



Journal of Interdisciplinary Qur'anic Studies 1 (2022) 83-105

Reinterpretation of "the Darkness of the Three" in Verse 6 of *Surah al-Zumar*, in Light of the Components of the Scientific Miracle of the Qur'an

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Article History: Received 22 March 2021; Accepted 11 October 2021

ABSTRACT:

(Original Paper)

One of the phrases that has been considered by most commentators with the approach of empirical science is "the darkness of the three (the three veils of darkness)" in the verse (Q.39:6). They have interpreted this combination as the three darknesses of the abdomen, uterus and amnion-chorion. A view has also been put forward by contemporaries, which considers it as the spaces between the abdomen and uterus, the flesh of the uterus and the amnion, the amnion and the fetus, and has considered such an interpretation as an example of the scientific miracle of the Qur'an. In the meantime, another approach can be taken and based on the descriptive-analytical method and with the focus on the interdisciplinary approach, what is the "darkness of the three" is examined. Accordingly, by relying on the symbol of "complete and dense indifference and shapelessness before creation" for "darkness of the three," this phrase can be considered as the platform for the formation of protein structures (based on genetic information contained in DNA codes), which are the cornerstone of the structure and biological processes of living organisms (without the production of proteins, no biological processes will be formed and no cells and organs will be made). It should be borne in mind that this interpretive possibility is also compatible with the components of the scientific miracle of the Qur'an.

KEYWORDS: Qur'an, Darkness, Number Three, Scientific Interpretation, Scientific Miracle, Protein, Three Protein Structures.

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1. Introduction

God says in the verse (Q.39:6), "He creates you in the wombs of your mothers, creation after creation, in a threefold darkness." Many commentators, considering the darkness inside the body and especially the mother's womb, have understood the darkness inside some parts of the mother's body in which the fetus grows and is kept. This is while the context of the verse does not clearly take into account the parts of the mother's body and only vaguely and briefly considers the continuation of human creation in the context of the "darkness of the three (a threefold darkness)." Accordingly, the reanalysis of the meaning of the words used in the above interpretation and the use of biology to explain this interpretation is necessary (a viewpoint based on linguistic methods such as etymology and symbolism of words in different cultures and religions with the focus on Quranic Context).

The background of the researches done on the meaning of "the darkness of the three" in the Qur'an includes traditional and modern interpretations of the Qur'an, which have been written so far under this interpretation. An article entitled "The concept of the darkness of the three" from the perspective of the Qur'an, narrations and new scientific findings (based on the verse Q.39:6)" has been published by Pahlawan and Shirdil, which has the same popular interpretive views on the application of "The Darkness of the three" and considers some of the organs of the human body with a more accurate and scientific view and with the view of narrations. However, scattered works with linguistic and symbolic approach to the words used in the interpretation of "the darkness of the three" can be seen, such as: "The etymology of the Qur'anic word oppression and the study of its semantic evolution until the revelation of the Holy Qur'an" by Sarshar and Hejazi (2015) and "The place of the number three in the ancient Iranian culture and rituals" by Mahmudi (2005). So far, a detailed, methodical and independent research with this approach and the view of biology to study the semantic relations of the "three" in the verse and relying on it to analyze the "Darkness of the Three" has not been done. Therefore, the present study deals with the semantics of the "darkness of the three" based on the above approaches. Precisely, the question: "What is the meaning of the" darkness of the three "in verse (Q.39:6)?" has been answered in the present paper.

2. Terminology

Studying the number word "three" and its companion "darkness" which are used in the interpretation of "darkness of the three," from a lexical point of view can be effective in understanding the meaning of this phrase more deeply, which have been studied in this section.

2.1. The Root TH-L-TH

"Three" in Hebrew, Aramaic and Syriac have been reported with the pronunciation $\dot{s}\dot{a}la\dot{s}$, $tel\dot{a}t\dot{a}$ and $tlot\dot{a}$ meaning the number three (Gesenius, 1939, 1025; Jastrow, 1903, 1672; Costaz, 2002, 392). In Abyssinian pronunciation $\dot{s}allasa$ refers to an action performed for the third time (Leslau, 1991, 529). One contemporary scholar believes that the Semitic root *t-l-t*, the Arabic form of the triad, is a partial repetition of the root *t-l* with the Arabic form *thullah*. Therefore, the origin of this root goes back to the Afro-Asian word *cul* meaning seed (Orel & Stolbova, 1995, 115) and the remnant of its ancient meaning in Arabic *thail* means seed. Compared to surviving words, such as *thullah* meaning abundant and large number, in Afro-Asian roots can also have the meaning of abundant (Pakatchi, 2016, 48-49).

On the other hand, "three" was a sign of "plural" which was used after counting "one" and "two" (Danzig, 2007). The root of *th-l-th* in the Arabic language and culture denotes the number three and its derivatives (al-Farāhīdī, 1988, 8:214; al-Azharī, 1928, 15:45; al-Zamakhsharī, 1979, 74). However, with regard to "the largest derivation" (*al-ishtiqāq al-akbar*) or "lexical exchange," it is possible to raise the possibility of a semantic relationship between the roots *th-l-th* and *th-l-l* and another meaning could achieve for the "third."

Subject to the above rules, whenever, while maintaining order, one of the three consonants in a word has been changed to another consonant, as in the case of the two words mentioned, the phonetic similarity is a sign of semantic similarity (Ibn Jinnī, 2010, 2:152 Ya'qūb, 1987, 208). A semantic correspondence can be established between *th-l-l* and *th-l-th*. On this basis, according to the meaning of the root *th-l-l* (al-Farāhīdī, 1988, 8:216; al-Ṣāḥib ibn 'Abbād, 1993, 10:126; al-Zamakhsharī, 1979, 75) and

the Qur'anic uses of *thullah* indicating "a large number of people,"¹ also the root *th-l-th* could have this meaning. Therefore, in line with the ancient languages, it confirmed the existence of the concept of "abundance" along with the numerical meaning of the root *th-l-th*.

Examining the traditional ritual-cultural symbols of the number "three" in different cultures and religions can be a way to conceptualize accurately the "darkness of the three." "Three" is a fundamental number all over the world. "Three" has also been a symbol of perfection. The Chinese say that "three" is an integer and an expression of wholeness and the end of emergence (Chevalier & Gheerbrant, 2008, 663-672; Nooraghayee, 2014, 39-41; Shepard, 2014, 358).

Multiplicity has also been one of the symbolic meanings of the number three in symbolic studies of different cultures and religions (Chevalier & Gheerbrant, 2008, 3:669; Cooper, 2013, 263; Nooraghayee 2014, 39; Schimmel, 2016, 81; Bruce-Mitford, 2009, 25). The number "three" symbolizes plurality, growth, and the first number contains the word "all." Third means the whole number, because it includes the beginning, middle and end. The "three" force is universal and is subject to the three natures of the universe, namely heaven, earth and water. In many traditions, the number "three" was considered to mean "abundant," meaning beyond duality. That is why Aristotle says, "The number three is the first number for which the word "all" can be used." In the Egyptian language, the plural sign is three lines. "Three," as a number of perfection, has played a role in the sacrificial rites of ancient Greece and Rome (Schimmel, 2016, 73-76).

Accordingly, the number "three" in different religions and cultures, in addition to the numerical meaning, indicates the meanings of the whole number, multiplicity and growth, which is also consistent with the root concept of this number.

2.2 The Root Z-L-M

The root *z-l-m* in Hebrew and Aramaic has been reported with the pronunciations *tlm* and *tlam*, respectively, meaning to oppress and injure (Gesenius, 1939, 378; Frankel, 1962, 35). This root has been used

تُلَةٌ مِنَ الْأَوّلينَ وَ قَليلٌ مِنَ الْآخِرِين (الواقعة/13–14)

^{1.} A multitude from the former [generations] and a few from the latter ones, see the verse (Q.56:13-14).

in Syriac with the pronunciation *tlumâ* meaning oppressor and thief (Brun-Durand, 1895, 187). This is while "darkness" has the same root with the pronunciation *salmâvet* in Hebrew and *tolmâ* in Syriac meaning darkness (Gesenius, 1939, 1126; Brun-Durand, 1895, 188). This root is used in Abyssinia with the pronunciation *şalma* meaning to be blacked (Leslau, 1991, 556). "Oppression" is also used in Assyrian culture with the pronunciation *şalmu* meaning black and dark (Gelb, 1957, 77). Also, the connotation of this word in the ancient Hamito-Semitic languages is the word *čil*, equivalent to "shadow" in Arabic meaning, shadow, which in the Orl culture refers to the addition of "am" as *čilam*, Arabic *zallam*, and has been reported in the meaning "be dark" (Orel & Stolbova, 1995, 119).

Therefore, it seems that the old meaning of this root is darkness and blackness, and later it was developed in the sense of oppression and has taken on a moral burden in the sense of "inappropriate behavior" (Sarshar & Hejazi, 2015, 115). Most Arabic lexicographers have considered the meaning of "darkness" for the root *z-l-m* (al-Farāhīdī, 1988, 8:162; al-Ṣāḥib ibn 'Abbād, 1993, 10:31; al-Zamakhsharī, 1979, 403).

Other meanings for the root *z-l-m* have been reported in the Arabic language and culture. For example, we can mention the "severity of evil deeds" (severe evil) (al-Farāhīdī, 1988, 8:162; Ibn Manzūr, 1955, 12:373. Linguists have considered *zulmah* from the same root to mean "disappearance of light" (al-Rāghib, 1991, 537; Ibn Fāris, 1983,3:467; al-Muṣṭafawī, 1989, 7:170). Accordingly, the root *z-l-m* in the Arabic language has various meanings such as darkness and the placement of an object outside its place. As mentioned earlier, this root has been used in ancient languages to mean shadow, darkness, and blackness, which later took on a moral connotation and was used to mean oppression.

"Blackness and darkness" in various religions and cultures symbolizes the initial darkness of the universe, fertility, life, emptiness, death, shame, despair, sadness, humility, forgiveness, dignity and black or dark blue as the first chaos (Cooper, 2013, 182-183; Chevalier & Gheerbrant, 2008, 3:685-695). Black is often symbolically known as cold, negative, and anti-all colors, and is associated with the first darkness and the initial indifference of the universe (before creation) (Serh, 1964, 96; Chevalier & Gheerbrant, 2008, 3:685-695; Cooper, 2013, 84). In the Bible, before creation, the earth was shapeless and empty, and the darkness covered the faces of the lips. Therefore, "black" is a sign of the first darkness before creation, which has been referred to in various religions (Chevalier & Gheerbrant, 2008, 3:685-695; Cooper, 2013, 182-183). Seeing black animals, blacks, or dark-skinned people in a dream indicates that we are in contact with our early instinctive world (Chevalier & Gheerbrant, 2008, 3:685-695). Growth and creation take place in the dark (Cooper, 2013, 84).

In Eskimo mythology, there is a myth about the creation that "in eternal darkness, a raven, helpless to find food, longed for light with all its being, and the earth became bright" (Weil, 2004). The myth of creation among the African people of Kono in Guinea includes the beginning of creation from the stage of pure darkness (Beier, 1966). The Apache Indians knew the beginning of the creation of the earth in water and darkness (Leeming, 2010, 42). The indigenous peoples of Hawaii also believed that there was pure darkness at the beginning of creation (Leeming, 2010, 123). The Māori natives of Polynesia in the Pacific islands also believed that darkness and water existed in the beginning of the world (Leeming, 2010, 184). The Papago natives of Arizona, in one of their creation myths, believed that darkness and water first existed (Leeming, 2010, 211). In Indian myths of creation in Rig Veda, there was darkness in the early stages of the world (Baqershahi, 2010). Prenatal darkness is a symbol of invisible light. Relying on this relationship, darkness and light are opposed, which also consider darkness as a symbol of the stage before entering the religion (Cooper, 2013, 84).

In Babylonian myths, Mesopotamia and ancient Iran, the battle between light and darkness is mentioned (Leeming, 2010, 13). Therefore, the concept of birth also lies in darkness because darkness is the main background for the birth of light. On this basis, "black" was also a symbol of fertility and life, as in ancient Egypt and North Africa, black was considered the color of the earth and the cloud of rain (Serh, 1964, 96).

Accordingly, the main traditional ritual-cultural symbol for blackness seems to be the initial amorphous and indistinguishable world before the creation of the universe, which has a common meaning with other black symbols, such as the embryonic stage of the world, the instinctive world. Primary, birth, entry into the new religion, life, growth, motherhood and fertility.



Figure 1. Etymological diagram of z-l-m in ancient languages.

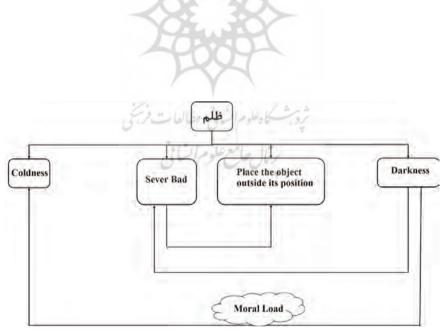


Figure 2. Etymological diagram of z-l-m in Arabic

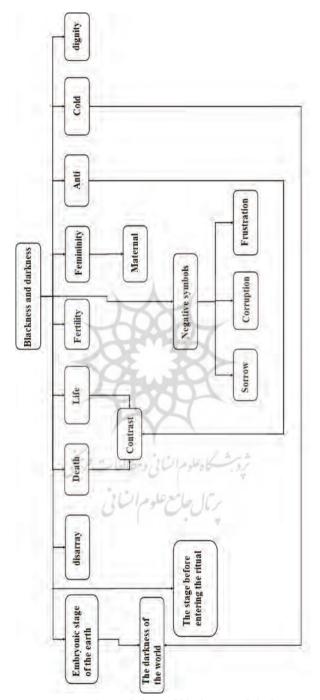


Figure 3. The symbolism of blackness and darkness

3. Qur'anic Applications

The analysis of the meanings of the roots and cultural-ritual symbols of the words *thalāth* and *zulumāt* that accompanies it, should be done with the focus on the Qur'an in order to judge the Qur'anic interpretation of "darkness of the three."

3.1. Thalāth

The root *th-l-th* has been used 32 times in the Qur'an, of which 6 and 11 times have been used in the form of *thalāth* and *thalāthah*, respectively. This word is used in the accompaniment of "days" in following verses:

He said, "My Lord, grant me a sign." He said, "Your sign is that you will not speak to people for three days except in gestures" (Q.3:41).¹

He said, "My Lord! Appoint a sign for me." He said, "Your sign is that you will not speak to the people for three complete nights" (Q.19:10).²

In the above verses, it is mentioned that three days (or day and night) the speech was taken from the prophet Zechariah as a sign for the good news of the divine bestowal of a child. Therefore, the number three here indicates a kind of mystery and holiness. The "three days" in these verses, which have a jurisprudential approach, indicate the number of days that a person must fast as an atonement for illness or breaking his covenants:

As for someone who cannot afford [the offering], let him fast three days during the hajj and seven when you return; that is [a period of] ten complete [days] $(Q.2:196).^3$

He who cannot afford [any of these] shall fast for three days. That is the atonement for your oaths when you vow (Q.5:89).⁴

These three days of atonement replace another action that has not been performed and has been abandoned. Therefore, performing this atonement leads to the completion of the said action. On this basis, three

I. «قالَ رَبِّ اجْعَلْ لِي آيَةً، قالَ آيتُكَ أَلَّا تُكَلِّمُ النَّاسَ ثَلاثَة أَيَّام إِلَّا رَمْزا... » (آل عمران/41)
 2. «قالَ رَبِّ اجْعَلْ لِي آيَةً قالَ آيتُكَ أَلَّا تُكَلِّم النَّاسَ ثَلاثَ لَيالٍ سَوِيًّا» (مريم/10)
 3. «قالَ رَبِّ اجْعَلْ لَي يَعِدْ فَصِيامُ ثَلاثَة أَيَّام فِي الْخَجِّ وَ سَبْعَةٍ إِذا رَجَعْتُمْ تِلْكَ عَشَرَةٌ كامِلَة...» (البقرة/196)
 4. «... فَمَنْ لَمْ يَجِدْ فَصِيامُ ثَلاثَة أَيَّامٍ فِي الْخَجِّ وَ سَبْعَةٍ إِذا رَجَعْتُمْ تِلْكَ عَشَرَةٌ كامِلَة...» (البقرة/196)
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can be considered complete numbers. "Three" is used to express the end and the completion of the period of women, accompanied by $qur\bar{u}$ " in the verse below:

Divorced women shall wait by themselves for three periods of purity [after menses] (Q.2:228).¹

The function of "three" meaning "completeness" is also evident in another verse:

Whereupon he said, "Enjoy yourselves in your homes for three days: that is a promise not to be belied!" (Q.11:65).²

Because the three-month deadline for completing the blessings to the people of *Thamūd* and completing the argument with them before the stage of torment is depicted. This verse also refers to different categories of human beings from the right, left and forerunners:

You will be three groups (Q.56:7).³

Because the parties (*azwāj*) bond together to form a bunch or set and the Companions of the Right and the North and the forerunners are each a group of human beings, it seems here that the meaning of the *azwāj* is the different "guilds" and "groups" of human beings.

Therefore, addressing the three guilds also means the general public of various categories and guilds (Tabataba'i, 1996, 19:116). Therefore, "three" in this verse also means completeness and perfection. *Thalāth* is also used in the following verse accompanying "forked" (*shu'ab*):

Get off toward the triple-forked shadow (Q.77:30).4

In this verse, God says to the people of hell: "Go to a shade [of dense and flammable smoke] that has three branches." Many commentators have interpreted the three branches of this smoke in three directions (right, left and above the head) (al-Tabarānī, 2008, 6:418; al-Tūsī, 2010, 10:230; al-Māwardī, 6:179; al-Ālūsī, 1994, 16:194; Ibn 'Āshūr, 1999, 29:402; Tayyib, 1990, 13:343). The intention seems to be that they will be tormented in every way and completely. Some have expressed the concept of completeness and perfection in the number three more clearly and the meaning of the three

branches of fire smoke is the intensity and density and greatness of the smoke (al-Zamakhsharī, 1979, 4:680; Tabataba'i, 1996, 20:154).

Accordingly, *thalāth* and *thalāthah* in the Qur'an, in addition to the concept of enumeration, indicate the meaning of wholeness and perfection, as well as the implicit meanings of holiness and mystery.



Figure 4. Diagram of Qur'anic uses of thalāth

3.2. Żulumāt

The word *zulumāt* (darkness) is used 22 times in the Qur'an. The word is used with "land and sea," "earth," "lightning," "light," "three" and sometimes without a nominal companion. In these verses, God refers to the "darkness of the land and the sea:

Say, "Who delivers you from the darkness of land and sea?" (Q.6:63).¹

Is He who guides you in the darkness of land and sea? (Q.27:63).²

It is He who made the stars for you, so that you may be guided by them in the darkness of land and sea (Q.6:97).³

The juxtaposition of land and sea can be an allusion to all places on earth. In these verses, the "darkness" of the whole earth is what God does to guide and save human beings from within it. In other words, in these verses, God is on one side and the servants caught in the "darkness" are on the other side. Hence, whatever "darkness" is, only God opposes and overcomes it.

In this verse, the abandonment of the hypocrites in "darkness" is mentioned: And left them sightless in a manifold darkness (Q.2:17).⁴

I. «قُلْ مَنْ يُنجّيكُمْ مِنْ ظُلُماتِ الْبَرَّ وَ الْبَحْر...» (الانعام/63)
 2. «أَمَّنْ يَهْدِيكُمْ فِي ظُلُماتِ الْبَرَّ وَ الْبَحْر...» (النمل/63)
 3. «وَ هُوَ الَّذِي جَعَلَ لَكُمُ النُّحُومَ لِتَهْتَدُوا بِما فِي ظُلُماتِ الْبَرَّ وَ الْبَحْر...» (الانعام/97)
 4. «...وَ تَرْبَحُهُمْ فِي ظُلُماتٍ لا يُبْصِرُون» (البقرة/17)

Therefore, God, who in the previous verses was the only savior of man from "darkness," has not spoken of guidance and salvation here and has confirmed the abandonment of hypocrites in the position of "darkness." It seems that the behavior and actions of some people, such as the hypocrites, have led to the grounds for benefiting from their guidance and salvation, which is expressed in this verse with the "disappearance of light." Therefore, the only possible state for them is to remain in absolute darkness and, consequently, to go astray. The opposition of "darkness" to "light" is seen in the other twelve verses by stating "bringing out of darkness into light" for "believers" and "expelling from light to darkness" for "infidels," for example:

Allah is the Guardian of the faithful: He brings them out of darkness into light. As for the faithless, their patrons are the Rebels, who drive them out of light into darkness (Q.2:257).¹

Here, too, God attributes "bringing out" to Himself, and in contrast to light, *zulumāt* can mean darkness and the resulting aberration. In this verse, God also speaks of a seed that is in the "darkness" of the earth and God is aware of its existence:

No leaf falls without His knowing it, nor is there a grain in the darkness of the earth (Q.6:59).²

Certainly, God knows the future of cultivating and bearing fruit (guidance and salvation) of this seed. Therefore, in this verse, God is on one side and "darkness" is on the other side. "Darkness" in this verse can mean the darkness inside the earth that no human being knows about.

In the following verse, unlike the previous verses, God has connected "darkness" with "heaven" and has used the companion with "lightning" which is attributed to the sky:

Or that of a rainstorm from the sky, wherein is darkness, thunder, and lightning (Q.2:19).³

In this verse, the fear of the disbelievers from "lightning" and "darkness" is on one side and God, who surrounds things, is on the other side, and there is no escape for them from the situation of darkness. Therefore, the

"darkness" in the above verse can be darkness that is accompanied by fear and panic and the result is aberration.

In addition, there is another verse, which refers to the multi-layered nature and multiplicity of "darkness":

Or like the manifold darkness in a deep sea, covered by billow upon billow, overcast by clouds, manifold [layers of] darkness, one on top of another: when he brings out his hand, he can hardly see it (Q.24:40).¹

Layering in the above verse is interpreted in such a way that the actions of infidels are like dense and double darkness in which they cannot even see their hand (Tabataba'i, 1996, 15:132).

Accordingly, the *zulumāt* in the Qur'an is interpreted as a dark and frightening situation that leads the trapped person astray so that it is impossible to get out of it. This is absolute darkness and can be very dense and multi-layered. This situation - that is, being in "darkness" - can occur in all places on earth, in the earth and in the space of the heavens (the universe known to humankind). God has used "light" and the two verbs "salvation" and "guidance" in contrast to "darkness" and has attributed it only to himself. In some cases, the knowledge of the "darkness" and the creature in it is considered to belong to God.

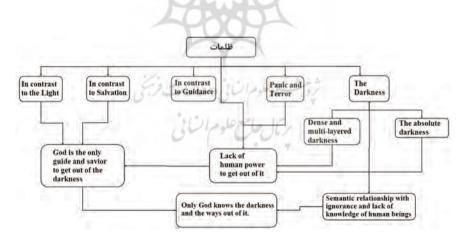


Figure 5. Qur'anic uses of zulumāt

I. «أَوَكَظُلُماتٍ فِي بَحْرٍ لَجَّيٍّ يَغْشاهُ مَوْجٌ مِنْ فَوْقِهِ مَوْجٌ مِنْ فَوْقِهِ سَحاب ظُلُماتٌ بَعْضُها فَوْقَ بَعْض إِذا أَخْرَجَ يَدَهُ لَمْ يَكَدْ يَراها...» (النور/40)

4. Possible Interpretations for "The Darkness of the Three"

The possible meanings derived from the etymology, cultural-ritual symbolism and Qur'anic uses of the words "darkness" and "three" can be assessed and analyzed with different contexts provided by the commentators and, consequently, the interpretive possibilities proposed by them. Many commentators have considered the meaning of "darkness of the three" to be the darkness inside the mother's abdomen, uterus and amnion-chorion (Muqātil ibn Sulaymān, 2002, 3:671; Ibn Abī Zamanīn, 2003, 2:239; al-Samarqandī, 1995, 3:178; al-Ṭabarānī, 2008, 5:364; al-Ṭabarī, 1991, 23:125; al-Tha'labī, 2001, 8:222). This view can also be seen in some sources of later narrations quoting Imam al-Bāqir (PBUH) (al-Fayd al-Kāshānī, 1994, 4:314; al-Qommī al-Mashhadī, 1989, 11:280; al-Arūsī, 1994, 4:477). Furthermore, "the darkness of the three" in the prayer of Imam al-Husayn (PBUH) on the day of '*Arafah* is known as flesh, skin and blood (al-Majlisi, 1982, 3:64).

Another view has also been put forward by contemporary scholars according to the traditions and views of biology, which the meaning of "darkness of the three" includes the spaces between "abdomen and uterus," "flesh of the uterus and amnion" and "amnion and fetus" (Pahlevan & Shirdel, 2016, 7). Some have interpreted the abovementioned interpretation as the darkness of "fathers' loin (*sulb*)" and "mothers' womb" (al-Māwardī, 5:116; al-Tabrisī, 1993, 8:765; Ibn al-Jawzī, 2001, 4:9; al-Zamakhsharī, 1979, 4:114). In the meantime, there are also monotheistic views, such as that the meaning of "darkness of the three" is physical nature, plant and animal soul (Ibn 'Arabī, 2001, 2:198).

According to another study (Tarokh et al., 2016), and its combination with the findings of the present study, perhaps the cell, the intracellular environment and the genetic material within the cell nucleus can be considered as other proposed examples of "darkness of the three." All the above views are based on the three layers of darkness, and if examined more carefully, the accuracy of the narrations can be accepted or questioned. What should be considered in this research is the degree of compatibility of these views with the meanings obtained from the semantic and symbolic study of the said interpretation. Obviously, each of the above examples is fully consistent with the concept of "three layers of darkness" – which was one of the approved meanings in view of the semantic relations of the "three" in the verse. Relying on the main symbol of "blackness and darkness" in different religions and cultures, namely, "the initial shapelessness and indifference before creation," the possible meaning of "three layers of darkness" can be transferred to another example. Thus, in the mother's body,¹ in an amorphous bed and at a stage where there is still no differentiation, the first structure of the protein is formed and long chains of biopolymers are formed. These proteins are made from genetic information contained in DNA codes, and in the next step, this long polymer chain is twisted on itself to form a meaningful form containing bio molecular effects. This stage is interpreted as the second structure of the protein.

In the last step, a final three-dimensional spatial structure of folds, rotations and other topological events is formed on the previous bed. This step is referred to as the third protein structure (Fromm & Hargrove, 2012, 36). Therefore, in three continuous stages, from darkness in the symbolic sense of shapelessness and indistinguishability, a complex and three-dimensional structure is created. Proteins are the key to bio molecular biology in the biological sciences; they are the cornerstone of the structure and biological processes in living things. Without them, no biological process would have taken place and no cells or organs would have been made. Therefore, the creation of the first cells in an embryo, when it is in the mother's womb, takes place through the production of these proteins,² and this case can also be suggested as one of the possible examples of the "darkness of the three."

In the following, with the approach of scientific contemplation and scientific interpretation, and of course with regard to the polysemous approach (and without denying other interpretive

2. Although other biological components, substances, and molecules (such as lipids, etc.) also play a number of primary or secondary roles in the process, structure, and function of living organisms, these are proteins that, from different perspectives, have key and unique roles, so that some researchers consider protein mechanisms as the main foundation (especially for cybernetics and control and complexity processes) in the early layers of the construction and structure of life. For example, proteins are considered the boundary between viruses and organic structures (in terms of complexity and biological cybernetics) and are considered a kind of "proto-living" structures. However, we are talking about proteins here, and this does not negate the role of other biological materials in biostructures.

^{1.} What follows is the synthesis of proteins in the reproductive process in the mother's body after fertilization. Although protein synthesis is present throughout the life of all living organisms, here we focus on the process of protein synthesis during reproductive and embryonic reproductive processes. In other words, we examine an instance of a scientific phenomenon as an instance of the meaning of the verse.

opinions), some appropriate proportions have been considered about this noble verse:

He created you from a single soul, then made from it its mate, and He has sent down for you eight mates of the cattle. He creates you in the wombs of your mothers, creation after creation, in a threefold darkness. That is Allah, your Lord! To Him belongs all sovereignty. There is no god except Him. Then where are you being led away? (Q.39:6).¹

- "A single soul" (*nafs wāḥidah*): Proportion to monomers (protein building blocks).
- "Then made from it its mate" (*thumma ja 'ala minhā zawjahā*):²
 Conformity with polymerization in the process of polypeptide synthesis for the first stage of protein synthesis.
- "And He has sent down for you eight mates of the cattle" (*anzala lakum min al-an 'ām thamaniāta azwāj*):

Compatibility with 8 nucleobases³ that carry information and protein construction maps (4 DNA nucleobases and 4 RNA nucleobases).

• "He creates you in the wombs of your mothers" (*yakhluqukum fi buțūni ummahātikum*):

All of these synthesis steps take place on host substrates (such as the cell nucleus, then the ribosome, then the first structure, then the second structure, and then the third structure). It is as if each bed or structure plays the role of the mother's womb and orphanage for the next stage product.

• "Creation after creation, in a threefold darkness" (*khalqan min ba'di khalqin fi zulumāt thalāth*):

I . «حَلَقَكُمْ مِنْ نَفْسٍ واحِدَةٍ ثُمَّ جَعَلَ مِنْها زَوْجَها وَ أَنْزَلَ لَكُمْ مِنَ الْأَنْعامِ ثَمَانِيَةَ أَزْواج يَخْلَقُكُمْ فى بُطُونِ أُمَّهاتِكُمْ حَلْقاً مِنْ بَعْدِ خَلْقٍ فى ظُلُماتٍ ثَلاثٍ دَلِكُمُ اللَّهُ رَبُّكُمْ لَهُ الْمُلْكُ لا إِلَهَ إِلاَّ هُوَ فَأَتَى تُصْرَغُونَ» (الزمر/6)

- 2. Other interesting scientific examples for this ascent of the holy verse and other ascents have already been presented in other researches (for example, some researchers have suggested that the single soul and its pair have a proportion to the original egg cell and its double division). But here, our focus is on the protein case to examine a suggested case for the verse. According to the polysemous approach, this does not negate the accuracy of other scientific examples for this noble verse.
- 3. There are good arguments for this proportionality, such as context, lexical meanings, interpretive evidence, and apparent proportionality of the structure of these molecules with related semantic descriptions and so on. Expressing these reasons requires a separate article for consideration, some of which were presented orally.

The first structure becomes the second structure during the first structural transformation (folding, etc.). The second structure becomes the third structure during the second structural transformation. The third structure becomes the fourth structure (the final structure of the protein) during the third structural transformation.

In each of these steps, from a large number of possible movements and a large number of possible transformations and many degrees of freedom, the process is precisely directed towards the construction of the specific product. Like directing a growth or movement in the heart of darkness. In the dark, all directions are equal, but it is the guide that determines a particular desired direction. Here, too, at each stage, although many states are possible, conditions and control mechanisms transform the previous structure into exactly the next complex structure (and not other things).

• "That is Allah, your Lord! To Him belongs all sovereignty" (*dhālikum Allah rabbakum lahu al-mulk*):

Your Lord is such a Lord that all the parts of the world, large and small, are under His command, will, providence, creation, and making. Perhaps one of the examples of God's kingdom in this verse, in addition to macroscopic beings, is the wonderful, complex and astonishing world of microscopic events (such as the events of protein synthesis and function).

• "There is no god except Him. Then where are you being led away?" (*lā ilāha illāhu fa'annā tuṣrafūn*):

When the whole universe is under God's "Developmental guidance" and worship (even the particles that make up proteins), how do you turn away from God's "legislative guidance" and worship?

It should be borne in mind that the second possible meaning for "darkness of the three" means "complete and dense darkness and horror," which was introduced by emphasizing the concept of "completeness and perfection" for the "three," in this verse can be in three stages (in a dense form and in perfection with great intensity) and God is the only guide and savior of these dense darknesses. With this view, creation can be considered as the source of human guidance and salvation, and considering the continuity in creation (*khalqan min ba'di khalqin*); the above interpretation can be considered as a sign of continuous divine guidance and salvation during human creation. Accordingly, the second possible meaning: "complete and dense darkness" can also be considered as an implicit possible meaning along with the first meaning (i.e., triple darkness).

probubilities					
Commentary Number	The main sources for each of the Commentaries	The First Layer	The Second Layer	The Third Layer	Type pf Viewpoint And its level
I	Ibn al-'Arabī	physical nature	vegetable nature	animal nature	systemic And Holistic
2	al-Țabrisī, al-Māwardī, al-Zamakhsharī and others	fathers' şulb (loin)	mother's abdomen	uterus	atomistic and macroscopic
3	the tradition of Imam al-Bāqir (PBUH), Muqātil ibn Sulaymān, al-Ṭabarī, Fayḍ Kāshānī and others	abdomen	uterus	amnion- chorion	atomistic and macroscopic
4	Pahlevan and Shirdel	the spaces between the abdomen and uterus	the spaces between the flesh of the uterus and the amnion	the spaces between the amnion and the fetus	atomistic and macroscopic\ microscopic
5	the prayer of 'Arafah, al-Majlisī	flesh	skin	blood	atomistic and macroscopic\ microscopic
6	Tarokh, Besharati Z., Besharati M. R.	cell	the intracellular environment	the genetic material within the cell nucleus	atomistic and microscopic
7	the current study	the first structure of the protein	the second structure of the protein	the third structure of the protein	atomistic and molecular
8	future researches	smaller structures	smaller structures	smaller structures	smaller dimensions

Table 1. Comparison of instances of "zulumāt thalāth" in different interpretive
probabilities

Table I compares the different instances of the "darkness of the three" in different interpretive probabilities. From what we see in this table, it can be argued that neither the set of interpretive opinions, nor the set of hadith and narrative evidence, nor the set of previous research of our contemporaries, is a simple one-dimensional, one-perspective approach. Putting these sets together represents a polysemous spectrum: from general and transcendental instances (such as commentary No. I in the table), to macroscopic and tangible (such as commentary Nos. 2 and 3 in the table), to microscopic and tangible (Such as commentary Nos. 4 to 6 in the table).

In addition, the proposed example of the "darkness of the three" in this article (i.e., protein structures) can connect the top and bottom of the verse from a conceptual and semantic point of view, more coherent than the previous interpretive theories for this verse. Because the biological instances for the "single soul" (*nafs wāhidah*) and the nucleotides for the cattle (*al-an 'ām*), mentioned at the beginning of the verse, are in perfect agreement with the structure and synthesis of the protein. This is a competitive advantage (compared to the other interpretations suggested for this verse). Previous interpretations seem to have encountered difficulties in relating to the various concepts contained in this verse. Of course, semantic complexity or simplicity cannot be the only reason for rejecting or accepting an interpretive statement, but in the end, for the *mujtahids* of interpretation, it can be a kind of sign and symmetry for the final inference of the interpretive opinion.

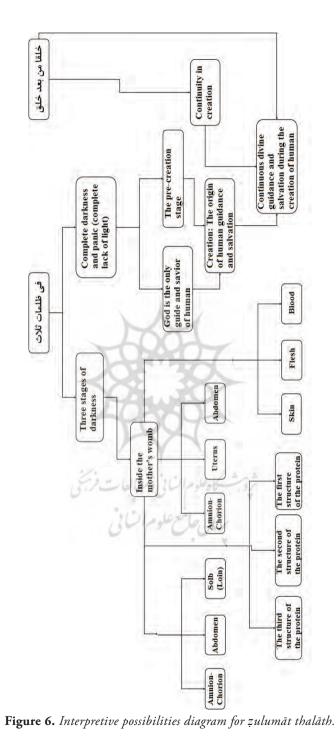
Of course, our proposed theory for the meaning of the term "darkness of the three" is, of course, not without its weaknesses. For example, if we consider the classical approaches to the interpretation of the Qur'an, which typically in many cases equate the specificity and appearance of a meaning with the mapping of lexical meanings, certainly because in the Arabic vocabulary of the age of revelation, there is no reference to protein and words for our proposed meanings have no semantic appearance, nor any textual signification. Of course, it seems necessary to mention that according to some traditional interpretive theories,¹ the possibility of dialogue between the "classical methods of interpretation" and "approaches to scientific interpretation and scientific miracle" is established in the Shi'i discourse of interpretation of the Holy Quran.

Given the principles, reasons, evidence, and possibilities presented in this article for the proposed approach, the autonomous theory of this article can be considered in terms of a polysemous approach to the verses of the Holy Qur'an, a suggestion to understand one of the examples of "threefold darkness" and a possibility of interpretation for more accurate and reasoned research (based on the rules and principles of understanding, contemplation and interpretation of the Qur'an based on the interpretive traditions of the prophet and his family (*Ahl al-Bayt*).

If, in future research, a coherent and reasoned theory for interpreting this noble verse can be presented based on the theory proposed in this article, then it may be possible to claim the scientific miracle of the Holy Qur'an on this noble verse (based on the reference to the structures and how protein is synthesized).



^{1.} Theories such as: "matching instances" (*al-jary wa al-tatbiq*) with the reading of Tabataba'i, 'symbolic meanings," "polysemy," "multi-layered meaning," and even some traditional approaches to esoteric interpretation (*al-ta'wil*) such as the approach adopted by Imam Khomeini on the issue of interpreting the meanings of the verses of the Holy Qur'an.



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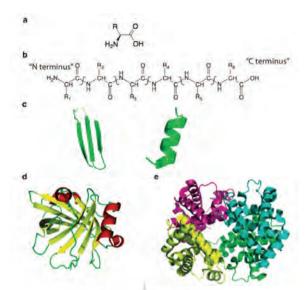


Figure 7. Four protein structures (Fromm & Hargrove, 2012, 36). In section a, we see a building block. In section b, c, d and e, we see the first, second, third and fourth structure respectively.

5. Conclusion

Common meanings in the Qur'anic roots, symbols, and uses of "three" and "darkness" include "number three, intensity, perfection, and density," and "darkness, shapelessness, and indistinguishability before the creation of an object," respectively. With regard to these meanings, the "darkness of the three" can be interpreted as complete, dense darkness, shapelessness and indifference, or three layers. Therefore, considering the meanings of "indifference, the bed of differentiation, the bed of emergence, the bed of manifestation and the bed of creation" for darkness and considering their respective meanings for "creation after creation" (i.e., distinction after differentiation, emergence after emergence, or creation after creation), The Qur'anic phrase "creation after creation in the darkness of the three" can be understood as three successive layers and three stages that occur one on top of the other and in total complete a process of creation.

In a polysemous approach based on the method of scientific interpretation and considering the context, it is possible to raise the possibility in the interpretation of verse 6 that the verse contains a scientific reference or scientific miracle to a biological phenomenon – "Darkness of the three" refers to the three steps in making proteins based on genetic information in DNA.

Proteins are the building blocks of the biological structures and processes of living organisms, and genetic information in DNA describes them. Without them, no biological processes and no cells or organs will be made, and they are the key to living things from a biomolecular perspective in the biological sciences.

Basically, in the first stage, biopolymer chains are made from information in DNA (the first stage, which is called the first protein structure), then this long polymer chain is twisted on itself to build a meaningful form containing a biomolecular effect (the second stage, which is called the second structure of the protein). Finally, in the final step, a final threedimensional structure of folds, rotations, and other topological events is formed on the previous substrate (the third step, which is called the third protein structure). There is a fourth structure for proteins that does not have topological and structural operations (as much as it does in the process of making the first to third structures) in building the fourth structure. In other words, the fourth structure is a kind of packing (and not a construction from a mass of components), and in this respect it may be possible to distinguish between it and the first three structures. Otherwise, we can consider the argument that the fourth structure, such as the meaning of perfection and intensity for "three," should be considered.

In this case, the darkness of the three means the construction of these proteins, which are the basis of living organisms and a kind of creation of living beings, in a context that is initially completely indistinguishable and amorphous. Both of these possibilities can be considered with a polysemous approach to the interpretation of the "darkness of the three."

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