

**THE STUDY OF THE STRATIGRAPHY, TOPOGRAPHY, AND
URBAN PLANNING CULTURE OF KUSHAN-PERIOD SITES IN INDIAN
AND PAKISTANI ARCHAEOLOGY**

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Abstract. *This thesis examines the principal scholarly and methodological approaches to the study of the stratigraphy, topography, and urban planning characteristics of Kushan-period archaeological sites in South Asian archaeology. Drawing on archaeological research conducted in India and Pakistan, particular attention is given to the sequence of cultural strata, the establishment of chronological boundaries based on ceramic and numismatic evidence, the topographical organization of urban settlements, defensive structures, religious and architectural complexes, and water-supply systems. The scholarly approaches of researchers such as A. Ghosh, B.B. Lal, R.C. Sharma, B.N. Puri, A.H. Dani, F.A. Durrani, S.R. Dar, M.S. Khan, M.R. Mughal, Ihsan Ali, and M. Nazir Khan are reviewed and synthesized, highlighting their significance for the comprehensive study of urbanization during the Kushan period.*

Keywords: *Kushan Empire, stratigraphy, topography, urban planning, urbanization, ceramics, numismatics, Gandhara, Taxila, Mathura, Peshawar Valley, India, Pakistan.*

Introduction

The Kushan period represents one of the significant historical phases in the history of South and Central Asia, characterized by intensive developments in urbanization, trade and economic relations, religious and cultural processes, and architectural traditions. The study of archaeological sites dating to this period relies heavily on stratigraphic analysis, topographic mapping, and the investigation of urban planning systems as important methodological approaches. In particular,

decades of archaeological excavations conducted in India and Pakistan have made it possible to identify the formation, development, and subsequent transformation of Kushan cultural strata and their transition into later historical periods.

The Development of Stratigraphic Studies

The research of A. Ghosh is of particular importance for the study of the stratigraphy of Kushan-period archaeological sites. He developed a methodological approach based on systematic, layer-by-layer archaeological excavation and the chronological classification of material culture, particularly ceramic assemblages. Investigations at Ahichchhatra revealed the stratigraphic sequence of red polished ceramics (*Red Polished Ware*) and fired-brick architectural remains characteristic of the Kushan-period strata. The division of the settlement into topographical sectors and the investigation of its defensive walls also provided important information concerning Kushan urban planning.

The stratigraphic approach developed by A. Ghosh was subsequently advanced by B.B. Lal through his investigations at Hastinapur. Lal employed the appearance and disappearance of ceramic types within archaeological strata as chronological indicators. His stratigraphic analysis of the transition from the period of Northern Black Polished Ware (*Northern Black Polished Ware*) to the Kushan-Sunga period contributed to distinguishing cultural continuity from stratigraphic disturbances caused by natural processes.

The studies of R.C. Sharma, in turn, demonstrate the combined use of lithological, typological, numismatic, and palaeographic indicators for distinguishing Kushan cultural strata from those of the preceding Saka-Kshatrapa and subsequent Gupta periods. Evidence from Mathura has demonstrated the development of fired-brick architecture, water-supply systems, drainage networks, and ring wells during the Kushan period [8].

Kushan Urban Planning and Topographical Studies

The views of B.N. Puri occupy an important position in the study of urbanization during the Kushan period. He demonstrated that the development of Kushan urban settlements involved an interaction between the rectangular urban and

fortified settlement-planning traditions characteristic of Central Asia and Bactria and the synthesis of Hellenistic and indigenous architectural traditions represented in Gandhara and the Ganges Plain. In Kushan monumental architecture, Buddhist temples, monasteries, and palace complexes constituted important components of the overall urban-planning structure [7].

The research of A.H. Dani is particularly significant for the study of Kushan-period sites in present-day Pakistan. His excavations at Shaikhan Dheri provided an opportunity to establish a chronological framework by correlating archaeological strata with numismatic evidence. This approach enabled the identification of construction phases associated with the Early Kushan period and with the reigns of Kanishka and his successors. His research into topography and landscape archaeology also contributed to determining the spatial distribution of Kushan-period sites within the Peshawar Valley and the Indus River basin [1].

F.A. Durrani further developed the chronological approach established by A.H. Dani by correlating it with archaeological evidence from the Gomal Valley. His research particularly emphasized the relationship between archaeological settlements, river basins, ecological resources, and transregional caravan routes. This approach made it possible to examine the formation of Kushan urban settlements not merely as an architectural process, but as a phenomenon closely associated with environmental, geographical, and economic factors [3].

Kushan Urbanization in the Taxila and Gandhara Regions

In the study of the Taxila region, S.R. Dar investigated Kushan urban planning on the basis of comparative and stratigraphic analysis of earlier historical phases. The sites of Bhir Mound, Sirkap, and Sirsukh demonstrate the historical continuity and transformation of urban culture across successive periods. In the study of the urban-planning system of Sirsukh, the evolution of masonry techniques, alongside numismatic evidence, was employed as an important chronological indicator.

S.R. Dar's research particularly emphasizes the synthesis of Hellenistic, Parthian, and indigenous Indian architectural traditions within Kushan urban

planning. The spatial distribution of Buddhist monasteries in the Gandhara region was interpreted not only in religious terms but also in relation to their broader socio-economic functions [2].

The research of M.S. Khan focused on the archaeological stratigraphy of the Taxila Valley and the structural characteristics of Kushan architecture. Particular attention was paid to the lithological composition of archaeological strata and to the vertical distribution of ceramic remains and Kushan coins within individual layers. His studies also addressed the question of cultural continuity between the Early Kushan and Saka-Parthian periods. In addition, the architectural characteristics of the defensive walls of Sirsukh and the foundation structures of Buddhist stupas were examined [4].

Landscape Archaeology and Settlement Systems

The studies of M.R. Mughal and Ihsan Ali are of particular importance for the regional investigation of Kushan-period archaeological sites. In his research on multi-layered archaeological sites, M.R. Mughal examined changes in archaeological strata, soil composition, and ecofacts, thereby relating chronological processes to environmental and climatic changes [6].

Ihsan Ali made a significant contribution to the development of ecological and landscape archaeology in the Peshawar Valley by mapping numerous ancient and Kushan-period archaeological sites. He classified settlements according to their size and social function into major urban centers, medium-sized craft and commercial centers, and small rural settlements. This approach made it possible to investigate Kushan urbanization not merely through individual cities, but as an interconnected regional settlement system.

The research of M. Nazir Khan focused on the structural and technological characteristics of Kushan monumental architecture, including columns, capitals, domes, and masonry techniques. His studies of Buddhist monasteries and fortified urban settlements in the Swat Valley demonstrate the relationship between their topographical locations, the natural environment, river valleys, and strategically elevated areas.

Conclusion

Archaeological research conducted in India and Pakistan demonstrates the importance of integrating stratigraphy, typology, numismatics, topography, landscape archaeology, and architectural analysis in the study of Kushan-period archaeological sites. The stratigraphic and ceramic-typological approaches developed and refined by A. Ghosh and B.B. Lal provided an important methodological basis for establishing the chronology of Kushan cultural strata [5]. The studies of R.C. Sharma and B.N. Puri further developed the analysis of urban planning and the functional characteristics of architectural structures, while the works of A.H. Dani, F.A. Durrani, S.R. Dar, and Ihsan Ali placed particular emphasis on regional topography and landscape factors.

Overall, these studies demonstrate that Kushan urbanization did not develop according to a single architectural model. Rather, it emerged as a complex historical and cultural process resulting from the interaction of local, Hellenistic, and eastern architectural traditions across Central Asia, Bactria, Gandhara, and the Ganges Plain. In this respect, the stratigraphic, topographical, and landscape-archaeological approaches developed within Indian and Pakistani archaeology provide an important scholarly and methodological foundation for the comprehensive investigation of Kushan-period archaeological sites.

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