

Book Review - 8/26/2015

Figures in the Fourth Dimension, Mechanical Movement for Puppets and Automata

Author: Ellen S. Rixford

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An artist herself, author Ellen Rixford felt driven to fill a void for solid information that could answer the questions that a curious student, technician, craftsperson or artist may have regarding the mysterious inner workings of animated puppetry and automata. For centuries these inner mechanical designs were jealously guarded and physically concealed from view by their creators. This naturally added to the illusion that was part & parcel of the performance, while conveniently preventing prying eyes from learning the “secrets” of their operation. I.e.: How can, they do that?

With this book the author peels back the layers of each object in order to dissect the mechanisms in a most thorough and descriptive manner. Exhaustive descriptions, detailed photographs and illustrations reveal how each cam, lever & linkage creates the animations in these sculptural kinetic artworks. The introduction describes the subjects to be covered and those that are not, such as basic fabrication techniques and contemporary electronics (micro-controllers, servo's, stepper motors, associated programming languages, etc...), as these are subjects unto themselves and can be found elsewhere. Unique to this author's writing style are her hand-drawn, 3-dimensional illustrations that are found peppered throughout the narrative. Each chapter relays a personal character and care for the subject matter, while explaining every mechanical connection, including its purpose, cause & effect.

Contributors to this technical reference work include some of the top contemporary artists from around the world specializing in the design & fabrication of puppets, marionettes, ventriloquist figures, light-wire puppets, hand-driven, coin-operated and clockwork driven automata. For those looking toward the historical foundations, the author includes an entire chapter dedicated to the golden age of automata, an in-depth exploration of the inner workings of a half dozen extraordinary examples from the 18th and 19th century. A sort of 'homage' to some of what are still today, some of the most complex, autonomous, automatic performance pieces that exist, and still function as they did when made.

In short, even though not an inexpensive book (\$80.-), if you are curious about the study of simple-to-complex animation mechanisms, or even inclined to try your hand at creating or repairing magical, moving, animated figures, this should be an invaluable, even inspirational – 'tour de force'.

This book is currently available via the Morris Museum Shop (973-971-3737) & via the Museum Shop webpage: (<http://www.morrismuseum.org/museum-shop>), or you can also order through the author's website (<http://www.figuresinthefourthdimension.com/html/Automata-clockwork.html>)

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