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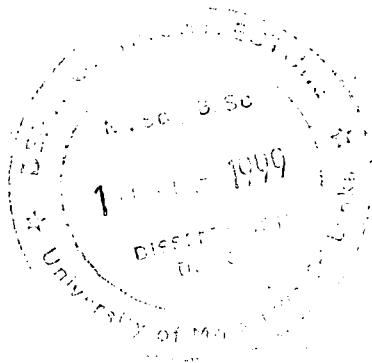
**IMITATION OF NATURE IN HER MANNER OF OPERATION:
AN EXAMINATION OF THE PRINCIPLE IN
MODERN ARCHITECTURE**

**A dissertation submitted to the University of Moratuwa
as a partial fulfillment of the requirements for the
Degree of Master of Science in Architecture.**



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ABSTRACT

We are the first generation in the world to know the approximate age of the universe, its likely origin, the main lines of its history and its fundamental principle of emergence by the modern sciences appeared. We are the first to unravel the major laws of its development and the creativity, beauty and hardship they must bring. We are the first to understand our significant place in a single, unfolding process that has lasted some fifteen billion years, and we are the first to be amazed by, celebrate, and question these discoveries.

We now know, however, the counter-lesson of the butterfly: mechanistic behavior is only one mode; the most simple, reduced and least characteristic one. As the new sciences of complexity are revealing, most of the universe is self-organizing, unpredictable, creative, and self-transforming like a butterfly.

Can a machine repair itself? Every living thing has the property of self-repair, a small version of its great power of self-organization, but no machine does. The butterfly is an example for self-transformation. It jumps from stage to stage in growth, changing identity from a vertically articulated egg to a horizontally segmented caterpillar. Then it miraculously metamorphoses into a slug-like chrysalis. It emerges finally from its heavy, blob-like form to become a lightweight flying instrument, something surprisingly unexpected and as beautifully different from the egg.

Its unexpected transformations are a perfect symbol of thought jumping from idea to idea, and the universe as it leaps from stage to stage towards higher organization. Hence, can believe that the universe is much more like a butterfly than a Newtonian machine.

This hypothesis, amounting to a new paradigm or world view, has only recently been formulated. It is no doubt that it will within a few years, because it is becoming standard science and is being incorporated into competing ideologies. As buildings reveal a way of life, this new world view will be most visibly expressed in architecture. Our world view and way of life are represented in architecture, and today both are becoming more attuned to what contemporary science is revealing about nature.

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