

SYMMETRY IN ARCHITECTURE

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Across all cultures and in all time periods, architectural compositions are symmetrically arranged. There are so many kinds of symmetry, so many kinds of architecture, and so many ways of *viewing* architecture, that the argument threatens to lose all meaning. This paper aims to establish some criteria for examining symmetry in architecture by discussing the experience of architecture and how symmetry is related to that experience. It is divided into two parts. The first part of this paper identifies the many types of symmetry found in architecture. The second part of the paper explores why an architect chooses a given symmetry, and provides insight into the design process from the point of view of symmetry.

Architecture shares some characteristics with other kinds of art. We may view architecture as a series of planes, such as we view a painterly composition; we may view it as a plastic object like a sculpture. It differs fundamentally from painting and sculpture, however, because we are meant to move through it. A building may be composed of multiple elements, which we experience sequentially and each of which may have its own symmetry. Multiple symmetries add to the richness of the architectural experience, and provide a great range of expressive possibility for the architect. The "of symmetry we may identify in a building is often a result of our physical position in relation to it. Although bilateral symmetry appears to dominant in architecture, most other "s are present as well, including rotation, reflection, cylindrical, spherical, chiral, spiral and fractal.

In addition to changing points of view, I also discuss two distinct components of the architectural experience: that of the enclosing architectural elements, and that of architectural space. Two concepts are fundamental in architectural space: center and path. In terms of symmetry, center may be thought of a "point" and path, as "axis." An examination of some 1500 years of architectural history looks at how architectural space evolved through the centuries, and how the dominant symmetries changed throughout the centuries. Architects of each age developed spaces that would best express their ideas. Symmetry was an important tool for conveying spatial ideas. Pavement design, as a two-dimensional rendering of the ideas present in three-dimensional space, is particularly indicative of this.