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CULTURAL AND STRUCTURAL CONTINUITY OF EARTH BASED STRUCTURE IN THE OTTOMAN EMPIRE

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ABSTRAC T

Earth, as one of the earliest building materials in human history, has functioned not only as a technical resource but also as a cultural medium shaped by social organization, collective knowledge, and ritualized production practices. In Anatolia, earthen construction represents a long-standing material continuity through which architectural techniques, maintenance traditions, and symbolic meanings were transmitted across historical periods. This study examines the cultural and structural continuity of earthen materials from Neolithic Anatolia through the Byzantine and Ottoman periods, approaching earth not merely as a construction material but as an active cultural agent embedded in collective memory.

Early Neolithic settlements such as Çatalhöyük, Aşıklıhöyük, and Çayönü demonstrate how adobe production, periodic plaster repairs, and interior surface renewals were integrated into social rituals and communal labor practices. These processes reveal an understanding of earth as a renewable, adaptable, and socially embedded material system. During the Byzantine period, this accumulated technical knowledge evolved into more complex material applications, exemplified by the use of lightweight earthen bricks and mortars in monumental structures such as Hagia Sophia. These techniques illustrate how earthen materials were strategically employed to achieve structural efficiency, weight reduction, and spatial continuity in large-scale domed architecture.

Building upon this longue durée of material knowledge, the study investigates how earthen construction techniques influenced the architectural approach of Architect Sinan and how this inherited technical culture was reinterpreted in the Ottoman context. Focusing on the domes of the Şehzade, Süleymaniye, and Selimiye mosques—defined by Sinan as his three architectural masterpieces—the research analyzes the role of earthen materials in dome construction, mortar composition, brick technology, and structural optimization. Rather than viewing these materials as secondary or auxiliary, the study positions them as integral components of Ottoman architectural intelligence, shaped by centuries of accumulated practice.

Through a material-based and historically grounded approach, the study evaluates the continuity of earthen construction techniques in relation to production methods, craftsmanship, and cultural memory. Thus, the paper will focus on how earthen materials functioned as carriers of technical knowledge and cultural continuity, shaping Ottoman architectural practice from its Neolithic roots to its classical synthesis under Architect Sinan.

KEY WORDS:

Adobe, mosque, Architect Sinan, Süleymaniye, Şehzade, Selimiye