C-13 A model for architectural design synthesis

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In design synthesis, architects have relied on intuitive design or a sequential process. Data is then considered sequentially and the overall design is difficult to envisage. The model presented here in the form of a solid geometric figure allows the multitude of parameters to be crystallized and seen concurrently.

The several parameters which are usually studied and evaluated in the design process were listed and grouped in a manner resulting in 4 main groupings - People, Place, Materials and Technology and Principles of Design. These parameters are intrinsically inter-related in the synthesis of works of architecture.

The solid geometric figure, the tetrahedron, embodies several properties which ideally suit its use as a model to serve as a tool for design synthesis. The main properties are that of its possessing 4 corners which are interlinked through its edges while yet being a stable and 'complete' entity. This allows for the concurrent display of the many parameters in its 4 groups indicating their inter-relationship without loss of the 'wholeness' or 'completeness' of the entity representing the complete architectural work. The model is time-specific although a particular chronological period could be assigned. Where the number of parameters are excessive, as in Place, other models may be assigned to the particular corner.

Thus, the tetrahedron with its assigned parameters at the 4 corners is a useful tool for informed professionals to strive towards suitable and total design from the inception of the design process. At no stage need the entirety of the design and its inter-relationships be relegated to the background while dealing with details. It also serves as a tool for building evaluation.