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Overcomplicated: Technology at the Limits of Comprehension

Samuel Arbesman
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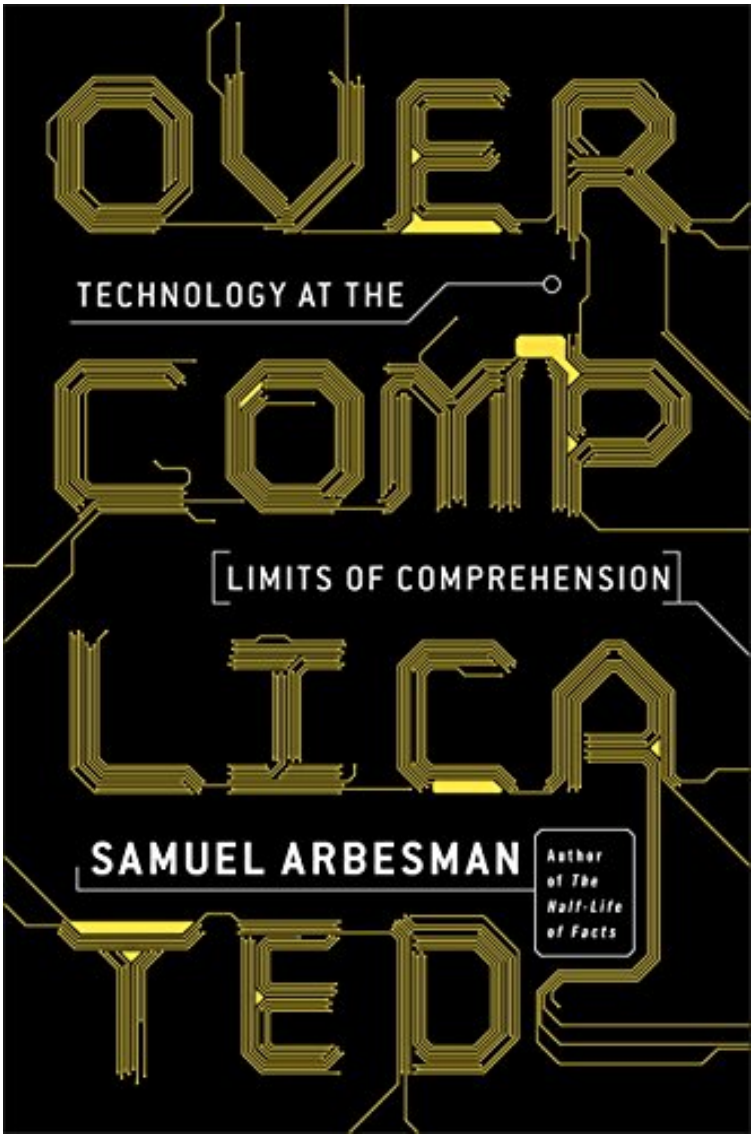

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Samuel Arbesman : Overcomplicated: Technology at the Limits of Comprehension before purchasing it in order to gage whether or not it would be worth my time, and all praised Overcomplicated: Technology at the Limits of Comprehension:

10 of 10 people found the following review helpful. One of the most through provoking books I've read in yearsBy Chip HaussI've read a lot of books on the relationship between technology and the complex nature of life in the first decades of the 21st century. None affected me more than Overcomplicated for two main reasons.First, while other authors get at technology per se at least as well as Arbesman does, he nails the problems growing out of it on the head

from the beginning of the book on. See, for example, this statement on p. 3: "Each of our actions has more unexpected ramifications than ever before, rippling not just to every corner of our infrastructure, but to every corner of the planet, and sometimes even beyond."Second, he is one of the few authors to view our responses to complexity as kluges, an IT term used to describe Rube Goldberg like patches that work well enough but often cover over root causes of problems. As a political scientist that's what most public policy turns out to be rather than programs that actually solve a problem once and for all. If Arbesman is right, kluges are becoming harder and harder to avoid. Alas. Think about Obamacare or dealing with violent extremism or almost any other policy dilemma.I think so much of Arbesman's book that I'm beginning the next edition of my comparative politics textbook with the quote I used above and revolving much of it around his notions of complexity and kluges.And he's a biologist turned complexity scientist turned venture capitalist.9 of 10 people found the following review helpful. Errors, edge-cases, and evolutionBy CogSciGuyIn Chapter 1 Arbesman introduces us to the complex systems that rule the world today (and describes how complex differs from the colloquial term complicated). In Chapters 2-4 we are shown how kluges, quick fixes to a problem, add up over time to make a system almost impossible for a single person to understand. In the final two chapters the author urges us to think differently and more broadlymdash;like a T-shaped individualmdash;to understand the technological systems that have become as complicated and kluge-y as ecological systems found in nature. We should stop fearing and worshiping the technology around us, and instead think like a biologist to understand the technology we rely on. A quick, but fun and wide-ranging read.0 of 0 people found the following review helpful. Illuminating Look Behind the Scenes of our Technology WorldBy California KidThough this subject has been considered by folks before, I found Sam Arbesman's style fun and accessible, and his ability to weave together disparate ideas very convincing and enlightening. I'd recommend this book for anyone looking to better understand how fast our techie world is changing, and how some of the underpinnings are occulted from all. This only makes us need to consider the greater question, which is how are we thinking about our tech, given that not all can be understood, and how we're choosing to apply it. Those are the big questions of tomorrow, and those are the questions that require diversity of thought and ideas, not just techies building tech for tech's sake. Fascinating read!

nbsp;nbsp;nbsp;Why did the New York Stock Exchange suspend trading without warning on July 8, 2015? Why did certain Toyota vehicles accelerate uncontrollably against the will of their drivers? Why does the programming inside our airplanes occasionally surprise its creators?nbsp;nbsp;nbsp;nbsp;After a thorough analysis by the top experts, the answers still elude us.nbsp;nbsp;nbsp;nbsp;You donrsquo;t understand the software running your car or your iPhone. But herersquo;s a secret: neither do the geniuses at Apple or the Ph.D.rsquo;s at Toyotamdash;not perfectly, anyway. No one, not lawyers, doctors, accountants, or policy makers, fully grasps the rules governing your tax return, your retirement account, or your hospitalrsquo;s medical machinery. The same technological advances that have simplified our lives have made the systems governing our lives incomprehensible, unpredictable, and overcomplicated.nbsp;nbsp;nbsp;nbsp;In Overcomplicated, complexity scientist Samuel Arbesman offers a fresh, insightful field guide to living with complex technologies that defy human comprehension. As technology grows more complex, Arbesman argues, its behavior mimics the vagaries of the natural world more than it conforms to a mathematical model. If we are to survive and thrive in this new age, we must abandon our need for governing principles and rules and accept the chaos. By embracing and observing the freak accidents and flukes that disrupt our lives, we can gain valuable clues about how our algorithms really work. Whatrsquo;s more, we will become better thinkers, scientists, and innovators as a result.nbsp;nbsp;nbsp;nbsp;Lucid and energizing, this book is a vital new analysis of the world heralded as "modern" for anyone who wants to live wisely.

Praise fornbsp;Overcomplicated:"[Arbesman] argues convincingly...He is undoubtedly right. The dream that we can fully understand our complex man-made systems is just thatmdash;a dream." mdash;The Wall Street Journal "Acquiring fluency in systems-speak is fast becoming a civic duty... Arbesmanrsquo;s freshly elucidated concepts are excellent field tools: they are the translucent sampling containers you take with you as you wade through the glitch-infested shallows of an algorithm."mdash;New Scientistldquo;I was shocked [by] this elegant, eye-opening bookhellip;Fascinating and full of new ideas I will use in argument from now on.rdquo;nbsp;mdash;Financial Timesldquo;Overcomplicatednbsp;has the scintillating, big-idea premise of an lsquo;itrsquo; business book, but it's more than a Hudson News read: It presents a new way to think about the world that makes seemingly impossible problems approachable. By identifying how tangled our world has gotten, we can figure out the best ways to undo the knots.rdquo; mdash;Vox"How do we navigate a digital world too complex for any individual to understand? With a sense of wonder and the spirit of a scientist, as Samuel Arbesman argues in this terrific and thoughtful book."mdash;CLIVE THOMPSON, author of Smarter Than You Think"With humor, insight, and wide-ranging examples, polymath Samuel Arbesman helps us hack through the tangle of complexity that defines our world today, and shows us how to cope with it." mdash;STEVEN STROGATZ, professor of mathematics, Cornell University; author of The Joy of x "Why canrsquo;t we understand technology anymore? In this consistently entertaining and insightful book, Arbesman offers a necessary guide to where we are headed and why everything seems so strange

along the way."nbsp;mdash;TYLER COWEN, author of Average Is Over "Complexity science has unlocked new insights in physics, seismology, biology, even finance. In Overcomplicated, Samuel Arbesman makes an original and invaluable contribution to the field by exploring human interaction with complex systems. This excellent book is necessary reading for the layman and the expert alike." mdash;JAMES RICKARDS, author of The Death of Money "Read this short book to get over the idea that we can make technology simple. Arbesman will convince you we have only one choice: to indirectly manage ever increasing complexity." mdash;KEVIN KELLY, author of The Inevitable"A powerful, concise argument about how to grapple with the mystery and wonder of twenty-first-century technology. It's exactly what we all need."mdash;CARL ZIMMER, author ofnbsp;Evolutionldquo;Fascinating, alarming, insightful, full of examples and funny.rdquo; mdash;QI.comAbout the AuthorSamuel Arbesmannbsp;is Scientist in Residence at Lux Capital, a science and technology venture capital firm. He is also a Senior Fellow of the Silicon Flatirons Center of Law, Technology, and Entrepreneurship at the University of Colorado and a Research Fellow at the Long Now Foundation. His writing on science, mathematics, and technology has appeared in The New York Times, The Wall Street Journal, and Wired. Arbesman's first book, The Half-life of Facts, examines how knowledge changes over time. He lives in Kansas City with his wife and children.