

Golden Proportion and Buddha Halls

- Geometrical Analysis of Myoshinji Buddha Hall Design

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Abstract

The golden proportion exists in the nature, and its properties have been long known in western cultures. The Ancient Greeks used golden ratios on their architecture, which had a strong influence in European architecture. In western architecture we can find the golden ratio on buildings from different period and styles.

In Japanese architecture its not known if the builders knew about the golden section before the encounter with westerners. Some authors believe that the knowledge of the Golden ratio had entered Japan together with Buddhist architecture, through pottery and paints (Yanagi R, 1977) but there is no document to prove it. Japanese Buddhist architecture was imported from China in the 8th Century and its plan composition is based on a modular system apparently with no relation to the western geometrical compositions.

Here we geometrically analyze Myoshinji temple Buddha hall (Butsuden). First we will explain the traditional proportional systems of Japanese Architecture. Than after explaining the historical context and main characteristics of Zen style architecture we will discuss about the use of the golden ratio on the design of the temple.

The Butsuden has a square plan and by geometrically analyzing it we found the existence of the golden ratio, and $\sqrt{2}$ ratio rectangles in the floor plan composition and design of the facades.

Keywords: Golden Proportion, Buddha Hall, Japanese Architecture