Things(2) (9 pages, 1500 words)
I closed a Gfield fall experience (Things1) by falling through six average ( $M_{1} M_{2}$ ) diameter/energy curves. Slightly different experience from Galileo's incline plane. His is 'stuck to the ground' environmental, controlled fall via Gfield Uniform Acceleration. In orbit space we have sling shot accelerations. Depending on entry orientation with these type Gfield energy curves, we can be thrown into deep space, captured, or continue fall to surface curve of $\left(M_{1}\right)$.

## Review of Gfield fall path from initial discovery curve(a);

 $\left(\frac{3}{2} \cos (t), \frac{3}{2} \sin (t)\right)$ controlling energy distribution via average diameter on period time curve of displacement integer(3).I select a particular parametric geometry Gfield fall path. Let our fall be from initial discovery curve ( $a$ ) to a final discovery curve $(f)$ as labeled in construction figure1.

Since each CSDA discovery curve is specific to an average energy diameter happening on an $\left(M_{1} M_{2}\right)$ event, each analytical fall is a time frame of initial, curve $(a)$, to final, curve $(f)$.

Each fall is along $\left(M_{2}\right)$ period time curve, eventually finding that place in space with abscissa event:

$$
(\sqrt{\text { displacement }})
$$

I say it is here we can set a mechanical limit on $\left(M_{2}\right)$ orbit motion and $\left(M_{1}\right)$ potential setting a fall event from orbit(3) to average energy curve of orbit(2) under control of discovery curve(f).

System rest energy of an ( $M_{1} M_{2}$ ) configuration is always a half step down central force spin. Let rest energy of higher orbit mechanics begin at the $\left(\frac{\pi}{2}\right)$ spin axis of the next lower mechanical ( $M_{1} M_{2}$ ) dynamic orbit configuration.

It is here a fall can be catapulted, arrested, or let slip away toward central force $\mathbf{F}$ of ( $M_{1}$ ).


Figure 1: Gfield fall mechanics from displacement orbit(3) to displacement orbit(2)
fall from orbit via initial discovery to final discovery

## ALEXANDER

| Name | Description | Caption |
| :---: | :---: | :---: |
| Curve a | Curve( $1.5 \cos (\mathrm{t}), 1.5 \sin (\mathrm{t}), \mathrm{t},-4,4)$ | Initial independent discovery curve. |
| Curve b | Curve( $\left(\mathrm{t}, \mathrm{t}^{2} /-6+3 / 2, \mathrm{t},-1.5,3\right)$ | $\left(M_{2}\right)$ period time curve AKA dependent/definition curve. |
| Curve c | Curve(t, $\mathrm{t}^{2} /-2+3 / 2, \mathrm{t}, 0$, sqrt(3)) | ( $\sqrt{\text { displacement }})$ pt (A) on period time curve(b). |
| Curve d | Curve(t, $\mathrm{t}^{1 /-2+3 / 2, ~ t, ~ 0, ~ 3) ~}$ | Registration of displacement(3) with ( $M_{1}$ ) spin axis. |
| Curve e | Curve(t, $\left.\mathrm{t}^{0} /-2+3 / 2, \mathrm{t}, 0,3\right)$ | Initial discovery rest energy curve |
| Curvef | Curve( $\cos (t), \sin (t), t,-0.15,1.5)$ | Final discovery curve. |
| Curve g | Curve( $\left.\mathrm{t}, \mathrm{t}^{2} /-4+1, \mathrm{t},-0.5,2\right)$ | Displacement integer(2) |
| Point A |  | Spin axis definition of $\left(M_{1}\right)$ potential limit on period curve(b) and rest energy on spin. |

## Created with GeoGebra

Let fall event be from orbit(3) to average energy curve of orbit(2), under control of discovery curve( $f$ ), fail.


Figure 2: analytic happenings at orbit displacement average diameter curve(2)

In this time frame discovery curve( $f$ ) now becomes primary orbit controller discovery curve ( $a$ ).

The mechanics will be the same as
orbit(3) to orbit(2); see fig.3. ( discovery (a) as initial to discovery $(f)$ as final.
fall orbit(2) to orbit(1.) (displacement(2) of Sir Isaac Newton to Surface Acceleration curve(a) of Galileo. Figure3.
ALEXANDER

| Name | Description | Caption |
| :---: | :---: | :---: |
| Curve a | Curve $(\cos (\mathrm{t}), \sin (\mathrm{t}), \mathrm{t},-4,4)$ | Initial discovery, Galileo Surface Acceleration curve |
| $\begin{aligned} & \text { Curve } \\ & \text { b } \end{aligned}$ | Curve( $\left.\mathrm{t}, \mathrm{t}^{2} /-4+1, \mathrm{t},-1.5,2\right)$ | $\left(M_{2}\right)$, displacement(2) period time curve |
| Curve c | Curve(t, $\left.\mathrm{t}^{2} /-2+\frac{1}{2}, \mathrm{t},-\mathrm{sqrt}(2), \operatorname{sqrt}(2)\right)$ | $(\sqrt{\text { surface acceleration curve (a) }})$ |
| Curve $\mathrm{d}$ | Curve(t, $\left.\mathrm{t}^{1} /-2+1, \mathrm{t}, 0,2\right)$ | Registration displacement(2) with spin |
| Curve e | Curve(t, $\mathrm{t}^{\mathbf{o} /-2+1, t, 0,2)}$ | Rest energy of Galileo's Surface Acceleration curve (a) |
| Curve f | $\begin{aligned} & \text { Curve }(0.5 \cos (t), 0.5 \sin (t), t,-0.15, \\ & 1.5) \end{aligned}$ | Final discovery curve, $\frac{1}{2}$ spin below Galileo's curve(a). |

## Created with GeoGebra

I use three index solution curves to map Gfield happenings:

$$
\begin{gathered}
\left(\text { parametric potential }\left(\text { displacement }^{\frac{1}{2}}\right) \xrightarrow{\text { yields }}\left(t, \frac{t^{\text {index }(2)}}{-2}+\frac{\text { displacement }}{2}\right)\right) \\
\left(\text { parametric }\left(\text { registration }^{\frac{1}{1}}\right) \xrightarrow{\text { yields }}\left(t, \frac{t^{\text {index }(1)}}{-2}+\frac{\text { displacement }}{2}\right)\right) \\
\left(\text { parametric }\left(\text { rest }^{\frac{1}{0}}\right) \xrightarrow{\text { yields }}\left(t, \frac{t^{\text {index }(0)}}{-2}+\frac{\text { displacement }}{2}\right)\right)
\end{gathered}
$$

Solution curves are derived from the basic root script:

$$
(\sqrt[i n d e x]{\text { displacement }})
$$

In the dependent numerator of variable $(t)$ I replace exponent with index. The displacement argument becomes the radicand independent $(t)$, and the placement pin, the add on position of solution curve relevance with displacement and spin becomes:

$$
\left(\frac{\text { displacement }}{2}\right)
$$

To fall from orbit curve(2) brings us to Uniform Acceleration curves of $\left(M_{1}\right)$. Our most familiar acceleration experience, thanks to Galileo.

An index(0) rest energy solution curve on Uniform Surface Acceleration curve (a), need pass across the separator of our infinities. Essentially, we move from macro space Classic Big to micro space quantum small, finding $\left(\frac{1}{2}\right)$ unit of $\left(M_{1}\right)$ spin, a Central Force spin axis.

To do this, I apply parametric index solution curve geometries against surface acceleration curve $(a)$ of $\left(M_{1}\right)$, construct rest energy path of $\left(M_{1}\right)$ curve $(e)$, and fall through the abundant nuclear space of $\left(M_{1}\right)$ surface acceleration to a place in
time and space where being is an inverse experience. Here's how to fall between the connecting space of atoms:
Falling through the cracks or Exploring Quantum Space with the tools of Calculus.

Rest energy curves of current discovery inquiry are always a half step down. They source current discovery as (place of initial), connecting 'initial' discovery, via rest energy link, with a new discovery curve $\left(\frac{\pi}{2}\right)$ spin place as (place of final). With surface acceleration curves we find a nuclear discovery frame, curve $(f)$.


Figure 3: parametric nuclear structure curves; (c and f) lying below surface acceleration curves of gravity.

I apply index(0) solution curve to discovery (1) curve (a), using displacement integer(2) as (pin) numerator to find rest energy of discovery(1) at (spin level $\left(\frac{1}{2}\right)$ ). I construct curve ( $f$ ), the first discovery curve definition I meet falling through and across Galileo's Gfield Uniform Surface Acceleration curve(a) into Quantum Space.

Let curve $(f)$ be the final discovery, and surface acceleration curve ( $a$ ) be inital.

The relevant pin term of curve $(f)$ is $\left(\frac{1}{2}\right)$ and the relevant pin term for rest energy of discovery $(a)$ is $\left(\frac{2}{2}\right)$.

If curve $(f)$ is a nuclear subset of $\left(M_{1}\right)$ a set member of micro infinity energy curves, we see relevant pin terms are actually placement at central force spin vertices of initial dependent parabola curve focal radii, a CSDA definition curve.

This next construction suffers identification code for lines and curves. I apologize for lack of coordination of standard model identification code. I get mentally consumed in my constructions and letters of identity may not fall same place as previous constructions. However, my concept of central force composition objects have inherent sameness. This construction gives significance to rest energy of Galileo's Surface Acceleration Curve.


Figure 4: only one index $(0)$ rest energy solution curve passes across Gfield central force acceleration curve $(a)$. That is index $(0)$ solution curve $(d)$, rest parametric of CSDA independent/discovery curve $(a)$.

I've constructed five displacement curves ( $i, v, k, r, b$ ) displacement integers( $6,5,4,3,2$ ), in this Gfield map (figure4). Only one, curve( $d$ ) from displacement integer(2), passes across the great divide of Big Space and Small Space.

This next construction enhances the curved space on both sides of the great divide.

Three sets of discovery curves and their displacement wards.


Figure 2: travel from macro space to micro space across two displacements curves of Sir Isaac Newton (3\&2) and the Surface Acceleration curve(a) of Galileo's incline plane.

Let the red set of curves be discovery $(f)\left(\frac{3}{2} \cos (t), \frac{3}{2} \sin (t)\right)$ and its displacement integer(3), period time curve $(g)$. Index solution curve parametrics:

- Rest energy curve $(i)$ of curve $(f)$ : $\left(t, \frac{t^{0}}{-2}+\frac{3}{2}\right)$
- Linear registration curve $(e)$ of curve $(g)$ with spin: $\left(t, \frac{t^{1}}{-2}+\frac{3}{2}\right)$
- Potential curve $(\mathrm{h}):(\sqrt{\text { displacement }}) \quad\left(t, \frac{t^{2}}{-2}+\frac{3}{2}\right)$

Let black set of curves be discovery $(a)$ and displacement(2):

- Rest energy curve $(k)$ of ( $a$ ) $\left(t, \frac{t^{0}}{-2}+\frac{2}{2}\right)$
- Linear registration curve ( $d$ ) of curve ( $b$ ) with spin: $\left(t, \frac{t^{1}}{-2}+\frac{2}{2}\right)$
- Potential curve $(j):(\sqrt{\text { displacement }}) \quad\left(t, \frac{t^{2}}{-2}+\frac{2}{2}\right)$

Let green set of curves be first foray ever into nuclear Quantum space:

- Rest energy curve $(l):\left(t, \frac{t^{0}}{-2}+\frac{1}{2}\right)$
- Linear registration curve(c) with spin: $\left(t, \frac{t^{1}}{-2}+\frac{2}{2}\right)$
- Potential curve $(j):(\sqrt{\text { displacement }}) \quad\left(t, \frac{t^{2}}{-2}+\frac{2}{2}\right)$

Nuclear collection refers back to Surface Acceleration spin of $\left(M_{1}\right)$.
I will not cover nuclear geography, analytics, or dynamics here in this exploratory. This paper is about how I got there not what I found there.

I have reservations concerning perception on arrival with quantum space solution curves. My first signing of these curves assigned negative to N pole spin and positive to S pole.


Figure 3: looking inside green at nuclear lines and curves.
Fall to surface accel crvspsqsprt(2)
the three index solution curves ( $g, h, i$ ) are signed as displacement space property. My original work on constructing roots assigned ( $\pm$ ) polarity using slope solution curves with positive domain.

- Nuclear linear connect curve(h); proton spin with Galileo surface acceleration:

$$
\left(t, \frac{t^{1}}{-2}+\frac{1}{2}\right)
$$

- Nuclear potential curve $(i): \sqrt{\text { surface acceleration }} \xrightarrow{\text { yields }}\left(t, \frac{t^{2}}{-2}+\frac{1}{2}\right)$

If I change sign, I get curves ( $l \& k$ ). rest energy curve $( \pm g)$ stays as is, a nuclear domain happening.

- Nuclear linear connect curve(I): $\left(t, \frac{t^{1}}{2}-\frac{1}{2}\right)$
- Nuclear potential curve(k): $\left(t, \frac{t^{2}}{2}-\frac{1}{2}\right)$

Different slope for different slope happenings.
That is enough. Need to let my mind drain off excess stuff floating around in here.
Intend to take a few weeks off for Thanksgiving and Christmas. Going to NJ.
As my nephew (JH III) once told me. Keep it simple.
Intend to script two MP4's about Things(1 \& 2) for production and posting 2023.
ALIXANDER; CEO SAND BOX GEOMETRY LLC
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