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VITRUVIUS AND THE ACOUSTICS OF ANCIENT THEATRE: ANALYTICAL AND COMPARATIVE STUDY ACCORDING TO RECENT RESULTS

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Abstract

One main reason for the success of the ancient theatre concept was its acoustic qualities. The Roman Architect Vitruvius, the chief authority studied by architects, discussed in his Fifth Book on Architecture, *De Architectura*, which appeared between 27 and 23 BC, the construction and proportions of the Greek and Roman theatres. The acoustics of open-air theaters was mentioned by Vitruvius. But he did not mention anything about the acoustics of roofed theaters (Odea). This earliest documentary discussion by Vitruvius shows interestingly his overriding concern is for acoustics, rather than vision, and this even extends to the rules he gives for seating design. However, the acoustic qualities mentioned by Vitruvius in the chapter, have given rise to many speculations and misunderstandings.

This paper will discuss and evaluate the acoustic qualities of the ancient theatres in relation to their design, typology, and architectural formation by testing and evaluation of Vitruvius main issues in the acoustic of ancient theatre and in accordance with recent results of studies and research programs.