Design Rules: The Power of Modularity: 1 (MIT Press)

Carliss Y. Baldwin, Kim B. Clark
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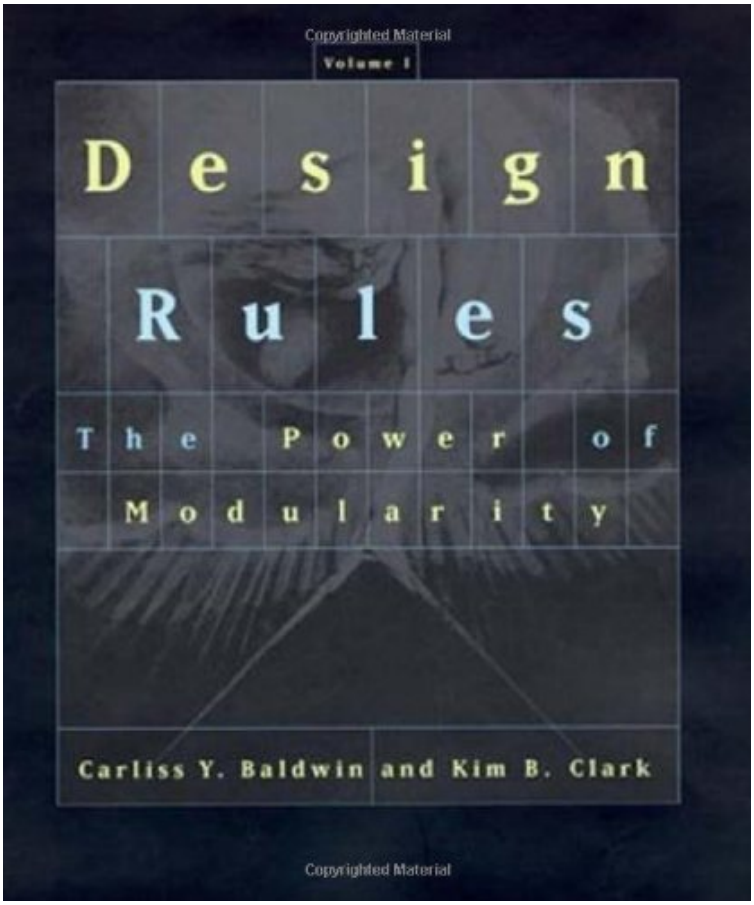

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Carliss Y. Baldwin, Kim B. Clark : Design Rules: The Power of Modularity: 1 (MIT Press) before purchasing it in order to gage whether or not it would be worth my time, and all praised Design Rules: The Power of Modularity: 1 (MIT Press):

1 of 1 people found the following review helpful. Five StarsBy V. ReinhardtOrdered for others no complaints32 of 38 people found the following review helpful. Elegant Integration of Real Options and Complexity ThinkingBy Dave BaylessThis is an important book. John Holland, who is heavily referenced, foreshadowed its publication when he linked the concepts of real options and complex adaptive systems in a talk at the Santa Fe Institute in late 1998.The authors clearly and persuasively explain how modular design adds a tremendous amount of value through the creation of real options. Furthermore, modularity allows for the evolution of both design and industry.In the 1960's, IBM created the System/360, the first modular family of computers. As a result, IBM launched an industry -- and lost control over the tremendous value it stimulated."Design Rules" was recommended me by one of the authors' colleagues, who thought that I'd "eat it up." I did, and I'm hungry for Volume 2.37 of 44 people found the following review helpful. A window into the "new economy"By Richard J BerginOpening the "black box" of technological and industrial progress, Baldwin and Clark introduce the notion that technology is a set of tasks and the organization

mirrors the design of the artifact that it produces.The authors model builds upon the work of John Holland, Stuart Kauffman and Brian Arthur (from the Santa Fe institute) on Complex Adaptive systems (CAS). CAS have four properties:1. Each of these systems is a network of many agents acting in parallel. The control of these agents is highly dispersed.2. The CAS has many levels of organization, with agents at any one level serving as the building blocks for agents at the higher level. Furthermore, CAS are constantly revising and rearranging their building blocks as they gain experience. Baldwin and Clark carefully document four layers operating in the computer industry, The global financial system, the markets for goods and labor, organizations, and the design and production of computers. In Addition, the authors describe the six "modular operators", the complete set of options that can be used by agents to modify the system that can be used at any level.3. All CAS anticipate the future. The various models, whether implicit or explicit assumptions, are constantly tested, refined and rearranged as the system gains experience. Baldwin and Clark assume that designers "see and seek" value, with value being measure in the global financial system.4. CAS typically have many niches, each one exploited by an agent adapted to fill that niche. Moreover, the very act of filling a niche opens up new more niches. Thus, there is no equilibrium in these models, it is not about a "punctuated equilibrium". The process is a constant search for an improved fit with the environment. Moreover, the clock speed of the process should match the environment.This book has deep implications for practitioners and scholars interested in understanding the "new" economy. I highly recommend the text.

We live in a dynamic economic and commerical world, surrounded by objects of remarkable complexity and power. In many industries, changes in products and technologies have brought with them new kinds of firms and forms of organization. We are discovering news ways of structuring work, of bringing buyers and sellers together, and of creating and using market information. Although our fast-moving economy often seems to be outside of our influence or control, human beings create the things that create the market forces. Devices, software programs, production processes, contracts, firms, and markets are all the fruit of purposeful action: they are designed.Using the computer industry as an example, Carliss Y. Baldwin and Kim B. Clark develop a powerful theory of design and industrial evolution. They argue that the industry has experienced previously unimaginable levels of innovation and growth because it embraced the concept of modularity, building complex products from smaller subsystems that can be designed independently yet function together as a whole. Modularity freed designers to experiment with different approaches, as long as they obeyed the established design rules. Drawing upon the literatures of industrial organization, real options, and computer architecture, the authors provide insight into the forces of change that drive today's economy.

About the AuthorCarliss Y. Baldwin is Senior Associate Dean and William L. White Professor of Business Administration and Kim B. Clark is Dean of the Faculty and Harry E. Figgie, Jr., Professor of Business Administration, both at Harvard Business School.