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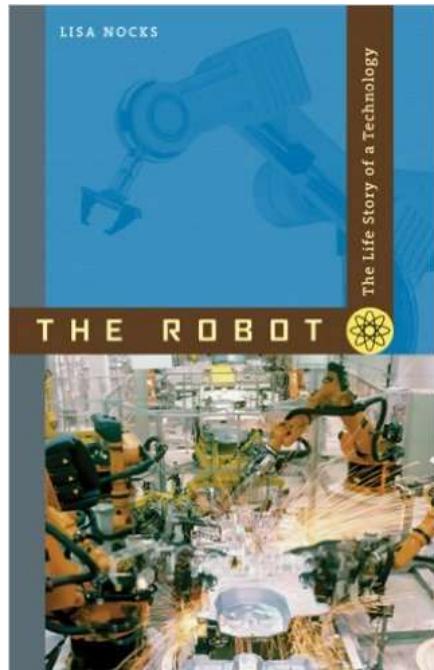
Book review: The Robot

Book Author: Lisa Nocks ISBN-13: 978-0801890710 / ISBN-10: 0801890713

Published by: The Johns Hopkins University Press, 192 pages

Review by: Dr Wayne Finger

I bought this book when doing some research on French musical box makers after discovering that it had a chapter on the origins of Automata. Now, Alice and I were packing for a cruise around the horn of South America so it went in the bag as a book to read on the cruise.



It turned out to be a very informative and enjoyable book. It is a history of the development of automatic machines - robots. Interspersed among many other mechanisms are numerous references to musical robots and automata. The first chapter describes how early civilizations envisioned automatic devices, including musical instruments. In the fourth century BC, Aristotle said, "If every instrument can accomplish its own work, obeying or anticipating the will of othersif the pick(s) touch the lyre, without a hand to guide them, chief workmen would not need servants." However, these ancient visions were not able to be realized until centuries later.

The second chapter, "Automata to Automation" tells the histories of automata makers Vaucanson, Maillardet, Jaquet-Droz, Theroude, Vichy, Roullet, Decamps and Bontems. Vaucanson studied with the Jesuits in Grenoble, but they didn't like his angel automata and destroyed his workshop, so he left and moved to Paris. A piano playing automata which used pneumatics was built by Henri Maillardet in Switzerland in the 1700s! Vichy originated the popular "Fin de Siecle" automata – a moon head atop a human figure leaning on a column and smoking.

The subsequent chapters discuss automation, robotic industrialization and recent developments in robotics. Of note is a discussion of the Japanese humanoid robot WABOT-2, which performed music daily during the Science Exposition in Tsukuba in 1985. Although it was bolted to its seat it did have legs and feet which manipulated the pedals of the instrument.It was not just manipulating the keys through a program of movement, but reading the music, processing what it saw and responding by playing the notes." Here is a video link of it playing an organ: https://www.youtube.com/watch?v=ZHMQuo_DsNU Most mechanical music enthusiasts will stop reading after the first 50 pages, as that is where the historical discussion transitions to a discussion of modern robotics.

After reading the entire book, the reader is left with a deep understanding and appreciation of how the clockmakers, musical box makers, automata makers and others laid the foundation which has enabled the multitude of automata and robotic capabilities we enjoy today.

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