

## Introducing an Original Method in Evaluating the Scientific Miracle of the Qur'an

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ABSTRACT:

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Proving the miraculous nature of the Qur'an as one of the methods to believe in the Qur'an as a divine text has always attracted the attention of the researchers of the Qur'an; nevertheless, the published efforts on this subject are facing numerous methodological challenges. This research attempts to introduce a new and original method exempt from the challenges of the present methods by utilizing some of the techniques in mathematical sciences, logic and statistics. This scientific case-based method rates the effective parameters in the recognition of scientific miracle for one case. Accordingly, it will calculate the certainty of each case and proceeds to combine the ratings of various cases of scientific miracle to calculate the degree of certainty of the divine nature of the book based on those results. In combining the ratings, a threshold will be determined based on human belief behavior. An advantage of this method is that it is extra-religious, data driven, quantitative, applicable to all texts, and generalizable to the entire content.

KEYWORDS: scientific miracle of the Qur'an; methodology of the miraculous nature of the Qur'an; science and religion; interdisciplinary studies of the Qur'an; evaluation method; digital humanities.

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## *1. Introduction*

According to the beliefs of Muslims with an intra-religious approach, the Qur'an has divine origins and it is based on divine revelation, similar to other holy books and scriptures, and it presents the guidance plan for humans and goes beyond other holy books and scriptures. It also displays the truthfulness of its messenger and in theological terms, its miracle, i.e., inimitability. On the other hand, with an extra-religious approach, the Qur'an, being of divine nature, is an issue that can be explained and proved with different methods. One of these methods is to prove the miraculous nature of the Qur'an through the inability of humans to bring about a similar text. There have been many endeavors to prove the uniqueness of the Qur'an in its various attributes. One of the miraculous aspects of the Qur'an which has drawn conflicting ideas of many contemporary thinkers today is the scientific aspect in which a great deal has been spoken and written by both supporters and opponents of this notion. Some argue that the language and purpose of the Qur'an and science are different and, therefore, the scientific interpretation of the Qur'an is not possible; Others, however, have argued about the compatibility of science and the Qur'an, relying on the clear expression of the Qur'an and its precise choice of words (Rūḥānī, 2020). Not considering those who, based on their principles of understanding the Qur'an, basically do not permit discussing the scientific miracle of the Qur'an (Bustami, 2018), the various disputes in this regard goes back to analyzing the examples of the scientific miracles of the Qur'an. Adopting a tolerant approach, some consider all statements of the Qur'an and explain natural phenomena as examples of scientific miracles and some others, based on the conditions and criterion validity, question the certainty of all claims of the scientific miraculous nature of the Qur'an. This research refrains from tolerance towards accepting claims of scientific miracles and, in light of the numerous probable examples for the scientific miraculous nature of the Qur'an, attempts to propose a method to evaluate quantitatively the scientific miracle and, therefore, prove the miraculous nature of the Qur'an.

## *2. Conceptology of the Scientific Miraculous Nature of the Qur'an*

According to theological definitions, a miracle is an extraordinary event inexplicable by natural causes alone (McGraw, 2019; Rūḥānī, 2021 according to which one who claims prophethood carries it out by challenging others, and no one else can perform anything similar (Suyūṭī, 1422/2001, 2:228), and it is therefore a sign of the truthfulness of the Prophet's claim (Khu'ī, 1326 AHS/1947, 37-38). Narrations of the Qur'an also refer to miracles as

extraordinary events (the Qur'an 7:107, 3:49, 5:110, 10:77, 27:13, 46:7; Gril, 2003, 393-396) that Prophets performed by God's permission when faced with denial from the people of their time (the Qur'an 26:154, 7:106, 26:23-30). No other human being could perform such extraordinary events, not even those who had special supernatural or priesthood powers (the Qur'an 7:107-126; Rūḥānī, 1400/2022). Nevertheless, non-believers called prophets sorcerers and magicians (the Qur'an 40:24), whereas believers viewed the extraordinary events as signs of the prophet's truthfulness (the Qur'an 40:28).

According to Qur'anic verses, even though the miracles of previous prophets were physical, supernatural and extraordinary natural events, the Prophet Muhammad (saw) and the Seal of the greatest miracle of the prophet was the Book, i.e., the Qur'an (Rūḥānī, 1394 AHS/2016); since in response to calls for natural miracles, God refers non-believers to the Qur'an (the Qur'an 29:50-51) and views the Qur'an as sufficient to warn mankind and as the last word (Bāqillānī, 1421/2001, 10-14). Further, God has challenged disbelievers in several verses to bring a chapter similar to the chapters of the Qur'an and reiterates that their inability and failure is a sign of the divine origin of the Book (the Qur'an 52:33-34; 11:13; 10:38; 2:23-24; 17:88; 28:49). This is why various thinkers view the verses that challenge disbelievers as the main Qur'anic reasons that the Book is a miracle (Bāqillānī, 1421/2001, 15-16; Suyūṭī, 1422/2001, 2:228; Ṭabāṭabā'ī, 1423/2002, 7; Mahdāvīrād and Shahīdī, 1393 AHS/2015); although there are differences of opinion in the similarities and challenging aspects in their views (Suyūṭī, 1422/2001, 2:231). The importance of the challenging aspect is clear when the Qur'an is compared to other man-made texts. One of the aspects that has attracted attention in recent centuries is the scientific aspect of the Qur'an's contents or the scientific miracle of the Qur'an. Some scientific propositions exist in the Book that are far beyond the scientific era at the time of the revelation of the Qur'an and today with scientific progress its rightfulness has become clear (Mu'addib, 2000, 195). These scientific propositions are presented as a sign of the divine origin of the Book or the scientific miracle aspect of the Qur'an.

It should be noted that the following verse (the Qur'an 41:53) can point to the scientific miraculous nature of the Qur'an:

سَنُرِيهِمْ آيَاتِنَا فِي الْأَفَاقِ وَ فِي أَنفُسِهِمْ حَتَّىٰ يَتَّبِعِنَ لَهُمْ أَنَّهُ الْحَقُّ أَوْ لَمْ يَكْفِ بِرَبِّكَ أَنَّهُ عَلَىٰ كُلِّ شَيْءٍ شَهِيدٌ

*We will show them Our signs in the horizons and within themselves until it becomes clear to them that it is the truth. But is it not sufficient concerning your Lord that He is, over all things, a Witness?* (Sahih International)

This verse notifies that the Qur'an's rightfulness in the future will become clear with mankind's scientific progress in natural horizons and their inner beings (Muḥammad Najjār, 1423/2002, 14).

The scientific miracle of the Qur'an can occur under three circumstances: first, the verse is explicit in the intended meaning (Riḍā'ī Iṣfahānī, 2002, 53); second, the scientific truth is valid and precise (Riḍā'ī Iṣfahānī, 2002, 50); third, this scientific truth was not discovered by mankind or human civilization at the time of the revelation and it would be completely unknown for the people of that time (Mu'addib, 1379AHS/2000, 195; Muḥammad Najjār, 1423/2002, 36; Riḍā'ī Iṣfahānī, 1381AHS/2002, 85).

### 3. *Background of the Methods of Assessing the Miraculous Nature of the Qur'an*

Structured and scientific discussion about the miraculous nature of the Qur'an began from the late second/eighth or early third/ninth century (al-Ḥumṣī, 1400/1979, 50); formerly only litterateurs, poets, eloquent orators, authors and elites could feel the miraculous nature of the Qur'an with all their soul and considered it a clear and evident matter (Mahdavīrād and Shahīdī, 1393 AHS, 170; 'Abd al-Raḥmān, 1404/1983, 1:39). 'The Miraculous Nature of the Qur'an idea' was developed by Muslim scientists from the third/ninth century and reached its peak in the fourth/tenth century (Mahdavīrād and Shahīdī, 1393 AHS/2015, 190). The early theories on the miracle aspect of the Qur'an presented by Muslim thinkers at the end of the third/ninth century were related to the three aspects of *ṣarfah*, i.e., the arrangement and design of the Qur'an and informing of the unseen<sup>1</sup> (Karīmīnīyā, 1392 AHS/2014, 138). Accordingly, some scientists and scholars strove to expand these aspects to the extent that Suyūṭī counts 35 aspects of miracles (Suyūṭī, 1422/2001, 2:231) and Riḍā'ī Iṣfahānī has collected 80 aspects (Riḍā'ī Iṣfahānī, 1392 AHS/2014, p 198 – 204); these efforts can be studied and analyzed in terms of their method of evaluation. One of the methods that Qur'an researchers have adopted is using intra-religious reasoning. In this method, reasoning and arguments are only limited to the verses of the Qur'an and Hadith. For example, the absence of discrepancies in the Qur'an's content and the fact that all books written by mankind have discrepancies in their contents is considered as one of the aspects of Qur'an's miracle (al-Qāḍī al-Asadābādī, 1965, 387). One of the major challenges with this approach is the circularity of the

1. Divine prevention of the competent from taking up the challenge of producing the like of the Qur'an (Ed).

argument whereby the miraculous nature of the Qur'an is used as a premise for the claim that Qur'an is irrefutable, which is itself proven based on the infallibility of the verse stating that there are no discrepancies in the Qur'an. In the beginning of the third/ninth century another aspect of the miraculous nature of the Qur'an, i.e., *ṣarfah*, was mentioned by Nazzām (Mahdaviṛād and Shahīdī, 1393 AHS). This method, which ushered in various interpretations in all instances to prove the miraculous nature of the Qur'an, points and refers to other sources besides the essence of the Qur'an (Qāḍīzādah, 1374 AHS/1995). This argument holds that it is God himself that prevents a text resembling the Qur'an in its qualities from coming to existence to challenge the complexity and elegance of the Qur'an itself. Another approach to prove the miraculous nature of the Qur'an is the style central method, in that the Qur'an contains special styles and order unattested other writings ('Abd al-Raḥmān, 1404/1983, 1:239; Qāsimpūr, 1389 AHS/1990, 62). Furthermore, in addition to the eloquent characteristics, content features concerning the Qur'an's style, for instance, the existence of fundamental and basic verses and allegorical verses and the abrogating (*nāsikh*) and abrogated (*mansūkh*) verses, the existence of depth and secrets and the semantic layers of the Qur'an can be viewed in this approach. One of the challenges of the style-oriented method is that even if it is proven that the Qur'an has a special style, this is not enough to prove the miraculous nature, i.e., the inimitability of the Qur'an.

It was in the fourth/tenth century that some books were authored for the first time on the miraculous nature of the Qur'an in which the inimitability of the Qur'an in terms of eloquence, literature and literary value by mentioning some of the eloquent verses and statements referred to as the miraculous aspect and element of the Qur'an ('Abd al-Raḥmān, 1404/1983, 1:100; Riḍā'ī Iṣfahānī, 1392 AHS/2014, 81). This aspect of the miracle of the Qur'an, which can be viewed as a literary example-oriented method, was deliberated by other thinkers in various ways in the following centuries. Not having enough elements to prove the miracle of the Qur'an from the verse in question and also the inability to generalize the example to the whole text of the Qur'an are some of the challenges of this method. Qur'an's news of the past and predictions future form an aspect of the miracle of the Qur'an which led to another subject raised by researchers of the Qur'an from the beginning of the miracle discourse ('Abd al-Raḥmān, 1404/1983, 1:92). According to this method, by relying on verses that point to events in the future, attempts have been made to prove the miracle of the Qur'an (Mu'addib, 1379 AHS/2000, 173-176); this approach may be termed 'news from the unseen.' Pointing to the victory of the Romans following the defeat of the Persians in the time span

of several years and also the prediction of the conquest of Mecca can be seen as examples of utilizing this method. Not being able to verify some of the examples, doubting the supernatural aspect of other examples as well as the manner of application of the example to the whole text are some of the challenges of this method.

Another method to prove the miraculous nature of the Qur'an, is the historical method; in this method by relying on historical narrations contemporaneous with the revelation of the Qur'an, the litterateurs writing in Arabic were at the peak of eloquence, but failed to respond to the challenge of the Qur'an in writing a similar text; therefore, they concluded that future generations who would be less eloquent in producing literary works would be unable to do likewise (Abd al-Raḥmān 1404/1983, 1:78). Even though this reasoning is fairly convincing, but temporal and spatial limiting of the challenge and miracle and also the uncertainty in historical propositions are its weak points. In the sixth/tenth century, Sakkākī introduced the idea of the visionary aspect of the miracle of the Qur'an (Ma'rifat, 1388 AHS/2009, 53-54). Proponents of this argument state that even though the miracle of the Qur'an can be felt and understood, it is inexplicable and indescribable. This method of proving the miracle of the Qur'an used by others in other aspects of the miracle of the Qur'an can be called visionary and the important problem and issue with it is its personal and unverifiable nature. Until the fourth/tenth century, the stated aspects did not result in new methods of proving the miraculous nature of the Qur'an. Iskandarānī in the fourth/tenth century was the pioneer of the idea of the scientific miracle of the Qur'an (Qāsimpūr, 1389 AHS/1990, 154-155). This aspect of the miracle also appealed to some later thinkers. In this approach, examples are analyzed and Qur'anic propositions are compared with new scientific findings and discoveries; this is why this method is termed the scientific case-based method. The challenges lie in the manner of its application to the whole text. The last method pointed out here is to focus and consider the special mathematical order in the Qur'an. Rashad Khalifa for the first time obtained mathematical and numerical relations from the Qur'an and contributed to this aspect of the miracle of Qur'an (Riḍā'ī Iṣfahānī, 1392 AHS/2014, 172-173). In this method, generalization is logical, rather than evident, random, and impossible to imitate or repeat by mankind and they thus form the necessary conditions for the miraculous and inimitable nature of the Qur'an and the absence of any of these characteristics is considered a challenge in this method.

**Table 1.** *Methods of proving the Scientific Nature of the Qur'an and their challenges*

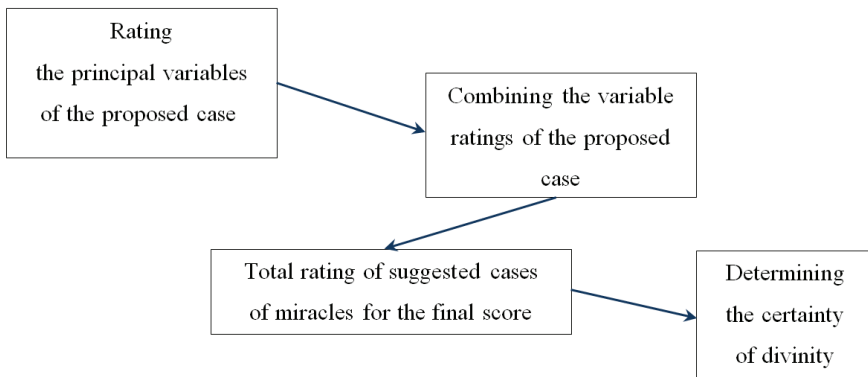
Method	Description	Challenges
Intra-Religious	Based only on the religious text for reasoning	The existence of circular reasoning or logic
<i>Ṣarfah</i>	Citing external sources to prove the miracle of the Qur'an	Not proving the miraculous nature of the Qur'an
Style-Oriented	Proving a special style in the Qur'an	Insufficient to substantiate the argument
Literary Case-Based	Qualitatively studying the literary, eloquent statements of the Qur'an	Unverifiable even for the example itself and unclear manner of its application to the whole text of the Qur'an
News of the Unseen	Citing verses that predict future events	Unverifiable, doubting the supernatural aspect of other examples and also the manner of application of the example to the whole text
Historical	Reasoning towards priority according to a historical proposition	Arabs at the time of revelation not being a priority, uncertainty of historical propositions
Visionary	Visionary and indescribable understanding	Being personal unverifiable
Scientific Case-Based	Comparing Qur'anic propositions with new scientific findings and discoveries	The degree of attention to the method of comparing the verses of the Qur'an with scientific findings and also the manner of its application to the whole text
Special Mathematical Order	Extracting mathematical and numerical relations from the Qur'an	Generalizability, logicity, unclarity, systematicity and inimitability

#### 4. *The Proposed Method*

In view of the above and the inadequacies of the existing methods of proving the miraculous nature of the Qur'an, a new method to verify the proposed scientific miracles needs to include the following features:

1. It should be applied to all texts;
2. It should be quantitative and calculate the degree of divine certainty of the book;
3. It should reduce the subjectivity;
4. It should be extra-religious, which means that it does not rely on religious presuppositions;
5. The proposition of the scientific miracle of the Qur'an should not be refuted or disproved with the slightest skepticism in the vital variables of the miracle (understanding the concept, the accuracy of the scientific matter, the authenticity of the matter, and the precedence of the expression over the others);
6. A low score should seriously deteriorate the effect of proposed cases;
7. Belief in the claimed miracles should increment by aggregating miracle cases and adding them up in time;
8. Its flexibility should allow the substitution of hypotheses where there are discrepancies in any of the numerical assumptions.

The steps of this method are shown in Figure 1:



**Figure 1.** *General stages of the proposed method*

In this model, to begin with, a score between zero to one is given for the parameters of explicitness, validity, accuracy, precedence and authenticity. The definition of these variables is provided in the following example:

*And We have sent the winds, and We have sent down water from the sky.*  
(the Qur'an 15:22)



The two propositions  $p$  and  $q$  (the meaning we derive from the verse and what we infer from the translation to reach the scientific content) are expressed as follows:

And We sent the winds to conceive, and We sent down water from the sky ( $p$ )  
It is possible to cause precipitation by seeding the clouds ( $q$ ).

Now the relevant parameters can be defined for all texts including the Qur'an as follows:

1. Explicitness: The degree of confidence in the correctness of  $p$ ;
2. Validity: The degree of confidence in inferring  $q$  from  $p$ ;
3. Accuracy: the degree of confidence in the credibility of the scientific portion ( $q$ );
4. Precedence: the degree of certainty that the statement( $q$ ) was not present in the scientific era of the speaker or author's time and could not have reached them from the natural path of the progress of science;
5. Authenticity: The degree of certainty that the statement was given at the time it is claimed to be made and it belongs to the specified speaker.

It must be noted that when a scientific proposition (Accuracy) is beyond the state of the art of a given time-frame (Precedence) and is conceived (Validity) from a clear, explicit (Explicitness) and authentic (Authenticity) proposition, it can be concluded that the probability of this proposition originating from the human mind, decreases.

By referring to three experts in this domain, these values are obtained by averaging their ratings:

Explicitness: 0.8 Validity: 0.8 Accuracy: 1 Precedence: 0.95 Authenticity: 1

In the following step, we must combine these parameters and reach a single score for an item. In order to combine these variables, the following key points should be considered for suggested operators:

1. Each of these parameters must be higher than the threshold ( $tr_1$ ) specified by the experts, otherwise the score of the combined parameter will be close to the lowest value of the parameters;
2. The resulting number is still between zero and one, so operators such as the sum of these combinations are certainly not appropriate;
3. Expert intuitions can be used in rating and the closest operator to these intuitions will be used.

Based on this method, nine hypothetical claims of miracles with different ratings can be seen in Table 2, which on the one hand have been combined with various techniques based on the above I to III points, and on the other hand, the average intuition of three experts is calculated to be able to choose the best combination method.

**Table 2.** *Nine hypothetical cases with the values of explicitness, validity, accuracy, precedence and authenticity variables along with the average assessment of experts for the final score of each case*

Expert's Assessment	Explicitness	Validity	Accuracy	Precedence	Authenticity
0.7	0.9	0.8	0.91	0.7	1
0	0.2	0.5	1	1	1
0	0.8	1	0.9	0.7	0.3
0.1	0.5	0.6	1	0.5	0.6
0.85	0.8	1	0.9	0.9	1
0.2	1	1	1	1	0.4
0.75	1	1	1	0.7	0.9
0.8	0.9	0.9	1	0.7	1
0.51	1	1	1	1	0.51

According to the fundamental points mentioned, in order to calculate the final score of each item, several methods and operators can be suggested. In this regard, in Table 3, six operators are proposed, which are depicted in the following points:

1. Multiplication: Since all parameters are less than or equal to one, their multiplication will undoubtedly be less than or equal to one as well. This product of multiplication will at most be equal to the minimum value of the claimed variables. Obviously, in this operator, the degree of weakening in most cases, will be very high.
2. Harmonic mean: Each of the arithmetic, geometric and harmonic means for numbers less than one will be less than one as well, but the harmonic mean has the property that it is closer to a smaller number than the other two means (Xu, 2009) and therefore it is more suitable in this case.

3. Using the threshold ( $tr_i$ ): If any of the parameters is lower than the specified threshold ( $tr_i$ ) (for example 0.7) the operator's value will become zero otherwise the harmonic mean is selected.
4. Minimum: Minimum parameters will increase or decrease by 10 percent, in proportion to how far the parameters are from the minimum.
5. Multiplication and harmonic: The multiplication of parameters is placed below the threshold ( $tr_i$ ) in order for further attenuation, and its harmonic average is placed above the threshold ( $tr_i$ ).
6. Multiplication and minimum: If each of the parameters is lower than the threshold ( $tr_i$ ), for further attenuation but not to become zero, the parameters are multiplied as in the previous operator and for other cases it is used like a minimum operator.

Table 3 shows the results of the execution of the above six operators for the combination of the five parameters. Based on the experts' assessment column, it is clear that the "multiplication and minimum operator" is more appropriate than the others.

**Table 3.** *The output of the suggested operators on ten hypothetical cases*

Multiplication	Harmonic Mean	Threshold ( $tr_i$ )	Minimum	Multiplication and Harmonic	Multiplication and Minimum	Expert's Assessment
0.45	0.84	0.84	0.72	0.84	0.72	0.7
0.1	0.5	0	0.21	0.1	0.1	0
0.15	0.61	0	0.31	0.15	0.15	0
0.09	0.6	0	0.48	0.09	0.09	0.1
0.64	0.91	0.91	0.84	0.91	0.84	0.85
0.4	0.76	0	0.44	0.4	0.4	0.2
0.63	0.9	0.9	0.75	0.9	0.75	0.75
0.56	0.88	0.88	0.74	0.88	0.74	0.8
0.51	0.83	0	0.56	0.51	0.51	0.51

The equation of the selected operator is given below:

$$S_k = \begin{cases} \left( \frac{M_3 - M_2}{1 - M_2} \times 0.4 = 0.2 \right) \times M_2 + M_2 & \text{for } M_2 < tr_1 \\ T_k \times C_k \times D_k \times V_k \times H_k & \text{for } M_2 < tr_1 \end{cases} \quad (1)$$

Where there is the score of kth case.

$$M_1 = \text{mean}(T_k, C_k, D_k, V_k, H_k) \quad \text{Average of five variables}$$

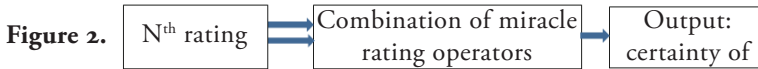
$$M_2 = \text{min}(T_k, C_k, D_k, V_k, H_k) \quad \text{Minimum of five variables}$$

$$M_3 = \frac{5M_1 - M_2}{4} \quad \text{Mean of the four variables except the minimum}$$

$$tr_1 = 0.69 \quad \text{Threshold of weakening}$$

### 5. The Aggregation of Cases' Score

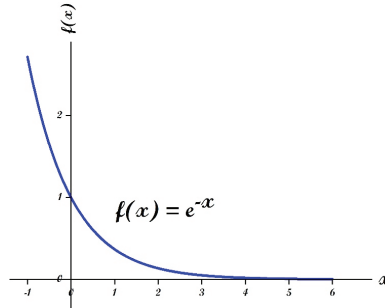
The manner in which the various claimed miracle cases are combined in order to achieve the degree of divine certainty of the text is shown in Figure 2.



As it was stated before, the principles of aggregation to attain the degree of divine certainty are as follows:

1. The effect of each item on increasing the degree of divine certainty and decreasing the certainty of being of worldly nature;
2. Being between zero and one due to the degree of certainty;
3. Corresponding to this feature of belief that the slope of increasing belief was high, but declines by increasing the cases.

According to these principles, the function of the degree of certainty can be proposed as follows:



**Figure 3.** Exponential function with the desired properties for the degree of certainty function (Gumbel, 1958; Ross, 2004)

According to Figure 3, the function starts from one, in the range of zero to infinity and moves with a high slope first and then it is reduced to a low slope moving towards zero. This is exactly the desired behavior to be used as a function of human degree of certainty. Therefore, the degree of certainty can be generally written as follows:

$$P_{h_1}(S) = e^{-r \sum_{k=1}^n S_k} \quad (2)$$

$$P_{h_2}(S) = e^{-r \sum_{k=1}^n S_k^2} \quad (3)$$

Equations 2 and 3 calculate the degree of divine certainty in which  $P_{h_1}(S)$  and  $P_{h_2}(S)$  are the text's degree of certainty in being of worldly nature,  $n$  is the number of rated miracle claims, and  $S_k$  is the score of a miracle claim noted in Equation 1. The two formulas differ in the degree to which they diffuse the value of low-confidence scores.

By increasing  $\sum_{k=1}^n S_k$  (or  $\sum_{k=1}^n S_k^2$ ), the certainty degree of divine nature of the text, increases to an extent that it equals to the certainty degree of it being of worldly nature. This value of  $\sum_{k=1}^n S_k$  (or  $\sum_{k=1}^n S_k^2$ ) is used to calculate  $r$ , thus, all the desired range for  $\sum_{k=1}^n S_k$  (or  $\sum_{k=1}^n S_k^2$ ) can be considered. For instance, a range of value of  $\sum_{k=1}^n S_k$  (or  $\sum_{k=1}^n S_k^2$ ) is assumed that starts with at least five claims with full score (one out of one), and continues with twenty cases with the same score. In other words,  $r$  is calculated in proportion to the required threshold ( $tr_2$ ), based on human belief behavior, to exceed 50% certainty. This threshold ( $tr_2$ ) in practice is the value that tilts the scale towards the case being a miracle when the sum of claimed cases' ratings reach that value.

In Table 4, the value of  $r$  is given in terms of threshold ( $tr_2$ ) values of 5, 10, 15, and 20 certain miracle cases to reach the degree of 50% certainty.

**Table 4.** *The values of  $r$  are proportional to  $tr_2$* 

<b><math>tr_2</math></b>	5	10	15	20
<b><math>r</math></b>	0.14	0.07	0.047	0.035

In order to calculate the  $r$  value of the degree of certainty in Equations 2 and 3 has to be set equal to 0.5. Therefore:

Table 4

$$r = \frac{\ln(2)}{\sum S_k^2}$$

In this case, assuming ten hypothetical claimed miracle cases of Table 1, the degree of certainty of the cases being divine or of worldly nature can be seen in Table 4 using each of the two mentioned equations.

**Table 5.** *Degree of certainty that the hypothetical cases are of worldly nature using the dual equations*

<b><math>tr_2</math></b>	5	10	15	20
<b>The certainty of being of worldly nature using Equation 2</b>	0.54	0.74	0.81	0.86
<b>The degree of certainty of being of worldly nature using Equation 3</b>	0.67	0.82	0.87	0.9

It is clear that by using this method, any book with any number of astounding scientific cases can be evaluated and the degree of certainty of it, being of worldly or divine nature, can be calculated.

## 6. Summary and Prospective Studies

Having defined the miracle of the Qur'an and examined the challenges faced by using different methods of providing proof for the miraculous nature of the Qur'an, it is essential to provide a new method without the deficiencies of the previous ones.

The result of this research is to present an extra-religious, data-driven, quantitative method that is applicable to all texts, generalizable to the entire content. Finally, by defining the main variables involved in rating the miraculous nature of a content and the method of combining it, a model was presented corresponding to the belief behavior, which by

accumulating each new case, the degree of certainty in the content being of worldly nature would diminish with the increase in the ratings received. It is important to analyze the behavior of the brain in accepting and believing a predicate. This behavior of the brain depends on:

1. The quantity of certain or uncertain cases it takes for a human to believe a specific content;
2. The manner of behavior of the rating combination slope in the beginning, middle and end of the curve.

Table 6 displays the number of miracle examples similar to the mentioned verse, so that the degree of certainty in the worldly nature of the content would reduce to zero.

**Table 6.** *The number of items required for each of the two equations for calculating the degree of certainty with different belief thresholds*

Equation	Certainty Regarding the Divine Nature of the Text (%)	$tr_2 = 5$	$tr_2 = 10$	$tr_2 = 15$	$tr_2 = 20$
2	50%	6	12	18	24
3		7	14	21	29
2	95%	25	51	77	103
3		31	62	93	124

Table 6 shows that at least 25 and at most 124 predicates in the Qur'an similar to *و ارسلنا الرياح لواقح لواقح* are required to reach 95% certainty in believing the divine nature of the Qur'an by adding new cases; this belief will be reinforced. moreover, by regarding other aspects of miracles, this degree of certainty may approach 100%.

The following points are made regarding future efforts:

1. Reaching a more precise rating system by analyzing the concepts of explicitness, validity, accuracy, precedence and authenticity;
2. Examining the viewpoints of more experts to determine intuitive ratings;
3. Utilizing the future developments of cognitive science in discovering more precise characteristics of the evidence-based behavior in order to determine the value of  $tr_2$ .

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