Preston Scott Cohen	*Contested Symmetries and Other Predicaments in Architecture*
	New York: Princeton Architectural Press, 2001
	Reviewed by Jin-Ho Park

Preston Scott Cohen's book, *Contested Symmetries and Other Predicaments in Architecture*, is a theoretical observation of architectural issues and design explorations from the historic to the contemporary. Cohen's approach derives from a continuing tradition of architectural design practice integrated in disciplined theory. This book is a good example of the bridge between the scholar and the architect in the Vitruvian tradition [Granger 1931].

The book is carefully grounded in two premises: analysis and synthesis. They are reciprocal in that analytic research establishes Cohen's design theory and methods, while his constructive design illustrates proof of his theory. Cohen describes his findings anatomically with procedural diagrams. His architecture exemplifies an intellectually driven pursuit with detailed illustrations and explanations of his design process. His figures and photographs are self-explanatory. Few architects have matched the process of defining, developing, and expounding architectural theory and methods with the creativity and credence that Cohen proposes in his book. His analyses and design projects demonstrate logic and clarity. This book makes significant contributions to contemporary architectural discourse.

Cohen's design approaches are challenging and experimental, exploring nouveau perspectives in viewing architectural design. Cohen's description of his work is conflicting as well as complementary. Contested layers of symmetries or geometric distortions conflict, yet, as a whole, they result in a design that is complementary.

Cohen's employment of computer technology as a design tool is essential in his latest work. Rather than simply following an illusory special effect toward contemporary stylistic trends or claiming a specious "algorithmic" approach in order to create architectural forms, Cohen revisits a body of classical architectural principles and searches for new design strategies with the help of advanced computer technology.

The first half of the book presents a collection of Cohen's four articles analyzing architectural objects in symmetry and geometry. In it, Cohen identifies the hybrid use of symmetries of the façades and plans of the Palazzo Gambara. The considerable complexity of the façades is observed in multiple levels. Such complexity arises from a multiple superimposition of symmetries with architectural elements. A staircase with windows added in the building acts as a key compositional element for the juxtaposition of the "contested" symmetry. Although not externally expressed, its unconventional type, placement, and orientation in a building create a different symmetric dynamism on the front as well as the rear façade of the building. As a matter of fact, this symmetric

approach was almost a convention in classical as well as modern architecture. Hadrian's Pantheon [Park 2000] and the Popenoe house of 1922 by R. M. Schindler [Park 2001] are good examples that explore a variety of subsymmetries superimposed one upon the other around a single central point in their design. With the multiple use of symmetry principles, complex designs as a whole can be decomposed into parts for analysis. Conversely, these parts can be recombined into multiple sequential designs using the same principles. The complementary applications of the symmetry idea are extremely valuable in a constructive sense, as Cohen illustrates in the book. The principles could be further applied to three-dimensional designs to generate diverse architectural objects as demonstrated in the Shape Grammar transformations [Knight 1998].

In the Villa Tauro (pp. 30-35), Cohen continues to elucidate complex symmetrical applications underlying the design. According to Cohen, the use of symmetry is distinctive in this villa. At a glance, the use of symmetry on the façade appears unclear "depending on which elements are seen as primary." However, an in-depth analysis reveals its intricate employment. In the villa, Cohen characterizes its symmetrical distinction as "overlapping horizontal bands and varying degrees of continuity and discontinuity between them." Various symmetric elements in multiple layers are subtly permutated, shifted, and aligned in order to create a global asymmetry. This subtle shifting makes the design unique and stands out from other similar types of villas.

In the chapter "Elliptical Congruencies," (pp. 36-53) Cohen convincingly reconstructs the conic embrasure in the corner of S. Carlo ai Catinari. His self-directed research speculates its underlying logic of forms, and interprets its hypothetical organizational forms with projective geometry. Perhaps Cohen's hypothetical analysis of the design is far more elaborate than what the original architect might have conceived, since it is uncertain that the original architect followed step-by-step mathematical calculations and geometrical constructions to design the embrasure and to satisfy contextual functions for the specific site. However, Cohen's comprehensive analysis with explanatory diagrams is so convincing that it not only makes sense of its spatial logic and probable design process, but it rewrites a seminal history of the tubular embrasure of S. Carlo.

In another chapter on the "perspective apparatus" (pp. 58-69), Cohen revisits the projective perspective that dramatically influenced the early eighteenth century design education at the Ecole Polytechnique [March 1981]. The method has been of particular importance in the interdisciplinary areas of visual description and representation. Cohen regards projective geometry as "unambiguous" mathematical technique, and promoted it as his design method of translating three-dimensional to two-dimensional design "in order to create a verisimilitude of visual reality." The knowledge deduces "distorted and inverted objects" using oblique, orthographic, and perspective projections in space to produce an accurate representation of two-dimensional surfaces with planes of reference.

In the articles, Cohen appears well versed in the notion of multiple symmetries and geometry in architectural applications. Cohen's discussion of these concepts in the book is more than constructive. It is intellectual. Through these articles, Cohen makes a

contribution to generative approaches of form-making in architecture. However, most of the techniques found in the book are far from theories of the state of the art in the field. Generative systems of form-making are certainly nothing new in architecture. Furthermore, unlike the most recent theoretic system in the field, for example, shape grammar, developed by Stiny and Gips [1978], Cohen's diagrammatic procedure lacks the comprehensive scope to make a strong theoretical impact on the field, and the formal rigor in the description and construction of designs. Cohen's process should be presented more clearly to the reader to justify its step-by-step generative procedure and demonstrate how the method can produce other sophisticated designs.

Cohen's interest in the fundamental principles of architecture raises questions about their application to contemporary practice. The second half of his book, devoted to his design projects, addresses the practical aspects of his principles. His theoretic observations are reflected in new understandings of interacting and merging theory and methods in his design practice. Although the projects presented are smaller in size, the elaboration of the same principles is consistent throughout the projects and evidences a sense of authority and conviction.

The projects in his book can be divided into three different thematic groups. Although some of the designs differ in style, they share common design principles and methodological approaches. The first group of projects is based on his early research findings from Italian villas. This theme is directly applied to constructing two houses, the Longboat Key house and the Siesta Key house. Overlapping and shifting of various layers of design elements in a single house and symmetries are manifested. In particular, the Siesta Key house excels in its brilliant dynamism of symmetrical juxtapositions where a variety of axial shifting creates an interlocking space form. Later, Cohen's reference to designs transcends early orthogonal planning as exemplified in the Cornered house. Paper folding, like origami, with reference lines appears, to be the design process of the house.

In the second group, Cohen's method of projective geometry is consecutively applied to create a variety of abstract and cerebral forms, called "stereotomic projections." Here, Cohen experiences theoretically stimulating geometric phenomena from a series of quasi-experimental and almost laboratory-quality design proposals.

In the third group, Cohen extends his theoretical exploration into a new territory dependent upon advanced computer technology. Although a bit peculiar, he introduces the "terminal line" process to generate architectural form. The method is without the source of knowledge, or particular reasoning and meaning. Various geometric deformations are achieved in this process, introducing arbitrary reference lines on surface, morphologically transforming its surface and projecting it in space. These groups of works explore geometric freedom extensively with the help of computer technology. In his last projects, Cohen also denotes a taste of contemporary stylistic trends.

Although Cohen launches different design strategies in each of his project, there are some drawbacks associated with this approach. The most peculiar characteristic of his

approaches in this book is its lack of metaphysical aspects of the historic reading as well as many other complex issues involved in making a work of architecture. Thus, it reflects on his resulting designs which carry only a fragment of the meaning he suggests. Perhaps, it is the deficiency of this book.

Overall, Cohen does not simply rely on fancy graphics, photographs, and eye-catching monographs to generate interest in his book. Instead, he questions, observes, and analyzes architectural designs relative to fundamental principles of architectural design. This provocative book by Cohen provides an evidence of how architectural design and the discipline of architecture should be approached due to the lack of discourse in contemporary trends.

To conclude, this book deserves a polite praise for its compelling contribution to contemporary architectural discourse. Based on its theoretical research in tradition and findings, this spectrum of Cohen's design exploration is convincingly expressive and stimulating. However, elegant and powerful as they are, many of his designs may remain theoretic or not built. This book leaves the reader hoping that there will be future implications relative to Cohen's predicaments in architecture such as new and diversified design possibilities or extensions of his theory and methods of design.

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About the Reviewer

Jin-Ho Park is an assistant professor in the School of Architecture at the University of Hawaii. He currently teaches architectural design studios as well as a series of courses on Design and Computation. He earned his BS in architecture from Inha University, Korea, and his MA and Ph.D. in architecture from UCLA. He is the first recipient of the R.M. Schindler Fellowship of the Beata Inaya Trust Fund, 1996/7, and twice recipient of the Chancellor's Dissertation Fellowship, 1998/99. The focuses of his academic research are on "The Architecture of R. M. Schindler—Unbuilt Works", "Design and Computation", including Fundamentals of Architectonics: Proportion, Symmetry, and Compartition, Shape Grammars, Virtual Reality, and Digital Media. He is author of numerous articles, including "Schindler, Symmetry and the Free Public Library, 1920" (*Architectural Research Quarterly*) and "Subsymmetry analysis of architectural designs: some examples" (*Environment and Planning B: Planning and Design*).

Preston Scott Cohen is a professor of Harvard Graduate School of Design (GSD). In 2004, he established a partnership with two registered architects, Amit Nemlich and Gilles Quintal, and became the Design Principal of Preston Scott Cohen, Inc. based in Central Square Cambridge, Massachusetts. Preston Scott Cohen, Inc. is renowned for the design of cultural, educational, commercial buildings and urban design projects around the world. Projects include the Sarmiento Performing Arts Center in Bogota

The interjection oh, by itself may express various feelings such as regret, despair, disappointment, sorrow, surprise and many others. Interjections can be divided into primary and derivative. Primary interjections are generally devoid of any logical meaning. Â e. g. A thousand pardons, scared to death, immensely obliged. Hyperbole is a device which sharpens the reader's ability to make a logical assessment of the utterance. This is achieved, as in case with other devices, by awakening the dichotomy of thought and feeling where thought takes the upper hand though not to the detriment of feeling. 6. Peculiar Use of Set Expressions. The ClichÃ©. A clichÃ© is generally defined as an expression that has become hackneyed and trite.