The Classification of The Quranic Suras - Part One: Structural Analysis and Organization into Groups Generated by Sura Al-Fātiḥah

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Abstract

This study aims to assess, using a rigorous scientific approach, whether the current ordering of the Quranic suras results from an intentional and predetermined organization or from a random arrangement. The methodology is based on discovery of a fundamental mathematical property, Equation 1 ($SV = 49N + 2V$), which establishes a unique functional relationship between the sum of the sura numbers (N), the total number of verses (V), and the sum of the verse numbers (SV) of the Noble Quran. The analysis used the sign of the ranking value D(a), derived from Equation (1), as a criterion to distribute the surahs into major structural groups (TA, TB, BZ), thereby revealing a coherent underlying architecture. This research has brought to light remarkable structural properties governing these groups and their subdivisions (BZ_1, BZ_2, IZ_1, IZ_2), including a series of equilibrium equations such as $S(TB) = 2 \times S(TA)$ and $N(IZ_2) = 2 \times V(IZ_1)$. The study further demonstrates the central functional role of specific suras, such as Sura Al-Fātiḥah, acting as a regulatory pivot. The mathematically verifiable, interdependent complexity and coherence of this architecture constitute strong evidence of a non-random design. A complementary part of this research, dedicated to the analysis of other partitions, will further consolidate this model. The ultimate objective is to demonstrate that the Quran adheres to a coherent and sophisticated internal mathematical organization, thereby confirming the validity and relevance of its current canonical order.

1. Introduction

The ordering of the Quranic suras continues to raise questions in Western academic circles. Influential authors, such as John Wansbrough (1977), have presented it as the result of a late and fragmentary compilation, seemingly devoid of a unifying structural logic [1]. These questions are not new, as evidenced by the divine response provided in verse 32 of sura 25:
*"And those who disbelieve say, 'Why was the Qur'an not revealed to him all at once?' [It is] thus that We may strengthen thereby your heart. And We have recited it [to you] in a measured recitation (*or: and We have arranged it in the best possible order*).'"*
The phrase "in the best possible order" suggests an underlying organization whose precise nature remains to be elucidated. Although revealed progressively, the Quran presents a final arrangement that appears to obey a profound structural logic, defying conventional explanations of random compilation (Déroche, 2014) [2].

Nomenclature

TG	General table consisting of all the suras
Ti	Table i consisting of a group of suras
$N(TG)$	Sum of the Sura numbers in table TG
$N(Ti)$	Sum of the Sura numbers in table Ti
$V(Ti)$	Sum of the verses (or number of verses) of the suras in the Ti table
$SV(Ti)$	Sum of the numbers of the verses of the suras in the Ti table
$SR1(Ti)$	Regularization relation of the Ti table: $SRi(Ti) = 49N(Ti) + 2V(Ti)$
$D(Ti)$	Ordering relation $D(Ti) = SRi(Ti) - SV(Ti)$

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2. Methodological Framework

2.1 Fundamental Principles and Continuity

This research constitutes a direct continuation of the study entitled "Proof of the Authenticity of the Holy Quran: Discovering the Precise Mathematical Arrangement Using Sūrat Fussilat" [3]. Relying on the same fundamental mathematical framework, the present work draws exclusively on the Quran's internal data, namely the surah numbers, the number of verses, and the verse numbers, and rigorously verifiable mathematical operations. In accordance with the principle of a rigorous analysis of the Holy Qur'an, no external hypothesis, whether historical, linguistic, or theoretical, is introduced. This study aims to demonstrate that the canonical arrangement of the suras is not random but corresponds to a coherent, hierarchical and verifiable mathematical architecture. To achieve this objective, our approach is structured around the following axes:

- Deduce the regularization and ranking relations from Equation 1, identified in a previous study during the examination of "Verse and Number Inversion" [3].
- Determine the different structural groups (TA, TB, BZ) and their characteristic equations.
- Establish the distinctive properties of each group and their systemic interactions, thereby revealing a previously unexplored level of structural organization.

2.2 Analysis and Methodological Procedure

The achievement of these objectives is based on a sequential and reproducible methodological procedure, structured into six steps.

Step 1: The Fundamental Equation

The process was initiated by a specific structural observation: the examination of verse inversion between suras belonging to the same group. This led us to investigate three fundamental parameters for the entire Quranic corpus:

- N(TG): The sum of sura numbers (from 1 to 114) = 6555
- V(TG): The total number of verses = 6236
- SV(TG): The sum of all verse numbers = 333,667

The search for a linear relationship between these three quantities resulted in the following equation: 6555u + 6236v = 333667

Solving this equation, via the Extended Euclidean Algorithm, yielded a unique positive integer solution: (u, v) = (49, 2), henceforth referred to as Equation 1: SV(TG) = 49 × N(TG) + 2 × V(TG)

Step 2: Definition of Regularization and Ranking Relations

For any subset of suras Ti (where Ti can be a group or a single sura), we define:

- SR1(Ti): The Regularization Value, calculated as 49 × N(Ti) + 2 × V(Ti). It represents the theoretical sum of verse numbers based on Equation 1.
- SV(Ti): The Actual Sum of verse numbers for the suras in Ti.
- D(Ti): The Ranking Value, defined as D(Ti) = SR1(Ti) – SV(Ti). This metric quantifies the deviation from the theoretical model and serves as the primary tool for classification.

Step 3: Primary Structural Classification via the Ranking Value D(a)

Each sura was analysed individually by calculating its D(a). The sign of D(a) (positive, negative, or zero) is the fundamental criterion for the initial structural partitioning:

- Group TA: A contiguous block of suras where D(a) is consistently Negative.
- Group TB: A contiguous block of suras where D(a) is consistently Positive.
- Group BZ: The residual set of suras exhibiting a mixed pattern of positive and negative D(a) values, located between TA and TB.

Step 4: Advanced Partitioning and the Role of a Regulatory Element

The mixed group BZ is then partitioned into subgroups BZ_1 and BZ_2 based on the sign of D(a). A crucial step is the identification and functional displacement of Sura 1 (Al-Fātiḥah). With a positive D(a), it is strategically assigned to BZ_2, acting as a mobile regulatory element.

Step 5: IZ Sub-groups and the Common Zone PI

The group BZ_2 undergoes a more granular level of analysis by subdividing into two distinct intervals:

- IZ_1: Subset of BZ_2 comprising suras whose number is less than 43.
- IZ_2: Subset of BZ_2 comprising suras located in the interval [43, 62].

Concurrently, a common zone (PI) within the interval [43, 62] is identified. This zone is not an additional group but an analytical view that allows for the visualization of the interaction of the three main groups (TA, TB, BZ) in this region. It consists of:

- PI_1: Structurally belongs to TA.
- PI_2: Structurally belongs to TB.
- IZ_2: Structurally belongs to BZ_2.

Step 6: Multi-scale Balance Verification

The final step involves verifying the consistency and intentionality of the derived structure across all hierarchical levels by testing global and local mathematical relationships, such as:

- S(TB) = 2 × S(TA) (The number of suras in group TB is twice that in group TA).
- $S(BZ_2)$ = 2 × $S(BZ_1)$ (The number of suras in subgroup BZ_2 is twice that in subgroup BZ_1).
- $N(IZ_2)$ = 2 × $V(IZ_1)$ (Multiple concordance between the subgroups of BZ_2).

The successful validation of this network of equations confirms the model's coherence and provides strong evidence of a non-random, integrated, and highly sophisticated design.

3. Relation $SV(TG)$

Context of Discovery:

The examination of verse inversion between the surahs of the same group, conducted in a previous study [3], revealed a remarkable mathematical relationship between three fundamental parameters of the Qur'an:
The sum of the Sura numbers (N)
The total number of verses (V)
The sum of the verse numbers (SV)

Problem Statement: The Three Global Values

N(TG) = 6555 (sum of integers from 1 to 114)
V(TG) = 6236 (total number of verses)
SV(TG) = 333667 (sum of the numbers of all verses)
Since they are coprime, we investigated whether they satisfy a linear relation of the form:
$6555u + 6236v = 333667$ $where$ $(u, v) \in \mathbb{N}^2$ are the unknown integers to be determined.

Mathematical Resolution

a. Existence of Solutions

GCD(6555,6236) = 1 → The equation admits integer solutions (Bézout's Identity Theorem)

b. Search for a Particular Solution:

Using the extended Euclidean algorithm, we obtain: 1 = 2815 × 6555 - 2959 × 6236
Multiplying by 333667: 333667 = (2815 × 333667) × 6555 + (-2959 × 333667) × 6236
Particular solution: (u_0, v_0) = (939272605, -987320653)

c. General Solution and Positivity

General solution: $u = 939272605 + 6236t, v = -987320653 - 6555t$ $(t \in \mathbb{Z})$
Positivity conditions: u > 0 and v > 0
The unique integer satisfying these conditions: t = -150621. Unique positive solution : **u = 49, v = 2**
Conclusion: The fundamental relation is written as: $SV(TG) = 49 \times N(TG) + 2 \times V(TG)$ (Equation 1)

3.1 Regularization relation SR1(Ti)

Definition: Let Ti be a subgroup of Suras belonging to the set TG.

When SV(Ti) ≠ 49 × N(Ti) + 2 × V(Ti), we define the regularization relation SR1(Ti) by:
$SR1(Ti) = 49 \times N(Ti) + 2 \times V(Ti)$ (Equation 2). Where:
    N(Ti): sum of the Sura numbers of group Ti
    V(Ti): sum of the number of verses of the Suras of group Ti
    SV(Ti): sum of the verse numbers of the Suras of Ti

Application

If $SR1(Ti) = SV(Ti)$, then the sum of the Sura numbers of group Ti can be determined as a function of their verses by applying equation (1):
$N(Ti) = (SV(Ti) - 2V(Ti))/49$. Or alternatively, $N(Ti) = (V(Ti)^2 - 3V(Ti))/98$
Example:

N(t8)	Name Sura	V(t8)	SV(t8)
10	yunus	109	5995
13	Ar raad	43	946
15	Al-Hijr	99	4950
17	Al-Isra	111	6216
22	Al-Hajj	78	3081
29	Al-'Ankabut	69	2415
34	Saba	54	1485
50	Qaf	45	1035
51	Adh-Dhariyat	60	1830
63	Al-Munafiqun	11	66
71	Nuh	28	406
73	Al-Muzzammil	20	210
107	Al-Ma'un	7	28
555		734	28663

We have: $49N(T8) + 2V(T8) = SV(T8) \Rightarrow 49 * 555 + 2 * 734 = 27195 + 1468 = 28663$

3.2 Ranking Relation D(Ti)

Definition

The ranking relation for the Suras in table Ti is defined as the difference between the regularization value SR1(Ti) and the actual sum of the verse numbers SV(Ti). This relation is expressed by:
$D(Ti) = SR1(Ti) - SV(Ti)$ (Equation 3)

Ranking Value

Once the Sura numbers and the number of verses are determined, the relation D(Ti) can be calculated, and its value will be referred to as the ranking value for the Suras in table Ti.
For an individual Sura 'a', the ranking relation becomes: $D(a) = SR1(a) - SV(a)$
where D(a) represents the ranking value of Sura 'a'.

Application

The systematic application of this relation to the entire set of Suras in the Quran makes it possible to establish a quantitative ranking value for each Sura

4. Ranking the Suras of the Quran by Groups

General Table TG

The analysis of the ranking value D(TG) for the entire Quranic corpus (general table TG) allows for the establishment of a structural ranking of the Suras into coherent groups.

Table 1 *Quranic structural parameters: the number of surahs (n), the number of verses (v), and the ranking values D(TG)*

N(TG)	Name Sura	V(TG)	D(TG)	N(TG)	Name Sura	V(TG)	D(TG)
1	Al-Fatihah	7	35	58	Al-Mujadila	22	2633
2	Al-Baqarah	286	-40371	59	Al-Hashr	24	2639
3	Ali 'Imran	200	-19553	60	Al-Mumtahanah	13	2875
4	An-Nisa	176	-15028	61	As-Saf	14	2912
5	Al-Ma'idah	120	-6775	62	Al-Jumu'ah	11	2994
6	Al-An'am	165	-13071	63	Al-Munafiqun	11	3043
7	Al-A'raf	206	-20566	64	At-Taghabun	18	3001
8	Al-Anfal	75	-2308	65	At-Talaq	12	3131
9	At-Tawbah	129	-7686	66	At-Tahrim	12	3180
10	Yunus	109	-5287	67	Al-Mulk	30	2878
11	Hud	123	-6841	68	Al-Qalam	52	2058
12	Yusuf	111	-5406	69	Al-Haqqah	52	2107
13	Ar-Ra'd	43	-223	70	Al-Ma'arij	44	2528
14	Ibrahim	52	-588	71	Nuh	28	3129
15	Al-Hijr	99	-4017	72	Al-Jinn	28	3178
16	An-Nahl	128	-7216	73	Al-Muzzammil	20	3407
17	Al-Isra	111	-5161	74	Al-Muddaththir	56	2142
18	Al-Kahf	110	-5003	75	Al-Qiyamah	40	2935
19	Maryam	98	-3724	76	Al-Insan	31	3290
20	Taha	135	-7930	77	Al-Mursalat	50	2598
21	Al Anbya	112	-5075	78	An-Naba	40	3082
22	Al-Hajj	78	-1847	79	An-Nazi'at	46	2882
23	Al-Mu'minun	118	-5658	80	'Abasa	42	3101
24	An-Nur	64	-776	81	At-Takwir	29	3592
25	Al-Furqan	77	-1624	82	Al-Infitar	19	3866
26	Ash-Shu'ara	227	-24150	83	Al-Mutaffifin	36	3473
27	An-Naml	93	-2862	84	Al-Inshiqaq	25	3841
28	Al-Qasas	88	-2368	85	Al-Buruj	22	3956
29	Al-'Ankabut	69	-856	86	At-Tariq	17	4095
30	Ar-Rum	60	-240	87	Al-A'la	19	4111
31	Luqman	34	992	88	Al-Ghashiyah	26	4013
32	As-Sajdah	30	1163	89	Al-Fajr	30	3956

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N(TG)	Name Sura	V(TG)	D(TG)	N(TG)	Name Sura	V(TG)	D(TG)
33	Al-Ahzab	73	-938	90	Al-Balad	20	4240
34	Saba	54	289	91	Ash-Shams	15	4369
35	Fatir	45	770	92	Al-Layl	21	4319
36	Ya-Sin	83	-1556	93	Ad-Duhaa	11	4513
37	As-Saffat	182	-14476	94	Ash-Sharh	8	4586
38	Sad	88	-1878	95	At-Tin	8	4635
39	Az-Zumar	75	-789	96	Al-'Alaq	19	4552
40	Ghafir	85	-1525	97	Al-Qadr	5	4748
41	Fussilat	54	632	98	Al-Bayyinah	8	4782
42	Ash-Shuraa	53	733	99	Az-Zalzalah	8	4831
43	Az-Zukhruf	89	-1720	100	Al-'Adiyat	11	4856
44	Ad-Dukhan	59	504	101	Al-Qari'ah	11	4905
45	Al-Jathiyah	37	1576	102	At-Takathur	8	4978
46	Al-Ahqaf	35	1694	103	Al-'Asr	3	5047
47	Muhammad	38	1638	104	Al-Humazah	9	5069
48	Al-Fath	29	1975	105	Al-Fil	5	5140
49	Al-Hujurat	18	2266	106	Quraysh	4	5192
50	Qaf	45	1505	107	Al-Ma'un	7	5229
51	Adh-Dhariyat	60	789	108	Al-Kawthar	3	5292
52	At-Tur	49	1421	109	Al-Kafirun	6	5332
53	An-Najm	62	768	110	An-Nasr	3	5390
54	Al-Qamar	55	1216	111	Al-Masad	5	5434
55	Ar-Rahman	78	-230	112	Al-Ikhlas	4	5486
56	Al-Waqi'ah	96	-1720	113	Al-Falaq	5	5532
57	Al-Hadid	29	2416	114	An-Nas	6	5577
						6555	
					6236		0

4.1 Distribution of the Suras of the Quran into Groups According to the D(TG) Sign

4.1.1 Classification Principle

The analysis of the canonical ordering of the suras according to the sign of the ranking relation D(TG) makes it possible to distinguish three main groups: TA, BZ, and TB.

Methodology:
- Each group is delimited by the Suras immediately preceding a change in the sign of D(TG).
- These "limit" Suras are identified by grey shading in Tables 1 and 2.

4.1.2 Description of the Three Groups

a) Group TA: Negative Ranking Values
    Interval of suras 2 to 30: Consecutive suras sharing the same sign.
    Lower limit: S(2, 286), the first Sura showing a sign change after S(1, 7)
    Upper limit: S(30, 60), the last Sura preceding the sign change at S(31, 34)
    Characteristic: All D(TG) values are negative
b) Group TB: Positive Ranking Values
    Interval of suras 57 to 114: Consecutive suras sharing the same sign.
    Lower limit: S(57, 29) – the first Sura showing a sign change after S(56, 96)
    Characteristic: All D(TG) values are positive
c) Group BZ: Mixed Ranking Values
    Interval of suras 31 to 56: Suras with opposite/negative and positive signs
    Limits: TA side: S(31, 34), TB side: S(56, 96)
    Particularity: Includes Sura No. 1 (its position will be explained later)
    Characteristic: A mix of positive and negative D(TG) values

4.1.3 Sub-Division of Group BZ

The BZ group will be subdivided into two sub-groups:
 BZ_1: Suras with negative D(TG) values
 BZ_2: Suras with positive D(TG) values

4.1.4 Remarkable Numerical Relation

A significant mathematical proportion between the groups is observed:

Table 2 *Proportional relationship between TB, BZ_2 and TA, BZ*

Groups with Positive D(TG)	Groups with Negative D(TG)	Relation
TB	TA	Number of suras in TB = 2×number of suras in TA
BZ_2	BZ_1	Number of suras in BZ_2 = 2×number of suras in BZ_1

This doubling relationship is illustrated in Figure 4.3(a).

4.1.5 Table TA, BZ and TB

Table 3 *Quranic structural parameters of the TA, BZ, and TB tables: the number of suras (n), the number of verses (v), and the ranking values D(TG)*

Table TA			Table BZ			Table TB			Table TB continued		
N(TA)	V(TA)	D(TA)	N(BZ)	V(BZ)	D(BZ)	N(TB)	V(TB)	D(TB)	N(TB)	V(TB)	D(TB)
1	7	35	31	34	992	57	29	2416	86	17	4095
2	286	-40371	32	30	1163	58	22	2633	87	19	4111
3	200	-19553	33	73	-938	59	24	2639	88	26	4013
4	176	-15028	34	54	289	60	13	2875	89	30	3956
5	120	-6775	35	45	770	61	14	2912	90	20	4240
6	165	-13071	36	83	-1556	62	11	2994	91	15	4369
7	206	-20566	37	182	-14476	63	11	3043	92	21	4319
8	75	-2308	38	88	-1878	64	18	3001	93	11	4513
9	129	-7686	39	75	-789	65	12	3131	94	8	4586
10	109	-5287	40	85	-1525	66	12	3180	95	8	4635
11	123	-6841	41	54	632	67	30	2878	96	19	4552
12	111	-5406	42	53	733	68	52	2058	97	5	4748
13	43	-223	43	89	-1720	69	52	2107	98	8	4782
14	52	-588	44	59	504	70	44	2528	99	8	4831
15	99	-4017	45	37	1576	71	28	3129	100	11	4856
16	128	-7216	46	35	1694	72	28	3178	101	11	4905
17	111	-5161	47	38	1638	73	20	3407	102	8	4978
18	110	-5003	48	29	1975	74	56	2142	103	3	5047
19	98	-3724	49	18	2266	75	40	2935	104	9	5069
20	135	-7930	50	45	1505	76	31	3290	105	5	5140
21	112	-5075	51	60	789	77	50	2598	106	4	5192
22	78	-1847	52	49	1421	78	40	3082	107	7	5229
23	118	-5658	53	62	768	79	46	2882	108	3	5292
24	64	-776	54	55	1216	80	42	3101	109	6	5332
25	77	-1624	55	78	-230	81	29	3592	110	3	5390
26	227	-24150	56	96	-1720	82	19	3866	111	5	5434
27	93	-2862				83	36	3473	112	4	5486
28	88	-2368				84	25	3841	113	5	5532
29	69	-856				85	22	3956	114	6	5577
30	60	-240							6555	6236	0

Note: Sura 1 occupies a distinctive place, it will be placed in the BZ table.

4.2 Distribution of the Suras of the TA, BZ TB According to the Number of Verses

4.2.1 Principle of the New Distribution

Following the initial organization of tables TA, BZ, and TB according to the sign of Equation 1, a more detailed analysis was performed based on the number of verses in the Suras.

Fundamental Observation

The three tables exhibit a remarkable common zone containing the Suras belonging to the interval [43, 62]. This discovery leads to an additional layer of organization for the Suras into three distinct intervals:
- [3, 42]
- [43, 62] (common zone)
- [64, 286]

As a result, the TA, TB, and BZ groups share a common subdivision: a common subgroup consisting of the suras belonging to the interval [43, 62].

4.2.2 An Additional Layer of Organization in Table TA

Transformation

The initial TA table (Suras in the interval [43, 286]) is divided into two new tables:

Table 4 *Characteristics of the new tables TA′ and PI1*

New Table	Interval	Number of Suras	Sign of D(TG)
TA'	[64, 286]	26 Suras	Negative
PI1	[43, 62]	3 Suras	Negative

Common characteristic: Both tables retain negative ranking values.

4.2.3 Special Note: Position of Sura 1

Important Note: Sura 1 (Al-Fatihah) occupies a distinctive position and will be integrated into table BZ. Its exact placement within this table will be the subject of a detailed subsequent analysis. Its status as the first sura being revealed by Equation 1, it will be considered the foundational postulate of this studyl.

4.2.4 Tables TA, TA' and PI1 (Continued)

A detailed analysis of table TA makes it possible to distribute its surahs into two distinct subgroups:
This segmentation allows for a more precise analysis of the mathematical properties underlying the structural organization of the Quran.

Table 5 *Quranic structural parameters of the TA, TA' and PI1 tables: the number of suras (n), the number of verses (v), and the ranking values D(TG)*

Table TA			Table TA'			Table PI1		
N(TA)	V(TA)	D(TA)	N(TA')	V(TA')	D(TA')	N(PI1)	V(PI1)	D(PI1)
2	286	-40371	2	286	-40371	30	60	-240
26	227	-24150	26	227	-24150	14	52	-588
7	206	-20566	7	206	-20566	13	43	-223
3	200	-19553	3	200	-19553	**57**	**155**	**-1051**
4	176	-15028	4	176	-15028			
6	165	-13071	6	165	-13071			
20	135	-7930	20	135	-7930			
9	129	-7686	9	129	-7686			
16	128	-7216	16	128	-7216			
11	123	-6841	11	123	-6841			
5	120	-6775	5	120	-6775			
23	118	-5658	23	118	-5658			
21	112	-5075	21	112	-5075			
12	111	-5406	12	111	-5406			
17	111	-5161	17	111	-5161			
18	110	-5003	18	110	-5003			
10	109	-5287	10	109	-5287			
15	99	-4017	15	99	-4017			
19	98	-3724	19	98	-3724			
27	93	-2862	27	93	-2862			
28	88	-2368	28	88	-2368			
22	78	-1847	22	78	-1847			
25	77	-1624	25	77	-1624			
8	75	-2308	8	75	-2308			
29	69	-856	29	69	-856			
24	64	-776	24	64	-776			
30	60	-240	**407**	**3307**	**-221159**			
14	52	-588						
13	43	-223						
464	**3462**	**-222210**						

Methodology Grouping Objective
Purpose of the Structural Distribution into Tables
The fundamental objective of constituting groups of Suras into distinct tables is to determine the sum of the Sura numbers within each set. The formation of Sura groups into distinct tables has the fundamental objective of determining the sum of the Sura numbers within each set. It should be noted that the number of verses per Sura is a known parameter, and that their distribution within groups G1 to G4 preserves the original configuration. However, the Sura numbers themselves are assumed to be unknown.

Methodological Principle
The underlying hypothesis posits that each group, when properly delineated according to specific criteria, exhibits intrinsic mathematical rules and properties.

Operational Necessity
Discovering and applying these specific properties is essential to accurately determine the sum of elements in the columns of tables TA, TB, BZ, and all other defined sets.

Notation Convention
Variable Designation System
To facilitate calculation operations in this system containing numerous equations, the parameters to be determined will be uniformly designated according to the following convention:
• Assigned letter: **X**
• Identification subscript: number of the corresponding sura

Notation Example

For the sura bearing number 25: $\mathbf{X_{25}}$

General Application

Thus, all sura numbers will be represented by variables noted $\mathbf{X_n}$, where *n* corresponds to the sura number, and whose values are initially considered unknown.

Sum Parameter of TA:

$$N(TA) = X_2 + X_3 + X_4 + X_5 + X_6 + X_7 + X_8 + X_9 + X_{10} + X_{11} + X_{12} + X_{13} + X_{14} + X_{15} + X_{16} + X_{17} + X_{18} + X_{19} + X_{20} + X_{21} + X_{22} + X_{23} + X_{24} + X_{25} + X_{26} + X_{27} + X_{28} + X_{29} + X_{30} \qquad (4)$$

Sum Parameter of TA' :

$$N(TA') = X_2 + X_3 + X_4 + X_5 + X_6 + X_7 + X_8 + X_9 + X_{10} + X_{11} + X_{12} + X_{15} + X_{16} + X_{17} + X_{18} + X_{19} + X_{20} + X_{21} + X_{22} + X_{23} + X_{24} + X_{25} + X_{26} + X_{27} + X_{28} + X_{29} \qquad (5)$$

Sum Parameter of PI1 :

$$N(PI1) = X13 + X14 + X30 \qquad (6)$$

Where N(TA), N(TA'), N(PI1) represent the sum of the Sura numbers in table TA, the sum of the Sura numbers in table TA', and the sum of the Sura numbers in table PI1, respectively.

4.2.5 Tables TB, TB' and PI2:

The Suras of TB are distributed across two intervals: TB' [3, 42] and PI2 [43, 62].

Table 6 *Quranic structural parameters of the TB, TB' and PI2 tables: the number of suras (n), the number of verses (v), and the ranking values D(TG)*

Table TB			Table TB'			Table PI2		
N(TB)	V(TB)	D(TB)	N(TB)	V(TB)	D(TB)	N(PI2)	V(PI2)	D(PI2)
74	56	2142	80	42	3101	74	56	2142
68	52	2058	75	40	2935	68	52	2058
69	52	2107	78	40	3082	69	52	2107
77	50	2598	83	36	3473	77	50	2598
79	46	2882	76	31	3290	79	46	2882
70	44	2528	67	30	2878	70	44	2528
80	42	3101	89	30	3956	**437**	**300**	**14315**
75	40	2935	57	29	2416			
78	40	3082	81	29	3592			
83	36	3473	71	28	3129			
76	31	3290	72	28	3178			
67	30	2878	88	26	4013			
89	30	3956	84	25	3841			
57	29	2416	59	24	2639			
81	29	3592	58	22	2633			
71	28	3129	85	22	3956			
72	28	3178	92	21	4319			
88	26	4013	73	20	3407			
84	25	3841	90	20	4240			
59	24	2639	82	19	3866			
58	22	2633	87	19	4111			
85	22	3956	96	19	4552			
92	21	4319	64	18	3001			
73	20	3407	86	17	4095			
90	20	4240	91	15	4369			
82	19	3866	61	14	2912			
87	19	4111	60	13	2875			
96	19	4552	65	12	3131			
64	18	3001	66	12	3180			
86	17	4095	62	11	2994			
91	15	4369	63	11	3043			
61	14	2912	93	11	4513			
60	13	2875	100	11	4856			

Table TB			Table TB'			Table PI2		
N(TB)	V(TB)	D(TB)	N(TB)	V(TB)	D(TB)	N(PI2)	V(PI2)	D(PI2)
65	12	3131	101	11	4905			
66	12	3180	104	9	5069			
62	11	2994	94	8	4586			
63	11	3043	95	8	4635			
93	11	4513	98	8	4782			
100	11	4856	99	8	4831			
101	11	4905	102	8	4978			
104	9	5069	107	7	5229			
94	8	4586	109	6	5332			
95	8	4635	114	6	5577			
98	8	4782	97	5	4748			
99	8	4831	105	5	5140			
102	8	4978	111	5	5434			
107	7	5229	113	5	5532			
109	6	5332	106	4	5192			
114	6	5577	112	4	5486			
97	5	4748	103	3	5047			
105	5	5140	108	3	5292			
111	5	5434	110	3	5390			
113	5	5532	**4522**	**861**	**212761**			
106	4	5192						
112	4	5486						
103	3	5047						
108	3	5292						
110	3	5390						
4959	**1161**	**227076**						

Decomposition of Table TB
Table TB, whose Suras span the interval [3, 62], is subdivided into two distinct subsets:
   TB': Suras within the interval [3, 42]
   PI2: Suras within the interval [43, 62]

Quantitative Characteristics
   TB' comprises 52 Suras
   PI2 comprises 6 Suras
   Total TB: 52 + 6 = 58 Suras (verifying the interval [3, 62])

Property of the Classification Signs
The values of the classification parameter D(TB) are strictly positive for all Suras belonging to: TB', PI2 and TB.

Sum Parameter of TB
$$N(TB) = X_{57} + X_{58} + X_{59} + X_{60} + X_{61} + X_{62} + X_{63} + X_{64} + X_{65} + X_{66} + X_{67} + X_{68} + X_{69} + X_{70} + X_{71} + X_{72} +$$
$$X_{73} + X_{74} + X_{75} + X_{76} + X_{77} + X_{78} + X_{79} + X_{80} + X_{81} + X_{82} + X_{83} + X_{84} + X_{85} + X_{86} + X_{87} + X_{88} +$$
$$X_{89} + X_{90} + X_{91} + X_{92} + X_{93} + X_{94} + X_{95} + X_{96} + X_{97} + X_{98} + X_{99} + X_{100} + X_{101} + X_{102} + X_{103} + X_{104} +$$
$$X_{105} + X_{106} + X_{107} + X_{108} + X_{109} + X_{110} + X_{111} + X_{112} + X_{113} + X_{114} \qquad (7)$$

Sum Parameter of TB' :
$$N(TB') = X_{57} + X_{58} + X_{59} + X_{60} + X_{61} + X_{62} + X_{63} + X_{64} + X_{65} + X_{66} + X_{67} + X_{71} + X_{72} + X_{73} + X_{75} + X_{76} +$$
$$X_{78} + X_{80} + X_{81} + X_{82} + X_{83} + X_{84} + X_{85} + X_{86} + X_{87} + X_{88} + X_{89} + X_{90} + X_{91} + X_{92} + X_{93} + X_{94} +$$
$$X_{95} + X_{96} + X_{97} + X_{98} + X_{99} + X_{100} + X_{101} + X_{102} + X_{103} + X_{104} + X_{105} + X_{106} + X_{107} + X_{108} + X_{109} +$$
$$X_{110} + X_{111} + X_{112} + X_{113} + X_{114} \qquad (8)$$

Sum Parameter of PI2:
$$N(PI2) = X_{68} + X_{69} + X_{70} + X_{74} + X_{77} + X79 \qquad (9)$$

4.2.6 Table BZ, BZ$_1$ et BZ$_2$:

The Suras of BZ are distributed across two intervals: BZ$_1$ [64, 286] and BZ$_2$ [3, 62].

Table 7 *Quranic structural parameters of the BZ, BZ₁ and BZ₂ tables: the number of suras (n), the number of verses (v), and the ranking values D(TG)*

Table BZ			Table BZ₁			Table BZ₂		
N(BZ)	V(BZ)	D(BZ)	N(BZ₁)	V(BZ₁)	D(BZ₁)	N(BZ₂)	V(BZ₂)	D(BZ₂)
37	182	-14476	37	182	-14476	53	62	768
56	96	-1720	56	96	-1720	51	60	789
43	89	-1720	43	89	-1720	44	59	504
38	88	-1878	38	88	-1878	54	55	1216
40	85	-1525	40	85	-1525	34	54	289
36	83	-1556	36	83	-1556	41	54	632
55	78	-230	55	78	-230	42	53	733
39	75	-789	39	75	-789	52	49	1421
33	73	-938	33	73	-938	35	45	770
53	62	768	**377**	**849**	**24832-**	50	45	1505
51	60	789				47	38	1638
44	59	504				45	37	1576
54	55	1216				46	35	1694
34	54	289				31	34	992
41	54	632				32	30	1163
42	53	733				48	29	1975
52	49	1421				49	18	2266
35	45	770				1	7	35
50	45	1505				**755**	**764**	**19966**
47	38	1638						
45	37	1576						
46	35	1694						
31	34	992						
32	30	1163						
48	29	1975						
49	18	2266						
1	7	35						
1132	**1613**	**4866-**						

Description of Table BZ:
Table BZ, whose Suras are within the interval [3, 286], is broken down into two sub-tables:
- **BZ₁:** Suras from the interval [64, 286]
- **BZ₂:** Suras from the interval [3, 62]

Table 8 *Characteristics of the tables BZ₁ and BZ₂*

Parameter	BZ₁	BZ₂
Number of Suras	9	18
Sign of classification values	Negative	Positive

Sum Parameter of Table BZ:
$$N(BZ) = X_1 + X_{31} + X_{32} + X_{33} + X_{34} + X_{35} + X_{36} + X_{37} + X_{38} + X_{39} + X_{40} + X_{41} + X_{42} + X_{43} + X_{44} + X_{45} + X_{46} + X_{47} + X_{48} + X_{49} + X_{50} + X_{51} + X_{52} + X_{53} + X_{54} + X_{55} + X_{56} \quad (10)$$

Sum Parameter of Table BZ₁ :
$$N(BZ1) = X_{33} + X_{36} + X_{37} + X_{38} + X_{39} + X_{40} + X_{43} + X_{55} + X_{56} \quad (11)$$

Sum Parameter of Table BZ₂ :
$$N(BZ2) = X_1 + X_{31} + X_{32} + X_{34} + X_{35} + X_{41} + X_{42} + X_{44} + X_{45} + X_{46} + X_{47} + X_{48} + X_{49} + X_{50} + X_{51} + X_{52} + X_{53} + X_{54} \quad (12)$$

4.2.7 Table BZ_2 Composed of Two Parts IZ_1 and IZ_2

The Suras of BZ_2 are distributed across two intervals: IZ_1 [3, 42] and IZ_2 [43, 62].

Table 9 *Quranic structural parameters of the IZ_1 and IZ_2 tables: the number of suras (n), the number of verses (v), and the ranking values D(TG)*

$N(IZ_1)$	$V(IZ_1)$	$D(IZ_1)$	$N(IZ_2)$	$V(IZ_2)$	$D(IZ_2)$
47	38	1638	53	62	768
45	37	1576	51	60	789
46	35	1694	44	59	504
31	34	992	54	55	1216
32	30	1163	34	54	289
48	29	1975	41	54	632
49	18	2266	42	53	733
1	7	35	52	49	1421
			35	45	770
			50	45	1505
299	**228**	**11339**	**456**	**536**	**8627**

Table BZ_2, whose Suras are within the interval [3, 62], is subdivided into two sub-tables:

IZ_1: Suras within the interval [3, 42] (i.e., 8 Suras).
IZ_2: Suras within the interval [43, 62] (i.e., 10 Suras).

$$N(IZ1) = X_1 + X_{31} + X_{32} + X_{45} + X_{46} + X_{47} + X_{48} + X_{49} \quad (13)$$
$$N(IZ2) = X_{34} + X_{35} + X_{41} + X_{42} + X_{44} + X_{50} + X_{51} + X_{52} + X_{53} + X_{54} \quad (14)$$

4.2.8 Table PI

Table PI represents the common zone shared by the three main tables. It consists of the three subgroups PI1, PI2, and IZ_2, which together comprise a total of 19 suras, all located within the interval [43, 62].

Table 10 *Quranic structural parameters of the PI1, PI2 and IZ_2 tables: the number of suras (n), the number of verses (v), and the ranking values D(TG)*

Table N(PI1)			Table N(PI2)			Table N(IZ_2)		
N(PI1)	V(PI1)	D(PI1)	N(PI2)	V(PI2)	D(PI2)	N(IZ_2)	V(IZ_2)	D(IZ_2)
13	43	-223	68	52	2058	34	54	289
14	52	-588	69	52	2107	35	45	770
30	60	-240	70	44	2528	41	54	632
			74	56	2142	42	53	733
			77	50	2598	44	59	504
			79	46	2882	50	45	1505
						51	60	789
						52	49	1421
						53	62	768
						54	55	1216
57	**155**	**-1051**	**437**	**300**	**14315**	**456**	**536**	**8627**

The sum parameters of the tables above are given by equations Eq.6, Eq.9, and Eq.14, respectively.

4.2.9 Chronological Classification

Regarding the chronological order, the following table highlights the fundamental organizational differences between the two sets:

Table 11 *Ranking values D(TG) according to the chronological ordering*

N	V	D	N	V	D	N	V	D	N	V	D
1	19	**-103**	31	40	779	57	34	2266	86	36	3620
2	52	**-1176**	32	9	1541	58	54	1465	87	286	**-36206**
3	20	**-23**	33	50	442	59	75	191	88	75	1612
4	56	**-1288**	34	45	721	60	85	**-545**	89	200	**-15339**
5	7	231	35	20	1545	61	54	1612	90	73	1855
6	5	289	36	17	1645	62	53	1713	91	13	4394
7	29	**-34**	37	55	383	63	89	**-740**	92	176	**-10716**
8	19	240	38	88	**-1878**	64	59	1484	93	8	4537
9	21	252	39	206	**-18998**	65	37	2556	94	29	4229
10	30	85	40	28	1610	66	35	2674	95	38	3990
11	11	495	41	83	**-1311**	67	60	1573	96	43	3844
12	8	568	42	77	**-791**	68	26	3033	97	78	1828
13	3	637	43	45	1162	69	110	**-2504**	98	31	4368
14	11	642	44	98	**-2499**	70	128	**-4570**	99	12	4797
15	3	735	45	135	**-6705**	71	28	3129	100	8	4880
16	8	764	46	96	**-2210**	72	52	2254	101	24	4697
17	7	819	47	227	**-23121**	73	112	**-2527**	102	64	3046
18	6	873	48	93	**-1833**	74	118	**-3159**	103	78	2122
19	5	926	49	88	**-1339**	75	30	3270	104	11	5052
20	5	975	50	111	**-3544**	76	49	2597	105	22	4936
21	6	1020	51	109	**-3278**	77	30	3368	106	18	5059
22	4	1076	52	123	**-4832**	78	52	2548	107	12	5189
23	62	**-702**	53	111	**-3397**	79	44	2969	108	18	5157
24	42	357	54	99	**-2106**	80	40	3180	109	14	5264
25	5	1220	55	165	**-10670**	81	46	2980	110	11	5346
26	15	1184	56	182	**-13545**	82	19	3866	111	29	5062
27	22	1114				83	25	3792	112	120	**-1532**
28	8	1352				84	60	2406	113	129	**-2590**
29	4	1419				85	69	1888	114	3	5586
30	11	1426							**6555**	**6236**	**0**

Unlike Table 1 and its derivatives, which follow an organization based on specific criteria, Table 11, classified according to the chronological order and the sign of the DTG) relation, does not seem to aim for a classification of the Suras per se, but could serve other purposes. We believe that the most coherent structure remains the one observed in the compilation order.

It should also be emphasized that any Sura numbering system different from that of the current Quran leads to a classification, based on the sign of D(TG), that is arbitrary and devoid of any coherent logic.
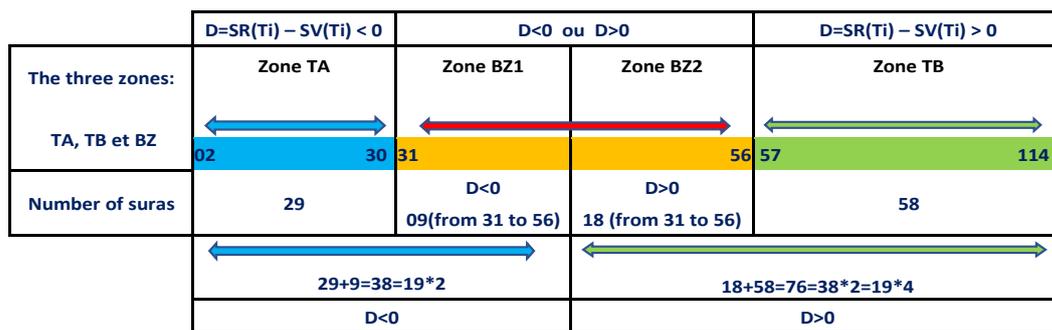
4.3 Distribution Patterns of Sura Groups

	D=SR(Ti) − SV(Ti) < 0	D<0 ou D>0		D=SR(Ti) − SV(Ti) > 0
The three zones: **TA, TB et BZ**	**Zone TA**	**Zone BZ1**	**Zone BZ2**	**Zone TB**
	02 ———— 30	31 ————	———— 56	57 ———— 114
Number of suras	29	D<0 09(from 31 to 56)	D>0 18 (from 31 to 56)	58
	29+9=38=19*2		18+58=76=38*2=19*4	
	D<0		D>0	

Fig. 1 *Distribution models of surah groups according to the classification relationship*

Number of verses	03 42	43 62	64 286
SIGN OF D(Ti)	D(Ti) > 0	D>0 ou D<0	D(Ti) < 0
TA		03 S	26 Suras numbered from 02 to 30
BZ	18 Suras numbered from 31 to 56 \n 08 S	10 S	09 Suras numbered from 31 to 56
TB	52 Suras from 57 to 114	06 S	
Number of Suras	18+58=76=38*2=19*4		29+9=38=19*2

Fig. 2 *Distribution models of surah groups according to the number of verses and the sign of D(Ti)*

5. Characteristics of the TA, TB, BZ Groups and the Secondary Tables

Each of these groups, once studied and defined, exhibits its own characteristics, identified using a research directive inspired by the methodologies employed in a previous study on the authenticity of the Noble Quran [3]. This approach allows for determining the sum of the sura numbers within each group and for formulating corresponding specific equations.

As outlined in section 4.2.4 (Operational Necessity), we will now examine the pre-existing properties within these groups. These properties will be used to determine the sums of the elements in the first columns, following a methodology analogous to that used to establish the parameters for groups G1, G2, G3, and G4 [3].

This same approach is extended to all groups in the General Table (GT), whose parameters are, initially, considered unknown.

5.1 Properties of the TA, TA' and PI1 Groups

By analogy with the general table TG, we have established that the TA, TA', and PI1 groups each exhibit a structural property similar to Equation (1) of the main model. These relationships can be systematically determined using dedicated algorithms.

GROUP TA:
The elements of TA satisfy the relation: $D(TA) = SR2(TA) - SV(TA)$
They are governed by the structural equation: $SR2(TA) = 28 \times N(TA) + 69 \times V(TA)$ (Éq. 15)

GROUP TA' :
The elements of TA' satisfy the relation : $D(TA') = SR3(TA') - SV(TA')$
They are governed by the structural equation: $SR3(TA') = 243 \times N(TA') + 45 \times V(TA')$ (Eq. 16)

GROUP PI1:
The elements of PI1 satisfy the relation: $D(PI1) = SR4(PI1) - SV(PI1)$
They are governed by the structural equation: $SR4(PI1) = 62 \times N(PI1) + 4 \times V(PI1)$ (Eq. 17)

Parameter Summary:
> The parameter for TA is defined by Equation (4) and its value is determined by Equation (15).
> The parameter for TA' is defined by Equation (5) and can be calculated via Equation (16).
> The parameter for PI1 is defined by Equation (6) and can be calculated via Equation (17).

5.2 Properties of the BZ, BZ_1, BZ_2, IZ_1, IZ_2 and PI Groups

5.2.1 BZ, BZ_1 and BZ_2 Groups

The distribution of suras within group BZ based on their verse count determines the configuration of subgroups BZ_1 and BZ_2. This organization mirrors the distribution of BZ performed according to the sign of D(Ti), leading to the following observations:

- **Group BZ_1:** Composed of 9 suras with the highest verse counts compared to those in BZ_2, and characterized by a negative D(Ti) sign.
- **Group BZ_2:** Composed of 18 suras with the lowest verse counts compared to those in BZ_1, and characterized by a positive D(Ti) sign.

Role of Sura No. 1 (S_1):

Sura Al-Fātiḥah (S_1), whose numerical position is a fundamental datum, occupies a unique place within the numerical structure of the Qur'anic text. It paves the way for a remarkable structural organization of the Qur'an.

A Singular and Functional Position

With a positive D(Ta) value of 35, it appears in table TA, which is composed of consecutive negative suras. However, according to the established principles, it should not be part of this table and must be separated to integrate another set, as determined by the principle of proportionality and Equation 1.

Consequently, this sura cannot be integrated into either table TA or table TB, as these sets are strictly defined and delimited in their internal composition. Its natural position is therefore within group BZ, which brings together suras exhibiting both positive and negative ranking values simultaneously.

This displacement, necessitated by the two aforementioned conditions, reveals the following functional characteristics:

Sura 1 does not function as a simple ordinal indicator but as a **global balancing factor**. Its existence is essential to the coherence of the Qur'anic structure, as it ensures equilibrium between the numerical parameters of the different groups. It thus plays a determining role in the proportional rebalancing of parameters between tables TA, TB, BZ, BZ_1, BZ_2, IZ, and IZ_2.

Note on Parameter States

All the values cited in relation to these tables represent the state *after* the displacement of Al-Fātiḥah. When referring to parameters from the initial state, this will be explicitly indicated using a conforming annotation (for example, **IZ'_1** for the initial IZ_1 group).

Observed Structural Balances:
Balance in the Number of Suras:

$S(TB) = 2 \times S(TA)$ *Table 3*

Where S(TB) and S(TA) denote the number of suras contained in groups TB and TA respectively, *after* Sura No. 1 has been moved from TA to BZ_2.

$S(BZ_2) = 2 \times S(BZ_1)$ *Table 7*

Where S(BZ_2) and S(BZ_1) denote the number of suras contained in groups BZ_2 and BZ_1 respectively, with Sura No. 1 included in BZ_2.

Balance in the Sums of Sura Numbers:

$N(BZ_2) = 2 \times N(BZ_1) + N(S_1)$ *Table 7*

Where N(G) represents the sum of the sura numbers in group G, and N(S_1) is the sura number of S_1.

Balance Between the Sums of Sura Numbers and Verses:

$N(IZ_2) = 2 \times V(IZ_1)$ *Table 9*

With $V(IZ_1) = V(IZ'_1) + V(S_1)$

Where N(IZ_2) denotes the sum of the sura numbers in group IZ_2, V(IZ_1) denotes the sum of the verses in group IZ_1 (*after* displacement), V(IZ'_1) denotes the sum of the verses in group IZ_1 *before* the displacement of S_1, and V(S_1) is the number of verses in S_1.

Modes of Influence:

The influence of Sura 1 is exercised through two complementary modes:
1. Through its presence as a countable sura S(G) in the TA, TB, and BZ systems.
2. Through its verse count V(S_1) in the IZ system.

Thus, Sura 1 acts as a pivotal balancing element between the different groups, ensuring the internal coherence of the structure and confirming the existence of an intentional mathematical organization within the structure of the Qur'an. These relationships finally allow for the statement of a set of general rules of correspondence between the BZ_1, BZ_2, and IZ_1 sets, confirming the existence of an intentional mathematical organization.

The ratio between the number of suras in BZ_2 including Sura No. 1 and the number of suras in BZ_1 is equal to the ratio between the sum of the sura numbers of BZ_2 minus the number of sura 1 and the sum of the sura numbers of BZ_1.

$$\frac{N(BZ_2) - 1}{N(BZ_1)} = \frac{S(BZ_2)}{S(BZ_1)} = \frac{18}{9}$$

Now, knowing: $N(BZ) = N(BZ_1) + N(BZ_2) \Rightarrow N(BZ_1) = N(BZ) - N(BZ_2) \Rightarrow$

$$N(BZ_1) = N(BZ) - 2N(BZ_1) - 1 \Rightarrow$$

$$N(BZ_1) = \frac{N(BZ) - 1}{3} \qquad (18)$$

Properties of the BZ$_2$, IZ$_1$ and IZ$_2$ Tables:

The BZ table consists of sura 1 plus 26 other suras whose numbers are consecutive, thus forming a set of 27 suras. This set is broken down into three distinct subgroups: IZ$_1$, BZ$_1$, and IZ$_2$, comprising 8, 9, and 10 suras respectively. Sura 1 (S_1), due to its role in structural balancing, is integrated into the IZ$_1$ group.

The number of suras in BZ, as well as that in the BZ$_1$ table, can be determined by applying equation 18.

Characteristics of the BZ table:

The BZ group brings together the suras numbered from 31 to 56, to which sura 1 is added.

The sum of the sura numbers of BZ is therefore equal to the sum of the integers from 31 to 56, increased by the number of sura 1: $N(BZ) = (sum\ from\ 31\ to\ 56) + 1$

The sum of consecutive integers from m to n is given by the classic formula:

$$S = \frac{(n - m + 1) * (m + n)}{2}$$

- $N(BZ) = \frac{(56-31+1)*(31+56)}{2} + 1 = 1132$
- Applying equation 18, we get: $N(BZ_1) = (1132 - 1)/3 = 377$,
- We deduce: $N(BZ_2) = N(BZ) - N(BZ_1) = (1132 - 377) = 755$

Calculation of the IZ$_1$ and IZ$_2$ sums:

According to the balance relationship established previously:

$N(IZ_2) = 2(V(IZ'1) + V(S1)), V(IZ'1) = 221\ et\ V(S1) = 7$

- $N(IZ_2) = 2 * (221 + 7) = 456$

Knowing also that: $N(BZ_2) = N(IZ1) + N(IZ2)$, we obtain:

- $N(IZ_1) = N(BZ_2) - N(IZ_2) = 755 - 456 = 299$

The sum parameter of BZ is defined by Equation (10)
The sum parameter of BZ$_1$ is defined by Equation (11)
The sum parameter of BZ$_2$ is defined by Equation (12)

5.2.2 Property of the PI Tables

By analogy with the TG, TA, and TA' tables, we have observed that the PI tables exhibit a similar structural property. A relationship links the sum of the sura numbers, the number of verses, and the sum of the verse numbers:

The elements of PI satisfy the relation: $D(PI) = SR5(PI) - SV(PI)$
And are linked by the relation:

$$SR5(PI) = 27N(PI) + V(PI) \qquad (22)$$

5.2.3 Calculation of the Parameters of the Tables

TA, TA', PI1, BZ, BZ$_1$, BZ$_2$, IZ$_1$, IZ$_2$, TB, TB', PI2, PI.

Once these tables have been established and their characteristics defined, their parameters are treated as input data. The main objective of this step is to determine the surah numbers, which are assumed to be initially unknown. To achieve this, the sums of the surah numbers for each table are computed by applying the mathematical relations specific to each of them. The expressions giving the sum of the verses and the sum of the verse numbers are respectively: $V = \sum_i vi$ et $SV = \sum_i vi\ (vi + 1)/2$.

• **TA, TA' and PI1.**

Table 12 *Quranic structural parameters of the TA, TA', and PI1 tables, according to the respective ranking values D(TA), D(TA'), and D(PI1)*

TA table according to: $SR2(TA) = 28N(TA) + 69V(TA)$				Table TA' according to: $SR3(TA') = 243N(TA') + 45V(TA')$				Table PI1 according to: $SR4(PI1) = 62N(PI1) + 4V(PI1)$			
N(TA)	V(TA)	SV(TA)	D(TA)	N(TA')	V(TA')	SV(TA)	D(TA')	N(PI1)	V(PI1)	SV(TA)	D(PI1)
X2	286	41041	...	X2	286	41041	...	X13	43	946	...
X3	200	20100	...	X3	200	20100	...	X14	52	1378	...
X4	176	15576	...	X4	176	15576	...	X30	60	1830	...
X5	120	7260	...	X5	120	7260	...	**57**	**155**	**4154**	**0**
X6	165	13695	...	X6	165	13695	...				
X7	206	21321	...	X7	206	21321	...				
X8	75	2850	...	X8	75	2850	...				
X9	129	8385	...	X9	129	8385	...				
X10	109	5995	...	X10	109	5995	...				
X11	123	7626	...	X11	123	7626	...				
X12	111	6216	...	X12	111	6216	...				
X13	43	946	...	X15	99	4950	...				
X14	52	1378	...	X16	128	8256	...				
X15	99	4950	...	X17	111	6216	...				
X16	128	8256	...	X18	110	6105	...				
X17	111	6216	...	X19	98	4851	...				
X18	110	6105	...	X20	135	9180	...				
X19	98	4851	...	X21	112	6328	...				
X20	135	9180	...	X22	78	3081	...				
X21	112	6328	...	X23	118	7021	...				
X22	78	3081	...	X24	64	2080	...				
X23	118	7021	...	X25	77	3003	...				
X24	64	2080	...	X26	227	25878	...				
X25	77	3003	...	X27	93	4371	...				
X26	227	25878	...	X28	88	3916	...				
X27	93	4371	...	X29	69	2415	...				
X28	88	3916	...	**407**	**3307**	**247716**	**0**				
X29	69	2415	...								
X30	60	1830	...								
464	**3462**	**251870**	**0**								

Tables TB, TB', and PI2
The parameters for these tables are determined by Equations Eq.7, Eq.8, Eq.9, and Table 7.

Tables BZ, BZ$_1$, BZ$_2$, IZ$_1$, and IZ$_2$
The numerical values for these tables are determined by a specific system of mathematical equations: Eq.10, Eq.11, Eq.12, Eq.13, Eq.14, and Tables 6 and 7.

Characteristics of Table TA (Table 12)
Sum of verses: $V(TA) = 3462$
Sum of verse numbers: $SV(TA) = 251870$
Sum of chapter numbers: $N(TA) = (SV(TA) - 69 \times V(TA)) / 28$
$N(TA) = (251\,870 - (69 \times 3\,462)) / 28 = 464$
Value of SR2 (Equation 15):
$SR2(TA) = (28 \times N(TA)) + (69 \times V(TA))$
$SR2(TA) = (28 \times 464) + (69 \times 3\,462) = 251\,870$
Value of D(TA): $D(TA) = SR2(TA) - SV(TA) = 251\,870 - 251\,870 = 0$

Characteristics of Table TA' (Table 12)
Sum of verses: $V(TA') = 3307$
Sum of verse numbers: $SV(TA') = 247716$
Sum of chapter numbers:
$N(TA') = (SV(TA') - 45 \times V(TA')) / 243 = [247\,716 - (45 \times 3\,307)]/ 243 = 407$
Value of SR3 (Equation 16):
$SR3(TA') = 243N(TA') + 45V(TA') = (243 \times 407) + (45 \times 3\,307) = 247716$
Value of D(TA'): $D(TA') = SR3(TA') - SV(TA') = 0$

Characteristics of Table PI1 (Table 12)
Sum of verses for PI1: $V(PI1) = 43 + 52 + 60 = 155$
Sum of verse numbers for PI1: $SV(PI1) = 4\,154$
Sum of the chapter numbers for the three chapters in PI1:
$N(PI1) = (SV(PI1) - 4 \times V(PI1)) / 62 = (4154 - 4 \times 155) / 62 = 57$
Value of SR4 (Equation 17):
$SR4(PI1) = 62 \times N(PI1) + 4 \times V(PI1) = 62 \times 57 + 4 \times 155 = 4154$
Value of D(PI1): $D(PI1) = SR4(PI1) - SV(PI1) = 4154 - 4154 = 0$

Characteristics of Table BZ

Calculation of the sum of chapter numbers for the three BZ tables.

BZ consists of 27 chapters, numbered from 31 to 56, plus chapter number 1. The sum of the chapter numbers for
BZ is therefore equal to the sum of integers from 31 to 56, increased by the number of chapter 1:
N(BZ) = (sum from 31 to 56) + 1
The sum of integers from m to n is given by: S = ((n - m + 1) * (m + n)) / 2
$N(BZ) = ((56 - 31 + 1) * (31 + 56))/2 + 1 = 1132$

Characteristics of Table BZ_1 (Details)
By applying Equation 18, we have: N(BZ_1) = (1132 - 1) / 3 = 377
Given that the number of verses in each sura belonging to group BZ_1 falls within the interval [64, 286], the total sum of the verses of the nine suras constituting this group presents a distinct and isolable value, which can therefore be determined in a systematic and unambiguous manner.
$V(BZ_1) = 73 + 83 + 88 + 75 + 78 + 85 + 89 + 96 + 182 = 849$
The sum of the verse numbers for BZ_1 is: $SV(BZ_1) = 45003$
The value of SR(BZ_1) is: $SR(BZ_1) = 49 \times N(BZ_1) + 2 \times V(BZ_1) = 49 \times 377 + 2 \times 849 = 20171$
The ranking value of BZ_1: $D(BZ_1) = SR1(BZ_1) - SV(BZ_1) = 20171 - 45003 = -24832$

Characteristics of Table BZ_2 (Details)
The sum of the chapter numbers for BZ_2 is given by Equation 18:
$N(BZ_2) = 1 + 2 \times N(BZ) = 1 + 2 \times 377 = 755$
The number of verses is: $V(BZ_2) = V(BZ) - V(BZ_1) = 1613 - 849 = 764$
The sum of the verse numbers for BZ_2 is: $SV(BZ_2) = 18557$
The value of SR(BZ_2) is: $SR(BZ_2) = 49 \times N(BZ_2) + 2 \times V(BZ_2) = 49 \times 755 + 2 \times 764 = 38523$
The ranking value of BZ_2: $D(BZ_2) = SR1(BZ_2) - SV(BZ_2) = 38523 - 18557 = 19966$

Characteristics of Table PI and its parts PI1, IZ_2, and PI2
Sum of verses and verse numbers for PI1: $V(PI1) = 155 \Rightarrow SV(PI1) = 4154$
Sum of verses and verse numbers for PI2: $V(PI2) = 300 \Rightarrow SV(PI2) = 7698$
Sum of verses and verse numbers for IZ_2: $V(IZ2) = 536 \Rightarrow SV(IZ2) = 14789$
Sum of verses for PI: $V(PI) = V(PI1) + V(PI2) + V(IZ2) = 155 + 300 + 536 = 991$
Sum of verse numbers for PI:
$SV(PI) = SV(PI1) + SV(PI2) + SV(IZ2) = 4154 + 7698 + 14789 = 26641$
Sum of chapter numbers for PI: $N(PI) = SV(PI) - V(PI)27 = 26641 - 99127 = 950$
The value of SR5 (Equation 22) is:
$SR5(PI) = 27N(PI) + V(PI) = 27 * 950 + 991 = 26641$
The value of D(PI): $SD(PI) = SR5(PI) - SV(PI) = 26641 - 26641 = 0$

Characteristics of Table PI2
The sum of the chapter numbers for PI1 is: $N(PI1) = 57$
The sum of the chapter numbers for IZ_2 is: $N(IZ2) = 456$
We have the relation: $N(PI) = N(PI1) + N(PI2) + N(IZ2) \Rightarrow N(PI2) = N(PI) - N(PI1) - N(IZ2)$
The sum of the chapter numbers for PI2 is therefore: $N(PI2) = 950 - 57 - 456 = 437$

The value of SR1 (Equation 1) is:
$SR1(PI2) = 49 \times N(PI2) + 2 \times V(PI2) = 49 \times 437 + 2 \times 300 = 21413 + 600 = 22013$
The value of D(PI2): $D(PI2) = SR1(PI2) - SV(PI2) = 22013 - 7698 = 14313$

Characteristics of Tables TB and TB'

The sum of verses for TB is: $V(TB) = 1161$

The sum of verse numbers for TB is: $SV(TB) = 18237$

The sum of the chapter numbers for TB is equal to the sum of integers from 57 to 114:

$N(TB) = ((114 - 57 + 1) \times (114 + 57))/2 = (58 * 171)/2 = 4959$

Or: $N(TB) = N(TG) - N(TA) - N(BZ) = 6555 - 464 - 1132 = 4959$

The value of SR1 (Equation 1) is:

$SR1(TB) = 49 \times N(TB) + 2 \times V(TB) = 49 \times 4959 + 2 \times 1161 = 242991 + 2322 = 245313$

The value of D(TB): $D(TB) = SR1(TB) - SV(TB) = 245313 - 18237 = 227076$

For Table TB':

The sum of verses for TB' is: $V(TB') = 861$

The sum of verse numbers for TB' is: $SV(TB') = 10539$

The sum of chapter numbers for TB': $N(TB') = N(TB) - N(PI2) = 4959 - 437 = 4522$

Value of SR1 (Equation 1): $SR1(TB') = 49 \times N(TB') + 2 \times V(TB') = 49 \times 4522 + 2 \times 861 = 223300$

Value of D(TB'): $D(TB') = SR1(TB') - SV(TB') = 223300 - 10539 = 212761$

6. Discussion

6.1 Proof of Intentionality: Beyond Coincidence

The structure revealed by this study exhibits a degree of interdependent complexity that radically exceeds the limits of plausibly random occurrence. Several converging elements establish the signature of an intelligent design:

1. **The Interlocking Nature of the Evidence**: The system does not rely on an isolated numerical coincidence but on a network of equations and partitions that fit together perfectly. The fundamental equation $49N + 2V = SV$ (which has a unique solution) validates the whole. Then, the classification by the sign of D(a) reveals groups (TA, TB, BZ) and their subgroups that themselves obey strict proportional balances: $S(TB) = 2 \times S(TA)$, $S(TB') = 2 \times S(TA')$, $S(PI2) = 2 \times S(PI1)$, $S(BZ_2) = 2 \times S(BZ_1)$. Finally, the advanced subdivision of BZ_2 reveals an even subtler relation $N(IZ_2) = 2 \times V(IZ_1)$. This cascade of verifiable relationships, where each level validates the previous one, is the antithesis of a random phenomenon.

2. **The Functional Role of Key Elements:** The analysis does not merely note numbers; it assigns specific functional roles to precise suras, whose names and positions resonate with their numerical function.
   o **Al-Fātiḥah (Sura 1)** acts as a regulatory pivot. Its displacement from its natural position (in TA) to BZ_2 is the action that activates the proportional balances. Its status as the "Opening" of the Book thus finds an echo in its role of "opening" the mathematical structure.
   o **Fussilat (Sura 41)** serves as a validation key. Its values 41 and 54 are the unique solution that validates the global balance between the groups. Its name, "Expounded in Detail" (Fussilat), aligns with its function as explicit proof.[3]

3. **The Statistical Argument**: The probability that a text of 114 chapters, composed over 23 years in the 7th century context, could subsequently develop a mathematical structure as complex, coherent, and interdependent as observed is statistically negligible. The proof lies in the fact that displacing just one element - Sura Al-Fātiḥah - is sufficient to simultaneously collapse multiple fundamental numerical equilibria.

   This structure, though concealed for centuries, proves to be intrinsic to the very architecture of the Qur'an, governing it in an immutable manner. An organized complexity of such magnitude cannot be attributed to chance, nor to any human construction conceivable within the historical context of its revelation.

6.2 Theological and Academic Implications

1. **Proof of Authenticity and Preservation**: This mathematical system, with its intrinsic fragility (since it depends on the exact number of verses and the specific composition of the sura groups), cannot be the product of later human compilation or alterations. It demonstrates that the canonical order of the suras and the verse count were fixed and preserved from the origin, constituting tangible proof of the Islamic assertion of the divine preservation of the Quran.

2. **A Response to Academic Criticisms**: The perception, inherited from authors like John Wansbrough [1], of the Quranic order as the product of a late and fragmentary compilation is radically invalidated by this demonstration. The Quran possesses an organization, but it is not linear or chronological; it is structural and mathematical. It belongs to a level of complexity that escapes conventional literary or historical analysis and requires a systemic study.

3. **The Convergence of Science and Revelation**: This discovery places the Quran in a unique position. It is not merely a spiritual or literary text, but it also contains marvels of mathematical signs of great sophistication. It updates the notion of "miracle" (*i'jāz*) by grounding it on a verifiable and falsifiable basis, thus meeting the rationality requirements of the modern era.

6.3 Limitations and Future Research Directions

This study does not represent an end point, but rather establishes the foundation for a new paradigm in Quranic structural research. The methodology we have demonstrated opens the door to a systematic scientific investigation, where future hypotheses can be subjected to mathematical verification rather than remaining in the realm of subjective interpretation.

The most promising research directions now include:

- The exhaustive identification of the complete set of structural partitions and their characteristic governing equations.
- The analysis of emergent properties arising from the interactions between the different levels of this complex organization.

Ultimately, this work provides a robust methodological framework for a renewed and rigorous exploration of the numerical architecture of the Noble Qur'an.

7. Conclusion

This research decisively demonstrates that the ordering of the Quranic suras is governed by an intrinsic mathematical logic, refuting the hypothesis of a random or purely thematic compilation. The discovery of the partition system (TA, TB, BZ) and their characteristic equilibrium equations reveals a coherent numerical architecture that operates as an integrated verification mechanism.

The convergence of evidence—the uniqueness of Equation 1, the fixed proportions between groups, and the functional assignment of Sura Al-Fātiḥah—leaves no room for conventional explanations. This organized complexity not only validates the authenticity of the Quran but attests to a design that transcends human methods of compilation and editing.

Consequently, this intrinsic and preserved mathematical structure constitutes tangible proof of the Quran's authenticity and its arrangement. It responds to criticisms about its alleged disorganization by revealing a profound mathematical order, inaccessible without the appropriate analytical tools.

The additional partitions and equations that will be the subject of the second part of this research promise to reveal even deeper levels of complexity. Even now, it is evident that the architecture of the Quran, of which we perceive only a minute part, surpasses all human capacity for imagination and understanding, attesting to its transcendent origin.

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Conflict of Interest

The author declares that there is no conflict of interests regarding the publication of the paper.

Author Contribution

The author is responsible for the study conception, research design, data collection, data analysis, result interpretation and manuscript drafting.

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