

Conjoined Values of the Royal Cubit & the Golden Ratio "Unearthed" from First Twelve Terms of Fibonacci's Series

Ó Joseph Turbeville

Introduction

A small booklet¹ published in 2000 by this author reveals an intriguing discovery, or quite possibly a re-discovery of ideas from an earlier time, that allowed tabularization of the *Fibonacci series* into self-limiting columns and rows of one, two and three digit numbers. A process termed *number distillation*² that is often referred to as "*the casting out of nines*" is responsible for, and allows, the all-important self-limiting aspect of the tables that were created. The column and row sums, as well as specific numerically marked area summations, proved in most cases to provide historically significant numbers that were oft times repeated in other of the tables. Table-1, the parent table that is included herein allows the reader a glimpse of the power of such tables in providing numbers of historical significance, all of which seem to be a part of Nature's grand design.

One of the most exciting discoveries was that several of the tabular summations numerically matched major external measurements of the Great pyramid as measured in feet. Ratios formed of certain sums proved to be very close approximations for Pi (π) and the Golden Ratio (ϕ).

Some tabular summations from other of the tables numerically matched geological measurements of physical items such as earth density, axial rotation speed and rotational energy.

Writer and reviewer Gary Val Tenuta best captures the feelings of the author about his findings when he states:

"Turbeville has apparently discovered something new under the sun. Or has he? While it may be new to us, as we stumble along seeking answers to the mysteries of the universe within the current scientific paradigm, the implications of the stunning correlations discovered by Turbeville suggest the possibility that he has rediscovered something that was known to the ancients but which was lost over the millennia. What we may have here is an

¹ "A Glimmer of Light from the Eye of a Giant": Tabular Evidence of a Monument in Harmony with the Universe" - ISBN 1-55212-401-0, www.trafford.com/robots/00-0065.html

² *Distillation* is the reduction of multi-digit numbers down to a single digit, by digit addition. e.g. 216 \Rightarrow 9
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archaeological find uncovered without ever having wielded a single stroke of pick-ax or shovel."

Table Format

Table-1 is a natural formation of **216** Cells arranged in **9** rows of distilled Fibonacci numbers in **24** columns, where each successive row is obtained by multiplying the row number by each respective top row factor and distilling. This limited grid pattern repeats itself when distillation is continued in either the X or Y direction.

																							Row Sum	Ñ	
1	1	2	3	5	8	4	3	7	1	8	9	8	8	7	6	4	1	5	6	2	8	1	9	117	
2	2	4	6	1	7	8	6	5	2	7	9	7	7	5	3	8	2	1	3	4	7	2	9	117	
3	3	6	9	6	6	3	9	3	3	6	9	6	6	3	9	3	3	6	9	6	6	3	9	135	
4	4	8	3	2	5	7	3	1	4	5	9	5	5	1	6	7	4	2	6	8	5	4	9	117	
5	5	1	6	7	4	2	6	8	5	4	9	4	4	8	3	2	5	7	3	1	4	5	9	117	
6	6	3	9	3	3	6	9	6	6	3	9	3	3	6	9	6	6	3	9	3	3	6	9	135	
7	7	5	3	8	2	1	3	4	7	2	9	2	2	4	6	1	7	8	6	5	2	7	9	117	
8	8	7	6	4	1	5	6	2	8	1	9	1	1	2	3	5	8	4	3	7	1	8	9	117	
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	216	
4	4	4	5	4	4	4	5	4	4	4	8	4	4	4	5	4	4	4	5	4	4	4	8	1188	
5	5	5	4	5	5	5	4	5	5	5	1	5	5	5	4	5	5	5	4	5	5	5	1		
189			189			216			189			189			216										
594						594																			

Glimmer Table-1

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Table-1 Notes

- Baseline Width (feet) of the Great Pyramid = $1188 - 2(216) = 4(189) = 756$ feet.
- The total sum minus the sum of all the nines = $1188 - 9(48) = 1188 - 432 = 756$ feet.
- The digit sum of the two central squares = **216** ⇒ Also, **216** is the number of table cells.
- The sum of the perimeter digits (light gray cells) = **612** ⇒ **Apothem** length $\cong 612$ feet.
- The sum of the forty border nines (dark gray on gray cells) = $9(40) = 360$ ⇒ **360** degrees
- Great Pyramid scale size to the Earth = $(1 : 43200) \Rightarrow 2(216) = 432 =$ Base ten factor.
- Pyramid Pi Factor (π_p) = $594 \div 189 = 22/7 = 3.142857$
- Pyramid's Height = Base Area Circumference $\div 2\pi_p = (4 \times 756 \text{ ft}) \div 2(22/7) = 481.1$ ft.
- Pyramid's Height = Base Area \div Total Sum of Table-1 = $(756 \text{ ft})^2 \div 1188 \text{ ft} = 481.1$ ft.
- Golden Ratio \cong Apothem \div half-width $\cong \sqrt{((481.1 \text{ ft})^2 + (378 \text{ ft})^2)} \div (378 \text{ ft}) = 1.618609$

0.036% error

The Royal Cubit & Golden Mean

If each of the digits in the first twelve cells of Row-1 (Table-1) is divided by the digit that precedes it, there will be eleven rational terms that added together sum to 20.61785714. i.e.

1	1	2	3	5	8	4	3	7	1	8	9
---	---	---	---	---	---	---	---	---	---	---	---

$$1/1 + 2/1 + 3/2 + 5/3 + 8/5 + 4/8 + 3/4 + 7/3 + 1/7 + 8/1 + 9/8 = 20.61785714 = \mathbf{20.618}$$

Limiting this number to three decimal places provides as much significance as the number need have when one assumes that a unit equivalent to the English *inch* might have been intended when a value was selected for the Royal Cubit.

Tabular Ratio Summation Value of the Royal Cubit = **20.618** inch

W.M. Flinders Petrie in his historic work, *The Pyramids and Temples of Gizeh*³ provides us a value for the Royal cubit that has become the generally accepted value. i.e. **Royal Cubit = 20.620 ± 0.005 inches** (British Imperial Units)

$$20.615 \text{ inch} \leftarrow \mathbf{20.618} \text{ inch} \rightarrow 20.625 \text{ inch}$$

Could the string of ratios that produce this historical value really be the source of the Royal Cubit? The possibility is supported by the fact, partially displayed in *Table-1 Notes*, that tabularization of the Fibonacci series by the process of distillation provides a wellspring of numerical knowledge for seekers of historic truths and on occasion will reveal a "new glimmer of light". Interestingly, the pivotal value for each column and row of Table-1 is the product of this ratio string, i.e. the number nine.

$$1/1 \times 2/1 \times 3/2 \times 5/3 \times 8/5 \times 4/8 \times 3/4 \times 7/3 \times 1/7 \times 8/1 \times 9/8 = \mathbf{9}$$

When each of the digits of the string is multiplied by the digit that follows it, and then distilled, the distilled product sum of the eleven terms will be 54.

$$1 \times 1 + 2 \times 1 + 3 \times 2 + 5 \times 3 + 8 \times 5 + 4 \times 8 + 3 \times 4 + 7 \times 3 + 1 \times 7 + 8 \times 1 + 9 \times 8 = \Downarrow$$

$$1 + 2 + 6 + 6 + 4 + 5 + 3 + 3 + 7 + 8 + 9 = \mathbf{54}, \text{ and the}$$

$$\mathbf{Golden Mean @ \ddot{O}(54, 20.618) = 1.618354 @ 1.618034 \text{ true value (0.02\% error)}}$$

³ *The Pyramids and Temples of Gizeh - Chapter 20 - Section 136 - Published London 1883*
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