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A Comparative Form and Geometric Analysis of the Funerary Architecture of Delhi: Lodi and Early Mughal Tombs

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Abstract - Funerary architecture in the Indian subcontinent represents a significant expression of cultural, political, and architectural development. Delhi, as the capital of several dynasties, contains a rich collection of tomb architecture that reflects evolving architectural ideas over time. The Lodi dynasty (1451–1526), representing the final phase of the Delhi Sultanate, developed a distinct architectural vocabulary characterised by geometric clarity, centralised plans, restrained massing, and structurally dominant domes. With the establishment of Mughal rule in 1526, funerary architecture underwent further transformation through the introduction of refined geometric systems, increased monumentality, axial symmetry, and integrated landscape planning.

This research undertakes a comparative architectural analysis of selected Lodi and early Mughal tombs in Delhi to examine continuity and transformation in funerary architecture. The study focuses specifically on plan typology, geometric organisation, spatial hierarchy, dome morphology, and proportional systems. Through the examination of tombs such as the Tomb of Muhammad Shah Sayyid, the Tomb of Sikandar Lodi, and Humayun's Tomb, the research investigates how architectural geometry functions as a generative design tool rather than merely a stylistic feature.

The findings reveal that early Mughal architecture did not emerge as a complete departure from Sultanate architecture but instead evolved through a gradual refinement of existing geometric and spatial principles. The study contributes to architectural history by highlighting the importance of geometry and form in understanding architectural continuity during this transitional period.

***Key Words*:** Funerary Architecture, Indo-Islamic Architecture Delhi Sultanate Architecture, Lodi Architecture, Mughal Architecture, Plan Typology, Geometric Organization, Spatial Hierarchy,Dome Morphology

1.INTRODUCTION

Funerary architecture in the Indian subcontinent reflects evolving ideas of form, geometry, spatial order, and symbolism. Delhi, as a continuous political and cultural centre for several centuries, preserves a layered architectural narrative shaped by successive dynasties. Each ruling power left a distinct architectural imprint that contributed to the development of Indo-Islamic architecture.

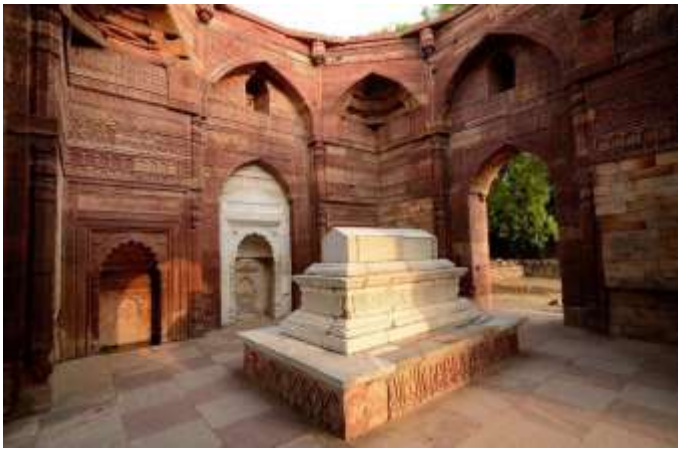


Fig -1:Tomb Of Illtutmish Source : Trawell Early Sultanate Period

Fig -2:Tomb Of Ghiyas-ud-din Tughlaq Source : Word Press Tughlaq Period

Fig -3: Tomb Of Sikander lodi; Source: Author Lodi Period

Fig -4: Humayun's Tomb ; Source : Author Mughal Era

During the late Delhi Sultanate period, particularly under the Lodi dynasty, tomb architecture developed into a distinctive architectural typology characterised by centralised plans, geometric clarity, and visually dominant domes. Lodi tombs were generally constructed as square or octagonal structures placed within enclosed garden settings or open landscapes. These monuments emphasised structural simplicity, proportion, and spatial balance.

The establishment of Mughal rule in India in 1526 introduced new architectural influences derived from Persian and Timurid traditions. Early Mughal architecture integrated refined geometric planning, axial symmetry, and monumental scale. Unlike earlier tombs that stood as isolated architectural forms, Mughal tombs were often integrated within formal garden layouts known as charbagh, creating a unified relationship between architecture and landscape.

Despite these differences, early Mughal architecture did not develop in isolation. Instead, it evolved from the architectural traditions established during the Sultanate period. The transformation from Lodi tomb architecture to Mughal monumental tombs reflects a process of architectural continuity and refinement rather than a sudden stylistic rupture.

This research examines this transitional phase through a comparative analysis of selected Lodi and early Mughal tombs in Delhi. By focusing on architectural form and geometry, the study seeks to identify the underlying design principles that governed funerary architecture during this period.

2. NEED FOR THE STUDY

Existing scholarship on Indo-Islamic architecture has extensively examined the stylistic, symbolic, and historical aspects of funerary monuments. However, relatively limited attention has been given to a systematic analysis of their formal and geometric logic.

Many studies interpret early Mughal architecture primarily as an innovation introduced by the new dynasty. Such interpretations often overlook the architectural continuity between the Sultanate and Mughal periods. As a result, the transformation of tomb architecture is frequently understood as a stylistic shift rather than as a gradual morphological evolution.

Furthermore, architectural monuments are often studied as isolated objects rather than as part of a broader architectural system governed by geometry and proportion. The absence of form-based analytical frameworks limits the ability to understand how architectural elements such as domes, plinths, and structural transitions relate to each other within a unified geometric order.

By examining geometry as a generative design tool, this research seeks to address this gap in scholarship. A comparative form-based analysis allows for the identification of underlying architectural principles that shaped tomb architecture across dynastic periods.

Such an approach contributes not only to architectural history but also to contemporary architectural education and heritage conservation practices. Understanding the geometric logic behind historical monuments can provide valuable insights for architectural analysis, documentation, and restoration.

3. AIM OF THE STUDY

The aim of this research is to undertake a comparative form and geometric analysis of selected Lodi and early Mughal funerary monuments in Delhi in order to

understand the architectural continuity and transformation in plan typology, spatial organization, proportional systems, and dome morphology during this transitional phase in Indo-Islamic architecture.

4. OBJECTIVES

The objectives of this research are:

- To study the historical and architectural context of Lodi and early Mughal funerary architecture in Delhi.
- To analyze the plan typologies of selected tombs, including square and octagonal configurations.
- To examine the role of geometry as a generative design tool governing spatial organization and symmetry.
- To analyze dome morphology and its relationship with the base structure and transitional elements.
- To investigate proportional systems and massing in tomb architecture.
- To identify architectural continuities and transformations between the Lodi and early Mughal periods.
- To develop a form-based analytical framework applicable to architectural history and conservation.

5. SCOPE AND LIMITATIONS

The scope of this study is limited to the comparative architectural analysis of selected Lodi and early Mughal tombs located in Delhi. The study focuses primarily on architectural form and geometry, including plan typology, spatial organization, dome morphology, proportional systems, and massing.

The research relies on analytical drawings such as plans, sections, and geometric diagrams to interpret architectural form. Landscape elements are considered only in relation to spatial hierarchy and axial alignment.

The study does not include detailed analysis of ornamentation, construction techniques, or material technology unless these elements directly influence architectural form.

Because the research relies largely on published drawings and secondary documentation, the findings are interpretative rather than empirical.

Fig -5: Literature Review Table; Source: Author

6. METHODOLOGY

The research methodology is based on a comparative architectural analysis combining both primary and secondary sources.

The research process begins with a comprehensive literature review of academic publications, architectural journals, and historical documentation related to Indo-Islamic funerary architecture.
Primary data collection involves field observation, photographic documentation, and on-site sketches of selected tombs in Delhi. These observations focus on architectural form, massing, spatial organization, and the relationship between structural elements.

Secondary data sources include published architectural drawings, archaeological documentation, and academic research papers.The analytical framework involves reconstructing architectural forms using simplified geometric diagrams derived from plans, sections, and elevations. Through these diagrams, the study identifies primary geometric shapes such as squares, octagons, and circles that govern the architectural composition.

Finally, a comparative analysis is conducted to identify similarities and differences between Lodi and early Mughal tomb architecture.

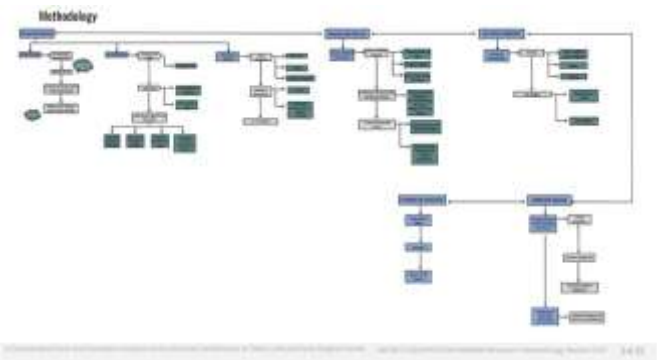


Fig -6: Methodology Chart; Source: Author

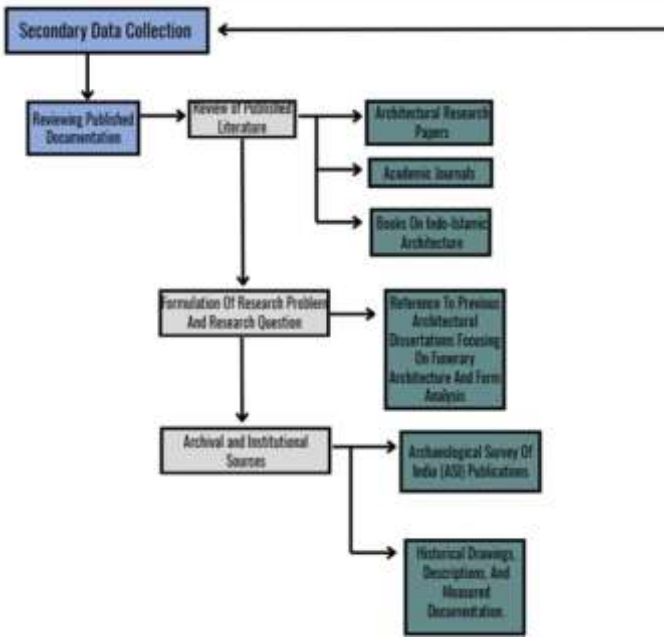
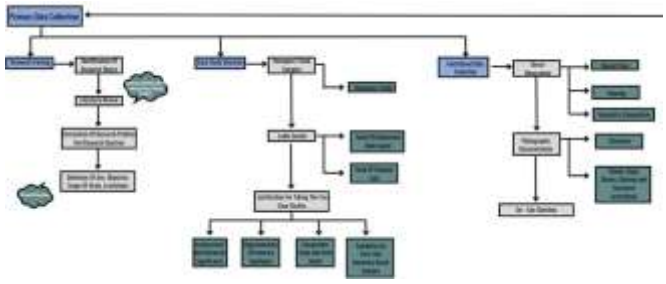


Fig -8: Methodology Chart; Source: Author



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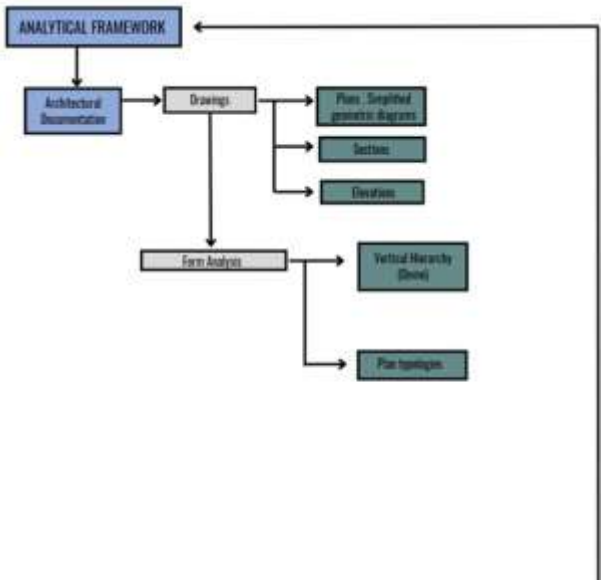

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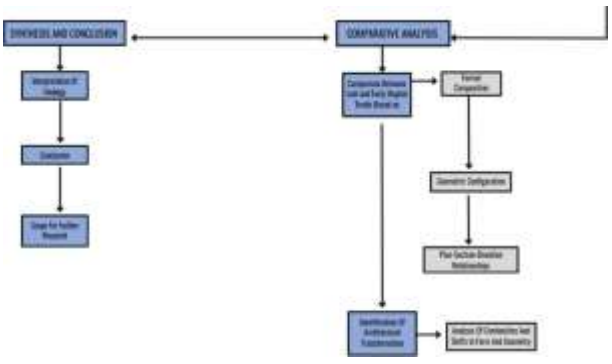
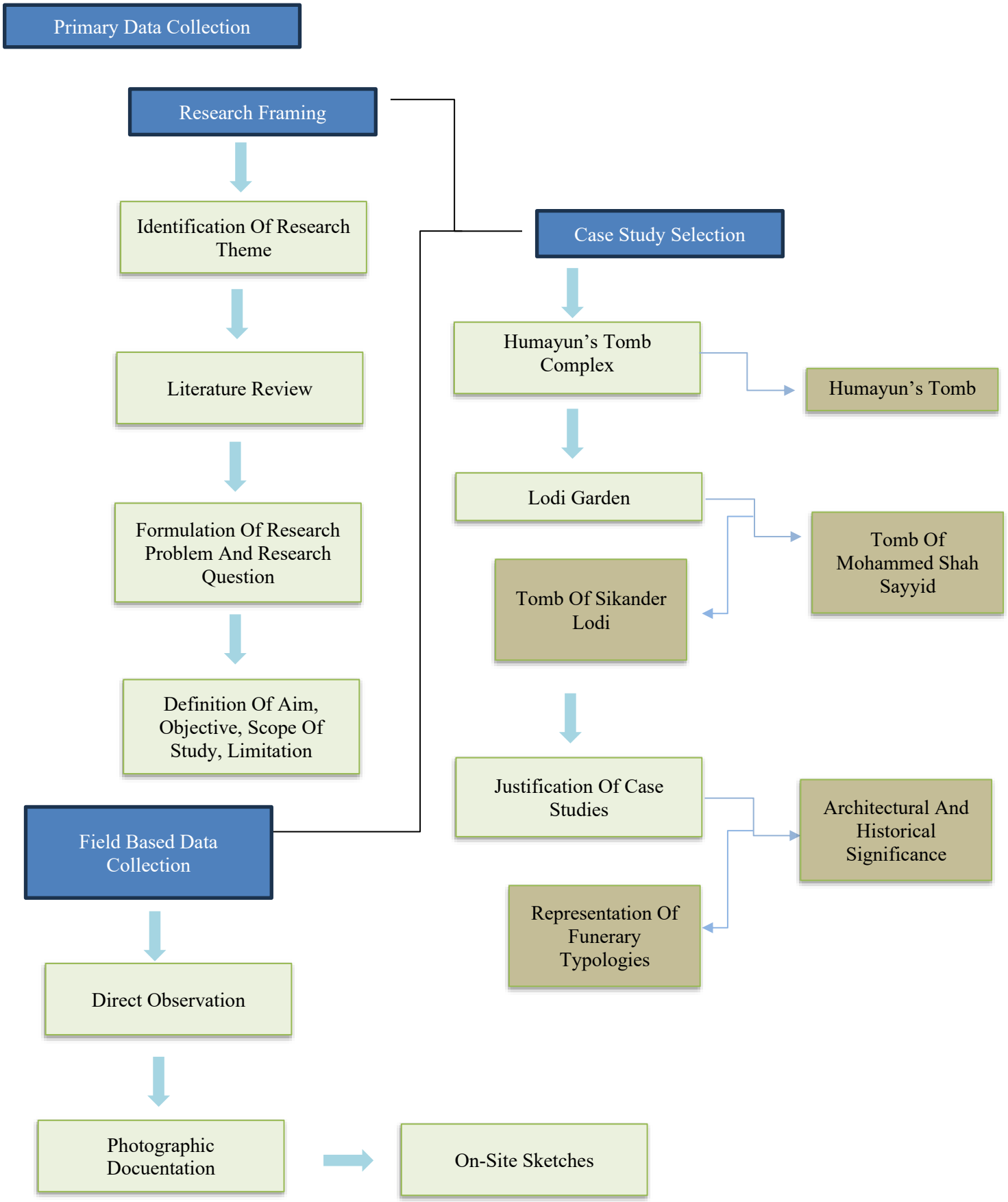


Fig -10: Methodology Chart; Source: Author

Chart 1


Primary Data Collection
Research Framing
Identification Of Research Theme
Literature Review
Formulation Of Research Problem And Research Question
Definition Of Aim, Objective, Scope Of Study, Limitation
Field Based Data Collection
Direct Observation
Photographic Documentation
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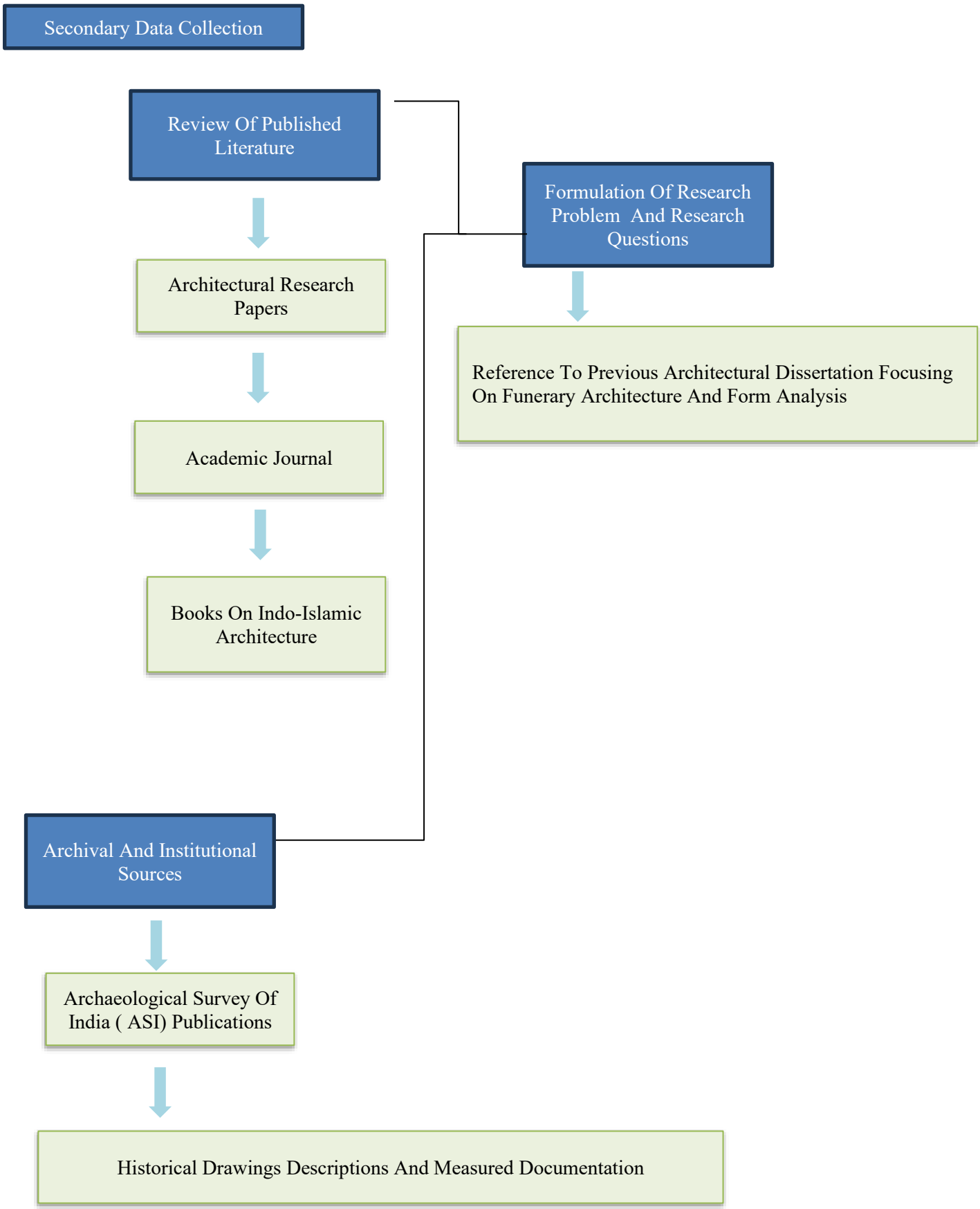
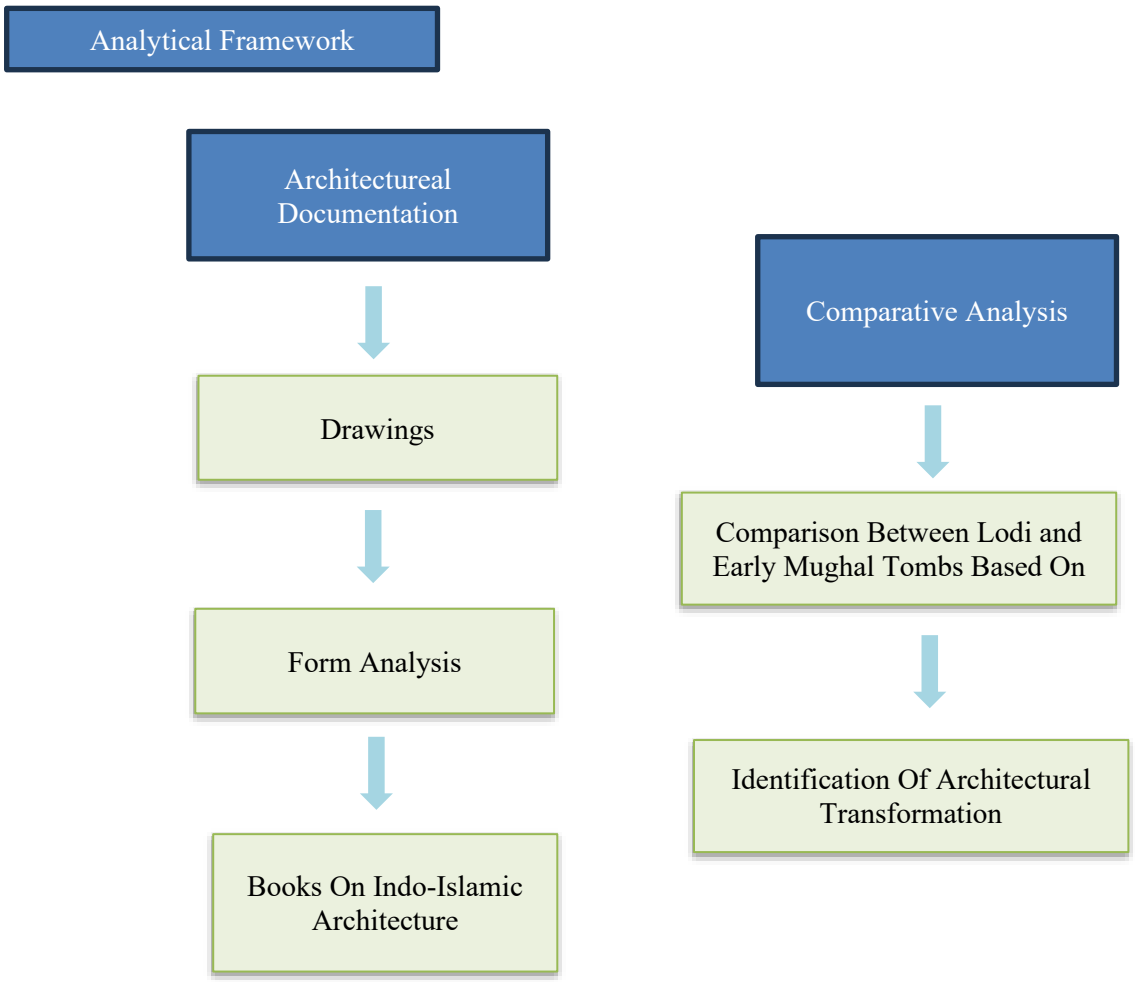
Case Study Selection
Humayun's Tomb Complex
Humayun's Tomb
Lodi Garden
Tomb Of Mohammed Shah Sayyid
Tomb Of Sikander Lodi
Justification Of Case Studies
Architectural And Historical Significance
Representation Of Funerary Typologies


Secondary Data Collection
Review Of Published Literature
Architectural Research Papers
Academic Journal
Books On Indo-Islamic Architecture
Formulation Of Research Problem And Research Questions
Reference To Previous Architectural Dissertation Focusing On Funerary Architecture And Form Analysis
Archival And Institutional Sources
Archaeological Survey Of India (ASI) Publications
Historical Drawings Descriptions And Measured Documentation


Analytical Framework
Architectureal Documentation
Drawings
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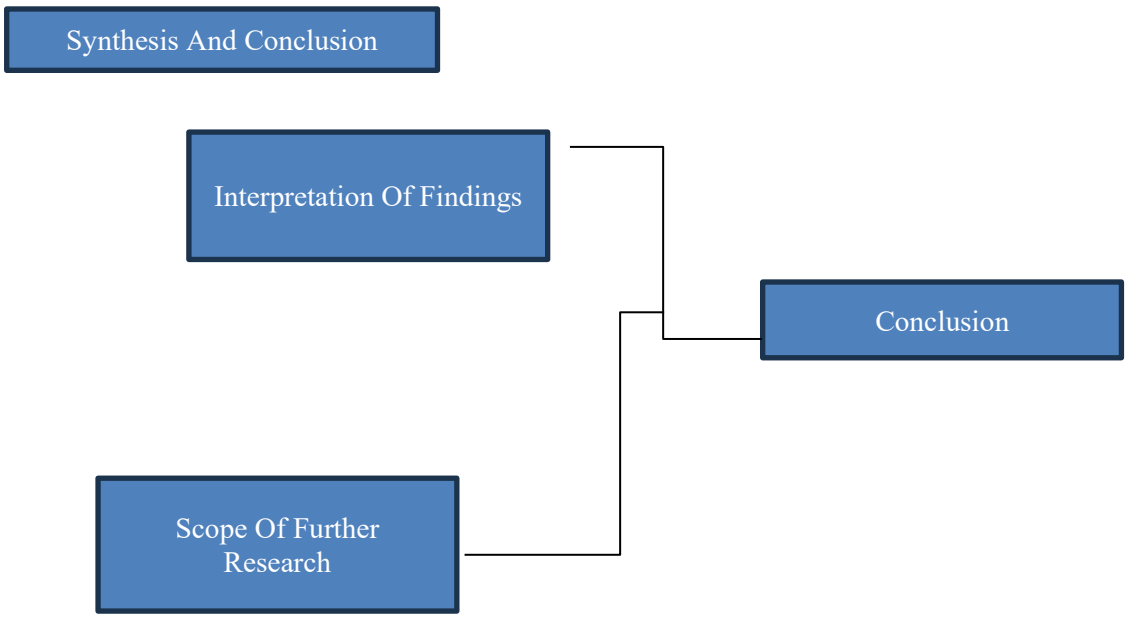
Comparative Analysis
Comparison Between Lodi and Early Mughal Tombs Based On
Identification Of Architectural Transformation


Synthesis And Conclusion
Interpretation Of Findings
Conclusion
Scope Of Further Research

CASE STUDY ANALYSIS

6.1 TOMB OF MUHAMMAD SHAH SAYYID DOME ANALYSIS

The Tomb of Muhammad Shah Sayyid, located in Lodi Gardens in Delhi, represents an important example of late Sultanate funerary architecture. Built during the Sayyid dynasty, the tomb reflects the architectural transition between earlier Sultanate forms and later Lodi developments.

The monument is characterized by an octagonal plan with a central domed chamber surrounded by a verandah. Each side of the octagon contains arched openings supported by pillars, creating a rhythmic and symmetrical façade.

The dome of the tomb is hemispherical in form and rests on an octagonal base through the use of transitional structural elements such as squinches. These elements allow the geometric transformation from an octagonal base to a circular dome.

The architectural composition is further enhanced by the presence of chhatris positioned at the corners of the roof. These small domed pavilions emphasize the vertical hierarchy of the monument while reinforcing its symmetrical geometry.

6.1.1 TOMB OF MUHAMMAD SHAH SAYYID PLAN TYPOLOGY ANALYSIS

The plan of the tomb of Muhammad Shah Sayyid represents an important octagonal tomb typology that became characteristic of late Sultanate and early Lodi funerary architecture in Delhi. This typology reflects an architectural transition from the earlier square tomb forms to more complex centralized plans that emphasize symmetry, spatial hierarchy, and geometric clarity.

1. Octagonal Centralized Plan

The tomb is organized around a central octagonal chamber, which forms the core of the structure and houses the cenotaph. The octagonal geometry allows for a balanced distribution of structural loads while also creating a visually harmonious form. Each side of the octagon corresponds to a façade bay, reinforcing the monument's symmetrical composition.

2. Ambulatory Verandah

Surrounding the central chamber is a verandah or ambulatory passage, created by a series of arched openings supported by pillars. This peripheral circulation space allows movement around the central tomb chamber and contributes to the monument's spatial layering. The verandah also acts as a transitional zone between the exterior environment and the sacred interior.

3. Axial Openings and Circulation

The plan maintains a strong axial organization, with openings aligned along the cardinal directions. These arched entrances create visual and physical access to the central chamber while preserving the geometric rhythm of the octagonal layout. The axial symmetry reflects the broader Islamic architectural emphasis on balance and order.

4. Corner Chhatri Integration

At the roof level, chhatris are positioned above the corners of the octagonal structure. Although they are not directly part of the ground plan, their placement corresponds to the octagonal geometry and reinforces the spatial hierarchy of the monument. The chhatris visually articulate the corners and contribute to the vertical emphasis of the design.

5. Typological Significance

The plan typology of the tomb demonstrates a transitional phase in Indo-Islamic funerary architecture. While earlier Sultanate tombs often used simple square plans, the octagonal layout introduces greater complexity and symbolic centralization. This typology later influenced the development of more refined garden-tomb structures during the Mughal period, including monuments such as Humayun's Tomb.

Key Plan Characteristics

- Central octagonal domed chamber
- Surrounding arched verandah / ambulatory
- Symmetrical axial entrances on multiple sides

- Integration of corner chhatris reinforcing geometry
- Transitional typology between Sultanate and Lodi architectural traditions

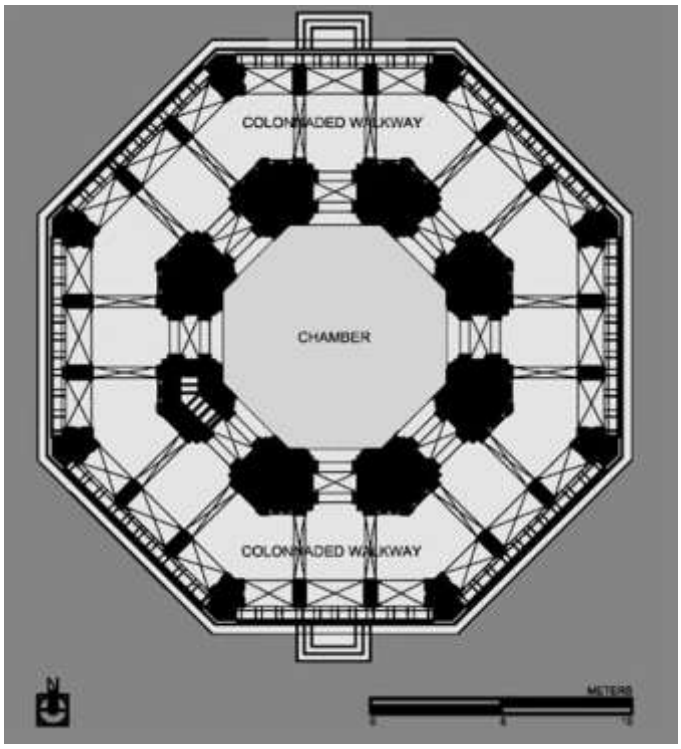


Fig -11: Muhammad Shah Sayyid Tomb Plan ; Source: Google Arts & Culture

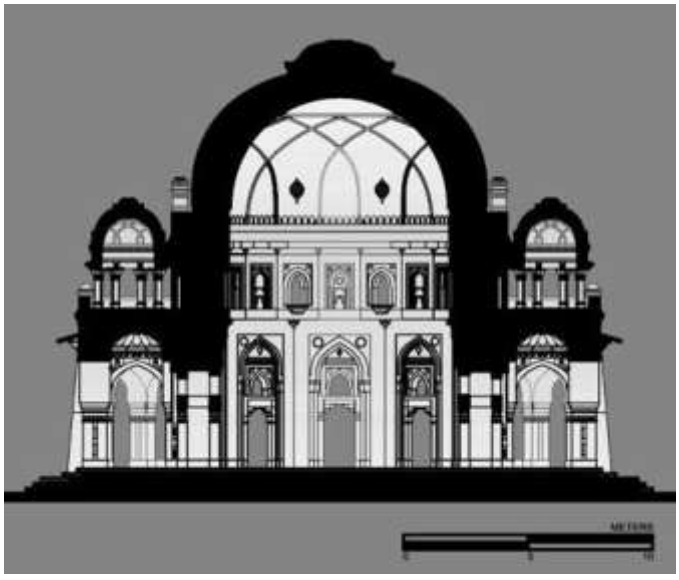


Fig -12: Muhammad Shah Sayyid Tomb Section ; Source: Google Arts & Culture

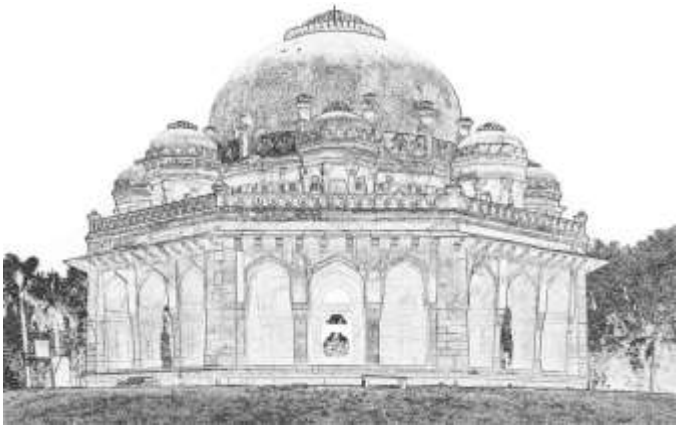


Fig -13: Muhammad Shah Sayyid TombSketch ; Source: Google Arts & Culture

6.2 TOMB OF SIKANDAR LODI DOME ANALYSIS

The Tomb of Sikandar Lodi, also located in Lodi Gardens, represents the mature phase of Lodi architecture. The tomb is enclosed within a walled garden, demonstrating an early form of garden-tomb planning.

Like earlier Sultanate tombs, the monument follows an **octagonal plan** with a central burial chamber surrounded by a verandah. The dome rests above the central chamber and forms the dominant architectural element of the structure.

Compared to earlier tombs, the proportions of the Sikandar Lodi tomb are more balanced and refined. The dome sits on a relatively low drum, giving the structure a compact and unified appearance.

The tomb demonstrates the increasing emphasis on geometric order and proportional harmony that later became characteristic of Mughal architecture.

6.2.1 TOMB OF SIKANDAR LODI PLAN TYPOLOGY ANALYSIS

The tomb of Sikandar Lodi represents a refined development of the octagonal tomb typology that became prominent during the late Delhi Sultanate period. The structure reflects a more organized and mature approach to spatial planning compared to earlier Sayyid and Tughlaq tombs.

1. Octagonal Central Plan

The tomb is based on an octagonal plan, with the central chamber forming the core of the structure where the cenotaph is placed. This centralized plan creates a balanced spatial arrangement and allows the dome above to be structurally and visually emphasized.

2. Peripheral Verandah

Surrounding the central chamber is a continuous verandah, formed by arched openings on each side of the octagon. This verandah acts as a transitional circulation space that separates the interior burial chamber from the exterior environment while maintaining visual openness.

3. Axial Symmetry and Entrances

The plan maintains strong axial symmetry, with arched openings aligned along the principal directions. These entrances provide access to the central chamber and reinforce the geometric clarity of the structure.

4. Enclosed Garden Context

A distinctive feature of this tomb is its placement within a walled garden enclosure, which represents an early form of the garden-tomb concept. The enclosure establishes a defined spatial boundary around the monument and introduces a formal relationship between architecture and landscape.

5. Typological Development

The plan typology of the tomb shows a more cohesive and proportionally balanced composition compared to earlier Sultanate examples. The integration of the tomb within a planned garden setting anticipates later Mughal funerary architecture, particularly the charbagh garden layout seen in monuments such as Humayun's Tomb.

Key Plan Characteristics

- Central octagonal burial chamber
- Surrounding arched verandah / ambulatory
- Symmetrical axial entrances
- Placement within a walled garden enclosure
- Greater proportional balance and spatial organization

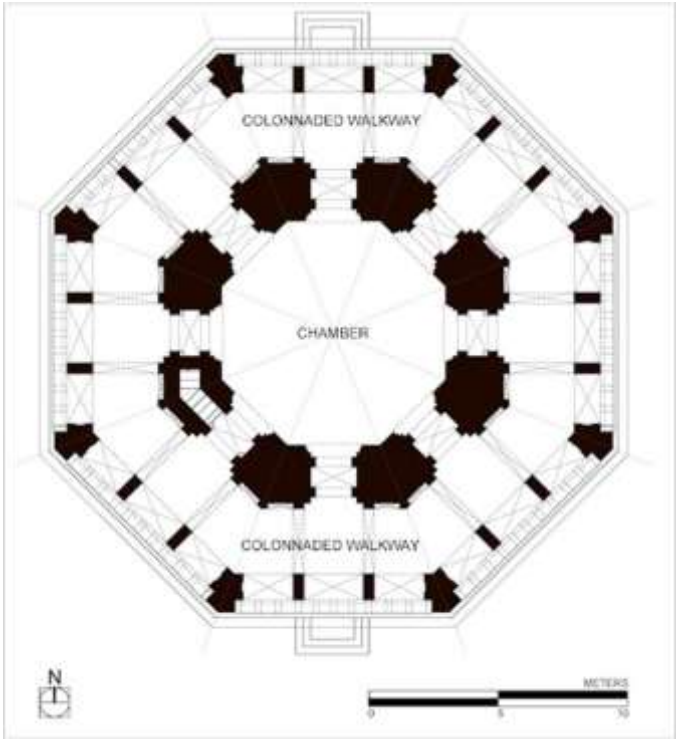


Fig -14: Sikander Lodi Tomb Plan ; Source: Google Arts & Culture

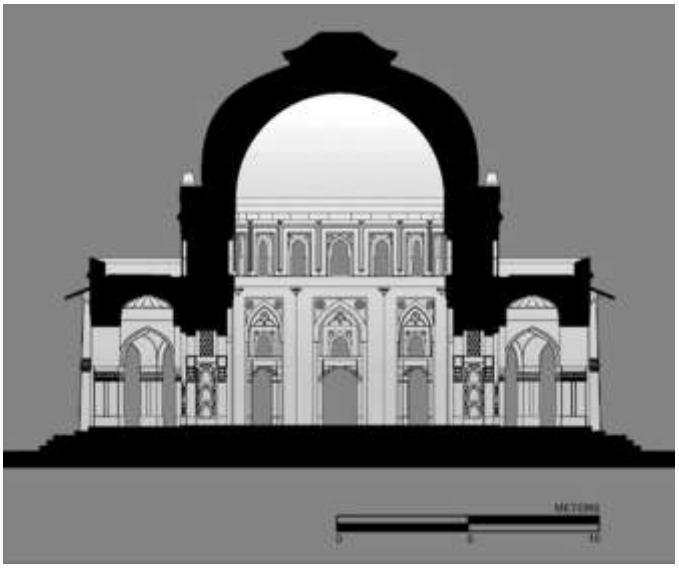


Fig -15: Sikander Lodi Tomb Section ; Source: Google Arts & Culture

6.3 HUMAYUN'S TOMB
DOME ANALYSIS

Humayun's Tomb, constructed in 1570, represents a major milestone in Mughal architecture and marks the transition from Sultanate tomb traditions to imperial Mughal monumentality.

The tomb is built on a large platform and is positioned at the center of a charbagh garden layout, divided into four quadrants by water channels and pathways.

Architecturally, the structure follows a square plan with chamfered corners, creating an octagonal internal geometry. The central chamber houses the tomb of Emperor Humayun and is surrounded by subsidiary chambers arranged symmetrically.

The most significant architectural feature of the monument is its double-shell dome, which consists of an inner structural dome and an outer dome that creates the monument's monumental external profile.

6.3.1 HUMAYUN'S TOMB PLAN TYPOLOGY ANALYSIS

The plan typology of Humayun's Tomb represents a major advancement in Indo-Islamic funerary architecture and establishes the prototype for later Mughal garden tombs. The monument demonstrates a highly organized spatial system combining centralized planning, geometric symmetry, and landscape integration.

1. Square Plan with Chamfered Corners

The tomb is primarily based on a square plan with chamfered corners, which transforms the interior geometry into an octagonal central space. This configuration allows the structure to maintain the stability of a square base while achieving a centralized spatial composition.

2. Centralized Chamber

At the core of the plan lies the large central domed chamber, which houses the cenotaph of Emperor Humayun. This chamber forms the principal spatial and symbolic focus of the monument, emphasizing the hierarchical importance of the central space.

3. Symmetrical Arrangement of Subsidiary Chambers

Surrounding the central chamber are smaller interconnected chambers and passageways, arranged in a symmetrical pattern on all sides. These secondary spaces create a layered spatial organization and provide access to the main chamber while maintaining the monument's geometric order.

4. Raised Platform and Axial Organization

The entire structure is placed on a high plinth or platform, which elevates the tomb and reinforces its visual prominence. Entrances are aligned along the main axes, strengthening the monument's symmetrical layout and directing movement toward the central chamber.

5. Integration with Charbagh Garden Layout

A defining aspect of the plan typology is the tomb's placement at the center of a charbagh garden, a quadrilateral garden divided into four sections by water channels and pathways. This layout symbolizes the Islamic concept of paradise and establishes a strong relationship between architecture and landscape.

6. Typological Significance

The plan of Humayun's Tomb represents the mature development of centralized Mughal funerary planning. Its combination of a square base, octagonal interior geometry, and garden-tomb setting became a model for later Mughal monuments, most famously the Taj Mahal.

Key Plan Characteristics

- Square plan with chamfered corners forming an octagonal interior
- Large central domed chamber
- Symmetrically arranged subsidiary chambers
- Raised platform (plinth) emphasizing monumentality
- Placement at the center of a charbagh garden layout
- Strong axial symmetry and geometric planning

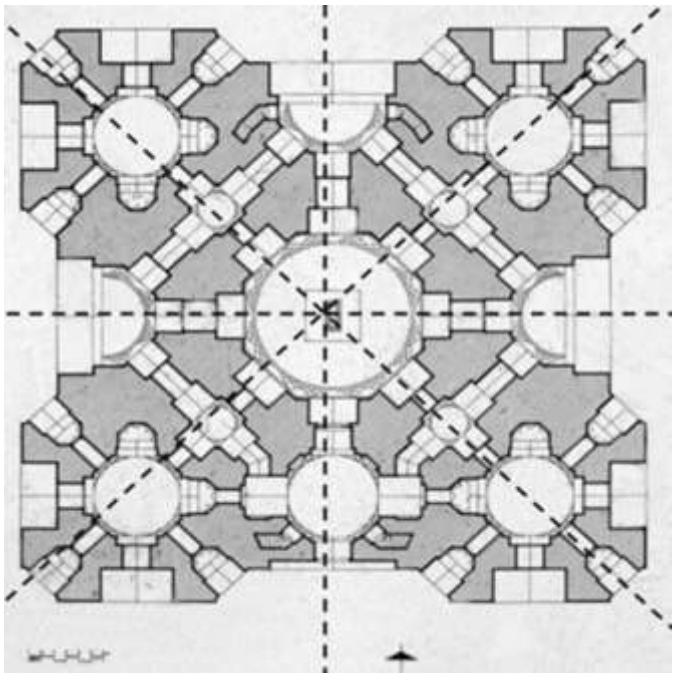


Fig -16: Humayun's Tomb Plan ; Source: Hidden Architecture

Fig -17: Humayun's Tomb Section ; Source: Hidden Architecture

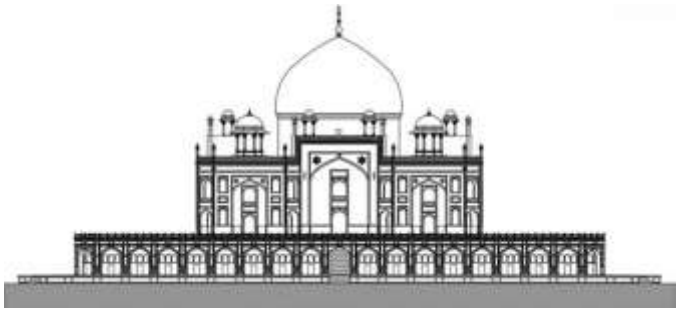


Fig -18: Humayun's Tomb Elevation; Source: Farhat Afzal

7. COMPARATIVE ANALYSIS

The comparative study of these tombs reveals several important patterns in the evolution of funerary architecture.First, the use of centralized plans remains consistent across both periods. Both Lodi and early Mughal tombs rely on square or octagonal geometries that establish spatial symmetry and structural stability.

Second, the dome continues to function as the dominant architectural element across both dynasties. However, its form evolves significantly. While Lodi domes are relatively simple hemispherical structures, Mughal domes become more complex and monumental through the introduction of double-shell construction.Third, the relationship between architecture and landscape undergoes a major transformation. Lodi tombs typically exist within enclosed gardens or open landscapes, while Mughal tombs integrate architecture and landscape through formalized garden layouts.

These observations demonstrate that early Mughal architecture evolved through the refinement and expansion of architectural principles already present in Sultanate architecture.

Parameter	Tomb of Muhammad Shah Sayyid	Tomb of Sikandar Lodi	Humayun's Tomb
Dynasty / Period	Sayyid Dynasty (15th Century)	Lodi Dynasty (Early 16th Century)	Early Mughal Period (16th Century)
Location	Lodi Gardens, Delhi	Lodi Gardens, Delhi	Nizamuddin East, Delhi
Plan Typology	Octagonal plan	Octagonal plan	Square plan with chamfered corners creating internal octagon
Geometric Organization	Centralized octagonal chamber surrounded by verandah	Centralized octagonal chamber with surrounding arcade	Square plan transformed into octagon internally through chamfered corners
Spatial Layout	Central burial chamber with surrounding circulation space	Central chamber with arcaded verandah and garden enclosure	Central chamber surrounded by subsidiary chambers arranged symmetrically
Relationship Between Plan and Dome	Octagonal base transitions to circular dome using squinches	Octagonal base supports hemispherical dome through structural transition	Square base transforms to octagon and then to circular dome
Dome Type	Single-shell dome	Single-shell dome	Double-shell dome
Dome Profile	Hemispherical dome with slightly pointed apex	Hemispherical dome with low drum	Bulbous dome placed on high drum
Dome Scale and Proportion	Moderately scaled dome integrated with octagonal base	Dome slightly more refined in proportion than earlier tombs	Large monumental dome dominating the structure
Structural Transition to Dome	Squinches convert octagonal base to circular dome	Transitional arches and squinches used	Complex transitional system converting square to octagon and then to circle

Fig -19: Comparative Analysis Of Plan Typology And Dome Typology ; Source; Author

8. FINDINGS

- The research identifies several key findings:
- Geometry functions as a fundamental design tool in funerary architecture.
- Centralized planning systems remain consistent across dynastic periods.
- Dome morphology evolves gradually from simple hemispherical forms to complex double-shell structures.
- Spatial hierarchy becomes increasingly pronounced in Mughal architecture.
- Landscape integration becomes a defining characteristic of Mughal tomb complexes.

Parameter	Tomb of Muhammad Shah Sayyid	Tomb of Sikandar Lodi	Humayun's Tomb
Dynasty / Period	Sayyid Dynasty (15th Century)	Lodi Dynasty (Early 16th Century)	Early Mughal Period (16th Century)
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Dome Profile	Hemispherical dome with slightly pointed apex	Hemispherical dome with low drum	Bulbous dome placed on high drum
Dome Scale and Proportion	Moderately scaled dome integrated with octagonal base	Dome slightly more refined in proportion than earlier tombs	Large monumental dome dominating the structure
Structural Transition to Dome	Squinches convert octagonal base to circular dome	Transitional arches and squinches used	Complex transitional system converting square to octagon and then to dome

Table -1: Comparative Analysis Of Plan Typology And Morphology Of Selected Tombs

Chart 2

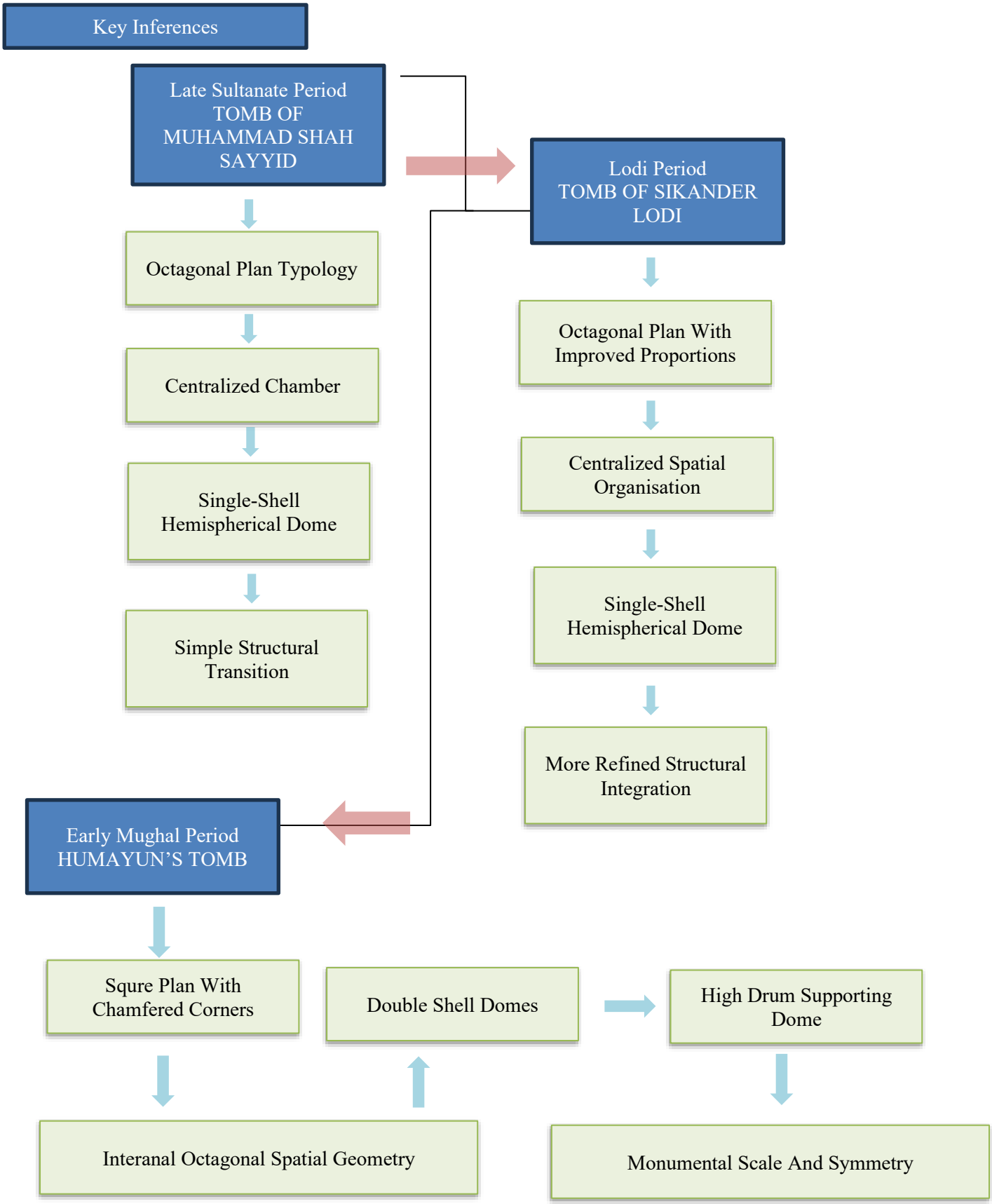
Key Inferences
Late Sultanate Period
TOMB OF
MUHAMMAD SHAH
SAYYID
Octagonal Plan Typology
Centralized Chamber
Single-Shell
Hemispherical Dome
Simple Structural
Transition
Lodi Period
TOMB OF SIKANDER
LODI
Octagonal Plan With
Improved Proportions
Centralized Spatial
Organisation
Single-Shell
Hemispherical Dome
More Refined Structural
Integration
Early Mughal Period
HUMAYUN'S TOMB
Squre Plan With
Chamfered Corners
Double Shell Domes
High Drum Supporting
Dome
Interanal Octagonal Spatial Geometry
Monumental Scale And Symmetry

Chart 3

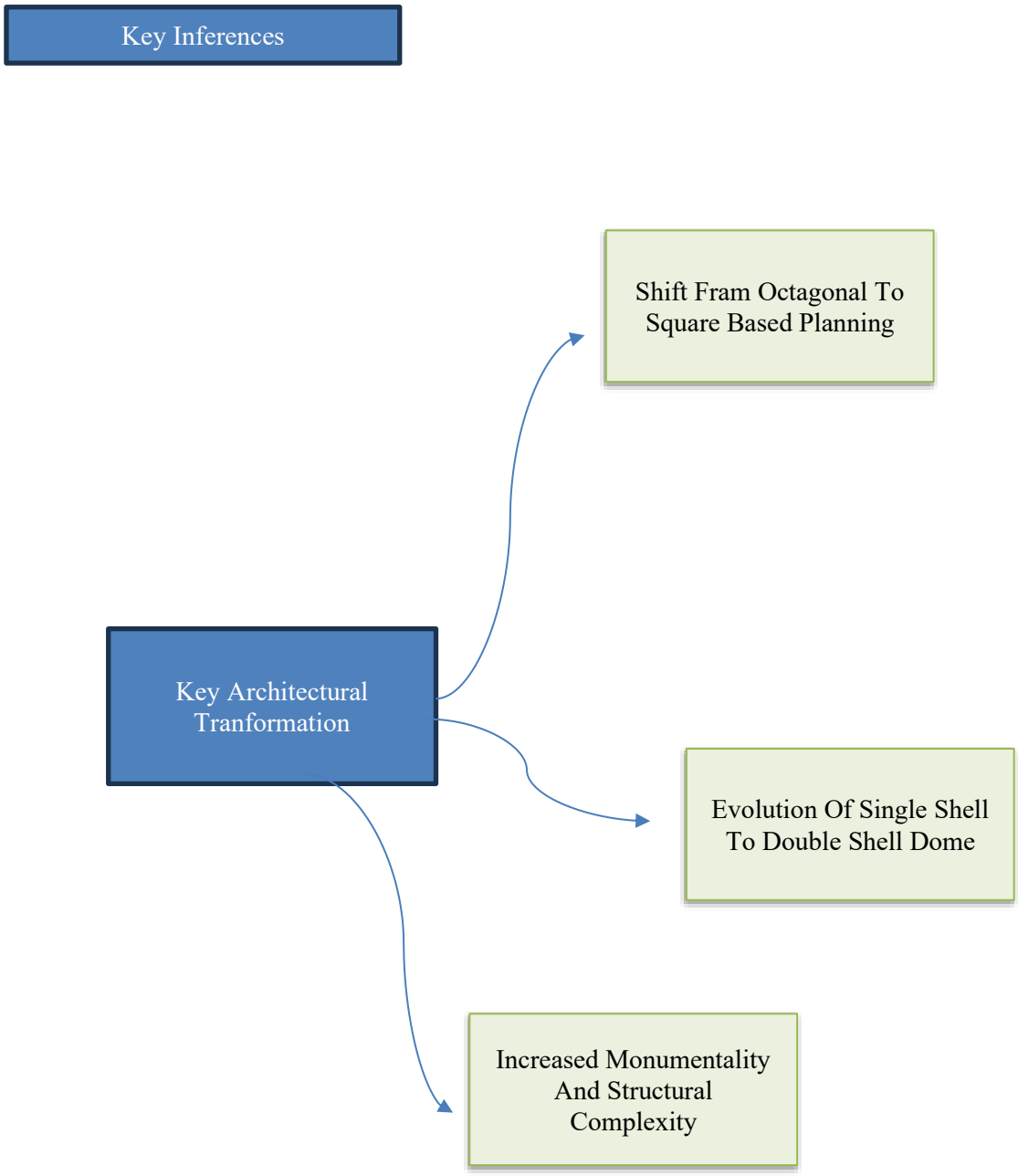
Key Inferences
Key Architectural Tranformation
Shift Fram Octagonal To Square Based Planning
Evolution Of Single Shell To Double Shell Dome
Increased Monumentality And Structural Complexity

Fig -20: Key Inferences ; Source; Author

9. CONCLUSION

This research demonstrates that the transition from Lodi to early Mughal funerary architecture represents a process of architectural continuity rather than abrupt transformation. While Mughal architecture introduced new elements such as monumental scale and garden planning, many of its underlying design principles were inherited from earlier Sultanate traditions.

Through a comparative analysis of form, geometry, and spatial organization, the study reveals the importance of geometric systems in shaping architectural evolution. Understanding these systems provides valuable insights into the development of Indo-Islamic architecture and contributes to broader discussions in architectural history and conservation.

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REFERENCES

1. Asher, C. B. (1992). Architecture of Mughal India. Cambridge University Press.
2. Begley, W. E., & Desai, Z. A. (1989). Taj Mahal: The Illumined Tomb. University of Washington Press.
3. Chaudhry, N., & Khan, S. (2018). Funerary landscape in pre-Mughal Delhi: Spatial and architectural characteristics. Journal of Islamic Architecture, 5(2), 75–88.
4. Hussain, A., & Kamal, M. A. (2022). Analysis of domes in tomb architecture of Delhi: Evolution and geometrical transition. International Advanced Research Journal in Science, Engineering and Technology (IARJSET), 9(6), 12–19.
5. Khan, S., & Ahmad, R. (2021). Role of geometrical art in the morphological development of Mughal tombs. ShodhKosh: Journal of Visual and Performing Arts, 2(1), 45–56.
6. Koch, E. (2006). The complete Taj Mahal and the riverfront gardens of Agra. Thames & Hudson.
7. Lowry, G. D. (1985). Humayun's Tomb: Form, function and meaning in early Mughal architecture. Oxford University Press.
8. Nath, R. (1978). History of Sultanate architecture. Abhinav Publications.
9. Rabb, P., & Nazer, Z. (2020). Geometrical analysis of the tomb of Shah Rukn-e-Alam, Multan. Journal of Islamic Architecture, 6(1), 33–45.
10. Sharma, R., & Verma, P. (2017). Mughal tomb complexes: Their spatial layout and grand entrances. Journal of Architectural Research and Development, 2(3), 21–30.
11. Uplekar, K., Krusche, K., & Furse, K. (2010). History, morphology and perfect proportions of Mughal tombs: The secret to creation of the Taj Mahal. International Journal of Architectural Research (Archnet-IJAR), 4(2–3), 159–174.