

To: Academy of Science; Geometrical / Mathematical Society in Your country & anyone, who can comprehend the subject.
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Dear Sir/Madam,

The time has come to discuss the following subject: the space (matter) structure. What it has to do with π ? Everything. There is the text in The Bible which suggests that $\pi = 3$. The hint is mentioned twice: in the first book of **Kings 7:23** and the second book of **Chronicles 4:2**. I'm completely aware of the fact that The Bible isn't a guide book for other religions such as Hindu's or Muslim faith. However not many people outside Christianity or Judaism will deny the fact that The Bible is at least an important historical document. Besides there is a phenomenon known as "*The Bible code*" which attracts considerable scientific community. When the Biblical text (The Old Testament) in Hebrew was searched for patterns by using computers it showed some hidden structure. It breaks if only one letter is replaced or left out. The odds are too extreme to see it as "*just a coincidence*". It preserved the Biblical text being intact and free from personal interpretations by copyists through the Ages. The view expressed below might interest You for the variety of reasons. Regards A. A.

“ Perpendicular reality and artefact of π ”

An extract from article “**Balled** ©Vision” by Alexei ARSENTYEV

- 1) “And he made a molten sea, *ten* cubits from the one brim to the other: it was *round* all about, and his height was five cubits: and a line of *thirty* cubits did compass it *round* about” -The Books of the Old and New Testament **1 Kings 7:23** and again in **2 Chronicles 4:2**.
- 2) « Ubi materia - ubi geometria » - Johannes Kepler.
- 3) “This is not a spoon what bends, it is only yourself”- wiz-kid from “The Matrix” movie.

Pi (π) is one of the most fundamental digits in geometry. It is by definition the ratio between the length of a circumference and its diameter. We all have been taught at school that π is approximately 3,1415926535897.. ad infinitum. That is so only if we consider our space to have 3D-cubic structure with perpendicular lines of force and flat sections in all directions. This state of mind has grown from so called “Euclid geometry”. It originated from the point of view which existed at the dawn of the civilization. Then people believed that our Planet was flat and resembled a coin or even a square. With the time we've learned that our Planet looks like a huge ball and this view has become widely accepted today. But apparently some flatness in our minds has remained. This is because almost everything around us is *flat, square & cubic*. We use *flat* geographical maps, look on images on *flat* TV and PC screens, see the World via flat windows and build *cubic* buildings. We consider our Universe and space around us to have that characteristic **3D-flat** structure by using Descartes' coordinates system in science. And good old fashioned cylinder-shaped glass bottle with milk has been replaced by brick-like card-boarded Tetra Brik by Tetra Pack. No wonder we have failed to upgrade our mind to the understanding that *perpendicular* reality with its straight lines, square angles and ideally flat surfaces exist only in our mind or on limited scale. We should be considering our Universe and space around us to have spherical structure. Any points, lines, circles, triangles, squares and other geometrical figures should be seen as laying on invisible spherical surfaces of various diameters and not on flat window glass. One example of such big sphere (although visible) is the surface of our Planet. Another- surface of an ordinary apple. What was Mr. Newton thinking about when the apple hit him? Oh ya, gravitation, not geometry. Thus *diameter* of a circle isn't a straight segment belonging to the flat plane containing circumference. It is slightly bend line belonging to imaginary or *real* (i.e. **visible**) sphere. Naturally, if we draw on the ground a circle with 3 meter in diameter then curvature of its surface will be trifling considering the size of our Planet. But if we imagine a circle as big as my native Russia; make 3 meter circle on the wall in the famous round chamber “La Salle π ” (Palais de la Decouverte in Paris) or on the wall of the Oval Office in the White House or draw coin-sized circle on an apple fruit then surface's curvature will become obvious. The only case when we can speak about surface with truly ideal flatness arises if we make a section of a ball by surface **going through its center**. Are we still living on pizza-like Planet in the center of the Universe? *Viva la Ptolemy* then!!! To those who doubt the idea of spherical Universe being expressed here I'd offer to explain the following facts using ever prevailing “**cubic**” point of view: *1) We've agreed upon the fact that we live on a surface of a big ball (not cube, pyramid etc). 2) As we observe drops of liquid in free fall we always see that those drops form balls and not cubes, cylinders, pyramids etc. 3) When astronauts on a space-station occasionally or otherwise spill some liquid it doesn't shape itself as little pyramids, cylinders, dodecahedrons etc. 4) Throw a little stone into a lake on a quite day and waves on a water surface will always be shaped as concentric circles, not triangles or squares. Have you ever seen concentric square waves???*

Why it is so? I'd say it is feature of our space originating from the principle of rotation. Even if we rotate any cube, pyramid or even a cylinder we will end up with a ball anyway. But with noticeable gradient of density. Ball is the most perfect shape in 3D-world we know because ball has infinite number of planes and axes of symmetry. After all who would dare to say that an atom shaped like a little brick? **Is an electron's orbit square?** The whole Universe is built on the principle of rotation. The only difference is scale and speed. The most adequate model of matter structuring should be *onion-like* model where bigger sphere contains smaller ones. So called *matrëshka* (back to USSR!) structure. Mathematically it can be described by tensors using Riman (thus not Lobachevsky) mathematical spaces, containing one another. It easily combines with the popular *sandwich*-theory of the Universe but layers aren't flat at all! Meaning: on the scale of the Universe light travels on bent (not straight) trajectories. So despite using appropriate mathematical tool (tensors) the one of the postulates of the famous Relativity Theory is only relatively correct. Sorry, Mr. Einstein. But happy birthday anyway! Size of such layers may vary. On smaller scale *onion-like* model would perfectly describe a single atom with electronic clouds having different energy levels. Below you will find the famous three (among others) axioms of incidence for the flat space and one additional axiom formulated by Yours Truly for the spherical mind. Here are the 3 *Axioms of Incidence* for the flat, cubic-like space:

- 1) through 1 point we can draw infinite number of straight lines through which we are able to draw infinite number of planes.
 - 2) For every two points A, B there exists a straight line l that contains each of the points A, B . Meaning: through 2 points we can draw only 1 straight line through which we are able to draw infinite number of planes.
 - 3) There exist at least three points that do not lie on a line. Otherwise: Through 3 points (in general case) we can't draw any straight line and one and only one plane. Or in more traditional reading: *For any three points A, B, C that do not lie on one and the same straight line there exists no more than one plane that contains each of the three points A, B, C .*
- When it comes to 4 points it is postulated: *There exist at least four points which do not lie in a plane.* Usually we learn this stuff at school but we don't really think about it. Only when I've grown up it struck me: on a sphere! So for that particular case I have formulated an additional axiom for the spherical space and mind which should read as following:
- 4) Through 4 points (in general case) we cannot draw any straight line or any plane, but one and only sphere.

Hereby I am expressing my "**balled** vision" by stating that *currently* $\pi=3$ sharp. Why currently? Because continuing to use the abovementioned logic we should come to the conclusion that for any hemi-sphere π (as ratio between its *diameter* and length of circumference) **equals 2**. In case of hemi-sphere its diameter is the line (once again: not a straight segment!) connecting 0 and 180 degree points of the Equator *going through the Pole*. And π (as ratio) of complete sphere is equal to one! π (of a point \odot complete sphere) = 1. So we've got the full spectrum of π quantities where sharp values $\pi=3$, $\pi=2$ and $\pi=1$ are representing a step, a *quantum jump* from one state of mind (and therefore matter) into another. This is a perfect example of so called "artefact". In this case the value of mathematical *constant* is changing in correlation with the state of experimenter's mind and the shape & size of surface in question. On a physical level the current shift from *flat* $\pi \approx 3,14159265358\dots$ to 3 sharp can be interpreted as change of the space curvature around us according to gravitational gradient. That is another question "what is causing it?" It also could mean that the Universe has made at least 1/6 of the complete rotation and some of us already feel it by expressing as $\pi=3$. In order to distinguish different values of π I'd propose to name the conditions under which length of a circumference contains exactly 3 diameters as *equilibrium*. Then π of *equilibrium* is ϵ and equality will look like $\epsilon=3$. Point of view where $\pi=1$ is the point of *complete spherical state of mind*. It represents the thinking of *human* or other *being* (call such *being* God if you wish) who *covers and feels* the whole Universe at once, by one thought. To my estimate most of us aren't there yet. But we're getting close.... Until further correspondence I remain Yours Truly,