A-2-2-Quality of physical Abstract object in ontology; “time character” or “tempal quality character ‘in ontology; corresponding with “dynamic geometry” in mathematic

In this part SGH introduce new point of view to geometry which is different from contemporary geometry, we need this type of view due to correspondence to ontology and correspondence to physics science as well. Till now SGH consider geometry as two different type:

1-geomtry according to spatial dimension which introduced as static geometry

2-geomtry according to Tempal dimension which introduced as dynamic geometry in this part we will introduce tempal geometry;

SGH geometry type of view established base on Tempal qualitative character in ontology and it is behalf of existence of “abstract motion into time” and it has Quality character.which this Quality is depend on time that’s why we called “Tempal quality character “ and it is corresponds with “dynamic geometry” in mathematics science.

SGH state:

Each abstract entity has inherent motion and because of that has Tempal quality and it placed into its coexistence dimension that means its time matrix, while it depends on level of its dimension;

For example:

Moving trace of a point (as abstract object) in certain timeframe is line.

moving trace of one line (as abstract object) in certain timeframe is a plane .

Moving trace of one plane (as abstract object) in certain time frame is volume, and so on.

Therefore base on SGH classification we can introduce postulates of dynamic geometry in any dimension as follow:

1. First dimension Geometry: Line geometry
2. Second dimension Geometry: plane geometry

3. Third dimension Geometry: solid geometry

4. Fourth dimension Geometry: and so on

There is important question about the contemporary mathematics subject which we looking for answer, does our mathematics equipped enough to analyses all shape in all dimension? For example we able to analyses triangle in second dimension because we have essential of analyses such as line or angle or plane .how about in 3rd dimension? How we can analyses one pyramid? We have plane and angle and how about 4th and 5th dimensions or even higher dimensions? Does our contemporary mathematic enable to analyses directly any shape in any dimension?

To answer such question we need to generalize our mathematics to all dimension For the generalize of geometry in different dimension SGH introduce fundamental elements of each particular dimension ,therefore by apply this dimensional elements we empower our mathematics to analyses any shape in any dimension.

In this part to reach such target we have to generalize dynamic geometry and to generalize we need some element as “geometric characters “but what are “geometric characters” in any certain dimension?

Dynamic Geometric characters postulates; generally aspect

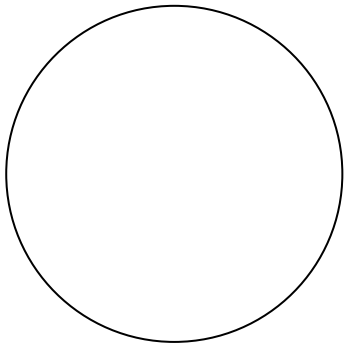
To discuss about any shape in any dimension SGH introduce following dynamic geometric characters base on dimension :

1-dynamic geometric structure: in any certain dimension has special structure for example: linear, palnear… structure which we will describe them in following.

2-dynamic geometric elements :it is basics of dynamic geometry structure of certain dimension for example geometric elements in 1st dimension is point and geometric elements in 2nd dimension is line and in third dimension is plane, and so on.

3-dimensional angle:

it is equal to the part of the “down space character “of “static geometry of ideal shape “which sounded between “dynamic geometry elements”. For example in second dimension dynamic is circle and its down space character is circumference and angle in this dimension is a part of circumference which is sounded between two line



4-unit of angle:

to analyses the angle we need the unite for measurement in any certain dimension. there is one considered ideal shape this ideal shape is come from A-1-2- part -static geometry condition. To measure angel we use:

base on following relation we can calculate the unite of angle in any dimension:

$$= \frac{r^{n-1}}{(down, s.g.c.)}$$

In this relation r is radius of down space static geometry character of ideal shape in certain dimension. For example in second dimension unite of angle is:

$$= \frac{r^{n-1}}{(down, s.g.c.)} = \frac{r}{2\pi r} = \frac{1}{2\pi}$$

in this SGH manner we could prepare our necessary utility to generalization our mathematics in all dimension as following:

Dynamic Geometry Generalization postulations:

SGH for first time in science history define geometry science base on motion which called dynamic geometry , this innovation will establish close relationship between mathematics science and physics science .base on new definition we can make better classification. right now our contemporary geometric science is not complete because base on that we cannot analyses different shapes in any dimension for example in 10^{th} dimension we don't know about spherical shape charters and we cannot analyses geometric shapes in such dimension or upper dimension, but SGH guide us to generalization and enable us to analyses all shape therefore SGH generalization introduce by define "dimensional geometry generalize" and "elements of dimension" as follow:

Dimensional geometry generalize postulates; particular aspect

1-1st dimension;

1-1-**Dynamic geometry structure:** linear geometry: first dimension Geometry: line geometry

Linear vector definition: it is motion trace of a "**pointe**" as abstract physical object which departure from uncertain initial coordinate (space, time) and move to uncertain final coordinate (space, time) .

Its due to the point (as abstract object) motion just probability to choose one direction in any moment.

1-2- **Dynamic geometry elements:** point as abstract object is dynamic geometry elemnts in 1st dimension.

1-3-. Angle between the elements:

In this dimension there is no Static geometry ideal shape that's why there is no angle no angle

1-4-unite of 1st angle: $= \frac{r^{n-1}}{(down, s.g.c.)} == \frac{1}{\pi}$ that's why there is no an angle

2-2nd dimension;-palnear (plan vector);

2-1 dynamic geometric **structure of 2nd dimension:** plane

plane vector definition: it is motion trace of a "**linear** "as physical abstract object which departure from uncertain initial coordinate (space, time) and move to uncertain final coordinate (space, time).

Geometric plane is vector that considered due to probability of abstract object motion in two direction in any moment.
2-2-dynamic geomtryric elements: in this dimension is line

2-3-2-4-Second dimension angle : in this dimension dynamic geometry element is line an Angle between lines is equal to part of the static geometry ideal shape which in this dimension it is circle therefore base on following figure no…… we illustrate it (2Ds): its space between (2) adjacent lines.

2-4. Unite of angle: base on static geometric character postulates in this dimension ideal shape is circle and its "down static geometric character" (down,S.G.C.) is :

Unit of angle is $= \frac{r^{n-1}}{(down, s.g.c.)}$

Therefore: $= \frac{r^{n-1}}{(down, s.g.c.)} == \frac{r}{2\pi r}$

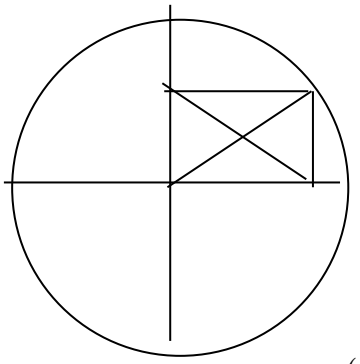
Unit of **2nd** dimension angle is :$(\frac{1}{2\pi})$

its dominance is : $0 \le 2D.Angel \le 2\pi$

2-4-Perpendicular 2Ds angel: $\frac{2^{n-1}\pi}{2^n} \to (n=2) \to \frac{2\pi}{4}(\frac{2\pi r}{2^2 r}) = (\frac{\pi}{2})$

2-5-triangle: sum of the angles inside of triangle is $= 2\frac{(down, s.g.c.)}{r^{n-1}} = \pi$

Here we have glance on our contemporary geometry analyses according to the



The Pythagorean Proposition and its effect on trigonometry and also algebra.

$$(\mathrm{OA})^2 + (\mathrm{OB})^2 = (\mathrm{AB})^2$$

$$\left(\frac{\mathrm{OA}}{\mathrm{AB}}\right)^2 + \left(\frac{\mathrm{OB}}{\mathrm{AB}}\right)^2 = 1$$

$$(\sin\alpha)^2 + (\cos\alpha)^2 = 1$$

$$\left(\frac{\mathrm{OA}}{\mathrm{AB}}\right) = \sin\alpha, -1 \ll \left(\frac{\mathrm{OA}}{\mathrm{AB}}\right) \ll 1$$

$$\left(\frac{\mathrm{OB}}{\mathrm{AB}}\right) = \cos\alpha, -1 \ll \left(\frac{\mathrm{OB}}{\mathrm{AB}}\right) \ll 1$$

SGH. By apply its new definition and by apply its generalization opens new windows to unknown worlds to new geometry that's why we should be ready for understanding new elements and new article. As before mentioned SGH tries to discus and solve problems of each dimension by its own element's directly and this is goal of SGH.

3-3rd dimension;

3-1-Dynamic Geometric **structure of 3rd dimension:** it is volumear (volume vector)

- Volume Definition: it is motion trace of a "**palnear'** as physical abstract object which departure from uncertain initial coordinate (space, time) and move to uncertain final coordinate (space, time).

3-2-**Geometric elements:** it is Plane and it is result of abstract object Motion in 3 direction in any moment in this dimension.

3-3- Angel between Element: Third dimension angle (3Ds),

it is equal to the part of the "down space character "of "static geometry of ideal shape "which sounded between "dynamic geometry elements". In this dimension static geometry character is sphere which its down space character is area .

3-4-unite of angle: $= \frac{r^{n-1}}{(down, s.g.c)} = \frac{r^2}{2^2 \pi r^2} = \frac{1}{4\pi}$

its dominance is : $0 \le 3D.Angel \le 4\pi$

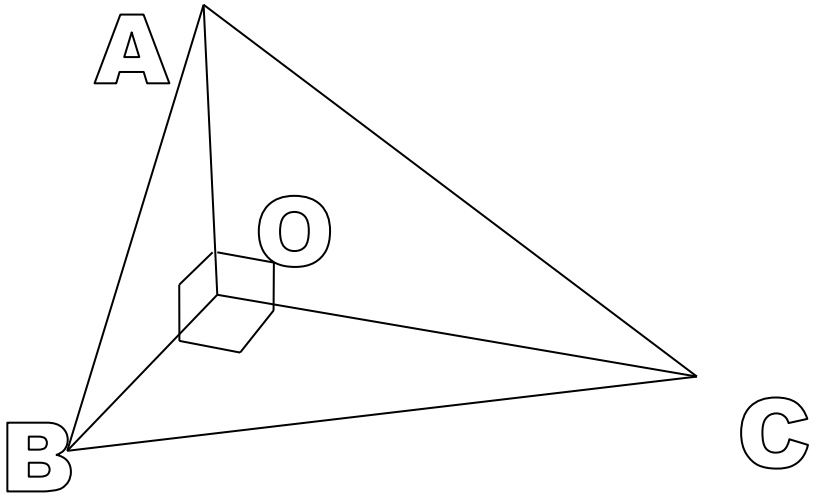
3-5- Perpendicular 3d angel: $\frac{2^{n-1}\pi}{2^n} \to (n=3) \to \frac{4\pi}{8}(\frac{2^2 \pi r^2}{2^3 r^2}) = \frac{\pi}{2}$

3-6-triangle: sum of the angles inside of triangle is $= 2\frac{(down, s.g.c.)}{r^{n-1}} = 2\pi$

5. triangle (minimum space) in 3D: 4(perpendicular)=4($\frac{\pi}{2}$)

6. Ideal complete shape in 3 dimension: sphere: $2^n(\frac{\pi}{2}) = 2^3(\frac{\pi}{2})$)

In compare with The Pythagorean Proposition in second dimension and by apply elements of 3 dimension SGH established trigonometry in 3 dimension as follow :



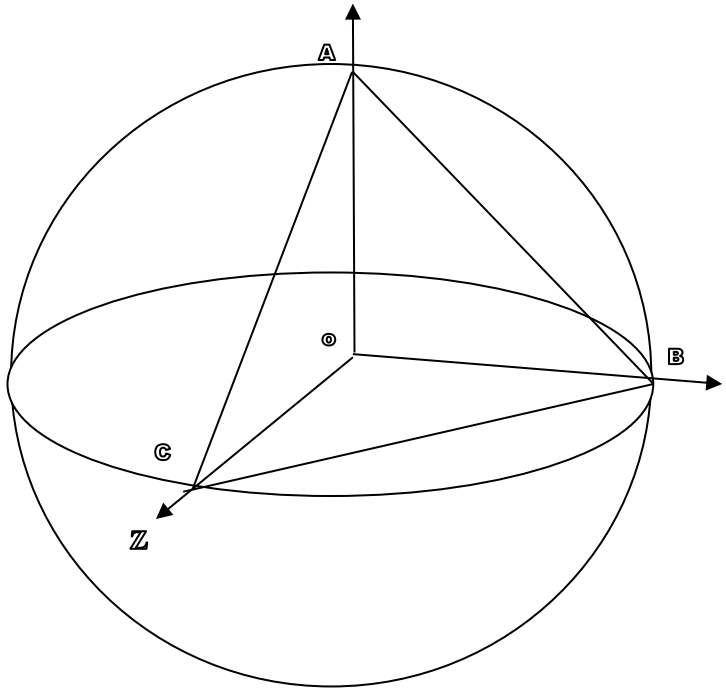
3Ds angel O: its space between 3 palnear: AOB, BOC, COA

For example at apex A “3 dimensional angle “is space limited between

BAD, DAC, BAC planes.

In third Geometry we use sphere, and use planes scale and 3D.angle.to discuses about details of space.in compare with second space geometry S.G. Hypothesis suggest new debate in geometry of third dimension. Trigonometry in 3 dimension .in compare with

2^{nd} dimension dynamic geometry SGH suggests The Pythagorean Proposition in 3^{rd} dimension and describe its trigonometry in 3^{rd} dimension as follow:



That’s why we can define bellows conductive planes in3 dimension same as sinuous and cosines in 2rd dimension:

1-Ata, 2- Yuta, 3- Meta

They are conductive palnear (like sin, cos in second dimension) in 3rd dimension

$$(S_{OAB})^2+(S_{OAC})^2+(S_{OBC})^2=(S_{ABC})^2$$

$$\left(\frac{S_{OAB}}{S_{ABC}}\right)^2+\left(\frac{S_{OAC}}{S_{ABC}}\right)^2+\left(\frac{S_{OBC}}{S_{ABC}}\right)^2=1$$

$$(ata)^2+(uta)^2+(mta)^2=1$$

Xoy, yoz, zox are conductive planes vectors or planer vectors like sin, cos vectors in second dimension.

It remind us The Stern–Gerlach experiment which strongly impact on developments in modern physics: these 3 plane vectors (ata, uta, meta) correspondent 3 beams Sx,Sy,Sz in quantum mechanics.

Quantum Bloch sphere while its vectors are corresponding Sx,Sy,Sz . We can use Pauli matrix as scale of these 3 vectors and apply new quantum mechanics base on this new 3 dimensional coordination set .by correspondence this idea SGH will continue innovation generalization to physics science quantum mechanics branch.

In next book we will carry on this debate and we will introduce new revolutionary idea about quantum physics in correspond this debate.

SGH begin from ontology definition and elementary fundamental and reach to very complicated sciences by logical steps as it is obvious how we reach to quantum mechanics from simplest ontological elements, this is ability and capability of SGH but this is not end and is just beginning .because SGH by generalization able to analyses fourth or fifth or upper dimension mathematics here we want to show how we can analyses next dimension in this manner and explorer new horizon for mathematics science:

4-4th dimension; (S4)

4-1-Geometric **structure of 3rd dimension:**

Because we do not have any name for 4th dimension structure we call it S4

- S4 Definition: it is motion trace of a "**volumear' as** physical abstract object which departure from uncertain initial coordinate (space, time) and move to uncertain final coordinate (space, time).

4-2- Geometric elements: it is volume and it is result of abstract object Motion in 4 direction in any moment inthis dimension.

2. Angel between Element:

it is equal to the part of the "down space character "of "static geometry of ideal shape "which sounded between "dynamic geometry elements". In this dimension static geometry character is (sphere D4) which it's down space character is volume.

3-unite of angle: $= \frac{r^{n-1}}{(down, s.g.c)} = \frac{r^3}{2^3 \pi r^3} = \frac{1}{8\pi}$

its dominance is : $0 \le 4D.Angel \le 8\pi$

4. Perpendicular 3d angel: $\frac{2^{n-1}\pi}{2^n} \to (n=4) \to \frac{8\pi}{16}(\frac{2^2\pi r^2}{2^3 r^2}) = \frac{\pi}{2}$

5-triangle: sum of the angles inside of triangle is $= 2\frac{(down, s.g.c.)}{r^{n-1}} = 4\pi$

5. Triangle (minimum space) in 3D: 4(perpendicular) =4($\frac{\pi}{2}$)

Nevertheless we cannot imagine or illustrate this dimension or upper dimension but in this manner we can program our computer and analyses each dimension by its elements.