



Embryological Exegesis in Classical and Modern Qur'anic Interpretation: *Al-Kasysyāf* and *Al-Jawāhir*

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Abstract

This study examines the methodological frameworks employed in interpreting Qur'anic embryological verses through a comparative analysis of Az-Zamakhsyari's Al-Kasysyāf and Tantawi Jawhari's Al-Jawāhir. Using a systematic comparative-analytical approach, this research investigates their distinctive interpretative methods concerning human embryological development (Q.S. Al-Mu'minun 23:12-14; As-Sajdah 32:7-9; Al-Insan 76:2). The study reveals how Az-Zamakhsyari's linguistic-rational methodology and Jawhari's empirical-scientific approach offer complementary insight into Qur'anic embryological discourse. This research contributes to the contemporary discussion on the integration of scientific knowledge in Qur'anic exegesis while highlighting the historical development of tafsir 'ilmi methodology.

Keywords: *Tafsir methodology, embryological interpretation, Al-kasysyāf, Al-Jawāhir, scientific exegesis, Qur'anic hermeneutics.*

Abstrak

Penelitian ini mengkaji kerangka metodologi yang digunakan dalam menafsirkan ayat-ayat embriologi Al-Qur'an melalui analisis komparatif *Al-Kasysyāf* karya Az-Zamakhsyari dan *Al-Jawāhir* karya Tantawi Jawhari. Dengan menggunakan pendekatan analitis-komparatif yang sistematis, penelitian ini menyelidiki metode penafsiran mereka yang khas mengenai perkembangan embriologi manusia (Q.S. Al-Mu'minun 23:12-14; As-Sajdah 32:7-9; Al-Insan 76:2). Penelitian ini mengungkap bagaimana metodologi linguistik-rasional Az-Zamakhsyari dan pendekatan empiris-ilmiah Jawhari menawarkan wawasan yang saling melengkapi tentang wacana embriologi Al-Qur'an. Penelitian ini berkontribusi pada diskusi kontemporer tentang integrasi pengetahuan ilmiah dalam tafsir Al-Qur'an sambil menyoroti perkembangan historis metodologi *tafsir 'ilmi*.

Kata Kunci: *Metodologi tafsir, interpretasi embriologis, Al-kasysyāf, Al-Jawāhir, tafsir ilmiah, hermeneutika Al-Qur'an.*

INTRODUCTION

Background

The interpretation of Qur'anic verses relating to natural phenomena (*ayat kauniyyah*) has evolved significantly throughout Islamic intellectual history. The emergence of scientific exegesis (*tafsir 'ilmi*) represents a crucial development in this evolution, particularly in understanding verses describing human embryological development. This interpretative approach has generated both enthusiasm and criticism within Islamic scholarship, raising important questions about methodology and validity (Adz-Dzahabi, 2019; Naif, 2024).



Research Gap

While numerous studies have examined either linguistic or scientific approaches to Qur'anic interpretation, few have conducted systematic comparative analyses of classical and modern methodologies, particularly regarding embryological verses. The existing literature lacks:

1. Comprehensive comparison of linguistic-rational and empirical-scientific approaches
2. Detailed analysis of methodological evolution in *tafsir 'ilmi*
3. Critical evaluation of interpretative frameworks' compatibility with contemporary scientific understanding

Research Objectives

This study aims to:

1. Analyze the methodological foundations of Az-Zamakhsyari's linguistic-rational approach and Jawhari's empirical-scientific framework
2. Evaluate the effectiveness of both approaches in interpreting embryological verses
3. Develop an integrated framework for understanding Qur'anic embryological descriptions
4. Assess the implications for contemporary *tafsir 'ilmi* methodology (Baidan, 2023; Shihab, 2024)

Theoretical Framework

Interpretative Paradigms in Qur'anic Exegesis

1. Classical Interpretative Methods

- a. Linguistic analysis (*tahlīl lughawī*)
- b. Contextual understanding (*fahm al-siyāq*)
- c. Intertextual correlation (*munāsabah*)

2. Modern Scientific Approaches

- a. Empirical verification
- b. Scientific correlation
- c. Interdisciplinary integration

Methodology in *Tafsir 'Ilmi*

1. Historical Development

- a. Early formative period
- b. Classical consolidation
- c. Modern scientific integration

2. Methodological Principles

- a. Linguistic accuracy
- b. Scientific validity
- c. Contextual relevance
- d. Theological consistency



Literature Review

Scholars have demonstrated the compatibility between Qur'anic descriptions and scientific understanding, particularly in embryology. Keith Moore and T.V.N. Persaud's findings align Qur'anic terms like *'alaqah* and *mudghah* with specific embryonic stages (Moore & Persaud, 1982). These contributions were reinforced by Muslim scholarship, which has examined the significance of embryological references in *ayat kauniyyah* for centuries (Islamic Compass, 2014; The Muslim Vibe, 2022). Further, Jawhari's efforts in integrating scientific data within exegesis provide a unique model for bridging classical texts with modern science (Shihab, 2024; Baidowi, 2023). Classical sources such as Ibn Kathir's *Tafsir Al-Qur'an Al-Azim* and Al-Tabari's *Jami' Al-Bayan* also contribute foundational perspectives on these interpretations.

RESEARCH METHODOLOGY

Research Design

This study employs a qualitative comparative-analytical approach with the following components:

1. Textual Analysis

- a. Primary source examination
- b. Linguistic investigation
- c. Contextual study

2. Comparative Framework

- a. Methodological comparison matrix
- b. Interpretative pattern analysis
- c. Conceptual mapping

Data Collection and Analysis

1. Primary Sources

- a. *Al-Kasysyāf* (Dar Al-Marefah, 2009)
- b. *Al-Jawāhir* (Mustafa al-Babi al-Halabi, 1350 H)
- c. *The Developing Human* (Moore & Azzindani, 1983)

2. Analysis Procedures

- a. Systematic coding of interpretative approaches
- b. Comparative analysis of methodological elements
- c. Evaluation of scientific accuracy and compatibility

RESULTS AND DISCUSSION

1. Detailed Methodological Analysis

a. Az-Zamakhsyari's Linguistic-Rational Framework

1) Grammatical Analysis Technique

- a) Emphasis on *i'rab* (grammatical analysis)



- b) Focus on *balaghah* (rhetorical devices)
- c) Attention to etymological roots of embryological terms

Example analysis from *Al-Kasysyāf*:

[التحليل النحوي لكلمة "علقة" في سياق الآية يشير إلى حالة التعلق والالتصاق، مما يتوافق مع المرحلة الجنينية المبكرة]

[Translation: The grammatical analysis of the word “*alaqah*” in the context of the verse indicates a state of attachment and adhesion, corresponding to the early embryonic stage]

2) Rational Interpretative Elements

- a) Application of logical reasoning
- b) Integration of Arabic linguistic traditions
- c) Correlation with established scientific knowledge of his era

3) Jawhari’s Scientific-Empirical Approach

a) Scientific Integration Method

1. Direct correlation with embryological observations
2. Use of contemporary scientific terminology
3. Visual representation of developmental stages

b) Empirical Validation Process

1. Reference to medical literature
2. Integration of observational evidence
3. Alignment with modern embryological understanding

2. Comparative Analysis of Interpretative Elements

a. Txtual Analysis Matrix

Aspect	Al-Kasysyāf	Al-Jawāhir
Primary Focus	Linguistic accuracy	Scientific correlation
Methodological Base	Classical Arabic grammar	Modern scientific observation
Interpretative Tools	Rhetorical analysis	Empirical evidence
Validation Approach	Linguistic authorities	Scientific literature
Contextual Framework	Historical-linguistic	Scientific-empirical



b. Analysis of Key Embryological Stage

1) Nutfah Stage Analysis

***Al-Kasysyāf*'s Interpretation:**

- a) Linguistic emphasis on “essence” (جوهر)
- b) Focus on the concept of “selective fluid” (نطفة مختارة)
- c) Connection to Arabic literary usage

2) *Al-Jawāhir*'s Interpretation:

- a) Correlation with zygote formation
- b) Description of cellular processes
- c) Integration with modern embryology

3) ‘*Alaqah* Stage Interpretation

Comparative Analysis:

a) Linguistic Perspective (*Al-Kasysyāf*)

- (1). Etymology of علق (attachment)
- (2). Metaphorical implications
- (3). Contextual usage in classical Arabic

b) Scientific Perspective (*Al-Jawāhir*)

- (1). Correlation with implantation
- (2). Description of blood vessel formation
- (3). Morphological characteristics

Case Studies

The following table presents three detailed case studies comparing both approaches:

Case Study	Az-Zamakhsyari (<i>Al-Kasysyāf</i>)	Jawhari (<i>Al-Jawāhir</i>)
1. Surah Al-Mu'minun (23:12-14)	Focuses on the term <i>sulālah</i> سُلالَةٍ, emphasizing its linguistic roots to signify a refined essence derived from water. Highlights the gradual creation process through grammatical analysis.	Correlates the term <i>nutfah</i> نُطْفَةٌ with fertilization stages, using modern embryological observations to illustrate the development from <i>nutfah</i> to عَلَقَةٌ ‘ <i>alaqah</i> . Incorporates diagrams of embryonic stages.



<p>2. Surah As-Sajdah (32:7-9)</p>	<p>Analyzes the term <i>nutfah</i> نُطْفَةٌ, discussing its grammatical implications and metaphysical significance in human creation. Emphasizes philosophical depth over empirical evidence.</p>	<p>Integrates scientific findings on embryonic development, illustrating how <i>nutfah</i> نُطْفَةٌ aligns with observed biological processes. Uses visual aids to enhance understanding of developmental stages.</p>
<p>3. Surah Al-Insan (76:2)</p>	<p>Discusses the existential implications of creation from a single drop (<i>nutfah</i>) نُطْفَةٌ, focusing on linguistic and philosophical dimensions rather than scientific validation.</p>	<p>Relates the verse to genetics and cellular biology, providing illustrations of cellular division and development stages that correspond with Qur’anic descriptions.</p>

3. Integration of Contemporary Scientific Knowledge

a. Modern Embryological Correlations

According to Moore & Azzindani (1983):

- 1) Precise correlation of Qur’anic terms with embryological stages
- 2) Photographic evidence supporting interpretations
- 3) Microscopic validation of developmental phases

b. Scientific Validation Matrix

Qur’anic Term	Classical Understanding	Modern Scientific Description	Supporting Evidence
نُطْفَةٌ (<i>nutfah</i>)	Selected fluid	Gamete/Zygote stage	Microscopic studies
عَلَقَةٌ (<i>‘alaqah</i>)	Clinging substance	Implanted blastocyst	Ultrasound imaging
مُضْغَةٌ (<i>mudghah</i>)	Chewed-like substance	Somite formation	Embryological studies

4. Implications and Future Directions

a. Methodological Integration Framework

- 1) Principles for Combined Approach:
 - a) Maintain linguistic accuracy
 - b) Incorporate scientific validation
 - c) Ensure theological consistency



- d) Preserve contextual relevance
- 2) Implementation Guidelines:
 - a) Systematic verification process
 - b) Cross-disciplinary consultation
 - c) Balanced interpretation approach

b. Future Research Directions

- 1) Methodological Development
 - a) Enhanced analytical frameworks
 - b) Integration of digital tools
 - c) Advanced comparative techniques
- 2) Extended Applications
 - a) Other scientific domains in Qur'an
 - b) Comparative religious studies
 - c) Educational resource development

CONCLUSION

This study demonstrates the enduring relevance of the Qur'an to scientific inquiry, as exemplified by the divergent yet complementary approaches of Az-Zamakhshari and Tantawi Jawhari. While Az-Zamakhshari's linguistic-rational approach provides a robust textual foundation, Jawhari's empirical-scientific framework offers a contemporary contextualization of Qur'anic verses. By integrating these methodologies, this research underscores the Qur'an's capacity to inspire scientific exploration and fosters a deeper understanding of the harmony between faith and reason.

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