



The Scientific Meaning of Fingerprints as Identity and Punishment in QS Al-Qiyamah (4) and Al-Anfal (12)

Ashila Uhnul Nafisa¹, Yeti Dahliana²

^{1,2} Universitas Muhammadiyah Surakarta, Indonesia

E-mail: g100220006@student.ums.ac.id¹; yd669@ums.ac.id²

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Abstract

The Qur'an mentions the term *banaan* (fingertips) in two different contexts, namely in QS Al-Qiyamah (4) and QS Al-Anfal (12), both of which contain scientific references that are relevant to modern knowledge. This study employed a qualitative method with a literature review approach to analyze the scientific meaning of *banaan* in both verses. The focus of the study was on the meaning of *banaan* as a symbol of human identity through fingerprints (QS Al-Qiyamah: 4) and as an object of punishment in the context of warfare (QS Al-Anfal: 12). Primary sources included *Tafsir Al-Azhar*, *Tafsir al-Muyassar*, and the works of Zaghlul al-Najjar, which were compared with modern anatomy, biology, and forensic literature. The results of the study indicated that QS Al-Qiyamah (4) affirms Allah's power in creating the unique identity of every human being through fingerprints, while QS Al-Anfal (12) describes the strategic dimension of attacks on vital points during the Battle of Badr. The novelty of this research lay in the integration of two meanings of identity and punishment in a single comparative analysis, which enhances the scientific approach studying of the Qur'an and opens up opportunities for the integration of modern science into Qur'anic exegesis (*tafsir*) studies.

Keywords: Surah Al-Qiyamah (4), Surah Al-Anfal (12), Fingerprints, Identity, Punishment

Abstrak

*Al-Qur'an menyebutkan istilah banaan (ujung jari) dalam dua konteks yang berbeda, yaitu dalam QS Al-Qiyamah (4) dan QS Al-Anfal (12), keduanya mengandung referensi ilmiah yang relevan dengan pengetahuan modern. Studi ini menggunakan metode kualitatif dengan pendekatan tinjauan literatur untuk menganalisis makna ilmiah banaan dalam kedua ayat tersebut. Fokus penelitian ini adalah pada makna banaan sebagai simbol identitas manusia melalui sidik jari (QS Al-Qiyamah: 4) dan sebagai objek hukuman dalam konteks perang (QS Al-Anfal: 12). Sumber utama meliputi *Tafsir Al-Azhar*, *Tafsir al-Muyassar*, dan karya Zaghlul al-Najjar, yang dibandingkan dengan literatur anatomi, biologi, dan forensik modern. Hasil penelitian menunjukkan bahwa QS Al-Qiyamah (4) menegaskan kekuasaan Allah dalam menciptakan identitas unik setiap manusia melalui sidik jari, sementara QS Al-Anfal (12) menggambarkan dimensi strategis serangan terhadap titik-titik vital selama Pertempuran Badr. Keunikan penelitian ini terletak pada integrasi dua makna identitas dan hukuman dalam analisis perbandingan tunggal, yang memperkuat pendekatan ilmiah dalam studi Al-Qur'an dan membuka peluang untuk integrasi ilmu modern ke dalam studi *tafsir* Al-Qur'an.*

Kata Kunci: Surah Al-Qiyamah (4), Surah Al-Anfal (12), Sidik Jari, Identitas, Hukuman



A. INTRODUCTION

The Qur'an, as the holy book of Muslims, not only contains guidance in the realms of faith, worship, and law, but also contains scientific references that are relevant to the development of human knowledge (Mufid, 2014). The *kauniyah* verses in the Qur'an often encourage humans to think, research, and reflect on God's creation as part of the signs of His power. One manifestation of Allah's power that is explicitly stated is His ability to resurrect humans perfectly, including the smallest and most detailed parts of the body, namely the fingertips (*banaan*). This is reflected in QS Al-Qiyamah (4), which reads "Indeed, We are able to reconstruct the fingers perfectly." This verse contains extraordinary scientific meaning, especially after the discovery that every human being has unique fingerprints that are not the same as one another, even in identical twins (Firmansyah, 2021)

In the Qur'an, the term *banaan* (fingertips) is mentioned in two different contexts that are rich in scientific meaning. On the one hand, *banaan* is presented as evidence of the uniqueness of Allah's creation through fingerprints, which serve as the identity of every human being. On the other hand, *banaan* is associated with the context of warfare as a vulnerable point that can be targeted as an object of punishment to weaken the enemy. These two contexts demonstrate the breadth and depth of meaning in the Qur'an which not only touches on the details of human creation, but also addresses strategic aspects of social life and warfare.

The uniqueness of fingerprints forms the basis of forensic science and biometrics as a precise means of individual identification (Beattie, 2012). Therefore, research on this verse is important in order to explore the scientific implications contained therein and how the verse preceded modern scientific discoveries. The scientific approach, which connects Qur'anic verses with contemporary science, is a relevant method for understanding the scientific dimensions of revelation (Nasir et al., 2024).

Furthermore, besides QS Al-Qiyamah (4), another verse that also contains the term *banaan* is QS Al-Anfal (12), which reads: "... Then strike their necks and strike every fingertip." This verse was revealed in the context of the Battle of Badr and has a different meaning from the previous verse. In this verse, *banaan* is mentioned in the context of

instructions for punishing disbelievers who oppose the truth, as a form of affirmation of power and protection for believers (Muhammad Nabiil Akbar, 2018).

If in QS Al-Qiyamah (4) the fingertips serve as a symbol of identity, then in QS Al-Anfal (12) they function as the object of punishment. These two contexts open up a reflective space, showing that this small and seemingly insignificant part of the body actually holds profound meaning within the system of creation and punishment. Therefore, further research is needed to compare these two meanings of identity and punishment within a scientific framework. A scientific approach to these two verses also demonstrates the flexibility of the Qur'an in responding to the developments of time, while affirming the relevance of revelation as a source of multidimensional knowledge; spiritual, legal, and scientific (Amin Abdullah, 2014).

Tafsir al-Muyassar also emphasizes an understanding that Allah is not only capable of reassembling human bones but also the smallest parts of the body, such as the fingertips. Meanwhile, Zaghlul al-Najjar's work has made a significant contribution to viewing *kauniyah* verses from a modern scientific perspective, particularly in relation to the creation and function of the human body.

This research is important, considering that few existing studies directly link QS Al-Qiyamah (4) and QS Al-Anfal (12), especially through a scientific approach. Most previous studies have focused on only one verse, specifically QS Al-Qiyamah (4), as done by Anik Oktaviyah, who found that classical exegetes interpreted *banaan* as "fingers," while modern exegetes associate them with fingerprints as a unique human identity that is in line with scientific findings. This research affirms the greatness of Allah in creation but is still limited to QS Al-Qiyamah (4) and does not address the dimension of punishment in QS Al-Anfal (12) (Oktaviyah, 2018).

An article by Naufal Ramdhani and Deden Suparman in the Moral Journal examines the differences in fingerprint patterns (loop, whorl, arch) based on science and the interpretation of QS Al-Qiyamah (3–4). Their finding indicated harmony between the scientific concept of dactyloscopy and the verses of the Qur'an; however, study did not address the use of *banaan* in the dimension of punishment as found in QS Al-Anfal (12) (Ramdhani & Suparman, 2024).

Meanwhile, Hasanah et al. (2025) successfully linked QS Al-Qiyamah (4) and QS Al-Anfal (12) by showing two sides of the meaning of *banaan*, namely as a unique human identity through fingerprints and as a vital point in the context of warfare. However, this study remained largely descriptive and had not integrated the meaning of *banaan* with contemporary scientific developments such as biometrics or forensics. In addition, the study did not discuss in depth the practical and ethical relevance of the concept of *banaan*, nor did it explore the continuity between classical and modern scientific interpretations (Hasanah et al., 2025).

This research primarily focused on analyzing the scientific meaning of the word *banaan* in QS Al-Qiyamah (4) and QS Al-Anfal (12) through a scientific approach, emphasizing its two meanings, as a symbol of human uniqueness and as an object of punishment in warfare. This study sought to explore how the Qur'an engages with the intricate anatomy of the human body, especially the fingertips, as evidence of Allah's power and justice. By analyzing these two verses in relation to one another, this study also aimed to demonstrate the symmetry of divine power in both creation and destruction, exaltation and abasement, all of which are governed by His truth and justice. In addition, this study aspired to enrich the discourse of scientific approaches to Qur'anic interpretation, particularly in integrating scientific and theological meanings in single term, namely *banaan*.

Therefore, this study not only built upon previous studies but also broaden its scope through a comparative and integrative analysis of these two verses.

B. RESEARCH METHODOLOGY

The method used in this study was a qualitative method with a *library research* approach. This method was chosen because the research focuses on the interpretation of verses from the Qur'an, which requires textual analysis rather than experimental or quantitative procedures. Through library research, the researcher was able to examine and compare various interpretations, books, and previous studies related to the term *banaan* in the Qur'an.

The primary source used in this research was *Tafsir Al-Azhar* by Prof. Dr. Hamka (Mucholit Vatku Rohman, Andri Nirwana AN, 1385). *Tafsir al-Muyassar* was compiled by

a group of scholars under the supervision of the Saudi Arabian Ministry of Religious Affairs. *Tafsir Ayat al-Kauniyyah fi al-Qur'an al-Karim*, a scientific work by Zaghlul Raghib Muhammad al-Najjar, an expert in scientific interpretation of the Qur'an. These sources were used as the main basis for exploring the meaning of the word *banaanah* theologically, semantically, and scientifically (Rika Tri Amalia, 2021). The secondary sources used were all scientific journal research, theses, and articles related to the scientific interpretation of QS Al-Qiyamah (4) and QS Al-Anfal (12).

The scientific approach in this study revealed the scientific content in the verses of the Qur'an by correlating them to contemporary scientific findings. Therefore, the two points mentioned above greatly helped the author in finding reference sources and information sources in carrying out the task of writing this journal (Alfadila et al., 2022).

C. RESULTS AND DISCUSSION

A study of the term *banaan* in the Qur'an reveals scientific meanings that are consistent with modern scientific discoveries. In one verse, *banaan* is understood as the fingertips of humans that contain fingerprint patterns. Modern research has proven that fingerprints are unique to each individual, even identical twins, and remain unchanged throughout life. This fact confirms Allah's absolute power in creating detailed and irreplaceable biological identity for every human being.

Meanwhile, in another verse, the term *banaan* appears in the context of warfare. Its mention describes a strategic command to weaken the enemy by attacking the vital parts of the body, namely the neck and the fingertips. From an anatomical perspective, the fingers function as the main centers of motor control for holding weapons, so an attack on this part serves not only as a form of punishment but also an effective strategy to neutralize the enemy's physical capacity and psychological resilience.

Scientific analysis of anatomical and biological literature further reinforces this meaning. Human fingers consist of fourteen bones with a dense nervous system, making them highly sensitive and vital. Fingerprints, formed during the fetal development stage, have served as a principal method of forensic identification since the 19th century. This shows that contemporary knowledge supports the Qur'an's message regarding the details of human creation and the strategic function of fingers in life.

The integration between classical and modern scientific interpretation also shows significant harmony. Classical interpretation emphasizes the theological aspects and God's power in raising humans, while modern interpretation provides scientific reinforcement by explaining the uniqueness of fingerprints and their relevance to anatomy and forensics. Thus, the two verses that mention *banaan* present two sides of meaning as biological identity and as an object of punishment in war which complement each other to show the breadth of Allah's power.

The *asbabun nuzul* Qs. Al-Qiyamah verse 4 in the book *Tafsir al-Munir* explains that it is related to the rejection of the Day of Judgment by some polytheists. One of them was 'Adi bin Rabi'ah, who once asked the Prophet Muhammad ﷺ about the time of the Day of Judgment. After receiving an explanation, he remained skeptical and even declared that even if he were to witness it with his own eyes, he would still not believe or have faith in it. He doubted the possibility that human bones, once destroyed and scattered would be gathered again by Allah.

A similar opinion was attributed to Abu Jahal, who expressed astonishment and disbelief at the notion that Allah could revive human bodies after had been destroyed and scattered. Such statements of doubt about the resurrection were the reason for the revelation of this verse as a form of admonition and affirmation of Allah's power in reviving His creatures (Wahbah Az-Zuhaili, 2013).

Qs. Al-Anfal verse 12 was revealed in connection with the Battle of Badr, the first major battle in Islamic history between the Muslims and the polytheists of Quraysh. This verse is part of Allah's support and encouragement to the Muslims, conveyed through the angels.

According to *Tafsir al-Munir* by Prof. Dr. Prof. Dr. Wahbah az-Zuhaili, the *asbabun nuzul* of this verse occurred when Allah sent angels to strengthen the hearts of the believers and weaken the enemies. In this verse, Allah commands the angels to strengthen the believers and strike the enemies at their vital points, namely their necks and fingertips (*banaan*), as a symbol of the destruction and weakening of the enemy's strength (Az Zuhaili, 2013).

1. The Meaning of *Banaanah* (Fingerprints)

Banaan (بنان) or "Al-Banaan" (البنان) literally refers to the fingers. This name is not arbitrary; rather, it alludes to the extraordinary abilities that humans possess through their fingers. It is said that fingers are called "banaan" because humans can arrange and organize various things with precision using this body part, which ultimately creates favorable conditions or brings about optimal circumstances (Alfadila et al., 2022).

According to *Mu'jam Mufradaat Alfaz Al-Qur'an* by Ar-Raghib Al-Asfahaani, the word "banaan" is also interpreted as the fingertips (Ar-Raghib al- Ashfahani, 1971). This further reinforces the idea of detail and precision that can be achieved by fingers. The ability to compose, organize, and create that fingers possess allows humans to achieve goals and create goodness in various aspects of life (Ar-Raghib al- Ashfahani, 1971).

In *Lisan al-'Arab*, the word "البنان" refers to the fingers of the hand, with the singular form being "بنانة" (Manzur & Muhammad, 2008). The usage of this term is not limited to the entire finger, but more specifically refers to the fingertips, which are the most delicate and unique part of the human hand. Ibn Buraidah from Lubaid bin Rabi'ah interpreted this in classical Arabic poetry, which clearly describes the role of fingers in symbolizing actions or deeds in family and social life (Manzur & Muhammad, 2008). This interpretation is further reinforced by a hadith narrated by Jabir, from his father, in which the Prophet ﷺ did not know the meaning of the words *banaanah* and *banaan* except as fingers of the hand. The term also appears explicitly in the Qur'an, Surah Al-Qiyamah, verse 4: "بِلِّي قَادِرِينَ عَلَىٰ أَنْ تُسْوِيَ بَنَانَةً", which means: "Indeed, We are able to reassemble the tips of his fingers."

According to Al-Farrā's interpretation, the mention of *banaan* refers specifically to the fingertips, because that is where the fingerprints are located, which are the unique characteristics that distinguish one human being from another. This highlights the unique aspect of creation in the human body that is not in vain (Al-Farra', n.d.). Therefore, the word *banaan* in the perspective of *Lisan al-'Arab* is not only anatomical in nature, but also rich in philosophical and spiritual meaning, namely as a symbol of uniqueness and a sign of Allah's power in creating humans.

According to Imam Al-Qurthubi, the term *banaan* in the context of QS. Al-Qiyamah verse 4 is linguistically interpreted as *ash-Shabi'*, which refers to the fingers of the hand

or human fingers. This interpretation shows that fingers are explicitly mentioned in the verse for a reason, namely because of their position as a very small and complex part of the body compared to other limbs (Asy-Syaukani, 2011).

Linguistic scholars such as Az-Zajjaj and Ibn Qutaibah added that the choice of the word fingers in this verse highlights the complexity and uniqueness of their anatomical structure. Fingers consist of small and detailed components such as bone joints, delicate joints, nails, and complex tendon tissue (Wahbah Az-Zuhaili, 2013). All these elements form a fine motor system that is very important for daily human activities. Therefore, the mention of banaan in this verse is a sign of Allah's perfect ability to create and reconstruct the human body in great detail and precision, even the smallest parts.

2. Interpretation of the Word *Banaan* According to Exegetes

In QS. Al-Anfal verse 12, Allah says, "Then strike their necks and strike every fingertip of theirs." This verse does not discuss criminal punishment, but rather the punishment of war (*fiqh al-jihaad*) in the context of the Battle of Badr. According to Islamic law, this verse affirms the permissibility of defensive warfare, the strategy of incapacitating the enemy proportionally, and does not apply absolutely outside the context of legitimate warfare.(Sulhadi & Sholihah, 2024)

Classical exegetes, such as Jalalayn and Ibn Kathir, interpret the word *banaan* (fingertips) in this verse literally, referring to the physical parts of the body, namely the fingers, which serve as the target of attacks in the context of warfare (Al-Mahali & Jalaludin, 2003). This literal interpretation is understood because the fingers represent the main motor center for holding weapons, so injuring or crippling them means strategically weakening the opponent's strength.

There is no *qarinah* (contextual indicator) that requires a *majazi* (figurative) interpretation, so the literal meaning is considered stronger (H. Aziz, n.d.). Consequently, the mention of fingers in this verse is not only historically relevant in the context of the Battle of Badr, but also demonstrates the precision of the language of the Qur'an in referring to vital points of human anatomy, while also showing its relevance to modern knowledge of the functions of nerves, motor skills, and individual identity through fingerprints.

In *Tafsir Al-Azhar*, Buya Hamka emphasizes that if Allah is capable of reassembling human bones, then it is certainly possible for Him to reshape even the smallest and most delicate parts of the body such as fingertips. He describes that each hand consists of 5 fingers containing 15 bones, so that the entire hand contains 30 bones. Similarly, the toes contain 28 bones. So that human body has 58 bones in total solely from the fingers and toes. Allah will perfectly recreate all these parts on the Day of Resurrection.

Buya Hamka highlights the uniqueness of the skin at the fingertips, which is very smooth, yet it is precisely there that a unique pattern exists, serving as the identity of each individual. It is impossible for two humans to share identical fingerprints, even among billions of people (Karim, 2024). Every person, whether they lived in the past or will be born in the future, has a distinctive fingerprint pattern, known in modern science as forensic identification through "fingerprints" (Hamka, 1982).

In his interpretation of Qs. Al-Anfal verse 12, Buya Hamka further explains that this verse pertains to the Battle of Badr, the first major battle faced by the Muslims and the polytheists of Quraysh. Allah commanded the angels to strengthen the hearts of the believers and instill fear to their enemies.

Buya Hamka emphasized that the command to "strike their necks and strike every fingertip" was a strategy to weaken the enemy physically and psychologically. The neck symbolizes the center of life, while the fingertips serve as the main tools for wielding weapons. Therefore, attacking these parts symbolizes the destruction of the enemy's strength and control (Hamka, 1982).

Buya Hamka also viewed that the revelation of this verse was not a command for cruelty, but part of Allah's command in a situation of war to uphold justice. He emphasized that this verse cannot be separated from its context as a defensive war verse, not as a justification for violence outside the battlefield (Al-Haq & Amalih, 2021).

In the interpretation of *Tafsir al-Muyassar*, Qs. Al-Qiyamah verse 4, explains that Allah swears by the importance of the day of reckoning and retribution, and on the soul that believes and fears Allah, a soul that always admonishes itself when it neglects obedience or falls into sin (MAJMA, 2019). Through this oath, Allah also affirms that the resurrection of humankind after death is a certainty. Some ask: "Do the disbelievers think that Allah is unable to reassemble their bones that have been crushed and scattered? Such

an assumption is completely wrong. Allah affirms His power, that not only will the bones be gathered, but they will also be reconstructed perfectly, down to the smallest parts such as the joints and fingertips just as they were before death.

In Surah Al-Anfal verse 12, it describes the circumstances of the Battle of Badr, when the angels were commanded to strike the necks and fingertips of the disbelievers as a form of fear and physical punishment (Az Zuhaili, 2013).

An Egyptian geologist, Zaghlul Raghib Muhammad Al-Najjar, is also known as an exegete with a scientific approach to the Qur'an. He was born in the village of Masyal, Basyun region, al-Gharbiyyah province, on November 17, 1933. From an early age, he showed his love for the Qur'an by completing its memorization before the age of 10 (Nazhifah, 2021).

In his explanation, Al-Najjar highlights the term *banaan*, which is the singular form of *banaanah*, meaning fingertips. Based on modern scientific findings, every human fingertip has a unique fingerprint pattern, and no two individuals share the same pattern. According to Al-Najjar, this verse confirms that Allah is capable of resurrecting humans on the Day of Judgment with their complete physical identities, including unique fingerprints. This serves as absolute evidence of Allah's power in creating and reviving His creatures. Furthermore, he explains that fingerprints play an important role in modern life because they serve as the most accurate means of personal identification. In interpreting the word *banaanah*, Al-Najjar focuses more on the scientific aspect of fingerprints found on the tips of human fingers (Nurmansyah & Dana, 2024).

This study successfully identifies two distinct meanings of the term *banaanah* in the Qur'an, namely as a symbol of human biological identity in QS Al-Qiyamah (4) and as an object of physical punishment in QS Al-Anfal (12). The scientific approach used has bridged the gap between the message of revelation and modern scientific discoveries, especially in the context of the uniqueness of fingerprints and the relevance of fingers in the identification system and human body structure.

This finding is in line with Buya Hamka's opinion in *Tafsir Al-Azhar*, which explains that the explicit mention of fingers in QS Al-Qiyamah (4) is a form of affirmation of Allah's power. He elaborates on the complex anatomical structure of human fingers, consisting of dozens of joints and bones, all of which will be resurrected on the Day of Judgment.

Zaghul al-Najjar, an expert in scientific interpretation, highlights that every human fingertip has a unique fingerprint pattern, and no two individuals share the same pattern. This uniqueness has been proven through biometric studies and is widely used in modern forensics. Al-Najjar states that this is scientific evidence of the truth of the revelation in QS Al-Qiyamah (4).

Meanwhile, *Tafsir al-Muyassar* emphasizes that Allah is fully capable of reconstructing every part of the human body, even the smallest ones such as fingertips. This is emphasized to answer the doubts of disbelievers regarding resurrection. The mention of the word *banaan* here is not only as a physical structure, but also as a body part that shows the precision of creation.

In QS Al-Anfal 12, the meaning of *banaan* shifts from a symbol of creation to a symbol of punishment. This verse was revealed in the context of the Battle of Badr, and as explained in *Tafsir al-Munir* by Prof. Dr. Wahbah az-Zuhaili, the command to strike the necks and fingertips of the disbelievers was a strategy to weaken the physical strength of the enemy, where the fingers are an important point in controlling weapons and defending the body.

This context opens a new interpretation that the neck not only indicates the uniqueness of human identity, but also becomes an important point in the human resistance system against truth. This is where the important contribution of this research lies: bringing together two major meanings in the same Qur'anic term, but in different contexts: identity and punishment.

3. Fingerprints in the Perspective of Science

For a long time, scientists have studied the characteristics of human fingerprints, by the late 19th century, research demonstrated that each individual has a unique fingerprint pattern that does not change throughout their life, even from the womb (Crawford & Beaty, 2013). Prior to this discovery, fingerprints were considered to be ordinary lines without meaning, even though the Qur'an had alluded to Allah's power over the creation of fingertips in Surah Al-Qiyamah verses 3–4 more than 14 centuries ago (Murni, n.d.).

From a scientific perspective, the study of fingerprints in this discussion can be categorized into three main fields, namely Anatomy, which examines the structure of the

finger bones (phalanges), the skin tissue at the fingertips consisting of layers, and the density of nerve endings. Second, Biology and Evolution, which discusses the formation process and uniqueness of fingerprint patterns genetically and in embryonic development. Third, Forensics, which reviews its use as an accurate and sustainable method of individual identification.

a. Anatomy

In human hand anatomy, fingers are formed from phalanges, which consist of 14 segments. Each finger has three segments (proximal, middle, and distal), while the thumb has two segments (Ghosh & Bhattacharjee, 2024). Phalanges are connected to the metacarpal bones through the metacarpophalangeal (MCP) joints and to each other through the proximal interphalangeal (PIP) and distal interphalangeal (DIP) joints. The fingertips (distal phalanges) are the most vital part because they are the motor center for grasping objects, are most sensitive to pain due to the density of sensory nerves, and also function as a unique human identifiers through fingerprints (Widowati & Rinata, 2020).

In the context of QS. Al-Anfal: 12, the mention of *banaan* (fingertips) aligns with the anatomical fact that fingers constitute a strategic weak point that can paralyze an opponent's ability, and it also contains scientific and individual identity meanings that have only recently been proven through modern studies. The fingertips are the most vital part of manual activities, such as holding a sword, bow, or weapon. By weakening the fingers, the enemy automatically loses the ability to hold weapons and continue fighting (Deivasigamani et al., 2023). From a strategic perspective, this command is precisely targeted, since it can neutralize the enemy without immediately killing them.

b. Biology dan Evolution

During fetal development, fingerprint patterns begin to form between the 10th to 16th or 17th weeks of gestation, when the basal layer of the epidermis folds into the dermis, creating primary ridges that are later refined through the formation of secondary ridges, until finally the minutiae or unique points in the pattern are permanently imprinted (Collins et al., 2021).

Although genetic factors influence basic types such as loops, whorls, and arches, the uniqueness of each fingerprint is determined by mechanical and environmental factors in the womb, such as pressure, fetal position, and cell proliferation, so that even

identical twins have different pattern (Falasev, 2011). Once formed, these ridges are durable because the basal layer consistently regenerates the structure; even if an injury occurs, the skin pattern will reappear exactly as before (Hicklin et al., 2025).

Additionally, fingerprints play a crucial physiological role, particularly in regulating moisture to maintain optimal grip under both dry and moist skin conditions. This is achieved through a microcapillary mechanism that directs evaporation, blocks sweat ducts, and enhances sensitivity to touch and friction against rough surfaces (Falasev, 2011).

c. Forensic

In forensic science, fingerprinting, also known as dermatoglyphics or dactyloscopy, is regarded as superior identification method based on the uniqueness and durability of ridge patterns or identification techniques that utilize skin crease patterns (friction ridges) on the fingertips, hands, or soles of the feet as individual characteristics (Marpaung & Jaya, 2015). It should be understood that fingerprint patterns are composed of ridge structures consisting of ridges and valleys (Sangiorgi et al., 2004). Ridges are the prominent parts of the ridges with a darker color, while valleys are the concave or deeper parts of the ridges with a lighter color, as shown in the following image (Hasanah et al., 2025).

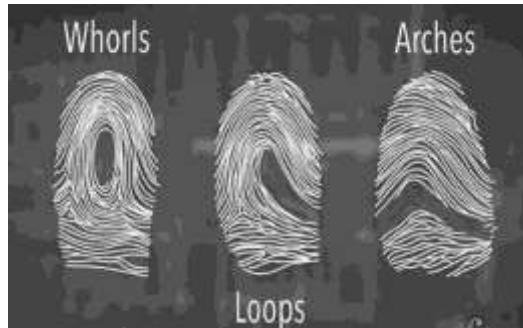


Picture 1: Fingerprint (<https://www.bayometric.com/fingerprint-reference-point-detection-and-feature-extraction/>)

The fingerprint identification process is typically conducted through three levels of features analysis:

- 1) Archcovering basic patterns such as loops, whorls, and arches (Dillon et al., 2001).

- 2) Focusing on minutiae, such as branch points or end points of lines;
- 3) And delves into micro-details such as pores and fine ridges (edgeoscopy) (Efrilia et al., 2023).



Picture 2 : Basic fingerprint patterns (<https://techno.okezone.com/read/2015/03/30/56/1126541/misteri-di-balik-pola-sidik-jari>)

Fingerprints begin to form when the fetus is approximately four weeks old and reach full maturity by around six months of gestation. Once established, these patterns remain unchanged throughout an individual's lifetime, except in cases of severe trauma or injury (Momani & Kóczy, 2025).

Interestingly, this scientific aspect is also implied in the Qur'an, specifically in Surah Al-Qiyamah verses 3-4: "Does man not think that, we can perfect his bones? Indeed, we can reconstruct them down to the tips of the fingers." The scientific interpretation of the Qur'anic verse, particularly *banaanah* ("tips of the fingers") in QS Al-Qiyāmah (75): 3-4, highlights the uniqueness of fingerprints as evidence of Allah's power in creating such detailed individual identities. This time, dactyloscopy is not merely a modern technical tool, but reflects a spiritual dimension: each individual has an exclusive characteristic that will serve as a witness before Allah (Gino, 2007).

4. Significance of Research Findings

The significance of this research lay in the perspective of developing interpretation using a scientific approach, by examining two verses that employed the same term (*banaan*) but in different contexts. This approach continues the scientific interpretation method recommended by Zaghlul al-Najjar, which connects *kauniyah* verses with modern scientific findings and is in line with Hamka's principles in *Tafsir Al-Azhar*, which combines the meaning of verses with empirical and historical realities

(Murni, n.d.). In addition, this study emphasized the role of interpretation, as stated in *Tafsir al- Muyassar*, to prove the truth of revelation through theological and factual arguments, thereby enriching scientific interpretation studies with the integration of classical and contemporary interpretations and modern scientific explanations in one comprehensive study (MAJMA, 2019).

The significance of this research can be outlined in four aspects

a. Strengthening the Scientific Miracles of the Qur'an

The discovery of the uniqueness of fingerprints, which have become the main means of personal identification in modern science, proves that the Qur'an had already hinted at this scientific fact from the beginning. QS Al-Qiyamah 4 provides a statement that goes beyond the knowledge of the Prophet Muhammad SAW's era, the truth of which was only proven at the end of the 19th century (Oktaviyah, 2018).

b. The Importance of the Smallest Body Parts in Revelation and Science

Fingers are not merely motor organs, but centers of control, symbols of identity, and points of weakness in warfare. The Qur'an highlights both their nobility and vulnerability. This shows that the verses of the Qur'an touch on the dimensions of physiology, forensics, and even divine philosophy in a single keyword (N. Aziz, 2018).

c. Contextualization of QS Al-Anfal (12)

The mention of *banaan* as an object of punishment in QS Al-Anfal (12) can be misunderstood if taken out of context. This research played an important role in clarifying the interpretation of this verse, emphasizing that this command is strategic in defensive warfare and cannot be used to justify violence outside the context of war that is lawful according to sharia (*ALQURAN PDF.pdf*, n.d.).

d. Tafsir Integration of Science and Revelation in the Tafsir Curriculum

These findings also had implications for the development of a scientific tafsir curriculum in higher education, particularly in Al-Qur'an and Tafsir studies programs. A deeper understanding of Al-Qur'anic terminology through science can encourage a new generation of interpreters who think critically, contextually, and integratively.

D. CONCLUSION

This study concluded that the term *banān* in the Qur'an encompasses a layered scientific meaning: in QS Al-Qiyamah 4, it affirms the uniqueness of human identity through fingerprints, serving as evidence of Allah's power in creation and resurrection. In contrast, QS Al-Anfal (12) functions as a strategic weak point in the context of warfare, symbolizing aspects of divine punishment and justice. These two contexts show a balance between mercy and justice, and prove the relevance of the Qur'an to modern science and the dynamics of human life.

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