

$\not\supset$ M, L
$-2, +1$
$-\frac{1}{2}, +\frac{3}{2}$ and $-1, 0$
$+1, +3$
$+2.5, +2.5$

also $M_3 = \dfrac{M_2^2}{M_1}$

$$M_3'' = \frac{m_0^4}{m_p} \Rightarrow \frac{M_{☆}^2}{M_D} = \frac{m_0^4}{m_p}$$

$M, R,$ The unexpanded universe $M \propto R$ $k = \frac{c^2}{G}$

L is result of expansion

inc α^2, n/μ, S factors etc $M \cdot 10^{-28} = R$

$$\dot{M}^3 L = \frac{h^2}{G}$$

$$\sim \quad R^3 L = \frac{h^2}{G}\frac{G^3}{c^6} = l_0^4$$

$$L_n = \frac{l_0^4}{R_n^3}$$

$$C = 0$$

$M, L \quad \rightarrow \quad \frac{GM^3}{L^2} \quad \rightarrow \quad \frac{c^4 L^2}{G^2 M^2} \quad \rightarrow \quad \frac{c^4}{G}$

$\frac{5}{2}, \frac{5}{2} \quad \frac{\hbar^4}{G M^4 L^4} \left(\frac{GM^3 L}{\hbar^2}\right)^2$

$1, 2 \quad \frac{\hbar^2}{ML^3} \left(\frac{GM^3 L}{\hbar^2}\right)^1 \quad \cancel{3L} - M$

$-\frac{1}{2}, \frac{3}{2} \quad \frac{GM^3}{L^2} \left(\frac{GM^3 L}{\hbar^2}\right)^0 \quad 3M + L$

$-2, 1 \quad \frac{M^5 G^3}{L \hbar^2} \left(\frac{GM^3 L}{\hbar^2}\right)^{-1} \quad L + M$

$-\frac{7}{2}, +\frac{1}{2} \quad \frac{M^8 G^3}{\hbar^4} \left(\frac{GM^3 L}{\hbar^2}\right)^{-2} \quad 3L + M$

$\frac{M}{L} c^2 = \frac{GM^2}{L^2} \quad \rightarrow \quad \frac{M}{L} = \frac{c^2}{G}$ the centrifugal to gravity balance of orbiting planets

$= \frac{M}{L} = \frac{v^2}{G}$ or $R = v^2$

ALAN WATTS

BEHOLD THE SPIRIT
Alan W. Watts
1947
III-A-4
Religion, Philosophy

NATURE, MAN AND WOMAN
Alan W. Watts
1958
III-A-4
Philosophy, Religion

THE BOOK ON THE TABOO AGAINST KNOWING WHO YOU ARE
Alan W. Watts
1966
III-A-4
Philosophy, Religion

MYTH AND RITUAL IN CHRISTIANITY
Alan W. Watts
1968
III-A-4
Philosophy, Religion

FORCES

$\hbar = 0$

conversion to $\frac{GM^3}{L^2}$

$$F(M,L)\cdot\left(\frac{GM}{C^2L}\right)^n = \frac{GM^2}{L^2}$$

$\left(\frac{GM}{C^2L}\right)^n$ is a "vector identity" [0]

~~$m = M-L+2$~~ $n = 3M+L$

conversion to $\frac{C^4}{G}$

$$F(M,L)\cdot\left(\frac{GM}{C^2L}\right)^k = \frac{C^4}{G}$$

$k = M-L$

F(M,L)
M\L values
from Table

$G = 0$

$$F(M,L)\cdot\left(\frac{MLC}{\hbar}\right)^w = \frac{\hbar c}{L^2}$$

where
$w = 3M-L$
~~$w = L - 3M$~~

$\left(\frac{MLC}{\hbar}\right)^n$ is a vector identity [0]

~~$F(M,L)\cdot\left(\frac{MLC}{\hbar}\right)^z = \frac{C^4}{G}$~~

~~$F(M,L)\cdot\left(\frac{C^4L^3M}{G\hbar^2}\right)^z = \frac{C^4}{G}$ $z =$~~

$\left(\frac{C^4L^3M}{G\hbar^2}\right)$ [0] vector identity

~~$G=0$ $F(M,L)\cdot(X) = \frac{C^4}{G}$ $F(M,L)\left(\frac{MLC}{\hbar}\right)^w\cdot\frac{L^2}{\lambda_0^2} = \frac{C^4}{G}$ $w = 3M-L$~~

~~(X) is a different [0] for each $G=0$ case~~

$G = 0$

$$F(M\cdot L)\cdot\frac{M^{p-2}L^pC^{p+1}}{\hbar^{p-1}G} = \frac{C^4}{G} \quad \text{no}$$

where $p = M+L$

not a force

$$\left(\frac{MLC}{\hbar}\right)^p\frac{C\hbar}{GM^2} \rightarrow 1.1$$

$\left(\frac{C\hbar}{GM^2}\right)^n$ vector identity

$G = 0$

$$F(M\cdot L)\left(\frac{c\hbar}{GM^2}\right)^v$$

where $v = 3M-L$

Forces $\supset G, c, \hbar$ incl

$\hbar = 0$

$M, L : (2, -1)\ k = 3$

$$\frac{L^3}{M^3}\frac{c^{10}}{G^4}\left(\frac{GM}{c^2L}\right)^k = \frac{c^4}{G}$$

$M, L = \left(\frac{3}{2}, -\frac{1}{2}\right),\ k = 2$

$$\frac{L^2}{M^2}\frac{c^8}{G^3}\left(\frac{GM}{c^2L}\right)^k = \frac{c^4}{G}$$

$(1,0)\quad \frac{L}{M}\frac{c^6}{G^2}\left(\frac{GM}{c^2L}\right)^{k=1}$

$\frac{1}{2}, \frac{1}{2}$

$0, 1\quad \frac{Mc^2}{L}\left(\frac{GM}{c^2L}\right)^{-1}$

$-\frac{1}{2}, +\frac{3}{2}\quad \frac{GM^3}{L^2}\left(\frac{GM}{c^2L}\right)^{-2}$

M, L	k
2, −1	3
$\frac{3}{2}, -\frac{1}{2}$	2
1, 0	1
$\frac{1}{2}, \frac{1}{2}$	0
0, 1	−1
$-\frac{1}{2}, +\frac{3}{2}$	−2

$M - L = k$

$$\boxed{\left(\frac{GM}{c^2L}\right)^k = \text{a vector identity}}$$

$G = 0 \rightarrow \frac{\hbar c}{L^2} \rightarrow \frac{c^4}{G}$

$$\frac{M}{L}c^2\left(\frac{MLc}{\hbar}\right)^n = \frac{\hbar c}{L^2}$$

$$(0,1)\ \frac{M}{L}c^2\left(\frac{\hbar}{MLc}\right)^1 = \frac{\hbar c}{L^2}\ \left(\frac{1}{2}, \frac{3}{2}\right)$$

$$\cancel{\frac{M}{L}c^2\left(\frac{\hbar}{MLc}\right)}$$

$$(1,2)\ \frac{\hbar^2}{ML^3}\left(\frac{\hbar}{MLc}\right)^{-1} = \frac{\hbar c}{L^2}$$

$$-\frac{1}{2}, +\frac{1}{2}\quad \frac{M^2c^3}{\hbar}\left(\frac{\hbar}{MLc}\right)^2$$

$\rightarrow \frac{\hbar c}{L^2}$

M L	n
1, 2	−1
$\frac{1}{2}, \frac{3}{2}$	0
0, 1	1
$-\frac{1}{2}, \frac{1}{2}$	2

$$\boxed{n = L - 3M}$$

$L - 3M$

$L - 3M$

$\rightarrow \frac{c^4}{G}$

$$\frac{\hbar c}{L^2} v \left(\frac{G\hbar}{c^3L^2}\right)^{-1}$$

$$\left(\frac{\hbar}{MLc}\right)^n = \text{a vector identity}$$

$$\frac{h^3}{ML^3}$$

$$\frac{\hbar c}{L^2} \rightarrow \frac{c^4}{G}$$

$$\left(\frac{MLc}{\hbar}\right)^n \frac{\hbar c}{L^2} =$$

$$\frac{\hbar c}{L^2}\frac{c^3L^2}{G\hbar}$$

$$\left(\frac{c^3L^2}{G\hbar}\right)\quad \begin{array}{c} VI \\ [0] \end{array}$$

$$\frac{c^5T^2}{G\hbar}\cdot\frac{\hbar c}{L^2} = \frac{c^6}{G}\frac{T^2}{L^2} = \frac{c^4}{G}$$

$$\frac{L^5}{\frac{t^3}{L^5}}$$

$\hbar = 0$

$n = 5$

$$\frac{L^3}{M^3}\frac{c^{10}}{G^4}\left(\frac{GM}{c^2L}\right)^n = \frac{L^3c^{10}G^5M^5}{L^5c^{10}G^4M^3} = \frac{GM^2}{L^2}$$

$n = 4$

$$\frac{L^3}{M^3}\frac{c^{10}}{G^4}\left(\frac{G^4M^4}{c^8L^4}\right) = \frac{Mc^2}{L}$$

$n = 3$

$$\frac{L^3}{M^3}\frac{c^{10}}{G^4}\left(\frac{G^3M^3}{c^6L^3}\right) = \frac{c^4}{G}$$

$n = 2$

$$\frac{L^3c^{10}}{M^3G^4}\left(\frac{G^2M^2}{c^4L^2}\right) = \frac{L}{M}\frac{c^6}{G^3}$$

$n = 6$

$$\frac{L^3c^{10}}{M^3G^4}\left(\frac{G^6M^6}{c^{12}L^6}\right) = \frac{M^3}{L^3}\frac{G^2}{c^2}$$

$$\frac{GM^2}{L^2}\left(\frac{GM}{c^2L}\right) = \frac{G^2M^3}{c^2L^3}$$

$$(M,L) \quad (+2,-1)\cdot\left(\frac{GM}{c^2L}\right)^5 = \frac{GM^2}{L^2}$$

$(\frac{3}{2}, -\frac{1}{2})(\quad)^4 =$

$(1, 0)(\quad)^3$

$(\frac{1}{2}, \frac{1}{2})(\quad)^2$

$(0, 1)(\quad)^1$

$$\frac{L^2}{M^2}\frac{c^8}{G^3}\left(\frac{GM}{c^2L}\right)^4 = \frac{G^4M^2 c^8}{L^3}$$

$(-\frac{1}{2}, +\frac{3}{2})(\quad)^0$

$(-1, +2)(\quad)^{-1}$

$$\frac{M^3}{L^3}\frac{G^2}{c^2}\frac{c^2L}{GM} = \frac{GM^2}{L^2}$$

$\hbar = 1$	n
$2, -1$	5
$\frac{3}{2}, -\frac{1}{2}$	4
$1, 0$	3
$\frac{1}{2}, \frac{1}{2}$	2
$0, 1$	1
$-\frac{1}{2}, +\frac{3}{2}$	0
$-1, +2$	-1

$$\boxed{M - L + 2 = n}$$

$-1 \quad +2 \quad +2$

$$\boxed{\hbar = 0 \quad F(M,L)\cdot\left(\frac{GM}{c^2L}\right)^n = \frac{GM^2}{L^2} \quad \text{when } n = M - L + 2}$$

CONVERT TO $\frac{GM^2}{L^2}$

CONVERT TO $\frac{c^4}{G}$

$$\frac{GM^2}{L^2}\cdot x = \frac{c^4}{G}$$

$$x = \frac{c^4L^2}{G^2M^3}$$

$$\left(\frac{c^4L^2}{G^2M}\right)^n \frac{L^3c^{10}}{M^3G^4}$$

$$\frac{L}{M}\frac{c^6}{G^3}\frac{MG}{Lc^2}$$

$$\frac{c^4L^2}{G^2M}\frac{GM}{c^4L}$$

$$\frac{L^3c^{10}}{M^3G^4}\cdot x = \frac{c^4}{G}\frac{M^3G^4}{L^3c^{10}}$$

$$x = \frac{M^3}{L^3}\frac{G^3}{c^6}$$

$$\left(\frac{MG}{Lc^2}\right)^n$$

$$\frac{L^3c^{10}}{M^3G^4}\left(\frac{MG}{Lc^2}\right)^n \quad n=3 \quad 2,-1 \quad 3$$

$n = 2 \quad \frac{3}{2}, -\frac{1}{2} \quad 2$

$0, 1 \quad 1$

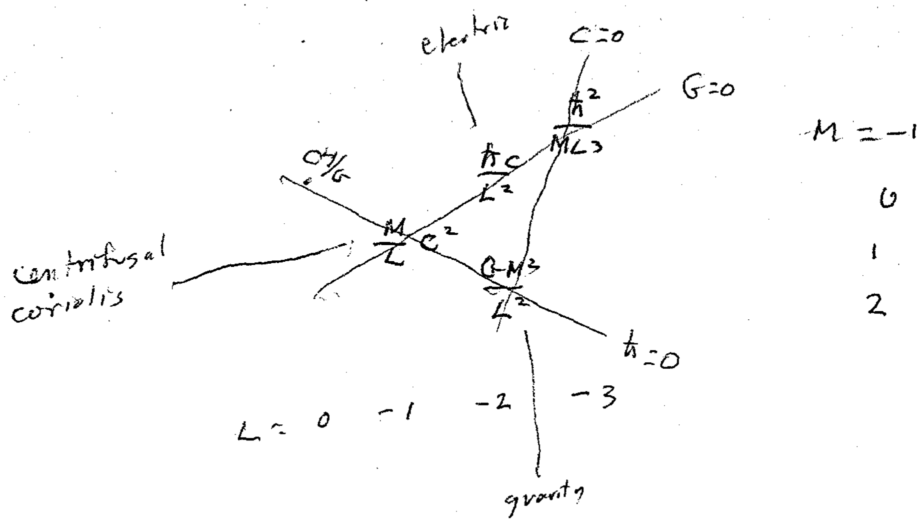
$$\frac{L^2}{M^2}\frac{c^8}{G^3}(\quad)^n$$

$$\hbar = 0 \quad F(M,L)\cdot\left(\frac{MG}{Lc^2}\right)^n = \frac{c^4}{G}$$

when $n = M - L + 1 = n$

	$\hbar = 0$ $\frac{GM^2}{L^2}$	$G = 0$ $\frac{M}{L}c^2$	$c = 0$ $\frac{\hbar^2}{ML^3}$
U	42.320136 $\frac{c^4}{G}(\alpha\mu)^{-6}$	45.701357 $\frac{c^4}{G}(\alpha\mu)^{-3}$	−190.431476 $\frac{c^4}{G}S^{-6}(\alpha\mu)^{-7}$
☆	44.574284 $\frac{c^4}{G}(\alpha\mu)^{-4}$	46.828431 $\frac{c^4}{G}(\alpha\mu)^{-2}$	−110.593458 $\frac{c^4}{G}S^{-4}(\alpha\mu)^{-2}$
D	46.828432 $\frac{c^4}{G}(\alpha\mu)^{-2}$	47.955505 $\frac{c^4}{G}(\alpha\mu)^{-1}$	−30.755440 $\frac{c^4}{G}S^{-2}(\alpha\mu)^{-1}$
P	c^4/G	49.082578 $\frac{c^4}{G}$	c^4/G
B	−29.628374 $\frac{c^4}{G}S^{-2}$	9.727107 $\frac{c^4}{G}S^{-1}$	7.472959 $\frac{c^4}{G}S^{-1}(\alpha\mu)^{-2}$

$\Delta = S^2\alpha\mu$
$= 79.838018$



What postulates, ... assumptions, rules
are needed to construct a Cosmic Template ?
[Cosmography]

BASIC QUANTITIES

$m_0 = -4.662\ 403\ 789$
$m_0^2 = -9.324\ 807\ 578$
$m_0^3 = -13.987\ 211\ 367$
$m_0^4 = -18.649\ 615\ 156$

$m_p = -23.776\ 602\ 304$
$m_p^2 = -47.553\ 204\ 608$
$m_p^3 = -71.329\ 806\ 912$

$c = 10.476\ 820\ 703$
$\hbar = -26.976\ \cancel{923}\ \cancel{730}$ $\left[\frac{ML^2}{T}\right]$
$G = -7.175\ 295\ 619$ $[L^3/M\,T^2]$

$\frac{c^2}{G} = 28.128\ 937\ 025$ $\left[\frac{M}{L}\right]$

$\frac{\hbar}{c} = -37.453\ 744\ 633$ $[ML]$

$\frac{\hbar^2}{G} = -46.778\ 552\ 241$ $[M^3L] = m_0^3\,l_0$

$M_\Omega = -42.890\ 801$
$m_p = -23.776\ 602$
$m_0 = -4.662\ 404$
M_D 14.451 796
$M_\star$ 33.565 9~~9~~5
M_U 52.680 194

$R = \frac{GM}{c^2}$

r_e −12.550 068 214
l_0 −32.791 340 828
$L_D = r_e$
$L_\star$ 7.691 205
L_U 27.932 478

R_P −51.905 539 $= r_e/S$
R_0 −32.791 341 $= l_0$
R_D −13.677 141 $= r_e/\alpha_M$
$R_\star$ +5.437 058 $= \frac{L_\star}{(\alpha M)^2}$
R_U +24.551 256 $= \frac{L_U}{(\alpha M)^3}$

$\Delta = 19.114\ 198\ 515$ $\Delta = 20.241\ 272\ 614$ $\Delta = 19.114$

	V	☆	D	~~ched~~ P	ched B or p
$(\alpha M)^3$ $\frac{M}{R}$	$= 28.128\ 938$	28.128 938	28.128 937	28.128 937	28.128 937
$\frac{1}{(\alpha M)^3}$ MR	$= 77.231\ 450$	$\frac{S}{\alpha M}$ 39.003 053	$\frac{S}{\alpha M}$ $(\alpha M)^2$ 0.774 655	(αM) $\frac{S}{\alpha M}$ −37.453 745	$\frac{S}{\alpha M}$ −75.682 141 S
$\frac{M}{L}$	$= 24.747\ 716$	αM 25.874 790	αM $(\alpha M)^2$ 27.001 864	αM αM 28.128 937	S −11.226 534 S
ML	$= 80.612\ 672$	S 41.257 200	S 1.901 728	S −37.453 745	−36.326 670 αM

V, ☆, D, P, B, M_Ω −42.890 801

$M_U = \frac{m_0^4}{m_p^3}$, $M_\star = \frac{m_0^3}{m_p^2}$, $M_D = \frac{m_0^2}{m_p}$, $m_0 = \frac{m_0}{m_p^0}$, $m_p = \frac{m_0^0}{m_p^{-1}}$, $M_\Omega = \frac{m_0^{-1}}{m_p^{-2}}$

$R_\Omega = -71.019\ 738$

$L_U = \frac{r_e^3}{l_0^2}$, $L_\star = \frac{r_e^2}{l_0^1}$, $L_D = \frac{r_e}{l_0^0}$, $l_0 = \frac{r_e^0}{l_0^{-1}}$, $L_P = \frac{r_e^{-1}}{l_0^{-2}}$, $L_\Omega = \frac{r_e^{-2}}{l_0^{-3}}$

−53.032 614 L_P −73.273 687 L_Ω

$$\frac{\hbar^2}{G}(\alpha\mu)^3 = m_p^3 L_v$$

$$\frac{\hbar^2}{G} = m_o^3 l_o$$

$$m_p^3 M_v = m_o^4$$

SYMMETRY

CONCEPT AND DEFINITIONS

- BALANCE ABOUT SOME 'FULCRUM'

AREA (SHAPE)	AREA (SHAPE)
MASS	MASS
M × L	M × L
$\frac{M}{L}$	$\frac{M}{L}$ $\frac{c^2}{G}$ SCHWARTZSCHILD

$f(x, \cdots) = \varphi(x, \cdots)$

- INVARIANCE UNDER TRANSFORMATION
  - ROTATION
  - TRANSLATION
  - INVERSION (REFLECTION)
  - DIALATION (SCALE) [FRACTALS]

INVARIANCE UNDER GRID INTERSECT~~INGS~~ S

- $F = \frac{ML}{T^2} = c\frac{M}{T} = \frac{c^4}{G} = \frac{\hbar}{cT^2} = \frac{MLc^5}{G\hbar}$ $\quad \frac{1}{T}\sqrt{\frac{\hbar c^3}{G}}$

and of inclusion

Symmetry

$$\frac{S}{\alpha\mu} \sim M \qquad S\cdot\alpha\mu \sim L$$