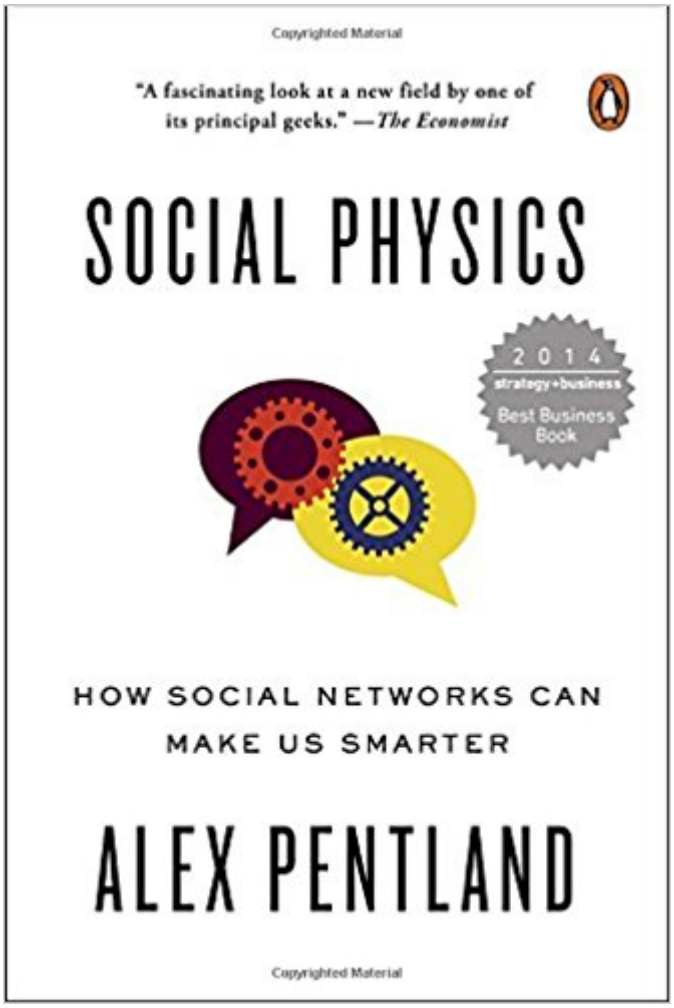
Social Physics: How Social Networks Can Make Us Smarter



Synopsis

From one of the worldâ ™s leading data scientists, a landmark tour of the new science of idea flow, offering revolutionary insights into the mysteries of collective intelligence and social influence If the Big Data revolution has a presiding genius, it is MITâ ™s Alex â œSandyâ • Pentland. Over years of groundbreaking experiments, he has distilled remarkable discoveries significant enough to become the bedrock of a whole new scientific field: social physics. Humans have more in common with bees than we like to admit: Weâ ™re social creatures first and foremost. Our most important habits of actionâ ”and most basic notions of common senseâ ”are wired into us through our coordination in social groups. Social physics is about idea flow, the way human social networks spread ideas and transform those ideas into behaviors. Thanks to the millions of digital bread crumbs people leave behind via smartphones, GPS devices, and the Internet, the amount of new information we have about human activity is truly profound. Until now, sociologists have depended on limited data sets and surveys that tell us how people say they think and behave, rather than what they actually do. As a result, weâ ™ve been stuck with the same stale social structuresâ ”classes, marketsâ ”and a focus on individual actors, data snapshots, and steady states. Pentland shows that, in fact, humans respond much more powerfully to social incentives that involve rewarding others and strengthening the ties that bind than incentives that involve only their own economic self-interest. Pentland and his teams have found that they can study patterns of information exchange in a social network without any knowledge of the actual content of the information and predict with stunning accuracy how productive and effective that network is, whether itâ ™s a business or an entire city. We can maximize a groupâ ™s collective intelligence to improve performance and use social incentives to create new organizations and guide them through disruptive change in a way that maximizes the good. At every level of interaction, from small groups to large cities, social networks can be tuned to increase exploration and engagement, thus vastly improving idea flow.Â Social Physics will change the way we think about how we learn and how our social groups workâ ”and can be made to work better, at every level of society. Pentland leads readers to the edge of the most important revolution in the study of social behavior in a generation, an entirely new way to look at life itself.

Book Information

Paperback: 320 pages
Publisher: Penguin Books; Reissue edition (January 27, 2015)
Language: English
ISBN-10: 0143126334

ISBN-13: 978-0143126331

Product Dimensions: 5.3 x 0.7 x 8 inches

Shipping Weight: 6.4 ounces (View shipping rates and policies)

Average Customer Review: 4.0 out of 5 stars 105 customer reviews

Best Sellers Rank: #112,873 in Books (See Top 100 in Books) #69 inÂ Books > Politics & Social Sciences > Sociology > Social Theory #180 inÂ Books > Science & Math > Technology > Social Aspects #656 inÂ Books > Science & Math > History & Philosophy

Customer Reviews

The Economist:â œSocial Physics is filled with rich findings about what makes people tick. Using millions of data points measured over a long period of time in real settings, which Pentland calls â ˆliving laboratories,â ™ the author has monitored human behavior on an unprecedented scaleâ |Pentlandâ ™s research also offers lessons for policymakers and business people. He advances a new way to protect privacy by creating something of a property right for personal informationâ |Social Physics is a fascinating look at a new field by one of its principal geeks.â •Kirkus Reviewsâ œA fascinating view of the future of social networks that offers intriguing possibilities.â •John Abele, Co-Founder, Boston Scientific:â œUnderstanding, predicting and influencing human behavior has been the goal of social scientists (and leaders anywhere) since the beginning of time. Pentlandâ ™s Social Physics is a major contribution to this field. By using communication tracking analysis and occasionally human sensors along with big data, he and his team are evolving a new discipline with a unique taxonomy and ontology that brings a higher level of quantification and rigor to a challenging and inherently complex field. Like Surowieckiâ ™s The Wisdom of Crowds it will spawn further work and research in a rapidly expanding new body of knowledge.â •John Seely Brown, Former Chief Scientist, Xerox Corporation and director of Xerox Palo Alto Research Center (PARC):â œRead this book and you will look at tomorrow differently. Reality mining is just the first step on an exciting new journey. Social Physics opens up the imagination to what might now be measurable and modifiable. It also hints at what may lie beyond Adam Smithâ ™s invisible hand in helping groups, organizations and societies reach new levels of meaning creation. This is not just social analytics. It also offers pragmatic ways forward.â •Reed E. Hundt, former chairman of the Federal Communications Commission, CEO of the Coalition for Green Capital:â œFrom his MIT aerie, eagle-eyed Alex Pentland has seen the future. His wise and stimulating book teaches us how ideas spring up, flow, and spread. Applying his lessons, we can act collectively to solve previously intractable social, economic and political problems. We can make

organizations more productive. We can even have government achieve its proper purposes, with greater fairness and less cost. As challenges like widening inequality and runaway climate change seem to exceed our ability to design solutions, Pentlandâ ™s data-driven, reality-based, yet sunny optimism about tomorrow should be eagerly welcomed by all readers.â •Stephen M. Kosslyn, Former Dean of Social Science, Harvard University; Former Director, Center for Advanced Study in the Behavioral Sciences, Stanford University; Founding Dean, Minerva Schools at KGI:â œSandy Pentland lives in the futureâ ”and it shows. This book will not only whisk you up to speed on cutting-edge research at the interface of technology, behavioral science, and the social world, but it will also give you a good sense of what could be next. Professor Pentland brilliantly analyzes how new ideas flow and how, with the emergence of the â ˆdata-driven society,â ™ they will increasingly influence every aspect of our lives.â •

Alex "Sandy" Pentland directs MITâ ™s Human Dynamics Laboratory and the MIT Media Lab Entrepreneurship Program and co-leads the World Economic Forum Big Data and Personal Data initiatives. He helped create and direct MITâ ™s Media Laboratory, the Media Lab Asia laboratories at the Indian Institutes of Technology, and Strong Hospitalâ ™s Center for Future Health. His research group and entrepreneurship program have spun off more than thirty companies to date. In 2012 Forbes named Pentland one of the seven most powerful data scientists in the world. His research has been featured in Nature, Science, and Harvard Business Review.

I liked the concepts and ideas presented. This is an exciting field. Unfortunately, this book doesn’t provide the detail necessary for those of us wanting to become practitioners or apply this emerging science. Pentland mentions "research done" but does not spend time detailing the research that has gone into the concepts presented. (Surely the research is mixed, having some contradictory findings.) We are left to trust that the work has been doneIts a broad, non-academic introduction, and at times almost comes across an infomercial, an opportunity for the author to tout his many start-ups. That’s OK if you want to hire Pentland or MIT, but if you’re looking for a thorough introduction to the field, I’m afraid you’ll have to look elsewhere.

It appears a biographical journey of the author at MIT disguised in the apron of social physics, that hides the message of the narrative.

What I (author: Alex Pentland) have learned from these experiences is that many of the traditional

ideas we have about ourselves and how society works are wrong. It is not simply the brightest who have the best ideas; it is those who are best at harvesting ideas from others. It is not only the determined who drive change; it is those who must fully engage with like-minded people. And it is not wealth or prestige that motivates the people; it is respect and help from peers.So how do we internalize new ideas and turn them into habitual behavior? Through social physics.Social Physics is the qualitative social science that describes reliable, mathematical connections between information and idea flow on the one hand and peopleÃ¢Â Â™s behavior on the other. Social physics helps us understand how ideas flow from one person to another through the mechanism of social learning and how this flow of ideas ends up shaping the norms, productibvity, and creative output of companies, cities, and societies.Mr. Pentland makes a cogent argument that our ability to survive and prosper is due to social learning and social influence at least as much as it is due to individual rationality. His research shows that peopleÃ¢Â Â™s desires and their decisions about how to act are often, and perhaps typically, dominated by social network effects.

The ideas behind this book seem good, but the author does not provide much hard evidence to back them up. Most evidence comes in the form of pointing out what esteemed journal published the data. The small area where I am knowledgeable contained inaccurate information. The book seems to be a paean to his isolated genius, and an advertisement for his many companies. I would have liked to see more use of the group wisdom that the book celebrates, and more real data.

Social physics is a fascinating emerging field but this book failed to live up to its potential. Some of Pentland’s most highly touted successes seem to have been derived from nothing more complicated than correlation statics applied to observational data sets. In one case he collected and analyzed terabytes of data to produce the idea that lunch room tables should be closer together to improve team cohesion. A creative executive could walk into a lunch room and come up with that idea. After hearing his interview on HBR I was excited to read about the quantitative evaluation of social interactions but instead wasted my time reading a distastefully self-promoting book.

Social Physics is a field that seems to be emerging with the growth of big data and the smart phone revolution. The author Alex Pentland is a leader in the field of big data and discusses the ideas of social influence and idea generation from the new lense the author has pioneered. The author discusses some of the quantitative experiments he and his students have engaged in to give credence to this new field as well as then try to discuss what he believes the future holds for both

the field as well as the world if we incorporate the ideas of social physics.The book is split into four parts. The first starts by discussing how ideas are generated and how we can improve our decision making. The author discusses his ideas about the flow of ideas and the need to learn from others but be weary of ideas which echo one another too much. He uses real world examples from trading site etoro to discuss the benefits of idea sharing but the dangers of too much idea overlap. The author discusses how habits and ideas are developed using results from behavioural science and tries to distinguish between the ways in which we are influenced and how social pressures can strongly influence us. The author then moves on to the second part named idea machines. The author discusses how the way we interact with one another have strong influence on productivity and creativity and that group dynamics are more important than individual intelligence. The author constantly sites experiments he and his students have done to reinforce these hypothesis put forward. The author discusses how incentivizing people to be engaged in their social networks can help adapt to change and make us more robust to the unexpected situations we will face. The author then moves on to the hypothetical potentials he sees for the future. He thinks about the ways in which smart cities will have the right mix of idea sharing but not too much exploration which increase crime as people lose familiarity and interaction which leads to loss of trust. He discusses ways in which sociometric devices will prepare us to better weather epidemics and inequality. The author then moves on to the future with a society in which people have access to large amounts of data about society at large. He discusses the need for privacy standards but with those in place, the utility of big data. The author addresses some relatively untied concepts like free will and how social influence and free will are distinct ideas but tries to reinforce that this new field of social physics can facilitate more egalitarian society with greater human potential and greater economic efficiency.Social physics is interesting and the ideas make sense. Idea generation as being a consequence of recombining old ideas and therefore immersion to various independent ideas is a productive exercise for the individual is not this authors idea, it was discussed a long time ago in economics. There is a lot of self promotion and the conclusiveness of the author’s work must be taken with a grain of salt. That being said, the ideas are definitely interesting and important food for thought, i think there is much that is beneficial about the path the author is focused on and the solution his group used in the DARPA challenge presented in the book was ingenious (though a little bit contrary to a conclusion claimed earlier that economic incentives are not effective relative to social influence ones, i encourage the review reader to read the book so that this commentary makes more sense!). All in all I recommend this and it is a look into a potential future that might be soon upon us.

Extremely disappointing. What could have been first rate content was totally eviscerated by the author's use of the first person in virtually every paragraph. The book could use some serious editing to remove the author's overwhelming overweening over bearing persona to leave the scientific substance. I suspect Pentland has some good insights, but they are buried by his self-centered narrative. I could barely force myself to finish the book and would not recommend it to anyone. Buchanan's The Social Atom is a far superior book about similar subject matter.