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SCIENCE IN ANCIENT ARTWORK

# The Baseline of the Great Pyramid: A Measure of $756: 676$ 

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The baseline of the Great Pyramid of Giza is often cited as being around 756 feet in length. The precise measurements may never be known given the degree of deterioration and destruction that the Great Pyramid has suffered over the millennia. Nevertheless, it may be possible to compute the theoretically projected measurement of the Great Pyramid, based upon elementary geometry and math, and what is known about ancient reckoning counts.

From our computations, we shall observe how such a theoretical projection may be devised and, significantly enough, we shall observe how the numbers and measurements related to the baseline are, in fact, relevant to other historically significant numbers in the ancient reckoning systems of the world. One such ancient number concerns the 756 datum. Professor Edwards, for example, offers distinct measurements for each of the four sides of the Great Pyramid:, as may be observed in the following illustration. The significant point is to note the average length ( $\mathbf{7 5 5 . 7 9}$ feet) for the four measurements offered by Professor Edwards, as this shall be extremely relevant to the theoretical projections, which we shall examine below.

According to the Pythagorean Theorem, any side measurements of internal triangles using this particular measure could be expressed in whole numbers. And, if the side measurements were actually a whole number, say, like 756 feet, then the internal triangles related thereof would be a fractional number at least for one of the sides. With this elementary idea in mind, we set out to know the measurements of the sides of related triangles within the cross-section of the Great Pyramid. And, much to our amazement, we have found that those measurements relate to another historically significant count (676c), relating the Four Worlds Legend of ancient Meso-America, specifically, related to the ancient Aztec period.

North side 755.43 feet
South side 756.08 feet
East Side 755.88 feet
West Side 755.77 feet
From I.E. S. Edwards, The Pyramids of Egypt, p. 118 .


```
If Sothic 164.9457812 x 1.14591559 = 189.0139422
    (Diametian) 378.0278844
    756.0557687
```

There are different ways to look at the base length of the Great Pyramid at Giza, and thousands of authors have examined these measurements, both theoretically and in a practical manner. We have related the numbers to many historically significant daycounts, year-counts and cycle-counts within the ancient reckoning system. But, we had not expected to find a direct relationship between the cited length of the base of the Great Pyramid, and a specific day-count or year-count originating from a Meso-American count. At least, we had not expected to find it in the manner in which it appears so obviously within the math and the geometry of the square-based, cross-section of the Great Pyramid.

We began our computations with the idea that the procedure would be highly complex, regarding an answer for this particular aspect of the Great Pyramid. When, in fact, we probably should have suspected the relative simplicity of the problem, given the obvious simplicity of design in the Great Pyramid itself. By taking a cross-section of the base of the Great Pyramid, and dividing it in half, and then drawing diagonal lines as illustrated in the following image, we encounter numbers that may explain its essential design, and possibly reveal a link with other cultures.

By employing the 756 c number for the length of the base, we are able to compute by means of the precision afforded by the Pythagorean Theorem. The key then is to maintain the whole number as the base length, since it may be considered that, the ancients wanted to actually create a whole number for the baseline (i.e., 756 feet), although the baselines are now expressed and measured as fractional numbers,

## The Cross-Section of the Base of the Great Pyramid at Giza

We have divided the base of the Great Pyramid into two halves and then, we have drawn diagonal lines as illustrated.


```
378'2}+75\mp@subsup{6}{}{2}=845.2336955*'
```

We shall see throughout our analyses, that the ancients may have apparently chosen a particular number or relation, whereby it could be viewed from different perspectives. For example, the baseline of the Great Pyramid may have been represented as a whole number, knowing that we would also realize it could represented as a fractional number; or, vice versa. It is our suggestion that the ancients comprehended that anyone who would analyze the baseline of the Great Pyramid could and would conceive of it as, for example, 756c, 755.7909764 , or even as 755.142857 (an expression of a reciprocal of seven derivative). One may ask erroneously which one is the correct measurement: the answer would be, they all are correct. It is a question of what it is that one wishes to achieve in the analysis.

The precision, and yet apparent imprecision in the measurements are ways of suggesting various interpretations of a singular event; an apparently singular event. In other words, the ancients appear to have suggested the variations and adjustments in the analysis by the apparent lack of definition at times in their artwork. A single event may be approached, viewed and analyzed from different perspectives, and a single line or dot may have one meaning from one perspective, while a totally distinct meaning from another perspective. This feature of the ancient artwork is nothing more than a characteristic of life; an individual may be at the same time one and many; a father, a husband, a brother, a cousin, a grandfather, a grandson, an uncle, a friend, etc. So is the nature of any line or dot within ancient artwork; it shares multiple meanings. It is our task to discern those meanings.

## The Cross-Section of the Great Pyramid with right-angle lines within the smaller triangles.

When the base of the triangle is $\mathbf{3 7 8}$ as shown, then the other legs of the smaller triangle are fractions either $\mathbf{1 6 9 . 2 3 3 5 6 6 4}$ or 338.116837, depending on the variables.

Since 676c is an historically recognized count, we may employ it as the invariable measure and adjust the 378 measurement.


We have drawn the lines of the internal triangles within the cross-section of the Great Pyramid, and much to our amazement, the measurements of the lines indicated in red above are precisely multiples of the 676 c ancient Meso-American count. The 676 c count constitutes that of the Legend of the Four Suns, or Four Worlds. And, as may be viewed above the squares of the two sides equal the exact length shown by the measurements of Professor I.E.S. Edwards ( 755.79 feet), cited from those in meters of J.H. Cole of the Survey Department of the Egyptian Government (1925).

$$
\begin{aligned}
169^{2}+338^{2}= & 377.8954882^{2} \\
& 753.7909764^{2}
\end{aligned}
$$

One immediately suspects the possibility that the ancient Meso-Americans and the ancient Kemi shared a common system of reckoning. For it would seem to be far too coincidental to have two historically significant counts enshrouded into the numbers of the Great Pyramid by mere happenstance. In fact, the numbers 756 c and 676 c are there due to a conscious design on the one (the choice of a 756 c measure for the base length), and due to the natural order of squares and triangles (the 676 c multiple coupled to the $756 \mathrm{c})$. In other words, once one has chosen the 756 c for the baseline of the square, then the 676 c follows as a natural order of things for the internal triangles as we have drawn them here.

Another significant aspect to ponder is the possibility that the 676 c is of greater significance then the 756c. It is well known that the ancients preferred whole numbers to fractional expressions. The fractional expression of the 756c on the baseline length may be pointing to the whole numbers of the multiples of the 676 c . The obviousness lies within the fractional 756c; the not-so-obvious lies within the multiples of the internal 676 c count ( $169 \mathrm{c}, 338 \mathrm{c}$ ). The ancients may have well reasoned that, had we known of the $755+$ count measure, then, most certainly, we would have know about the whole numbers 676 c count necessarily implied within. For, remember, even if we err regarding the theoretical measure of the Great Pyramid itself, the numbers (169:338:755.79+) exist as such, and require an explanation. In other words, we must explain why two cultures, on opposite sides of the planet each chose an number for their counts from either side of the equation.

Aztec Numbers : Kemi Numbers

| $169^{2}+338^{2}$ | $=377.8954882^{2}$ |
| :--- | :--- |
| $338^{2}+676^{2}$ | $=755.7909764^{2}$ |



$$
378^{2}+756^{2}=845.2336955
$$

$$
169+169+507=845
$$

The Legend of the Four Suns, or Four Worlds, in ancient Meso-American history occupies a significant interpretation of the cosmic view of the Aztec people as it has been recorded in different codices. There are different interpretations regarding the number of years corresponding to the Four Worlds, before the coming of the Fifth World. One particular interpretation has been cited as representing 2028 years, arrived at from the 676 c year-count as shown above. The side lengths of the different internal triangles within the cross-section of the Great Pyramid may be added together in different ways in order to achieve this particular sum. We shall present only a couple for viewing, in consideration with other art forms within the ancient Aztec culture, especially in relation to the Four Worlds shown in the Aztec Calendar. For example, let us look at another geometrical figure which may be viewed in the Aztec culture, that is often associated with the open mouth of the eagle, such as the red outline figure in the following illustration:

The Meso-American Legend of the Four Suns


Now, let us view the cross-section and the internal triangles in a slightly different perspective, where we have eliminated some other lines. The lines that we have left visible within the cross-section are suggestive of yet another Aztec design; one that belongs to the Aztec Calendar. But, first, let us see the lines and the corresponding numbers.

| The Aztecs said that |
| :--- |
| their reckoning included |
| the number 1521, the |
| year of the downfall of |
| their society. |



In order to visualize a relationship with the internal design of the Great Pyramid in this manner with that of the Aztec Calendar, we must now rotate the previous figure so that it falls in line with the design on the Aztec Calendar. The corresponding design on the Aztec Calendar concerns the Four Worlds, which are said to be represented in the central, square-like figures of the calendar. We may visualize a fit between the lines drawn in the previous illustration with the lines marking off the Four Worlds on the Aztec Calendar. In this manner, we would have a mathematical and a geometrical representation of the Four Worlds on the Aztec Calendar that would correspond to the math and geometry of the drawing shown above. Being a square, we may lie the figure on its side in any direction.

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The above illustration regarding the year-counts pertains to the juxtaposition of two Great Pyramids, theoretically of course. We have written about the theoretical juxtaposition of two Aztec Calendars and the discernment of hidden images within the design of the Aztec Calendar. It is impossible to examine these particular ideas at this time, but we would like to remind our readers of the theoretical possibility, at least, of relating a particular art piece to itself. In our studies, we have become convinced that the ancients conceived of their artwork in this manner, and the repeat geometrical patterns within their artwork attest, in our minds, to just such a theoretical interpretation.

The fistorically significant numbers may be encoding information beyond anything that we may be currently imagining.

# There may be more to the numbers than meets the eye. The coincidence of numbers may not lie within the ancient reckoning system, but rather within Nature herself. Hydrogen pulsates at a frequency of 1,420,405,000 cycles per second 

According to today's measure.
Consider the possibilities:


This is a relatively close match.

```
3V756 = 9.109766916
Electron mmss fiPgctol]
            =
        9.10938188
```

As we research the ancient reckoning system, we find increasing similarity and computational affinity with the physical constants of today. Scientists today are confident of the exactness in their measurements. However, one may notice how the socalled physical constants are constantly undergoing changes in their values as ever more precise measurements are achieved with advances in technology. Who is to say that the ancient measures may have been more exact or as exact as those of today.

In this brief essay, we have simply drawn attention to the numbers that relate to the internal design of certain possible triangles within the cross-section of the Great Pyramid; namely, within the design of a square. The numbers corresponding to the internal triangles, as of the assigned numbers to the baseline (756c) of the sides of the Great Pyramid, as we have discussed above, relate to other historically significant counts (676c) of ancient Meso-America. This particular proportion corresponds to the design and behavior of a square and the triangles as drawn herein. Any critical consideration
that would simply assign the juxtaposition of two historically significant counts from the ancient past (the 676c and 756c counts) in this manner to mere happenstance, can only be frowned up. The odds of (supposedly) two diametrically opposed cultures on this planet, at different moments in time, having chosen these two counts respectively (by the Aztecs and by the Kemi people), out of mere happenstance are difficult to compute. Especially, when we consider the fact that these two numbers enjoy an innate link within the design of squares and triangles.

Our analyses convince us that the ancient reckoning system was one and the same. And, this obtains even if it means initially that the Aztec and the Kemi cultures analyzed the same mathematical and geometrical problem of squares and triangles, and just happened to have arrived at the same numbers expressed in their equations of equivalency. In other words, if the Aztecs chose the 676c, then, ultimately they had to have chosen the 756 c in the equation. And, if the ancient Kemi chose the 756 c , then, they had to have arrived at the 676 c at some time in their equation. The more likely analysis, the more effortless thought process, would be simply to accept the evidence that the Aztec 676c and the Kemi 756c counts enjoyed a similar status within a single reckoning system; a system shared by both of these cultures.

And, "lest we forget", we must close by calling to mind the Maya 576c count, which as we have proposed in earlier analyses, forms another element of the same ancient reckoning system that appears to have encircled the globe millennia ago. For now, we have concentrated upon the $756: 676$ relationship within the Great Pyramid. In time, we shall bring the 576 c into focus a little more in an attempt to close the circle.
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