



The Unified Physics Map plots the path from the Pattern cluster and its derived equation past relativity and the quantum to finish at to the Pattern cube. The map reveals the remarkable correspondence between the terms of the different equations and the parts of the Pattern cube.

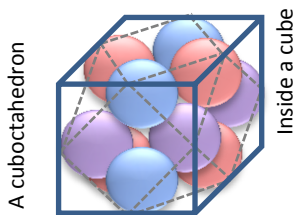
The Pattern was initially discovered in the cluster of spheres, thereafter expressed as the Pattern equation (pair) with its natural number value sets and later realised as the Pattern cube. This map reveals the unification potential of the Pattern cube.

The Pattern cube is an intricate geometric object that is shown on this map to match the relativity and quantum constructs of theoretical physics. In *The Standard Model Map* the Pattern cube had been shown to be a geometric version of the model.

The Pattern Cube is also the Gravity cube with three types of gravity: the antigravity (*aa*), gravity (*bb*) and chain gravity (*ab/ba*). The unification of special relativity, general relativity and the quantum phenomena happens in a single cube.

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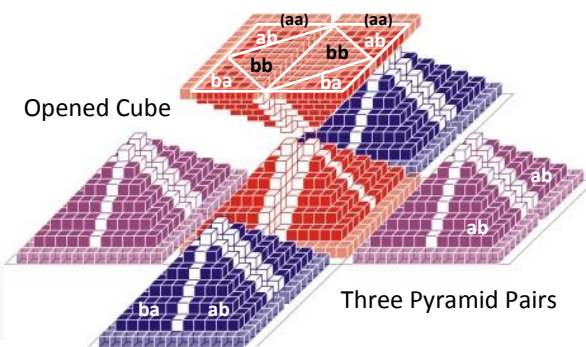
The Pattern Cluster



Basic equation $(a + b) = c$ & $c = (b + a)$
(Values: $a=6,5,4,3,2,1,0$; $b=0,1,2,3,4,5,6$)

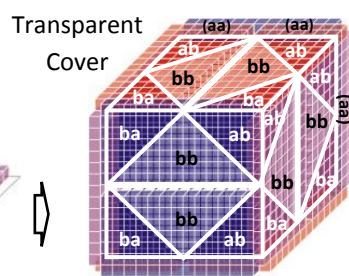
The (Linear) Pattern Pyramids

$6x [(aa + ab) + (ba + bb)]$ & $[(bb + ba) + (ab + aa)] x6$



The Pattern Cube

$6x [(aa) + ab + ba + (bb)]$ & $[(bb + ba + ab + (aa))] x6$



END HERE

The cubed Pattern equation (pair) equals 6 times the squared Pattern equation (pair):
 $(a + b)^3 = c^3$ & $c^3 = (b + a)^3$ equals Left $6(a + b)^2 = 6c^2$ & $6c^2 = 6(b + a)^2$ Right.

The Cubed Pattern Equation (Pair): $6x (aa + ab + ba + bb) = cc$ & $cc = (bb + ba + ab + aa) x6$

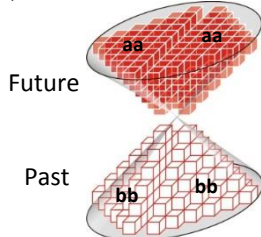
The basic imaginary equation (pair) is: $(ia + b) = c$ & $c = (b + ia)$ (This is a complex number pair)

The squared imaginary equation (pair) is: $-aa + (ia)b + b(ia) + bb = cc$ & $cc = bb + b(ia) + (ia)b - aa$

The Pattern cube is the Creation cube but with the *aa* parts compressed to form the cover-type antigravity.

The (Nonlinear) Relativity Light-cone

(It exhibits the antigravity and gravity sequences)
 $(aa = 36,25,16,9,4,1,0; b = 0,1,4,9,16,25,36)$



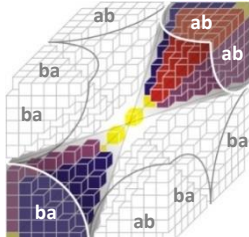
$6x (aa + bb)$ & $(bb + aa) x6$

With imaginary *a* it becomes:

$(-aa + bb)$ & $(bb - aa)$ is $-a^2 + b^2 = c^2$ & $c^2 = b^2 - a^2$

The (Nonlinear) Quantum Life-cone

(It exhibits the chain gravity sequence.)
 $(0, 1, 4, 9, 16, 25, 36, 16, 4, 0)$



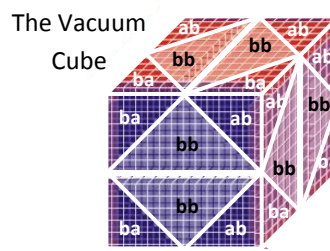
$6x (ab + ba)$ & $(ba + ab) x6$

With imaginary *a* it becomes:

$(ia)b + b(ia)$ & $(ia)b + b(ia)$ is $i(ab + ba)$ & $i(ba + ab)$

The (Linear) Creation Cube

(with overlapping *aa* and *bb* parts)



$6x (aa + ab + ba + bb)$ & $(bb + ba + ab + aa) x6$

The *aa* and *bb* parts overlap in this four-dimensional cube.

The equation above compares with a spacetime light-cone with cleft.

$-a^2 + b^2 = c^2$ & $c^2 = b^2 - a^2$ is $-t^2 + x^2 = s^2$ & $s^2 = x^2 - t^2$

The cubed Pattern equation 'contains' six such light-cones that overlap to combine with the mixed terms (*ab + ba*) to form the 4D Creation cube.

The physics needs the i, not the cube.

The equation above compares with the quantum condition:

The filler terms of the squared Pattern equation, i.e. $(ia)b + b(ia)$, do not commute in their geometric renditions (as parts of the life-cones), i.e. $(ia)b \neq b(ia)$. Therefore $(ia)b - b(ia) \neq 0$ and $ab - ba \approx \text{constant}/i$.

The *a* and *b* terms are similar to the momentum (**p**) and position (**q**) conjugate variables of the quantum condition $\mathbf{pq} - \mathbf{qp} = (\hbar/2\pi i) \mathbf{I} = \text{constant}/i$, (**I** is the unit matrix).

The quantum condition highlights the relevance of the filler terms (*ab + ba*) and their manifestation as the 'imaginary' life-cones. The complete quantum context, however, requires all four terms of the squared Pattern equation, i.e. including the *aa, bb* terms.



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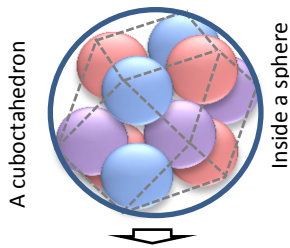
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The Pattern Cluster

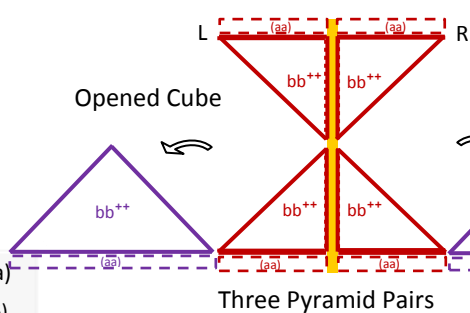


Basic equation $(a + b) = c$ & $c = (b + a)$
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The (Linear) Pattern Pyramids

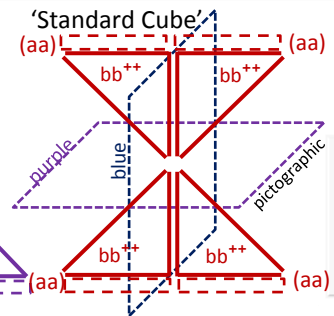
$6x [(aa + ab) + (ba + bb)]$ & $[(bb + ba) + (ab + aa)] x6$

Note that $(ab + ba + bb)$ equals bb^{++}



The Pattern Cube

$6x [(aa) + ab + ba + bb]$ & $[(bb + ba + ab + (aa))] x6$



END HERE

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The Cubed Pattern Equation (Pair): $6x (aa + ab + ba + bb) = cc$ & $cc = (bb + ba + ab + aa) x6$

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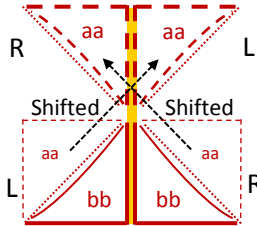
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The (Nonlinear) Relativity Light-cone

(It exhibits the antigravity and gravity sequences)

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$6x (aa + bb)$ & $(bb + aa) x6$

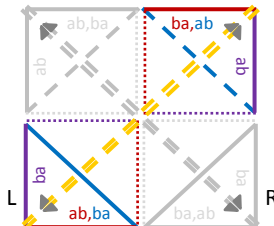
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The (Nonlinear) Quantum Life-cone

(It exhibits the chain gravity sequence.)

$(0, 1, 4, 9, 16, 25, 36, 16, 4, 0)$



$6x (ab + ba)$ & $(ba + ab) x6$

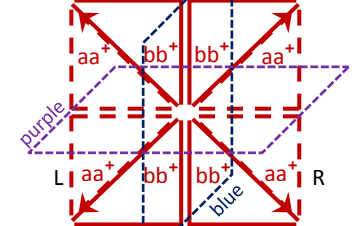
With imaginary *a* it becomes:

$(ia)b + b(ia)$ & $(ia)b + b(ia)$ or $i(ab + ba)$ & $i(ba + ab)$

The (Linear) Creation Cube

(Four+four+four duonity modules)

'Vacuum Cube'



$6x (aa + ab + ba + bb)$ & $(bb + ba + ab + aa) x6$

The simplified (combined) terms are:

$aa + ab = aa^+$ and $ba + bb = bb^+$

The equation above compares with a spacetime light-cone with cleft.

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