

IN REVIEW

Shifting Information Analysis: Big Data's Implications for the Information Sciences and Professions

Marc Kosciejew, Ph.D.

In *Big Data: A Revolution That Will Transform How We Live, Work, and Think*, Viktor Mayer-Schönberger and Kenneth Cukier present the emerging trend of big data and its various political, economic, social, and professional implications. This book is intended for a diverse academic and professional audience in various disciplines. It should be of particular

interest to scholars and practitioners in the information sciences and professions because of its focus on the information concepts and practices inherent in, and influenced by, big data. The chapters are divided by big data's major components, thereby providing a clear framework in which to approach and understand this emerging trend. A detailed section



**Big Data: A Revolution
That Will Transform How
We Live, Work, and Think**

**Author: Viktor Mayer-
Schönberger and
Kenneth Cukier**

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for notes on each chapter is included, along with a bibliography and index.

Emphasizing Information

The book's central argument is that big data is transforming the ways in which we approach, understand, measure, study, and interact with the world (of information) around us. *Big data* refers to the massive amounts of information generated and collected by agencies, companies, and institutions for diverse purposes and the advancements in computing power and storage that allow for the efficient and effective management and use of this information.

While technology plays an important role, information is the bedrock of the big data era. Big data opens up novel avenues of research and practice that were not possible when only smaller datasets were available, thereby providing opportunities for new kinds and sources of economic activity, value, innovation, and work.

Further, the authors argue that big data permits *datafication* (not to be confused with digitization) – that is, processes and practices that render more aspects of reality into data points, data formats, and data sets to be used to better understand phenomena.

Shifting Information Analysis

Of particular interest to information scholars and professionals is the discussion on the emerging changes in information analysis. The authors argue that big data demands three

major shifts in analyzing information, which they call “more,” “messy,” and “correlations.”

The first shift is big data's information surfeit: there is much more data that reveals details about phenomena that could not have been examined before this trend.

The second shift is big data's messiness: examining more data allows for the relaxation of precision. We are no longer constrained by the rigid exactitude demanded by small data; instead, with much larger and more comprehensive datasets we can gain greater insights at various analytical levels, from categories to sub-categories. Messiness does not mean discarding exactitude, only our devotion to it.

The third shift is big data's correlations: the information profusion helps reveal patterns and relationships that show *what* is happening in a particular case or phenomenon instead of *why*. We no longer have to obsess over causality, an obsession that can often lead to mistakes and misinformation; instead, we can concentrate on what is happening in order to discover new insights. Incidentally, once these correlations are established, they can then be used to help improve causation analysis.

Neglecting the Information Professions

A weakness of the book, however, is it neglects to recognize the integral roles played by information professionals in the big data era. The au-

thors state that for too long we have concentrated on the “T” (the technology) in IT, and it is now time to recast our focus on the “I” (the information). If that is so, the authors have ignored an essential part of the “I”: the important and long-standing information professions. The authors barely discuss the information professions – from librarians to records and information managers and practitioners – that are directly, intricately, and intimately involved with the management of information and its life cycle in many contexts, past and present.


The authors do, however, discuss the so-called emerging data specialist who deals with big data. This discussion would be richer, more detailed, and more nuanced if the authors mentioned, at the very least, that information professionals are the original, current, and future data specialists, instead of presenting the data specialist as a new and unique kind of professional.

Nevertheless, the seventh chapter's discussion of how big data affects the skills, ideas, and mindsets essential to information management illuminates new directions and insights for information professionals as they embark on big data initiatives and projects.

Approaching Big Data

This book provides an excellent foundation on which to approach, build, and expand one's knowledge and understanding of big data and its many implications for diverse actors, cases, settings, and scenarios. Although overlooked in the book, scholars and practitioners in the information sciences and professions will find its arguments, examples, and prescriptions informative for their approaches to, and their work with, big data. **END**


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Taking Control of E-Mail with Uniform Retention Rules Page 20

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Order in the Courts! RM Principles for the Judiciary Page 26

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Analyze This: The Big Demand for Big Data Professionals Page 32

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Making the Leap to an Information Governance Role Page 38

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RIM Fundamentals Series Forging a Partnership with IT to Build a Solid IG Program Page 42

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Shifting Information Analysis: Big Data's Implications for the Information Sciences and Professions Page 45

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