Genesis 1:1 – the Parametric Equations
– and Beyond

Addendum (1) to THE ULTIMATE ASSERTION (2) and THE SECOND EDGE (3)

Abstract: The numbers that arise from a fair alternative reading of the Bible’s first 8 Hebrew words are neither random nor independent - as might well be supposed. Rather, they convey the impression of having been purposely selected as a coherent and ordered set. This strongly suggests that their Author was, long ago, engaged in preparing an impregnable defence for the truth of His Word, the Judeo-Christian Scriptures, in a time of intense unbelief.

Preamble

This paper extends claims already made in the author’s earlier writings, viz. that the numerical structure represented by the opening words of the Hebrew Bible has been purposefully and intensely seeded with the hallmarks of Supernatural Intelligent Design; it is, in fact, nothing less than a complex cryptogram and standing miracle (4).

As before, we begin by taking a closer look at the object in question: here are the first eight words of the Judeo-Christian Scriptures as they feature in the original Hebrew:

![Figure 1](image_url)

Their fair conversion to whole numbers is based upon the system of alphabetic numeration(5) introduced into Jewish society circa 200 BC. In our example, proceeding from right to left, we read the whole of the first verse (Genesis 1:1) and the first word of the second. Letter values are marked above the text and their sums, the word values, below. These are referred to as the ‘Characteristic Values’ (CVs) of the Hebrew words.

[Observe that in stripping down words to fixed numbers precision is being substituted for the clouding nuances of language and interpretation. If there is a message in the numbers, it is therefore based upon mathematical certainty – but then, only if the numbers themselves prove to be meaningful. Clearly, one’s natural reaction would be to regard them as little more than fortuitous adhesions to the text, and hence devoid of interest. However, the Bible declares its words to be divinely inspired (6) – a claim that cannot be lightly dismissed; we must allow for the possibility that the numbers are somehow predetermined and intended to accomplish some significant purpose. The analyses which follow strongly confirm this.]

The datasets before us may be summarised thus:

\[ G = \{913,203,86,401,395,407,296\} \text{ – the first verse} \]
\[ G^+ = \{913,203,86,401,395,407,296,302\} \text{ – the first eight words} \]
and their sums:

\[ \sum G = 2701 = 73^{rd} \text{ triangular number} \]
\[ \sum G^+ = 3003 = 77^{th} \text{ triangular number} \]
Observe:

1. Both $G$ (Genesis 1:1) and $G^+$ are large triangular numbers.
2. Their terms – the CVs – reside within the first thousand natural numbers.
3. None of these is a multiple of 3.
4. The first term is more than double any other.
5. The sets centre around a multiple of 100 – confirming their affinity with the decimal system of numeration and suggesting the parametric equation

$$G^+_i = 100u_i + v_i \quad - - - - - - - - - - - - - - (i)$$

6. Closer inspection reveals two more parametric relationships, viz.

$$G^+_i = 37u_i + 6v_i \quad - - - - - - - - - - - - - - (ii)$$

and

$$G^+_i = 105u_i + 99v_i + w_i \quad - - - - - - - - - - (iii)$$

In each of these, the parameters $u$, $v$, and $w$ represent whole numbers. Such relationships are compelling evidence that the sets are cohesive.

The Derivation of the Parametric Equations

Concerning (i):

Clearly, $u_i$ represents the number of hundreds in each CV; and $v_i$, its distance from the nearest 100. $G^+$ thus encompasses 28% of numbers in the first thousand.
Here is the table of values accompanying this property:

\[ G^+_i = 100u_i + v_i \]

<table>
<thead>
<tr>
<th>i</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>G^+_i</td>
<td>913</td>
<td>203</td>
<td>86</td>
<td>401</td>
<td>395</td>
<td>407</td>
<td>296</td>
<td>302</td>
</tr>
<tr>
<td>u_i</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>v_i</td>
<td>13</td>
<td>3</td>
<td>-14</td>
<td>1</td>
<td>-5</td>
<td>7</td>
<td>-4</td>
<td>2</td>
</tr>
</tbody>
</table>

**Figure 3**

Example:

\[ G^+_3 = 100u_3 + v_3 = 100 - 14 = 86 \]

**Concerning (ii):**

Each of the eight opening words of the Hebrew Bible may be expressed absolutely within a rectangle of square counters, of height 37, thus:

\[ G^+_i = 37u_i + 6v_i \]

**Figure 4**

As may be seen, 913 comprises 25 complete columns of 37 less 12 counters; 302, 8 complete columns of 37 plus 6 counters, and so on. All deficits and surpluses are observed to be multiples of 6. With respect to 407 and 296, these are both multiples of 37 and so register neither deficit nor surplus.

Here is the table accompanying this property:

<table>
<thead>
<tr>
<th>i</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>G^+_i</td>
<td>913</td>
<td>203</td>
<td>86</td>
<td>401</td>
<td>395</td>
<td>407</td>
<td>296</td>
<td>302</td>
</tr>
<tr>
<td>u_i</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>v_i</td>
<td>13</td>
<td>3</td>
<td>-14</td>
<td>1</td>
<td>-5</td>
<td>7</td>
<td>-4</td>
<td>2</td>
</tr>
</tbody>
</table>
Example

\[ G^*_5 = 37u_5 + 6v_5 = 37 \cdot (11) + 6 \cdot (-2) = 407 - 12 = 395 \]

[Observe here the use of the period (.) as a multiplication symbol]

Remarkably, the first 7 of Figure 4 function as pieces of a jigsaw puzzle; they fit together perfectly in two distinct ways – as depicted in Figures 6 and 7. This feature alone adds substantially to the building of an ‘Intelligent Design’ argument.

Observe that two complete rectangles, A and B, may be formed from pieces 1 to 5; clearly, each is a multiple of 37 and equal to 999; C and D are already multiples of 37; together, these 4 units comprise a total of 999 + 999 + 407 + 296 = 2701 counters.

Similarly, these 5 pieces may be combined differently to form rectangles A’ and B’ – yielding the alternative result.
While not part of these constructions, it is clear that the unused 8\textsuperscript{th} piece is of the same form as the others.

These representations are also significant in demonstrating that of the 127 combinations of the terms of $G$, 23 will be multiples of 37 – i.e. some 7 times more than the number expected of a random set.

**Concerning (iii):**

The third parametric equation concerning $G^*$ arises from its remarkable affinity with the metric dimensions of an abundant modern artefact – the A4 sheet of cut paper (see [www.whatabeginning.com/A4Enigma.pdf](http://www.whatabeginning.com/A4Enigma.pdf)). This rectangular object has the nominal dimensions 297mm x 210mm and, outside of Canada and the US, is now the most popular medium for communicating the written word. The inception of ISO 216 – the A4 standard – dates from 1975.

Clearly, an A4 sheet may be divided precisely into six rectangular panels of dimension 105mm x 99mm. Surprisingly, the numbers 105 and 99 are found to relate directly to each of the final seven of $G^*$, thus:
\begin{align*}
203 (G^*_2) &= 105 + 99 -1 \\
302 (G^*_3) &= 203 + 99 \\
401 (G^*_4) &= 302 + 99 \\
407 (G^*_6) &= 302 + 105 \\
296 (G^*_7) &= 401 - 105 \\
395 (G^*_8) &= 296 + 99 \\
86 (G^*_3) &= 296 - 105 - 105
\end{align*}

Observe that each of these is one less than a multiple of 3. All 7 may therefore be accommodated within the borders of a pair of segmented A4 sheets laid side-by-side, as depicted in Figure 9.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure9.png}
\caption{Figure 9}
\end{figure}

Note however that the first of $G^*$ must be accommodated separately because 913 is two less than a multiple of 3. As may be seen (Figure 10), it is accompanied by doubles (browns) and pairs (blues) of the above CVs.
A third parameter w of value -1 or -2 is thus required to deal with the situation.

There can be no clearer evidence for the coherence and coordination of the elements of $G^+$ and the special status of its first term!

Figure 11 records the values (all small integers) of the 3 parameters $u$, $v$ and $w$ for the $G^+$ set

$$G^+ = 105u + 99v + w$$

**Example:**

$$G^+_2 = 105u_2 + 99v_2 + w_2 = 105.1 + 99.1 - 1 = 203$$
The derivation of \textbf{S1 and S2}

It is necessary in this case to generate two tables of values on the basis of \( w_i \) being either -1 or -2. This parameter is based upon the fact that 913, the first of the set, is two less than a multiple of 3, whereas all the remaining terms are one less. The \( w \) values are thus best dealt with separately. So, for the moment, leaving them out, we have the temporary set \( S' \):

\[
S' = 105u + 99v
\]

<table>
<thead>
<tr>
<th>( u )</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

\textbf{Figure 12}

\( S1 \) is derived from \( S' \) by subtracting 1 from each entry, thus:

\[
S1 = S' - 1
\]

<table>
<thead>
<tr>
<th>( u )</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

\textbf{Figure 13}

\( G^{*}_{(2-8)} \) are highlighted.

\( S2 \) is derived from \( S' \) by subtracting 2 from each entry:
Finding a General Solution

Our initial quest will be to determine the set of numbers $S$ in the range 1-1000 of which $G^+$ is a subset. This will involve a series of ‘scalpings’ as each of the observed features is considered and applied. Here again is the table of variables accompanying equation (i):

$$G^+_i = 100u_i + v_i$$

The following table reports all values within the range 1 – 1000 that meet the requirements of equation (i), viz. $G^+_1 = 100u_1 + v_1$ – observe that the $G^+$ components are highlighted.
Now, because of the fact that none of $G^+$ is a multiple of 3, we may remove such multiples from the table, thus:

**Figure 17**

The next task is to remove all terms which are not of the form required by equation (ii), viz. $G^*_i = 37u_i + 6v_i$

**Figure 18/5**

Here is the reduced table (Figure 19):
With regard to equation (iii), we need to apply $S_1$ and strike out those entries which are not included, thus:

<table>
<thead>
<tr>
<th></th>
<th>$S_1 = S' - 1$</th>
<th>$u$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>--</td>
<td>203</td>
</tr>
<tr>
<td>2</td>
<td>--</td>
<td>302</td>
</tr>
<tr>
<td>3</td>
<td>86</td>
<td>401</td>
</tr>
<tr>
<td>4</td>
<td>185</td>
<td>599</td>
</tr>
<tr>
<td>5</td>
<td>284</td>
<td>704</td>
</tr>
</tbody>
</table>

**Figure 20/13**

Here is the set $G_1$ which captures all analogues of $G^{+}_i$ ($i = 2$ to $8$) over the integer range 1 to 1000:

**Figure 21**
And now, applying $S_2$ to the same, we have the set $G_2$ which captures all analogues of $G^*_1 (i = 1)$ over the integer range 1 to 1000:

![Table](image)

**Figure 22/14**

Observe that the CVs in these two sets $G_1$ and $G_2$ represent all the numbers over the range 1 – 1000 which satisfy the requirements of the 3 parametric equations and the further condition that none is a multiple of 3.
Further Analysis

The outputs of the foregoing analyses are the reduced data sets \( G_1 \) and \( G_2 \) which contain \( G^+ \) and all its analogues.

\[
G_1 = \{ 86, 92, 191, 197, 203, 290, 296, 302, 308, 389, 395, 401, 407, 413, 500, 506, 512, 611 \}
\]

\[
G_2 = \{ 388, 493, 499, 598, 604, 610, 703, 709, 808, 913 \}
\]

The terms of the first 8 CVs of Genesis 1 (i.e. \( G^+ \)) are marked in red.

Observe that – apart from 913 – all the terms of \( G_2 \) are the sums of pairs drawn from the red components of \( G_1 \), thus:

\[
388 = 86 + 302; \quad 493 = 86 + 407; \quad 499 = 203 + 296; \quad 598 = 296 + 302; \quad 604 = 203 + 401; \\
610 = 203 + 407; \quad 703 = 401 + 302 = 407 + 296; \quad 709 = 407 + 302; \quad 808 = 401 + 407
\]

This fact alone strongly suggests the coherency of \( G^+ \); the situation is probably unique among the combination of 7 which might be constructed from \( G_1 \), with 913 occupying the first position.

[With these reduced sets, \( G_1 \) and \( G_2 \), in mind, the author had hoped that further Visual Basic analysis would establish \( G \) as unique among the many 7-CV sets of 2701 that could be constructed from \( G_1 \) and \( G_2 \). However, it was not to be – the task was burdened by the need to make many assumptions, and would thus fail to lead to a convincing outcome. The author therefore had to look elsewhere for further evidence of the Creator’s miraculous choice. It occurred to him that more could be said to justify the choice of particular CVs.]

So, to place the matter beyond all reasonable doubt, more can be said about certain of the individual components of \( G \) and \( G^+ \) and the position they occupy within the verse, thus:

Concerning 913:

It appears logical that this – standing out as the largest, structurally different from the rest, and central to the tessellations described in the first addendum – should be honoured in this way.

Concerning 401:

This derives from the Aleph-Tav – the little word formed from the first and last characters of the Hebrew alphabetic. It is a most prolific word – occurring some 2251\(^{(8)} \) times in the text of the Jewish Bible. Interestingly, it is the equivalent of the Alpha/Omega of the New Testament– which symbol Jesus claimed as his own (Revelation 1:8, 1:11, 22:13).

Concerning 407 and 296:

These multiples of 37 total 703 – representing the triangle which fits perfectly within the verse triangle 2701 and the hexagon 1801 (see Figure 24) – have a significant part to play in making possible the presence of 2368 among the factors of the 21-digit concatenation of \( G \):

\[
913203086401395407296 = 2368 \times 385643195270859547
\]

This strongly suggests that \( G \) is a carefully ordered set, and this is confirmed in later observations.

Thus, remarkably, the Creator’s Name is found again in the numerical expression of

“In the beginning God created the heaven and the earth.”

But there is more: because 296 – the second component – is factor of both Name and Title of the Creator, thus:

\[
Jesus = 888 = 3 \times 296
\]
Concerning 302:

This first CV of the second verse serves the important function of converting $G$ to $G^+$ — in particular, converting 2701-as-triangle (the 73rd) to 3003-as-triangle (the 77th); it also participates with the last 4 of $G$ in the hexagon which fits precisely within 2701-as-triangle — accommodating 703-as-triangle perfectly in the process.

Here we see the G-triangle of 2701 precisely inscribed by the hexagon of 1801 (the sum of the last 5 of $G^+$, viz. 401 + 395 + 407 + 296 + 302 = 1801) and this, perfectly inscribed by the triangle 703 (the sum of the last 2 of $G$, viz. 407 + 296 = 703). Observe here a fact which appears to be significant, viz. 302 is not included in $G$. It seems that we are thereby intended to understand that the miracle of these coordinated geometries reaches beyond $G$ to include the remainder of God’s Word.

It should not escape our notice that these geometrical elements, deriving from complete sequences of the CVs, must mean that $G^+$ is an ordered set, i.e. the information it contains extends beyond the numbers themselves. This fact is further exemplified by the two following divisions of $G$:

**Division 1**

Here, $G$ is divided into ‘odds’ and ‘evens’:

Observe that the sum of the odd values, $913 + 86 + 395 + 296 = 1690$; and the sum of the evens, $203 + 401 + 407 = 1011$.
Factorising these sums, we find $1690 = 10 \cdot 169$ and $1011 = 3 \cdot 337$. Now 169 and 337 are related geometrically; they represent the 8th numerical hexagon/star pair and tessellate, thus:

![Figure 26]

Note that this figure comprises 10 hexagons – each of 169 counters – and 3 hexagrams of 337; in all, a total of 2701. The figure is thus a representation of Genesis 1:1 and, like its triangular form, exhibits a threefold symmetry. Clearly, things needn’t have happened this way. It is indeed a most remarkable addition to what is already a significant confluence of attributes. Observe also that a simple development of this figure leads to the 3-dimensional 7th stella octangula $^{(10)}$.

**Division 2**

<table>
<thead>
<tr>
<th></th>
<th>C = 703</th>
<th>B = 882</th>
<th>A = 1116</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>203</td>
<td></td>
</tr>
<tr>
<td>296</td>
<td>395</td>
<td>407</td>
<td></td>
</tr>
<tr>
<td>407</td>
<td>401</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>86</td>
<td>203</td>
<td>913</td>
<td></td>
</tr>
</tbody>
</table>

![Figure 27]

From these three segments, the following integrated structures arise:

1. $(A + B) + C = 2701 = \text{the G-TRIANGLE}$
2. $(A + C) - B = 937$; this is depicted below as the union of the inner (37th) triangle with a centred inverted copy of itself, thus creating the 13th term of the hexagram (or ‘star’) series in which the 12th triangle figures as a constructional element
3. $(B + C) - A = 469$; this appears as the blue hexagonal core of the hexagram
The interplay within $G$ strongly suggests that it was designed with these beautiful coordinated geometries in mind! And the symbolic nature of the result, with 12 as the dimension of the triangular spurs of the hexagram, should not be missed.

**Conclusions**

It is a sobering thought that each of the billions of A4 sheets of paper that pass through the hands of people daily should bear silent witness to the Glory and Majesty of our Creator! Can there be anything more persuasive of his Divine Presence than the realisation of this? And, of course, along with that, the revelation that the opening words of his ‘Maker’s Manual’, the Bible, are backed by such a glittering array of numerical wonders based on their cohesion, coherency and order – as has been demonstrated here. (11)

The seemingly interminable debates – God vs No-God, Creation vs Evolution, ID vs Non-ID, and so on – suggest that those participating have overlooked the possibility that the Creator might, at some point, intervene to declare his presence *inferentially* – just as He did long ago by delivering His people from Egypt, parting the Red Sea, providing direction in a cloud by day and fire by night, and sustaining them for 40 years in an arid wilderness. Today, adopting an approach which is more in keeping with the understanding of modern man, He provides – in the very first verse of His Word – an elaborate numerical cryptogram – effectively declaring, (1) His Being and Sovereignty, (2) the Inerrancy of His Inspired Word and, (3) the Gospel of Jesus Christ and the reality of mankind’s supernatural enemies. The Hebrew of Genesis 1:1 speaks clearly and incontrovertibly of these truths.

It is significant that the publication of this paper coincides with that of Stephen Meyer’s book *The Return of the God Hypothesis* (see Appendix 1 for a brief survey of its contents). While we both share a passion for Truth, a distinction must be made between the nature of the respective evidences presented: whereas mine (incorporating *The Second Edge* and its Addenda) is unchallengeable, SM’s is likely to invoke much fruitless discussion as antagonists strive to circumvent his findings. However, between us, I believe, the battle is won: JESUS really is ALIVE! The BIBLE really is TRUE!
Another view of the A4/G connection may be found in Appendix 2. This follows an experimental approach requiring nothing more than a metre ruler graduated in millimetres and a few sheets of A4 and A5.

Footnotes

(1) This is the second addendum to The Ultimate Assertion and The Second Edge. The first was entitled The Chain Tesselations of Genesis 1:1.


(4) The term standing miracle represents a wonder that endures and is therefore ever available for inspection and analysis.

(5) SE, p.15

(6) We read “All scripture is given by inspiration of God, and is profitable for doctrine, for reproof, for correction, for instruction in righteousness: ... (2Tm.3:16)

(7) Figure 15 is a copy of Figure 3.

(8) Quoting William Sandford from The Messianic Aleph-Tav Interlinear Scriptures, p.(iii).

(9) SE, pp.60-61

(10) SE, pp.45-48

(11) The Book of Genesis was written a millennium or so before Hebrew letters came to be used as numerals.

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29th July, 2019

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A significant prophecy fulfilled:

“...behold, I will proceed to do a marvellous work among this people, even a marvellous work and a wonder: for the wisdom of their wise men shall perish, and the understanding of their prudent men shall be hid.” (A.V. Isaiah 29:14)
Appendix 1

“The Return of the God Hypothesis” – Stephen Meyer

Meyer uses three scientific points to refute popular arguments put forward by the “New Atheists” against the existence of God:

(1) The evidence from cosmology showing that the material universe had a beginning.
(2) The evidence from physics showing that, from the beginning, the universe was being “finely tuned” to allow for the possibility of life.
(3) The evidence from biology showing that since the universe came into being large amounts of genetic information present in DNA must have arisen to make life possible.

In analysing the evidence from three fields, Meyer reveals how the data support not just the existence of an intelligent designer of some kind – but the existence of a theistic creator.

Appendix 2

An Experiment – Another approach to the details of the A4/G+ connection.

The accompanying table details the nominal paper sizes (in millimetres) determined by the current international paper standard ISO 216. A0 has an area of 1 square metre.

Observe the dimensions of A4 (210 x 297) and A5 (148 x 210). Clearly, in halving A4 we will have lost 1 mm; in other words, to reconstitute A4 from a pair of A5 sheets the result (A4’, say) will have the dimensions 210 x 296.

The following diagram shows a number of standard A4 sheets – some folded – and one A4’ sheet, folded and coloured, in contact with a metre ruler graduated in millimetres. Observe the appearance of G+ and 703 (= 407 + 296 = 401 + 302) at strategic positions along the ruler.
Note the absence of one CV from our construction; it is 407, i.e. 302 + 105. To put this matter right, we repeat the above diagram but with the rightmost sheet of A4 rotated clockwise by 90 degrees – its bottom edge aligned with the 302 mm mark on the ruler.