The Great Pyramid Architect Had A Secret

Joseph Turbeville MS

Abstract

This presentation offers powerful tabular evidence that the principal architect of the Great pyramid of Giza, in the era of the Old Kingdom of Egypt, chose the 'foot' as the primary unit of linear measure for the design, then retained in secret the mathematical system that was used to define the unit of measure for the pyramid. This secret is uncovered and disclosed in this paper by the author, and the chosen unit is found to be dimensionally the same as the 'foot' defined by the British Imperial system of units.

A mathematical process termed *number distillation,* which has been referred to in the distant past as "*the casting out of nines",* is an essential part of the self-limiting, sequential, single-digit per cell tables that are developed here. The column and row sums, as well as specific numerically marked areas whose digits are cubed and summed provide overwhelming evidence that the term 'foot' is the only possible candidate for the primary pyramid design unit.

There is no evidence as to just when the unit was adopted for use in the Old Kingdom era, but the sequentially based, tabular method introduced here is mathematically and geometrically irrefutable. It provides a rational, non-circular argument that even hints at the proposition that the pyramid designer may have developed and been the first ever to use this particular unit of the 'foot'.

The Great Pyramid Architect Had A Secret
Joseph Turbeville MS

Introduction

My earlier research into Fibonacci's mathematical series led to a method of *number* tabularization that would provide a rich source of what were called canonical numbers by ancient philosophers. For some mysterious reason some of the major tabular summations were almost identical to external measurements of the Great pyramid of Egypt as had been recorded by W.M. Flinders Petrie[1].

The tables[2] however provided no units for these special numbers, which only caused one to assume it was self-evident, that to have any meaning, the unit for such numbers had to be one of those that would be found in the British Imperial system of units, e.g. (mile, foot. inch, etc.)   In other words, no correlation effects were apparent if summation units were assumed to be meters or cubits.

A numerical reduction process termed *distillation*[3] by the author was used to reduce the first 24 terms of the Fibonacci series to single digits, and it was this reduction to single digits that was responsible for the self-limiting aspect of the tables. The distillation value (dv) of the Fibonacci terms beyond the first 24 terms only duplicated the original string of distilled value digits. *Distillation* was a shortcut term for what had been called *"the casting out of nines"* in the past.

What is to be presented now is a similar technique of tabular construction that involves using only the sequential digits (1– 9) as the cell occupants of the first row of a table rather than the first 24 terms of the Fibonacci series. The cells of each row thereafter will contain a single digit that is the distilled value (dv) of the product of the row number by its respective top row factor.   e.g.

- $Cell_{R,C}$ digit $=$ dv$(R_n \bullet C_n)$ $\Rightarrow$ $Cell_{3,4}$ # $= 3 \bullet 4 = 12 \Rightarrow 3$
- $Cell_{R,C}$ digit $=$ dv$(R_n \bullet C_n)$ $\Rightarrow$ $Cell_{4,6}$ # $= 4 \bullet 6 = 24 \Rightarrow 6$ etc.

---

[1] *The Pyramids and Temples of Gizeh* - Chapter 6-Section 21 – Published London 1883
[2] AKA "Glimmer Tables", first published in "*A Glimmer of Light From the Eye of a Giant"* – 2000 Trafford Publishers – Victoria, BC, Canada – V8T 4P4. – ISBN 1-55212-401-0
[3] e.g. Distillation values: (dv) of 25920 $\Rightarrow$ 2+5+9+2+0 $\Rightarrow$ 18 $\Rightarrow$ 1+8 $\Rightarrow$ 9 and (dv) of 331$\Rightarrow$7

Tables containing nine columns and eight rows will be presented in the discussion that follows. Rows and columns greater than nine would simply be repeating the original columns and rows, therefore the tables are said to be self-limiting.

<u>Inherent Design Ratios & Measures of an Unknown Pyramid</u>

From examination of Table 10-A it will be noted that column and row sums are shown in the white outside border cells, and the different grayscale to white scale inside the table pattern provide important numbers that we now examine.

Table 10-A

Eight Rows of Distilled Value Digits (1- 9)

n	1	2	3	4	5	6	7	8	9	Row Sums
1 dv	1	2	3	4	5	6	7	8	9	45
2 dv	2	4	6	8	1	3	5	7	9	45
3 dv	3	6	9	3	6	9	3	6	9	54
4 dv	4	8	3	7	2	6	1	5	9	45
5 dv	5	1	6	2	7	3	8	4	9	45
6 dv	6	3	9	6	3	9	6	3	9	54
7 dv	7	5	3	1	8	6	4	2	9	45
8 dv	8	7	6	5	4	3	2	1	9	45
Column Sums	36	36	45	36	36	45	36	36	72	378
	72		117		81		108			

©2005 Joseph Turbeville

Note:

❑ First, imagine that the four 9's cornering the dark gray rectangle in the center of the 64 cell (8x8) section represent the cornerstones of some unknown pyramid.

Table 10-B

1	2	3	4	5	6	7	8	9
2	4	6^3	8^3	1^3	3^3	5	7	9
3	6^3	9	3	6	9	3^3	6	9
4	8^3	3	7	2	6	1^3	5	9
5	1^3	6	2	7	3	8^3	4	9
6	3^3	9	6	3	9	6^3	3	9
7	5	3^3	1^3	8^3	6^3	4	2	9
8	7	6	5	4	3	2	1	9

❏ Next, imagine that the four white sections shown in Table 10-B with the digits (6,8,1,3) on each side of the pyramid are cubed and summed. The pyramid will then have a perimeter value of (4 x 756) = 3024 units.
 Do these numbers make it seem self-evident that we may be describing the Great Pyramid of Giza?

Lets proceed on and examine the white cells in the central area in Table 10-C.

❏ The twelve white cells form a double-cross of the digits (3,7,2,6).
 If the digits are cubed and summed, the total will be 4 x 594 = 2376.
 (Notice the sum number 2376 has the same digits as the double-cross).

❏ A circle with a 2376 unit perimeter will fit exactly into a square with a perimeter of 3024 units. Thus the diameter of the circle is the same as base width of our pyramid. This fact provides us with the definition of Pi that some have termed as Pyramid Pi.   i.e. π_p = 2376/756 = 22/7

Table 10-C

1	2	3	4	5	6	7	8	9
2	4	6	8	1	3	5	7	9
3	6	9	3^3	6^3	9	3	6	9
4	8	3^3	7^3	2^3	6^3	1	5	9
5	1	6^3	2^3	7^3	3^3	8	4	9
6	3	9	6^3	3^3	9	6	3	9
7	5	3	1	8	6	4	2	9
8	7	6	5	4	3	2	1	9

❑ The ratio of the perimeter of the square, to the perimeter of the circle, was probably one of the most valuable tools in the ancient architects toolbox, and as you may see, it applies to many things in nature.   i.e.

$$\underline{\text{Ratio} = 3024 \text{ units} / 2376 \text{ units} = 14/11 \ = 4/\pi_p} = 1.272727$$

❑ Peter Tompkins[4] discusses the facts brought out in Tons Brune's writings about the Egyptian people's strong belief in the sacredness of the circle, the square and the cross.   These are the same three subjects we discussed here as we defined the 'secret method' of numerical extraction from Tables 10-A, B & C.

❑ <u>Height of the unknown pyramid</u> = (14/11)(Total sum of Table–10A)

   "   "   "   = (14/11)(378 units) = <u>481.1 units</u>

❑ <u>Pyramid slope</u> = invtan(378/297)= invtan(14/11) = <u>$51°. 84277 \cong 51° \ 51'$</u>

It is the author's contention that he has now extracted sufficient numerical evidence from Table-10A to say for certain that the unknown pyramid has the same exterior dimensions as the Great Pyramid of Giza, as measured in British Imperial feet, and that a similar table had to have been used by the architect to secretly select the unit he would use for his design of the pyramid. Therefore we can say with some certainty now that the "foot" was born of the Great pyramid and thus became the primary pyramid unit.   The Royal cubit may have been created as a construction unit, for it would have been an easier unit for the builders to work with. e.g.

❑ GP design base half-width = 378 feet =   220 RC
❑ GP design base width   = 756 feet =   440 RC
❑ GP design height   = 481.1 feet =   280 RC
❑ GP design base perimeter= 3024 feet = 1760 RC

---

[4] Author of 'Secrets *of the Great Pyramid'* – ISBN:0-88365-957-3 – p.261 – discusses author Tons Brune's book, *'The Secrets of Ancient Geometry',* and his belief in how the Egyptian people held strong feelings for the sacred value of the circle, square, and the cross.

Other Ratios Extracted from Table 10-A

There is a useful approximation for the value of the Golden Ratio found in our pyramid extractions that differs slightly from the precise value defined in the realm of pure mathematics, but it does appear in nature and was shown above joined with the pyramid Pi ratio 22/7. It has been termed Phi-sub-one (φ_1) by this author for convenience.

- Golden Ratio$_1$ = φ_1 = $(3024/2376\ )^2$ = $(14/11)^2$ = $(4/\pi_p)^2$ = 1.619835
  True value Phi φ = 1.618034

- Golden Ratio$_1$ = φ_1 = $((\text{Earth + Moon})_{\text{Radii}} / \text{Earth}_{\text{Radius}}))^2$
  $((3960 + 1080)\ \text{mi}/3960\ \text{mi}))^2$ = $(14/11)^2$ = 1.619835

- Sq.rt. Golden Ratio$_1$ = $\sqrt{\varphi_1}$ = $4/\pi_p$ = 14/11

- Sq.rt. Golden Ratio$_1$ = $\sqrt{\varphi_1}$ = $(\text{Earth + Moon})_{\text{Radii}} / \text{Earth}_{\text{Radius}})$
  Sq.rt. Golden Ratio$_1$ = $\sqrt{\varphi_1}$ = $(3960 + 1080)/3960$ = 14/11 = 1.2727

- Earth / Moon scale = $(72+117+108)/(81)$ = 297/81 = 11/3 = 3.666

Conclusion

As the author of this work I am aware of the possible extent of its significance and I wonder in awe as to what impact it may have on the historical record. I feel as though I have found the true mathematical source of "reasoning" for a unit of measure that has come to be known as the English 'foot'. This chosen unit is found to be dimensionally the same as this 'foot' defined by the British Parliament in 1592 that was used by W.M. Flinders Petrie[5] in his research for his now famous book *The Pyramids and Temples of Gizeh.*

The source of the architect's secret has been revealed but the time of its discovery and first application is still uncertain.

---

[5] The Pyramids and Temples of Gizeh Chapter – Published London 1883