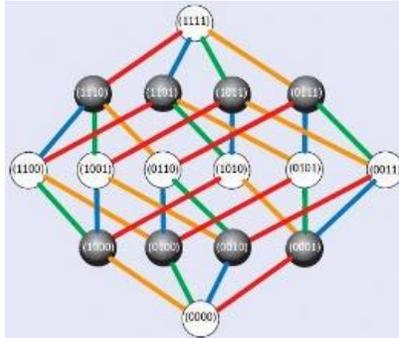


ADINKRAS, SUSY, AND MITZI'S MODEL

I hope to be able to show here the direct correlation between S. James Gates' conception of supersymmetry (SUSY), and my own musical version. Gates and his colleagues propose an "adinkra" of movable black and white balls, where each ball is afforded a binary number between 1 and 16, below.

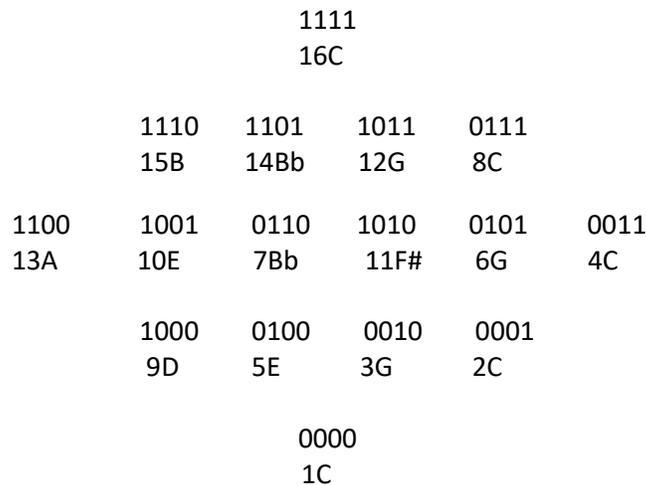


Using a similar geometric layout, below, I have replaced the "balls" with specific musical pitch frequencies (matrix harmonics). Gates' white balls are shown here as red.



Below, I have added the corresponding binary numbers (where 0000 = 1).

PITCH CORRESPONDENCE TO GATES' FIRST ADINKRA



Now, having been afforded sufficient information (by which I mean knowing all three encoding systems: binary, decimal, *and* musical letters/pitches), Gates' SUSY (supersymmetry) becomes not only apparent, but even crystal clear.

Look!

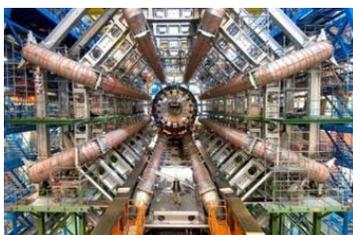
The 16C and 1C, the vertical boundaries, add to 17. The 13A and 4C, the horizontal boundaries, add to 17. The two lineages together form the sign of the cross, +.

The "outer" diagonals 15B and 2C, and also 8C and 9D, each sum to 17. Their crossing forms the x. The "inner" diagonals 14Bb and 3G, and also 12G and 5E, each sum to 17, also crossed and forming x. (The + and x, the signs for addition and multiplication, in conjunction with 0 and 1, concern "identification," a topic for later).

The numbers not yet counted, the four red balls in the middle, also pair up: 10E and 7Bb; and 11F# and 6G. Each couple, au pair, adds to 17.

Altogether, there are a total of eight couplings (8 x 17), or 136, this being the sum of the ordinal numbers from 1 to 16 (i.e.,  $1+2+3+4+5 \dots +16 = 136$ ). Each of the corresponding pairs of binary numbers, without exception, forms *mirror images* (e.g., 1110 becomes 0001, and so on).

Given Gates' professional association with the experimental 8-spoked Large Hadron Collider at CERN, and its 17-mile underground track, discerning SUSY's eight couplings amounting to 17 seems very fitting, indeed.



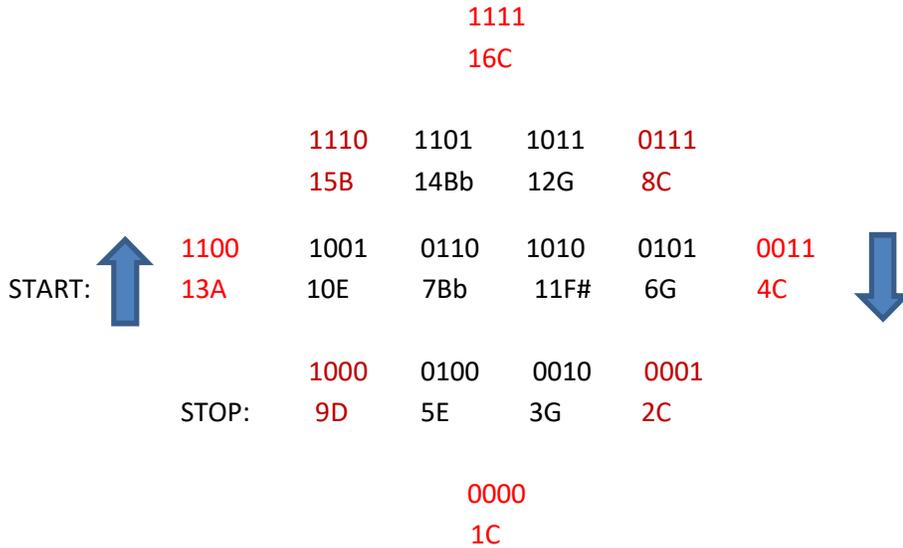
The scientists believe that only by experimental observation, by seeing how particles separate and recombine, will they ever be able to understand how matter really behaves. Perhaps their experience would be enhanced by listening to the musical tones, whose sounds reveal what the eyes alone cannot perceive.

When compared to Gates' balls (excuse me, his generic model), the musical pitches (ova-tones?) already reveal pregnant ideas crying for further investigation. For instance,

- (1) Look at the perimeter. Moving clockwise from A13, the musical letters used are A B C D, and, in fact, they appear in exactly *that* alphabetical order: A13, B15, C16, C8, C4, C2, C1, D9.

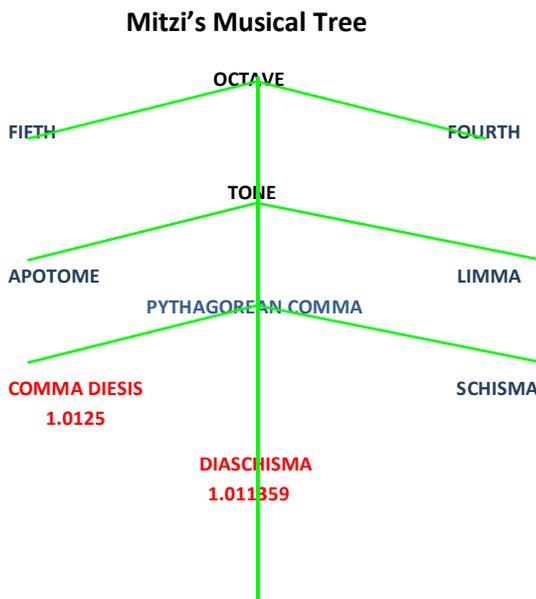
When added together, these perimeter numbers sum to 68.

Strangely enough, President Donald Trump adamantly insists that his Trump Tower in Manhattan has 68 floors, although the building actually has 58 floors. Hmm, does he know something that he's not telling? Don't discount the idea – things are very fishy.



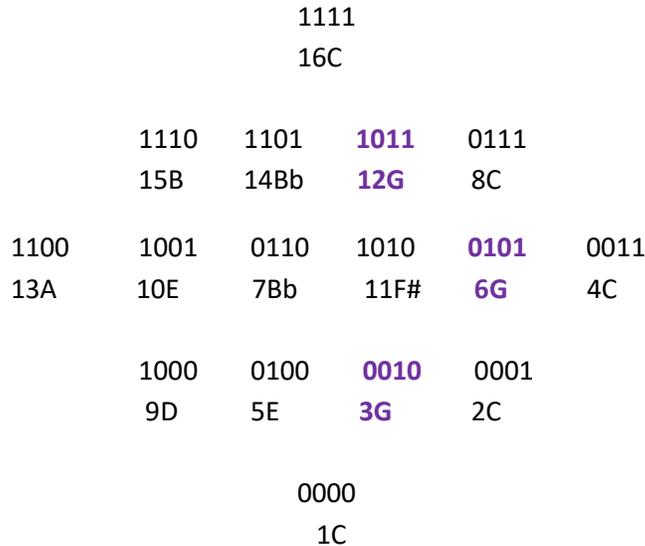
- (2) Notice how the outer right-hand edge is constructed solely of octave Cs: C1, C2, C4, C8, C16. When multiplied (1 x 2 x 4 x 8 x 16), the product is 1024, which, in computer code amounts to one kilobyte (1 KB) of information. Are these five Cs our five senses affording our 5-cent reality?

I was aware from my previous studies that the kilobyte (1024 bytes) is the very ratio that can be found lurking around the roots of my Musical Tree. See for yourself. The lower tier of the tree contains the two very small intervals, the comma diesis (1.0125) and the diaschisma (1.011358). Their product (that is, 1.011358 x 1.0125) is 1.024) . . . the deathly **kilobyte!**



The **kilobyte** is a unit of memory or data. Did you hear that? I'll say it again. *A kilobyte is a unit of memory or data.* Did this "kilobyte" have anything to do with the infamous bite (or is it byte?) eaten from the "fruit of the Tree of Knowledge" located in the proverbial Garden of Eden? The story tells that the eating of this "fruit" by that *pair* called "Adam and Eve" results in their "knowing good and evil." What did they know, or not know, prior? Does knowing "good *and* evil" infer knowing both at once, which is a sign of awakening conscience?

(3) Also notice that the next layer (G3, G6, G12) on the right-hand side, more interior, is composed solely of octave Gs.



In musical terms, the G is the "dominant," the next most important note after the tonic C. When we multiply the three Gs (3 x 6 x 12), they amount to 216. This number is the sum of three cubes (3<sup>3</sup> + 4<sup>3</sup> + 5<sup>3</sup> = 6<sup>3</sup>). Plato mentions it in the Republic (Book VIII). Given that it is the product of 6 x 6 x 6, it also is thought by some to symbolize the "mark of the Beast" in the Christian tradition.

It might also be mentioned, for future reference, that according to Ken Burns, his series "Baseball," *216 is the number of stitches on a baseball.* (Remember Trump's iconic cap? Oh God! Look at my website, where this item is discussed in more detail). <sup>1</sup>

We may also want to bear in mind, for later, that the Gs, when added (3 + 6 + 12), sum to 21. The number has significance as "Agenda 21" (see website), those "protocols for sustainable development."<sup>2</sup>

Regarding the "inner part," the remaining notes also sum to 68, the "other half" of 136.

3G, 5E, 6G, 7Bb, 10E, 11F#, 12G, 14Bb

<sup>1</sup>[http://www.mitzidewhitt.com/EZ/mdw/mdw/doclibrary/GETTING\\_TO\\_THE\\_SECRET\\_ROOTS\\_OF\\_THE\\_WOR\\_K\\_2017.pdf](http://www.mitzidewhitt.com/EZ/mdw/mdw/doclibrary/GETTING_TO_THE_SECRET_ROOTS_OF_THE_WOR_K_2017.pdf)

<sup>2</sup> [http://www.mitzidewhitt.com/EZ/mdw/mdw/doclibrary/Merry\\_Mary\\_Marry\\_Xmas\\_Cards\\_2017.pdf](http://www.mitzidewhitt.com/EZ/mdw/mdw/doclibrary/Merry_Mary_Marry_Xmas_Cards_2017.pdf)

For convenience, this inner set of numbers is shown in bold, and highlighted in purple font.

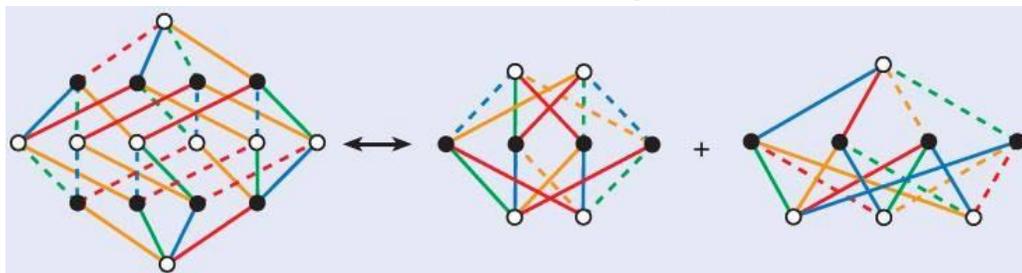
			1111			
			16C			
	1110	<b>1101</b>	<b>1011</b>	0111		
	15B	<b>14Bb</b>	<b>12G</b>	8C		
1100	<b>1001</b>	<b>0110</b>	<b>1010</b>	<b>0101</b>	0011	
13A	<b>10E</b>	<b>7Bb</b>	<b>11F#</b>	<b>6G</b>	4C	
	1000	<b>0100</b>	<b>0010</b>	0001		
	9D	<b>5E</b>	<b>3G</b>	2C		
			0000			
			1C			

Here, in the “inner sanctum,” one hears the strangely disconcerting sounds of the diminished triad, E G Bb, the chord composed solely of intervals of minor thirds (think of Brahms’ Lullaby, the words “lullaby and goodnight”). The singular exception is the F#, which sticks out like a sore thumb, so to say.

How interesting that this innermost part contains these “black” notes, the F# and Bb, the definers of the axis-based structure of tonal music. The F# sides with the G, the ruler of the sharps, the Bb sides with the F, the ruler of the flats. The two warring parties battle it out on the outfield of the musical staff, and in the in zone of veins and arteries of the human heart, perhaps as the militant corps of red and white corpuscles.

So far, we have been considering Gates’ first adinkra (the one on the left). The whole configuration, its sixteen balls, amount to 136. Hopefully we are now better prepared to understand Gates other two adinkra diagrams.

S. James Gates Adinkra Diagrams



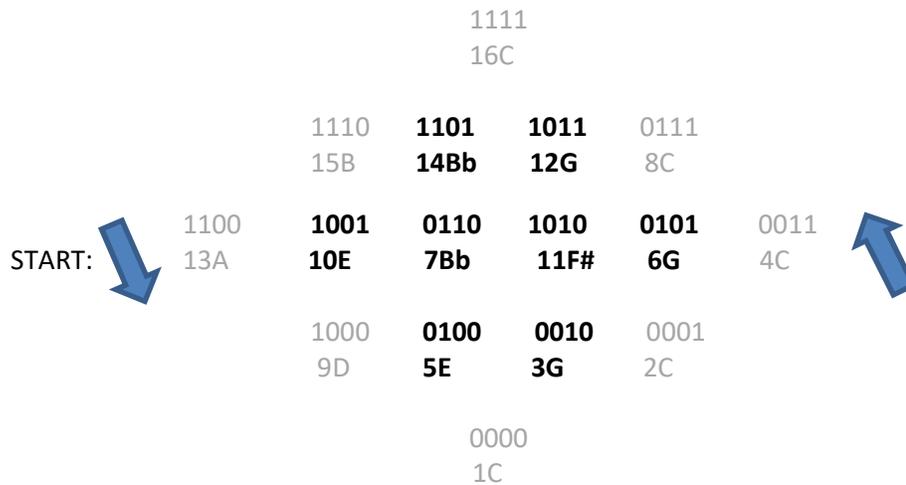
According to Gates, his main adinkra on the left can break into two separate adinkras. The process is called “gnomoning.” The term comes from Euclid’s conception of a plane figure obtained by taking out a smaller part similar to the larger part.

We have already broken the whole (harmonic series) into two smaller parts. Each part sums to 68.

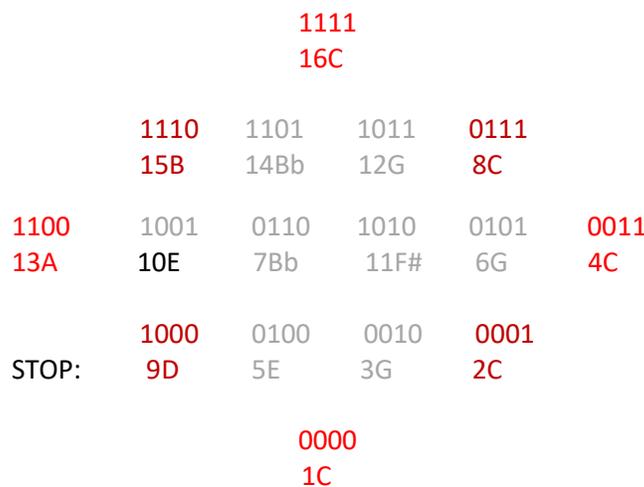
Let's assume Gates' middle adinkra to be the middle "inner" part of the whole. The central part of the "musical adinkra" (which sums to 68) fits perfectly Gates' configuration (two-four-two).

If we stretch the imagination only a little bit, we may be able to hear with our "inner ear" the sounds of the e-diminished triad, as it zooms in like an errant comet, spiraling from the outer reaches of the solar system, from the E10, and moving counterclockwise, first to E5, then G3, G6, G12, Bb14, Bb7, it "loses its energy" (as evidenced by the flats) and "crashes" (collapses) at the F#11.

CORRESPONDENCE TO GATES SECOND ADINKRA



The remaining eight musical pitches from the original adinkra (highlighted below) should correspond to Gates' third adinkra (the one on the right). The musical letters names would be A B C D. However, the same identical *geometrical* alignment does not appear to obtain.



Wait! Wait! What if we simply *turned the whole thing on its side*, set it at a 90-degree angle? Then, by a simple shifting of rows there would be that same "one-four-three" configuration corresponding to that

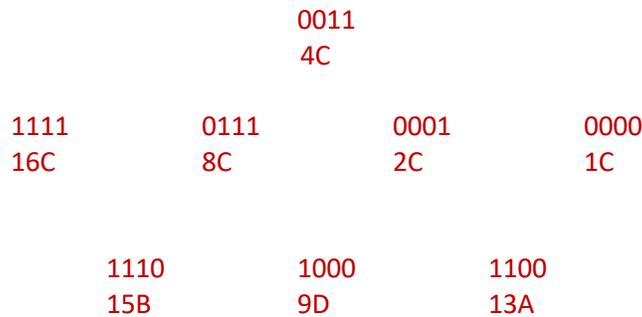
of Gates' third model. The situation, so to say, would be "rectified." But which way do we turn it? Should the A13 still be the starting point, at the apex? Or should we turn it topsy-turvy and start with the C4?

The fact of the matter is, it really doesn't matter! Either way, it works. If the A13 is set on top, then the middle row of four conforms to the notes B15, D9, C16, C1; and the last three balls fall into place as 8C, 2C, 4C. Or, conversely, if the C4 is put on top, the middle row of four becomes C1 C2 C8 C16, and the last three balls are D9 B15 and A13.

However, it is somehow more satisfying to the sensibilities to make the C4 the "crown," and let the middle be a whole row of Cs, while the "tail part" sounds the "leftovers," the A and B and D which, curiously, when respelled, spells "BAD," or perhaps hints of "ABDomen" (or BAD omen?)

I have set out this method in the picture below, which now does resemble Gates' third adinkra – a "perfect fit," in fact (one-four-three).

CORRESPONDENCE TO GATES' THIRD ADINKRA



Doing the calculations (the addition) for this third adinkra, the sum of the binary numbers is 4444. The square root of this number is 66.66. Yikes, very close to the ominous biblical "number of the beast!"

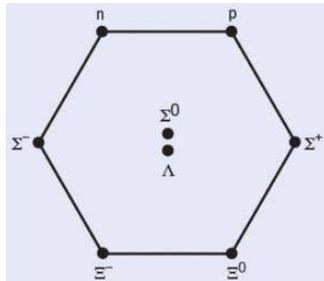
It is at the tail end of the Holy Bible, in the Book of Revelations (13:18), where we read, "Here is wisdom. Let him that hath understanding count the number of the beast; for it is the number of a man: and his number is six hundred threescore and six."

In that same chapter in the Book of Revelations, chapter 13, there are said to be *two beasts*. The first beast comes up out of the sea (verse 1). The second beast arises from the earth (verse 11). No one understands the meaning. The first beast arising from the sea (C) hints of Gates' Third Adinkra.

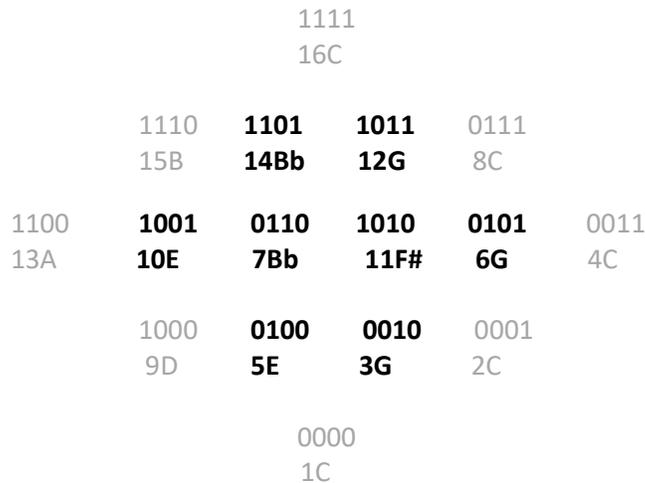
Out of curiosity, on a whim, really, I added the numbers of Gates Second Adinkra. These eight binary numbers also summed to 4444. Was this the biblical "second beast," arising from the "earth?" Did the black notes (F# and Bb) hint of "soil"? That word, "soil," spelled in mirror language, is "lios," the tail end

of “anulios.” Are these two *accidentals* Gurdjieff’s Luna (“anul”) and Anulios, the two “broken-off fragments,” the result of the accident with the errant comet, as described in *Beelzebub’s Tales*?

Looking back again at this second adinkra, suddenly it occurred to me that this pattern of 2-4-2 was a perfect match for what Gates calls a “Weight-Space Diagram.” The physicists use the hexagon to show the proton (p), the neutron (n), and six other particles known for their “strangeness.” When lines are drawn from the vertices, triangles emerge which form the symmetries.



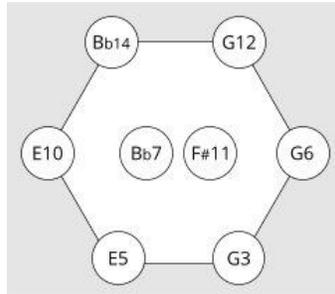
In the second adinkra, when my musical pitches (shown below in black bold font) are superimposed upon the physicists’ eight dots, the geometries are a perfect hexagonal match.



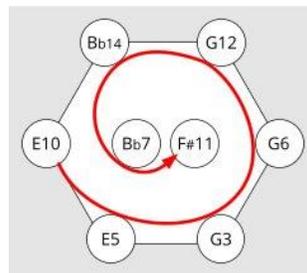
How intriguing that the two little dots in the center of the physicists’ picture match the two “black notes” (Bb and F#) in my musical construction! As previously stated, the rim of this hexachordal construction sounds the e-diminished triad (e-g-b-flat). Looking closer into the situation, a music theorist would note the “relativities” in the key relations: that is, Bb-g, and G-e (major/relative minor keys). Harmonically, the tonal relationships conform to minor thirds: 6/5 (or, by octave doubling, 12/10). The “anomaly,” the F# (the “ma tivra” in Hindu music, the 11<sup>th</sup> harmonic), is an “outsider” whose presence introduces major and minor 2nds (E-F#, F#-G) into the picture. Numerically, one might say that it surges in between the harmonic thirds (e-**F#**-g, 10-**11**-12), bringing dissonance into the formerly harmonious family. If I am allowed to say that the family of 3rds concerns the principles of “relativity,” then this other lineage, the 2nds, hints of “quantum mechanics,” by which I mean the discrete principles used in musical scale formation. This singular sharp (diesis) does carry a lot of

weight! (And keep in mind that the words “scale” and “weigh” are synonyms). Hmm, is this sharp harmonic fourth, F#, “the “eleventh man,” what is meant by “I am the Way”?

My musical “Weight-Space Diagram” is depicted below.



For all intents and purposes, the two “black” notes are *hidden* inside the “inner sanctum.” What we can perceive with our ordinary limited vision is only the outer rim of hexachords, the e-diminished triad (e-g-b-flat). Spiraling down the rabbit hole. . . E E G G G Bb Bb, thunk! we find ourselves at the earth’s core, at the bottom of the black hole, *ground base*: Bb F#.



The spiraly thing reminded me of “Beelzebub’s curly tail.” Or . . . was it the beginnings of an *embryo*?

When the two separated parts (Gates’ Second and Third Adinkras, now coming into focus as the “two beasts,” each 4444) are put back together again, the addition amounts to 8888. (Is this the real reason why Gurdjieff titled the final segment of Beelzebub’s Tales “The Addition”)? Is it merely coincidence that multiplying the four 8’s, the product is 32, the number associated with gravity and the “law of falling?” (As the scientists put it, gravity accelerates a falling object at the rate of 32 feet per second per second. And for future reference, take note of the “r” in “rate”).

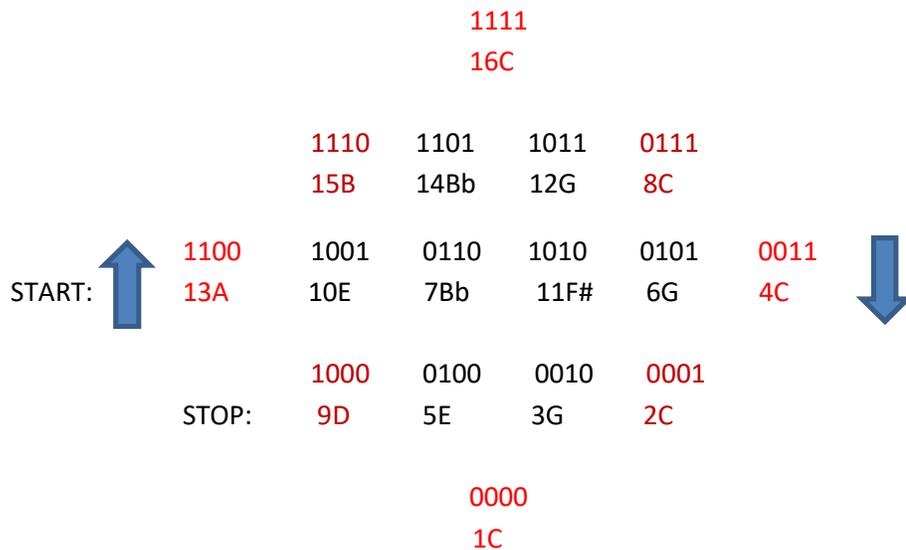
Are the scientists intuiting the gravitational force in their “weight-space diagram?” Maybe. But do they realize that gravity actually appears only then, when the two forces are together, acting as one? Is this why Gates and his colleagues, whether or not they fully recognize the implications, know that “knowing SUSY” requires “both sides of the equation?” Even so, what their weight-space diagram reveals is still only the one side. Thus this “beast with the curly tail” puts the hex on any true understanding. All that can be known from this hexagonal depiction is partial. Gurdjieff was adamant that there are two ends to every stick: the head *and* the tail. Knowing only one end is not enough. Understanding requires bringing both ends into the equation.

Let's do a creative thought experiment. Assume at the one end are the binaries, 0 and 1, forming the *base 2* system. At the other end are the ordinals, 1 – 9, forming the decimal system, *base 10*. Let's call them the two haploids ("haploid," a cell having only one set of chromosomes). The 1 penetrates the 0, thus:  $\phi$  (or phi). This eventful moment between the two haploid cells, that is, the ovum (female gamete) and sperm cell (male gamete) produces the new diploid cell, the "zygote" (from the Greek, meaning "joined" or "yoked").

This little germ now begins to grow by division: from 1 comes 2, from 2 comes 4, from 4 comes 8, from 8 comes 16. Once the zygote has divided into 16 cells, the cleavage divisions cause it to resemble a mulberry, hence the name *morula* (Latin, *morus*: mulberry). Then the cells collect around the edge leaving a hollow space in the middle. This hollow ball of cells is called the "blastocyst." The usual time of its development is around 5 to 7 days after fertilization.

In my mental conception, I am picturing the 16 cells as the 16 balls in the complete adinkra, and the hollow ball of cells at the outer rim as the "blastocyst," formed of the eight musical notes A B C C C C C D. This "blastocyst" is reshown below, for convenience.

**"MITZI'S MUSICAL CONCEPTION OF THE BLASTOCYST"**

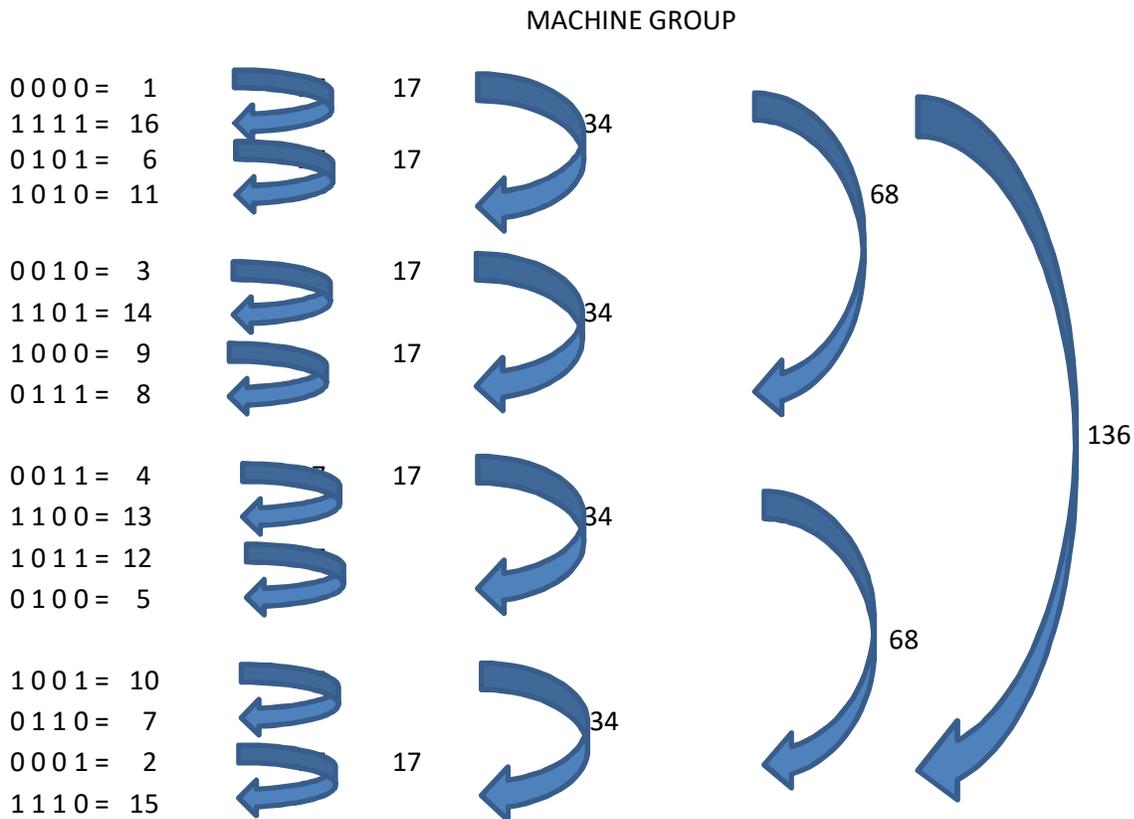


A successful pregnancy goes through distinct stages. Let's call this Stage One of the blast-off of the "rocketship." In Stage Two, the blastocyst must reach the uterus and implant itself in the endometrium, the mucous membrane. Only then, when this implantation happens, can the blastocyst develop into an embryo, and then into a fetus. In the Musical Weight-Space Diagram, the "endometrium" is the hexagon, composed of the triadic notes, E G Bb. When viewed as "in movement," the notes implant themselves in a spiral formation until, sure enough! the little embryo becomes visible as the lineage from E10 ("e" for embryo?), and if it continues, even matures to the F#11 (F# for fetus?) In the ancient world, the "feet" are measured as 16 ("pes"). In other words, the mature fetus suggests the whole adinkra, composed of all 16 balls. By this stage, the two different "bloodlines" (male and female) have

fully merged to form the “hybrid,” the little child crystallized from the two different bases: base 2 and base 10. This new crystallization infers the third system, base 16.

Crystallization, in chemistry, is a technique of separation used to separate a solid which has dissolved in liquid and made a solution. When warmed, the solvent evaporates (becomes gaseous), leaving a saturated (liquid) solution. As the saturated solution cools, it produces (solid) crystals, which can then be collected. Thus the-solid-becomes-liquid-becomes-gas-becomes-liquid-becomes-solid-crystal is now a finer (refined) body. The size of the crystal depends upon the method of cooling: fast cooling gives a litter of many small crystals; slow cooling, fewer but larger crystals. Humans, as a rule, produce one “precious crystal” at a time.

Without further explanation, I present what I call “the Machine Group” (the title of one of Gurdjieff’s Movements). The fanning out of the coupled pairs brings a stability formerly lacking. Not only that, there is the real possibility of “oneness,” when the final consolidation unifies the particles into one whole “wave,” the 136, which by theosophical addition sums to 10, which returns to the One.



Those who have thought about it might be gleaning hints about the possibility for the unveiling of the fine structure constant. Perhaps it is what is meant by the “astral body.” But that’s another topic for another chapter. For now, let’s enjoy this long “gravity wave,” as we continue to surf our way around the cosmos.

The number 8888 brings up more associations.

According to some seers and sorcerers, when one sees the number 8888, it means that the universal forces have noticed you. They have seen your work and are pleased. (Or, as reported in the Gospel of Matthew 3:17, "And a voice from Heaven said, 'This is my beloved son, in whom I am well-pleased'"). The number 888, using gematria, is the name "Jesus," who, for Christians, is the "beloved son."

The repeating series of 8's, in the ancient world, was linked with wealth, prosperity, good fortune, and longevity. In other words, 8 is "good news." Children in Sunday School are taught that the word "gospel" means "good news." Who knew that its true hidden meaning is "go spell"? Moreover, what Sunday School teacher knows enough to tell the little children that the spelling of the letters pertains to the two beasts of Revelations? For that matter, what minister or priest knows that when these two "beasts" are joined together, their "combinatorials" amount to 8888? As a child, I attended Sunday School religiously, so to say, but no one ever told me that the "gospel truth" concerned what Plato called the "true Hellenic mode," the ancient Dorian heptachord (A B C D E F# G, which, by the way, is the scale Gurdjieff utilizes in the Movement "The Last Pythagoras." Evidently, he knew something that the other "high priests" did not). Plato's other Hellenic mode is the ancient Phrygian hexachord (G A Bb C D E). When the two modes are yoked together, they resound the fullness of the Pythagorean octachord: A Bb B C D E F# G.

How curious that, when the letter "r" is included, the word "beasts" becomes "breasts." The letter "r," in physics, can stand for "rate," as in "separate" or "accelerate." When using the "magical incantation, ABRACADABRA, the "R" comes in between the four letters, A B C D, separating them, forming a round (canon).

In the chapter, "Beelzebub's Fourth Sojourn on the Earth," Gurdjieff mentions the emblem of the society Akhaldan, called "Conscience," which serves, for its members, as a stimulus to awaken. It so happens that this statue, an allegorical being, is a combination of different creatures, and has the *breasts* of a Virgin, the large *wings* of an eagle, and the body of a lion. The animals "come alive" by the animation brought about by the three different encoding systems: base 2 (the wings of the eagle: the lemniscate, formed by the powers of 2); base 10, the body of the *lion* hinting of *millions* and *billions* and *trillions*, the multiples of 10, the decimal metric system); and base 16, the breasts of the Virgin: each breast an octet of 4444, which together amount to the crystallized hexachord, 8888). The breasts nourish.

The emblem, which, as Gurdjieff says, reminds the members that it is possible to obtain freedom, has to do with specific "constructions" which are "enclosed by a special lattice-work." These special constructions give the sensibility of perception at higher crystallizations. In music, 8 connotes the pitch frequency that resonates at double that of the fundamental. But whereas that other number standing for the octave, (the number 2), is "barren," the number 8 is "fruitful," its harvest of "fruits" being the inner notes of the musical scale. The octave is a "higher crystallization." It infers a sense of wholeness and completeness and goodness.