CHAPTER 4

AESTHETICS, CRITICISM, AND DESIGN

4.1 Introduction

The straightforward observations that objects are experienced as works of art and that objects are made as works of art lead to the two difficult questions:

(i) How are objects experienced as works of art?

(ii) How are objects made as works of art?

Answers to these basic questions vary with the approach taken to art.

The multiplicity of approaches to art is acknowledged readily. When two different observers understand and appraise the same object as a work of art in two different ways or two different artists make two different objects both of which are claimed to be masterpieces, they often take different approaches to art. When one culture produces an object because of its utility or religious significance and another culture preserves the same object because of its artistic effect, different ideas about art are usually at work. When an audience misunderstands and misjudges the intentions of an artist or an artist misunderstands and misjudges the expectations of an audience, their different conceptions of art probably speak past each other.

Given the multiplicity of approaches to art, no absolute answers to the questions of how objects are experienced and made as works of art can be expected. Rather, a framework in which questions about
different approaches to art as well as questions about objects as works of art can be posed and answered in a consistent, rigorous, and uniform way should be sought. This study takes some preliminary first steps toward the development of such a framework by considering the structure of systems (algorithms) that can be reasonably said to respond to or make objects as works of art. Where the actual procedures used by these systems will vary with the approach taken to art, their underlying structure is the same. Aesthetics is thought of as the attempt to elucidate and use this structure to increase our understanding of art and objects which are experienced and made as works of art.

The results presented here were obtained by thinking about the structure of algorithms which could respond to or make objects as works of art in the same sense that people might be expected to respond to or make objects as works of art. We believe that this algorithmic approach will lead to a much increased understanding of how objects are experienced and made as works of art. As Knuth points out, "It has often been said that a person doesn't really understand something until he teaches it to someone else. Actually a person doesn't really understand something until he can teach it to a computer, i.e., express it as an algorithm ... . The attempt to formalize things as algorithms leads to a much deeper understanding than if we simply try to understand things in the traditional way." [15].