



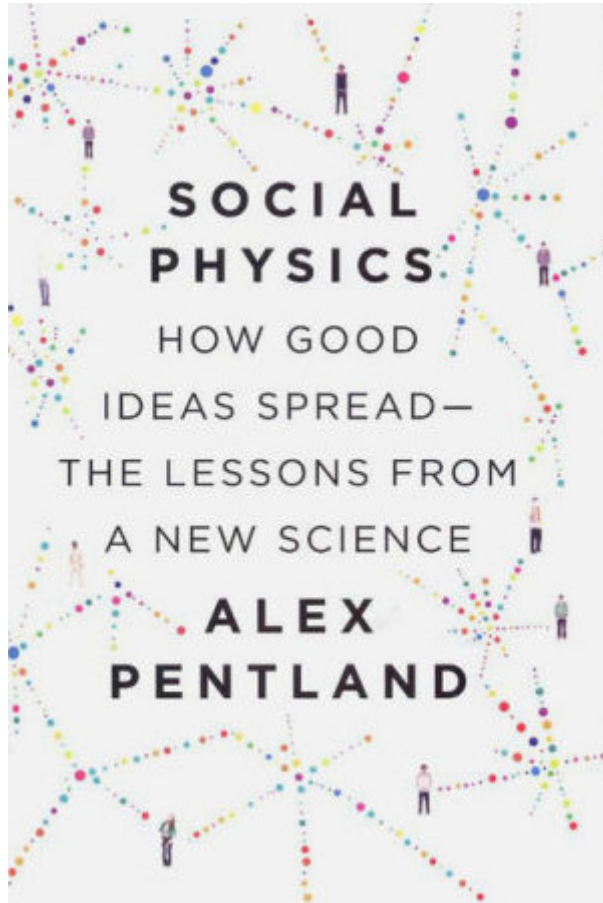
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DAILY NEWS

'Could very well change the way you think'

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"Social Physics: How Good Ideas Spread – Lessons from a New Science" by Alex Pentland. New York, NY: Penguin Press, 2014. 300 pages, \$27.95.



“Social physics is a quantitative social science that describes reliable, mathematical connections between information and idea flow on the one hand and people’s behavior on the other,” Alex Pentland writes near the beginning of “Social Physics: How Good Ideas Spread – Lessons from a New Science,” his revolutionary new treatise on our continuing development as a species. “Social physics helps us understand how ideas flow from person to person through the mechanism of social learning and how this flow of ideas ends up shaping the norms, productivity and creative output of our companies, cities and societies.”

Obviously, this is a tall order, and to be honest, I began my adventure into Pentland’s vision of the future with a somewhat skeptical mindset. Anytime someone claims to have insights into reality that venture too far beyond conventional wisdom, I am always simultaneously intrigued and suspicious – especially when the narrative involves reducing human behavior to mathematical formulae. But it did not take long for the author to alleviate my cynicism; by the time I reached “Part III: Data-Driven Cities” I was persuaded Pentland

was painting an original, legitimate and compelling portrait of how the world increasingly functions. Granted, I did not find myself in complete alignment with everything he is suggesting, but I am convinced his basic premise is on target.

“Right now, the most important generator of city data is a familiar tool: the ubiquitous mobile phone,” Pentland explains. “These devices are, in effect, personal sensing devices that are becoming more powerful and more sophisticated with each product iteration. In addition to deriving information on user locations and call patterns, we can map social networks and even gauge people’s moods by analyzing the digital chatter that has become so pervasive. As smartphones continue to morph into personal information hubs that have greater computing capacity, they will reflect ever more information about human behavior.”

All of this is true, of course. As the global population continues to escalate exponentially, our survival as civilized societies is inherently linked to our ability to employ data-driven decision-making on a scale that was simply not possible before advanced communication technologies began

to permeate every aspect of our day-to-day lives. At the same time, there is something distinctly Orwellian about the author's proposed strategy for dealing with the challenges threatening our collective prospects. All data can be used for both good as well as evil purposes. Pentland tends to see the ongoing generation and acquisition of more and more information about every detail of our lives in a positive light. Call me a worrywart, but I believe he could have focused more attention on the potential downside of such extensive data collection.

In any event, the illustrations Pentland uses to describe the intricacies of social involvement are drawn from many sources and are often interesting in their own right. Witness this excerpt from "Collective Intelligence," the fifth chapter of the book: "It is common knowledge that worker bees explore for good food sources and then return to the hive and do a waggle dance to signal the distance and direction of the food. Less well known, though, is that bees use this same mechanism as the basis for group decision-making. One of the most important choices made by a bee colony is where to locate a nest, and bees use a kind of idea machine to make this decision. Networks – whether apian or human – that vary their interaction structure as needed are able to shape idea flow to optimize both exploration and engagement."

The author has a definite knack for breaking down complicated ideas so they are readily accessible to a general audience. You do not have to possess a background in, or an exposure to, the underlying science on which "Social Physics" is built in order to understand and appreciate the thesis he is putting forth. Only a rudimentary knowledge of fundamental concepts and principles is needed to grasp the case he makes throughout the book that we are on the cusp of a new paradigm for deciphering and predicting human activity on both a microcosmic as well as a macrocosmic level.

Pentland is director of both the Human Dynamics Laboratory and the Media Lab Entrepreneurship Program at the Massachusetts Institute of Technology; he also co-leads the World Economic Forum Big Data and Personal Data Initiatives. This is his second book, the first being "Honest Signals: How They Shape Our Lives," which was published in 2010. He was named one of the seven most powerful data scientists in the world by Forbes magazine in 2012.

"Social Physics" is exceptionally well researched, with 29 pages of source notes and references at the conclusion of the 11 chapters that comprise the main text. The book is laid out in four major sections, excluding the preface and appendices, which are both helpful in clarifying the ideas he presents.

"This book marks the launch of a larger discussion," Pentland asserts. "The goal is to get the language of social physics into general use, where it can provide much needed nuance to the traditional language of market competition and regulation. In a world of hyperconnectivity, where social dynamics are such an important determinant of outcomes, a better understanding of social physics has become critical."

After reading his manifesto, I am left with the overwhelming sense the author is definitely onto something big – something that will affect us all in the next few decades. So if you want a preview of what may be in store for us down the road, pick up a copy of "Social Physics." It could very well change the way you think.

— *Reviewed by Aaron W. Hughey, Department of Counseling and Student Affairs, Western Kentucky University.*