



# Structure in Nature is a Strategy for Design

By Peter Pearce

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## Structure in Nature is a Strategy for Design By Peter Pearce

The structural designs that occur in nature—in molecules, in crystals, in living cells, in galaxies—is the proper source of inspiration, Peter Pearce affirms, for the design of man-made structures.

Nature at all levels builds responsive and adaptive strategies that conserve material and energy resources through the use of modular components combined with least-energy structural strategies. This book—itsself designed with graphic modularity and richly illustrated with examples of forms created by nature and by man, including some remarkable and surprising architectural structures developed by the author—leads the designer in this "natural" direction, beyond the familiar limitations of the right angle and the cube and into a richer world of forms based on the triangle, the hexagon, and general polyhedra, as well as saddle polyhedra spanned by minimal continuous surfaces.

The author writes that "Systems can be envisaged which consist of some minimum inventory of component types which can be alternatively combined to yield a great diversity of efficient structural form. We call these *minimum inventory/maximum diversity* systems.

"By such a 'system' I mean a *minimized* inventory of component types (a kit of parts) *along with* rubrics whereby the components may be combined.... The snowflake is the most graphic example in nature of the minimum inventory/maximum diversity principle. In fact, it may be considered an archetype of physico-geometric expression. All planar snow crystals are found to have star-like forms with six corners (or subsets thereof).... However, within this six-fold form, no two snowflakes have ever been known to be exactly alike....

"An integral part of the concept of minimum inventory/maximum diversity systems is the principle of conservation of resources. The formative processes in natural structure are characteristically governed by least-energy responses. Perhaps the simplest expression of this is found in the principle of closest packing, a principle which even in its most elementary form is common in both the animate and inanimate worlds."

Pearce's work follows in the tradition established by D'Arcy Wentworth Thompson and Konrad Wachsmann, and reflects his earlier close working

association with Charles Eames and Buckminster Fuller. With Eames, he contributed to the design of seating and other furniture systems, and he edited the preliminary text of Fuller's *Synergetics*, that grand summary of his thoughts, and prepared the illustrations for the published version of that book.

Many of the ideas explored in this book have already undergone "reduction to practice" in the firm Pearce founded, Synestructics, Inc. Its initial products have been kits and kites, and a ministructure large enough for kids to crawl through, the "Curved Space Labyrinth," a saddle polyhedra system made of transparent plastic. Adult-sized structures, and indeed megastructures, based on these principles can be realized as soon as entrepreneurs emerge whose vision is commensurate with that of Peter Pearce.

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## **Structure in Nature is a Strategy for Design By Peter Pearce Bibliography**

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## **Editorial Review**

### Review

"The principles illustrated can be readily adapted by artists and designers to produce graphics, fabric, tile, sculpture, products and packaging."

—**Reed Benhamou**, *AIA Journal*

"The author, in 1970, founded Synestructics, Inc., of Chatsworth, California, which turns out educational toys, games and playground equipment based, for example, on hexagons and such exotic geometries as saddle polyhedra.... The concepts encompassed in the book should appeal to any lover of geometry, but particularly to those interested in design."

—**Walter Sullivan**, *The New York Times*

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#### **Brian Lowe:**

Information is provisions for those to get better life, information presently can get by anyone at everywhere. The information can be a knowledge or any news even restricted. What people must be consider whenever those information which is within the former life are hard to be find than now's taking seriously which one would work to believe or which one often the resource are convinced. If you find the unstable resource then you buy it as your main information you will see huge disadvantage for you. All of those possibilities will not happen in you if you take Structure in Nature is a Strategy for Design as the daily resource information.

#### **Elaine Jenkins:**

The book untitled Structure in Nature is a Strategy for Design contain a lot of information on that. The writer explains her idea with easy method. The language is very clear to see all the people, so do not worry, you can easy to read the item. The book was published by famous author. The author provides you in the new period of literary works. It is easy to read this book because you can keep reading your smart phone, or device, so you can read the book in anywhere and anytime. If you want to buy the e-book, you can open their official web-site along with order it. Have a nice read.

#### **Cindy Mattis:**

In this era globalization it is important to someone to acquire information. The information will make you to definitely understand the condition of the world. The healthiness of the world makes the information better to share. You can find a lot of references to get information example: internet, classifieds, book, and soon. You

will observe that now, a lot of publisher that print many kinds of book. The particular book that recommended to you personally is Structure in Nature is a Strategy for Design this publication consist a lot of the information with the condition of this world now. This specific book was represented how can the world has grown up. The dialect styles that writer value to explain it is easy to understand. Often the writer made some analysis when he makes this book. That's why this book ideal all of you.

**Jamie Harper:**

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